Investment Adviser Exam Prep: Series 65

First edition | 10 units | 50 lessons + a full practice exam | A video for every lesson

FIRST EDITION

Course guide

This is a full-year, career-pathway course for high-school students (grades 11–12) who want to enter the investment profession by the front door: the **Series 65**, the Uniform Investment Adviser Law Examination written by the North American Securities Administrators Association (NASAA). Passing it is the main qualification for becoming an **investment adviser representative** — a person paid to give investment advice — and, unusually among securities exams, it requires **no sponsoring firm**: any person may enroll with FINRA's Form U10, pay the fee and sit for it. The real exam is 130 scored multiple-choice questions in 180 minutes, and 92 correct answers pass. This course covers all four sections of NASAA's official outline in their exam weights: economic factors and business information (15%), investment vehicle characteristics (25%), client investment recommendations and strategies (30%), and laws, regulations and unethical business practices (30%).

The rules on this exam were not invented in a conference room; nearly every one was written after somebody was robbed. So each lesson begins with **the story** (the brokers under the buttonwood tree in 1792, the crowds outside the Exchange in October 1929, the Senate's Pecora hearings, Mr. Howey selling rows of orange trees, the Studebaker workers whose pension vanished, Harry Markowitz in the RAND library, Bernard Madoff's seventeenth-floor secret), then **how they figured it out**, then **the big idea** with its definitions and formulas, and then **on the exam today**: exactly how the Series 65 asks about it, with the traps named. Every lesson ends with worked examples, a practice set written in the exam's own four-choice format, and a project. Each unit ends with a 100-point test, there is a 60-question midterm after Unit 5, and the final exam is a full-length, 130-question, 180-minute practice Series 65 weighted exactly like the real one.

The course teaches the law, the mathematics and the ethics of the profession; it never gives individualized investment advice, names no investments to buy, and

does all investing with pretend money. Fees, tax figures and dollar thresholds change, so the course teaches each method with clearly labeled example numbers and shows where to find the current ones (nasaa.org, finra.org, sec.gov, irs.gov). Throughout, the fiduciary duty at the heart of the Series 65 is taught as what it has always been: stewardship. “Moreover it is required in stewards, that a man be found faithful” (1 Corinthians 4:2). A student who learns to put the client first, disclose every conflict and guard other people’s money as a sacred trust has learned the exam’s hardest section — and something better than the exam.

> Videos were chosen lesson by lesson from public and educational sources: Khan Academy, Marginal Revolution University, Two Cents (PBS), the Federal Reserve Bank of St. Louis, the SEC’s Office of Investor Education, The Plain Bagel and a few other teaching channels. Every video was checked in preview for accuracy and content. Securities law has few general-audience explainers, so a few law lessons use videos from teachers who also sell exam-prep materials; their teaching was previewed and stands on its own, and nothing in this course requires buying anything. Exam fees, tax figures and contribution limits change, so treat any numbers in a video as examples and look up the current figures at nasaa.org, finra.org and irs.gov. A few channels end with a sponsor message or an invitation to subscribe; you can stop when the teaching ends.

Start with Lesson 1.1 →

Who it is for

Written for students in grades 11–12 who have completed Algebra I and, ideally, the School Launch Personal Finance & Investing course (or equivalent familiarity with stocks, bonds and compound interest). The mathematics is percents, exponents and formulas; the heavier load is vocabulary and law, which the course builds gradually with constant review. Students work fairly independently; a parent or mentor checks the practice sets, discusses the ethics cases and proctors the timed exams. The real Series 65 may be taken without a sponsor, but registering as an investment adviser representative afterward is a state decision and generally requires being 18; most students should plan to sit for the real exam near or after graduation. A passing result generally remains valid for two years before registration (longer in states

adopting NASAA's Exam Validity Extension Program), so check the timing with your state securities Administrator before paying the fee.

How to use this course

1. **The weekly rhythm.** Each lesson takes three sessions of about 50 minutes. Session 1: the warm-up, the video, the core ideas and the worked examples. Session 2: the project and the exam notebook. Session 3: the practice set in exam format, checked against the answers, with every miss corrected in the notebook. Each unit ends with a test day; the midterm and final each get a review day. At five sessions a week the course fills a school year of about 33 weeks.
2. **Story, then the big idea, then the exam.** Read the core ideas in order. The story explains why the rule exists, and a rule whose reason you know is a rule you do not have to memorize. Every lesson ends with "on the exam today": how the Series 65 actually asks about the idea and the standard traps.
3. **Answer like the exam.** The practice sets use the real exam's format: four choices, one best answer, no penalty for guessing. Train the habit from week one: read the question's last line first, strike out the two clearly wrong choices, and answer every question. On the real exam 92 of 130 passes — about 7 correct out of every 10 — so a careful student can miss 38 questions and still pass.
4. **The exam notebook.** Keep one notebook for the year. Left pages: definitions, formulas and the unit's "trap list." Right pages: every practice question you missed, rewritten with the right answer and one sentence on why you missed it. The week before each exam, study only your right-hand pages.
5. **Example numbers are examples.** Exam fees, waiting periods, tax brackets, contribution limits and dollar thresholds (such as the assets-under-management line between state and federal registration) change. When a lesson says "in this example," it is teaching the method. Before you enroll for the real exam, check the current facts at nasaa.org and finra.org.
6. **Practice sets.** Problems are marked easy, medium, hard and challenge. Do all of the easy and medium problems and most of the hard ones; the challenge problem is for students who want more. Mark your work against the answers the same day, and rework every miss in the notebook.
7. **Picture study.** Each lesson has one public-domain painting, print or historic photograph. Look at it quietly for two minutes, put it away and tell what you

remember, then work through the “look for” items and questions, which point to the markets, money or trust in the picture.

8. **Timed exams, honestly proctored.** Take each unit test closed-book. Take the midterm in one two-hour sitting and the final — a full 130-question practice Series 65 — in one three-hour sitting, proctored by a parent, with no notes, exactly like test day at the testing center. Treat the score honestly: the final tells you whether you are ready to pay the real fee.
9. **No individualized advice.** The course teaches how the profession works; it does not tell you or anyone what to buy. All portfolios in the course use pretend money. Real decisions belong to your family and, for clients someday, to the fiduciary care this course exists to teach.
10. **The pathway after the pass.** Lesson 10.5 walks through enrollment (Form U10, the fee, scheduling at a test center), what happens on test day, and the steps after a pass: state registration as an investment adviser representative (generally at 18, by state decision), the two-year validity window, and the jobs this license opens — client-service and paraplanner roles at advisory firms, and eventually advising. It also covers the related exams (Series 63, 66, 7 and the SIE) so the student can map the whole territory.

Scope and sequence

UNIT 1 · WEEKS 1–4

The Calling and the Path

What an investment adviser is and what a fiduciary owes; how American markets grew from the Buttonwood Agreement to the Crash of 1929; the securities laws born of the crash; the Investment Advisers Act of 1940 and the state blue-sky laws; and the Series 65 exam itself — its format, its enrollment and a study plan for this course.

1.1 The Investment Adviser: A Fiduciary's Calling

1.2 From Buttonwood to Black Thursday: How American Markets Grew

1.3 Truth After the Crash: The Securities Acts of 1933 and 1934

1.4 The Investment Advisers Act of 1940 and the Blue-Sky Laws

1.5 The Series 65 Exam: Format, Enrollment and Your Study Plan

UNIT 2 · WEEKS 4–7

Economic Factors and Business Information

The business cycle and GDP; leading, lagging and coincident indicators and the CPI; the Federal Reserve and the tools of monetary policy; fiscal policy, sovereign debt and exchange rates; and inflation, interest rates, yield curves and credit spreads — the exam's Economic Factors section.

2.1 The Business Cycle and GDP: Measuring the Economy

2.2 Economic Indicators: Leading, Lagging and the CPI

2.3 Money and the Federal Reserve: Monetary Policy

2.4 Fiscal Policy, Sovereign Debt and Exchange Rates

2.5 Inflation, Interest Rates and the Yield Curve

UNIT 3 · WEEKS 7–10

Reading the Numbers

The three financial statements, audits and SEC filings; liquidity, leverage and valuation ratios; present value, net present value and internal rate of return; the statistics the exam expects — mean, median, mode, range, standard deviation and beta; and systematic and unsystematic risk, opportunity cost and the order of liquidation.

3.1 Financial Reports: The Income Statement, Balance Sheet and Cash Flow

3.2 Ratios: Liquidity, Leverage and Valuation

3.3 The Time Value of Money: Present Value, NPV and IRR

3.4 Statistics for Investors: Mean, Median and Standard Deviation

3.5 Types of Risk and the Ladder of Liquidation

UNIT 4 · WEEKS 10–14

Cash and Fixed Income

Insured deposits, CDs and money-market instruments; Treasury bills, notes, bonds, TIPS and agency securities; corporate, municipal and foreign bonds; coupons, zeros, call features, ratings and tax treatment; and the bond arithmetic the exam loves — the price–yield seesaw, current yield, yield to maturity and call, and duration.

4.1 Cash and the Money Market: Deposits, CDs and Treasury Bills

4.2 Lending to the Government: Treasuries, TIPS and Agencies

4.3 Corporate, Municipal and Foreign Bonds

4.4 Bond Features: Coupons, Calls and Credit Ratings

4.5 Bond Mathematics: Prices, Yields and Duration

UNIT 5 · WEEKS 14–17

Equity Securities

Common stock at home and abroad, ADRs and shareholder rights; preferred and convertible preferred stock and the four dividend dates; restricted stock, Rule 144 and employee stock options; fundamental analysis with the dividend discount and discounted cash flow models; and what technical analysts do with charts, trends and volume.

5.1 Common Stock and Shareholder Rights

5.2 Preferred Stock, Convertibles and Dividends

5.3 Restricted Stock and Employee Stock Options

5.4 Fundamental Analysis: Value from Earnings and Dividends

5.5 Technical Analysis: Reading the Charts

UNIT 6 · WEEKS 17–20

Funds, Derivatives and Insurance Products

Open-end mutual funds, net asset value, share classes and fees; closed-end funds, unit investment trusts, ETFs and REITs; hedge funds, private equity, venture capital, limited partnerships, ETNs, leveraged and inverse funds and structured products; options, warrants, futures and forwards; and fixed, variable and indexed annuities and the kinds of life insurance.

6.1 Mutual Funds: Shares of a Great Pool

6.2 Closed-End Funds, UITs, ETFs and REITs

6.3 Private Funds and Alternative Investments

6.4 Options, Futures and Other Derivatives

6.5 Annuities and Life Insurance

UNIT 7 · WEEKS 20–24

The Client

Individuals, businesses, trusts and charities and the client profile — goals, risk tolerance, time horizon and behavioral finance; the income, capital-gains, gift and estate taxes an adviser must know; traditional and Roth IRAs and qualified plans; ERISA, 404(c) and the investment policy statement; and 529s, UTMAs, HSAs, forms of joint ownership, trusts and wills.

7.1 Types of Clients and the Client Profile

7.2 Taxes the Adviser Must Know: Income, Capital Gains and Estates

7.3 Retirement Plans: IRAs, Roths and Qualified Plans

7.4 ERISA: The Plan Fiduciary's Rules

7.5 Special Accounts and Passing Wealth On

UNIT 8 · WEEKS 24–27

Building and Measuring Portfolios

Modern portfolio theory, the Capital Asset Pricing Model and the efficient market hypothesis; strategic and tactical asset allocation and the active, passive, growth, value and income styles; diversification, rebalancing, sector rotation, dollar-cost averaging and hedging; order types, margin, short sales and best execution; and every kind of return the exam can ask for.

8.1 Capital Market Theory: Markowitz, CAPM and Efficient Markets

8.2 Strategies and Styles: Allocation, Active and Passive

8.3 Techniques: Diversification, Rebalancing and Dollar-Cost Averaging

8.4 Trading: Orders, Margin and Best Execution

8.5 Measuring Performance: Returns, Benchmarks and Risk Adjustment

UNIT 9 · WEEKS 27–30

The Laws

The federal securities acts and the Uniform Securities Act; the exam's four roles — investment adviser, investment adviser representative, broker-dealer and agent — with every exclusion and exemption; Form ADV, the brochure, books and records and renewals; the Howey test and how securities are registered; and the state Administrator's powers, penalties and remedies.

9.1 The Federal Acts: 1933, 1934 and the Two Acts of 1940

9.2 Who Must Register: Advisers, Representatives, Broker-Dealers and Agents

9.3 Registration in Practice: Form ADV, Records and Renewals

9.4 What Is a Security: The Howey Test and Registration of Issues

9.5 The Administrator: Powers, Penalties and Remedies

UNIT 10 · WEEKS 30–33

Ethics and the Capstone

Disclosure, advertising, performance claims and client contracts; fees, commissions, performance-based fees and soft dollars; custody, discretion and the safekeeping of client property; the prohibited practices — churning, front running, insider trading, selling away and the rest; and cybersecurity, business continuity, a test-day plan and what to do the week you pass.

10.1 Speaking the Truth: Disclosures, Advertising and Client Contracts

10.2 Honest Compensation: Fees, Commissions and Soft Dollars

10.3 Guarding Client Property: Custody, Discretion and Madoff's Warning

10.4 Prohibited Practices: Churning, Front Running and Insider Trading

10.5 The Capstone: Cybersecurity, Continuity and Exam Day

Weekly pacing calendar

WEEK	PLAN
1	• Day 1: Lesson 1.1 The Investment Adviser: A Fiduciary's Calling: video, teaching and worked examples • Day 2: Lesson 1.1: project and notebook • Day 3: Lesson 1.1: practice set and corrections • Day 4: Lesson 1.2 From Buttonwood to Black Thursday: How American Markets Grew: video, teaching and worked examples • Day 5: Lesson 1.2: project and notebook *Five sessions a week of about 50 minutes. Families on a four-day week can combine the practice day of one lesson with the teaching day of the next.*
2	• Day 1: Lesson 1.2: practice set and corrections

WEEK	PLAN
	• Day 2: Lesson 1.3 Truth After the Crash: The Securities Acts of 1933 and 1934: video, teaching and worked examples • Day 3: Lesson 1.3: project and notebook • Day 4: Lesson 1.3: practice set and corrections • Day 5: Lesson 1.4 The Investment Advisers Act of 1940 and the Blue-Sky Laws: video, teaching and worked examples
3	• Day 1: Lesson 1.4: project and notebook • Day 2: Lesson 1.4: practice set and corrections • Day 3: Lesson 1.5 The Series 65 Exam: Format, Enrollment and Your Study Plan: video, teaching and worked examples • Day 4: Lesson 1.5: project and notebook • Day 5: Lesson 1.5: practice set and corrections
4	• Day 1: Unit 1 test • Day 2: Lesson 2.1 The Business Cycle and GDP: Measuring the Economy: video, teaching and worked examples • Day 3: Lesson 2.1: project and notebook • Day 4: Lesson 2.1: practice set and corrections • Day 5: Lesson 2.2 Economic Indicators: Leading, Lagging and the CPI: video, teaching and worked examples
5	• Day 1: Lesson 2.2: project and notebook • Day 2: Lesson 2.2: practice set and corrections • Day 3: Lesson 2.3 Money and the Federal Reserve: Monetary Policy: video, teaching and worked examples • Day 4: Lesson 2.3: project and notebook • Day 5: Lesson 2.3: practice set and corrections
6	• Day 1: Lesson 2.4 Fiscal Policy, Sovereign Debt and Exchange Rates: video, teaching and worked examples • Day 2: Lesson 2.4: project and notebook • Day 3: Lesson 2.4: practice set and corrections • Day 4: Lesson 2.5 Inflation, Interest Rates and the Yield Curve: video, teaching and worked examples • Day 5: Lesson 2.5: project and notebook
7	• Day 1: Lesson 2.5: practice set and corrections

WEEK	PLAN
	• Day 2: Unit 2 test • Day 3: Lesson 3.1 Financial Reports: The Income Statement, Balance Sheet and Cash Flow: video, teaching and worked examples • Day 4: Lesson 3.1: project and notebook • Day 5: Lesson 3.1: practice set and corrections
8	• Day 1: Lesson 3.2 Ratios: Liquidity, Leverage and Valuation: video, teaching and worked examples • Day 2: Lesson 3.2: project and notebook • Day 3: Lesson 3.2: practice set and corrections • Day 4: Lesson 3.3 The Time Value of Money: Present Value, NPV and IRR: video, teaching and worked examples • Day 5: Lesson 3.3: project and notebook
9	• Day 1: Lesson 3.3: practice set and corrections • Day 2: Lesson 3.4 Statistics for Investors: Mean, Median and Standard Deviation: video, teaching and worked examples • Day 3: Lesson 3.4: project and notebook • Day 4: Lesson 3.4: practice set and corrections • Day 5: Lesson 3.5 Types of Risk and the Ladder of Liquidation: video, teaching and worked examples
10	• Day 1: Lesson 3.5: project and notebook • Day 2: Lesson 3.5: practice set and corrections • Day 3: Unit 3 test • Day 4: Lesson 4.1 Cash and the Money Market: Deposits, CDs and Treasury Bills: video, teaching and worked examples • Day 5: Lesson 4.1: project and notebook
11	• Day 1: Lesson 4.1: practice set and corrections • Day 2: Lesson 4.2 Lending to the Government: Treasuries, TIPS and Agencies: video, teaching and worked examples • Day 3: Lesson 4.2: project and notebook • Day 4: Lesson 4.2: practice set and corrections • Day 5: Lesson 4.3 Corporate, Municipal and Foreign Bonds: video, teaching and worked examples
12	• Day 1: Lesson 4.3: project and notebook

WEEK	PLAN
	• Day 2: Lesson 4.3: practice set and corrections • Day 3: Lesson 4.4 Bond Features: Coupons, Calls and Credit Ratings: video, teaching and worked examples • Day 4: Lesson 4.4: project and notebook • Day 5: Lesson 4.4: practice set and corrections
13	• Day 1: Lesson 4.5 Bond Mathematics: Prices, Yields and Duration: video, teaching and worked examples • Day 2: Lesson 4.5: project and notebook • Day 3: Lesson 4.5: practice set and corrections • Day 4: Unit 4 test • Day 5: Lesson 5.1 Common Stock and Shareholder Rights: video, teaching and worked examples
14	• Day 1: Lesson 5.1: project and notebook • Day 2: Lesson 5.1: practice set and corrections • Day 3: Lesson 5.2 Preferred Stock, Convertibles and Dividends: video, teaching and worked examples • Day 4: Lesson 5.2: project and notebook • Day 5: Lesson 5.2: practice set and corrections
15	• Day 1: Lesson 5.3 Restricted Stock and Employee Stock Options: video, teaching and worked examples • Day 2: Lesson 5.3: project and notebook • Day 3: Lesson 5.3: practice set and corrections • Day 4: Lesson 5.4 Fundamental Analysis: Value from Earnings and Dividends: video, teaching and worked examples • Day 5: Lesson 5.4: project and notebook
16	• Day 1: Lesson 5.4: practice set and corrections • Day 2: Lesson 5.5 Technical Analysis: Reading the Charts: video, teaching and worked examples • Day 3: Lesson 5.5: project and notebook • Day 4: Lesson 5.5: practice set and corrections • Day 5: Unit 5 test
17	• Day 1: Review day for the midterm • Day 2: Midterm exam (60 questions, two hours, one sitting)

WEEK	PLAN
	• Day 3: Lesson 6.1 Mutual Funds: Shares of a Great Pool: video, teaching and worked examples • Day 4: Lesson 6.1: project and notebook • Day 5: Lesson 6.1: practice set and corrections
18	• Day 1: Lesson 6.2 Closed-End Funds, UITs, ETFs and REITs: video, teaching and worked examples • Day 2: Lesson 6.2: project and notebook • Day 3: Lesson 6.2: practice set and corrections • Day 4: Lesson 6.3 Private Funds and Alternative Investments: video, teaching and worked examples • Day 5: Lesson 6.3: project and notebook
19	• Day 1: Lesson 6.3: practice set and corrections • Day 2: Lesson 6.4 Options, Futures and Other Derivatives: video, teaching and worked examples • Day 3: Lesson 6.4: project and notebook • Day 4: Lesson 6.4: practice set and corrections • Day 5: Lesson 6.5 Annuities and Life Insurance: video, teaching and worked examples
20	• Day 1: Lesson 6.5: project and notebook • Day 2: Lesson 6.5: practice set and corrections • Day 3: Unit 6 test • Day 4: Lesson 7.1 Types of Clients and the Client Profile: video, teaching and worked examples • Day 5: Lesson 7.1: project and notebook
21	• Day 1: Lesson 7.1: practice set and corrections • Day 2: Lesson 7.2 Taxes the Adviser Must Know: Income, Capital Gains and Estates: video, teaching and worked examples • Day 3: Lesson 7.2: project and notebook • Day 4: Lesson 7.2: practice set and corrections • Day 5: Lesson 7.3 Retirement Plans: IRAs, Roths and Qualified Plans: video, teaching and worked examples
22	• Day 1: Lesson 7.3: project and notebook • Day 2: Lesson 7.3: practice set and corrections

WEEK	PLAN
	• Day 3: Lesson 7.4 ERISA: The Plan Fiduciary's Rules: video, teaching and worked examples • Day 4: Lesson 7.4: project and notebook • Day 5: Lesson 7.4: practice set and corrections
23	• Day 1: Lesson 7.5 Special Accounts and Passing Wealth On: video, teaching and worked examples • Day 2: Lesson 7.5: project and notebook • Day 3: Lesson 7.5: practice set and corrections • Day 4: Unit 7 test • Day 5: Lesson 8.1 Capital Market Theory: Markowitz, CAPM and Efficient Markets: video, teaching and worked examples
24	• Day 1: Lesson 8.1: project and notebook • Day 2: Lesson 8.1: practice set and corrections • Day 3: Lesson 8.2 Strategies and Styles: Allocation, Active and Passive: video, teaching and worked examples • Day 4: Lesson 8.2: project and notebook • Day 5: Lesson 8.2: practice set and corrections
25	• Day 1: Lesson 8.3 Techniques: Diversification, Rebalancing and Dollar-Cost Averaging: video, teaching and worked examples • Day 2: Lesson 8.3: project and notebook • Day 3: Lesson 8.3: practice set and corrections • Day 4: Lesson 8.4 Trading: Orders, Margin and Best Execution: video, teaching and worked examples • Day 5: Lesson 8.4: project and notebook
26	• Day 1: Lesson 8.4: practice set and corrections • Day 2: Lesson 8.5 Measuring Performance: Returns, Benchmarks and Risk Adjustment: video, teaching and worked examples • Day 3: Lesson 8.5: project and notebook • Day 4: Lesson 8.5: practice set and corrections • Day 5: Unit 8 test
27	• Day 1: Lesson 9.1 The Federal Acts: 1933, 1934 and the Two Acts of 1940: video, teaching and worked examples • Day 2: Lesson 9.1: project and notebook

WEEK	PLAN
	• Day 3: Lesson 9.1: practice set and corrections • Day 4: Lesson 9.2 Who Must Register: Advisers, Representatives, Broker-Dealers and Agents: video, teaching and worked examples • Day 5: Lesson 9.2: project and notebook
28	• Day 1: Lesson 9.2: practice set and corrections • Day 2: Lesson 9.3 Registration in Practice: Form ADV, Records and Renewals: video, teaching and worked examples • Day 3: Lesson 9.3: project and notebook • Day 4: Lesson 9.3: practice set and corrections • Day 5: Lesson 9.4 What Is a Security: The Howey Test and Registration of Issues: video, teaching and worked examples
29	• Day 1: Lesson 9.4: project and notebook • Day 2: Lesson 9.4: practice set and corrections • Day 3: Lesson 9.5 The Administrator: Powers, Penalties and Remedies: video, teaching and worked examples • Day 4: Lesson 9.5: project and notebook • Day 5: Lesson 9.5: practice set and corrections
30	• Day 1: Unit 9 test • Day 2: Lesson 10.1 Speaking the Truth: Disclosures, Advertising and Client Contracts: video, teaching and worked examples • Day 3: Lesson 10.1: project and notebook • Day 4: Lesson 10.1: practice set and corrections • Day 5: Lesson 10.2 Honest Compensation: Fees, Commissions and Soft Dollars: video, teaching and worked examples
31	• Day 1: Lesson 10.2: project and notebook • Day 2: Lesson 10.2: practice set and corrections • Day 3: Lesson 10.3 Guarding Client Property: Custody, Discretion and Madoff's Warning: video, teaching and worked examples • Day 4: Lesson 10.3: project and notebook • Day 5: Lesson 10.3: practice set and corrections
32	• Day 1: Lesson 10.4 Prohibited Practices: Churning, Front Running and Insider Trading: video, teaching and worked examples • Day 2: Lesson 10.4: project and notebook

WEEK	PLAN
	• Day 3: Lesson 10.4: practice set and corrections • Day 4: Lesson 10.5 The Capstone: Cybersecurity, Continuity and Exam Day: video, teaching and worked examples • Day 5: Lesson 10.5: project and notebook
33	• Day 1: Lesson 10.5: practice set and corrections • Day 2: Unit 10 test • Day 3: Review day for the final • Day 4: Final exam: a full-length practice Series 65 (130 questions, three hours, one sitting) • Day 5: Score the final as the real exam would (92 of 130 passes), review every miss, and plan the real enrollment with your parents

Materials

A calculator

A basic or scientific calculator is enough; the real exam provides an on-screen four-function calculator, so practice doing exam problems with nothing fancier.

Exam notebook (a bound notebook), pencil and ruler

For definitions, formulas, the trap lists, and every corrected practice question — the single most valuable study tool in the course.

Free spreadsheet software (Google Sheets or LibreOffice Calc)

Used in several projects: compound growth and present-value tables, a pretend portfolio tracker, and the fee-comparison and performance projects.

Index cards

For the vocabulary: the Series 65 is half a vocabulary exam. Build the deck unit by unit; by Unit 10 it will hold about 400 cards.

NASAA's free Series 65 materials (nasaa.org)

Download the current exam content outline and FAQs from nasaa.org for reference; they are free and official. Check current fees and rules there before enrolling for the real exam.

A kitchen timer or stopwatch

Exam training is time training: about 83 seconds per question. Used from Unit 1 onward on every practice set, and for the proctored midterm and final.

Optional: one of the books or resources listed in a unit

Never required. See the list in each unit.

Grading

Grades come from the practice sets, the projects, the exam notebook, the ten unit tests, the midterm and the full-length practice final. A multiple-choice answer earns credit only when the student can defend it; on review days, pick five questions at random and ask “why is this the answer, and why are the other three wrong?” A calculation earns full credit when the formula, the substitution and the answer with its units are all shown.

PART	%
Practice sets (completed and corrected)	**15**
Projects (real numbers, organization, explanation)	**20**
Exam notebook (definitions, formulas, trap lists, corrected misses)	**10**
Unit tests	**30**
Midterm exam (60 questions, timed)	**10**
Final exam (full-length 130-question practice Series 65, timed)	**15**

Scale: A 90–100, B 80–89, C 70–79, D 60–69, F below 60.

- Practice sets are graded for completion and correction, not first-try accuracy: a question missed, understood and rewritten in the notebook earns full credit.
- The final is also reported the way the real exam would score it: 92 or more correct out of 130 is a pass. A student who passes the course final under honest exam conditions is ready to consider enrolling for the real Series 65.
- A project earns full marks when its numbers are complete and labeled, its totals are correct, and it ends with a paragraph on what the student learned.

- For a high-school transcript this course is one full credit of business/finance (career and technical education). Keep the exam notebook, the projects and the scored practice final as the course portfolio.

A NOTE TO PARENTS

You do not need a finance background to run this course well. Your jobs are to keep the rhythm (three sessions per lesson), check the practice sets against the answers, ask the student to defend a few answers aloud each week, discuss the ethics cases at the table, and proctor the three timed exams honestly — closed book, full time, no pauses. The course is self-explaining; the student does the work.

Be clear-eyed about the pathway, and hopeful. The Series 65 itself has no sponsorship requirement and NASAA publishes no minimum age, but registering as an investment adviser representative is a state decision and generally requires being 18, and a passing result lapses (generally after two years) if the person is not registered — so the wise plan for most students is to master the material now and sit for the real exam near or after graduation, timed so the window is not wasted. Current rules, fees and waiting periods are at nasaa.org and finra.org; this course states them as of 2026 and labels them as examples. School Launch has no connection to NASAA, FINRA or any test vendor, and this course is a preparation, not a guarantee.

The history is told honestly: crashes and frauds are taught as lessons, without sensationalism, and the laws that grew out of them are taught as settled history, not present-day debates. The deeper aim is the one the law itself borrows from Scripture: a fiduciary is a steward, and "it is required in stewards, that a man be found faithful" (1 Corinthians 4:2). If your student ends this course able to pass a hard exam and unwilling to touch a dishonest dollar, it has succeeded twice. *Fabricando fit faber*: by making, one becomes a maker.

UNIT 1

The Calling and the Path

Before you memorize a single rule, you should know what the work is and where its rules came from. In this unit you will meet the **investment adviser** — a person paid to give advice about securities — and learn why the law holds him to the **fiduciary standard**, the duty of a steward who puts his client first. You will watch the Supreme Court read that duty into the law in *SEC v. Capital Gains Research Bureau* (1963), and you will walk the whole road that led there: twenty-four brokers signing the **Buttonwood Agreement** under a Wall Street sycamore in 1792, the ticker tape of 1867, the margin madness of the 1920s, and the terrible October of 1929 that brought it all down.

Out of that wreckage came the laws the Series 65 tests: the **Securities Act of 1933**, the **Securities Exchange Act of 1934** that created the SEC, the **Investment Advisers Act of 1940**, and the state **blue-sky laws** that began in Kansas in 1911 and grew into the Uniform Securities Act of 1956. The unit ends at the door of the testing center: you will learn exactly what the Series 65 exam is — its 130 scored questions, its 180 minutes, its passing score of 92 — and you will build the 33-week study plan this course follows. By the end you will know the profession, its history, its laws, and your path to the license.

PREREQUISITES

- Can work comfortably with percents and decimals (find 70.8% of a number, convert a fraction to a percent)
- Can read a timeline and keep a tidy, dated notebook
- Can look up a source online (nasaa.org, sec.gov, investor.gov) and record what it says
- Has completed a basic personal-finance course or can define stock, bond and interest in one sentence each

MASTERY CHECKLIST

- ☐ I can define an investment adviser and a broker-dealer and tell them apart by how each is paid.
- ☐ I can explain the fiduciary standard, contrast it with suitability, and tell the story of SEC v. Capital Gains Research Bureau (1963).
- ☐ I can tell the story of American markets from the Buttonwood Agreement (1792) to the Crash of 1929, and define primary and secondary markets.
- ☐ I can state what the Securities Act of 1933 and the Securities Exchange Act of 1934 each regulate and which one created the SEC.
- ☐ I can explain why the Investment Advisers Act of 1940 was passed and what blue-sky laws, the Uniform Securities Act of 1956 and NSMIA each do.
- ☐ I can state the Series 65 exam's format, fee, passing score, enrollment steps and retake rules as of 2026, and say where to check them.
- ☐ I can name the four content sections of the exam with their weights and question counts.
- ☐ I can lay out a 33-week study calendar with a weekly review habit and an 83-second-per-question timing drill.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **NASAA Exam FAQs (Series 63, 65 and 66)**: Free, official. The exam's own writers answer every question about fees, scoring, waiting periods and enrollment. Read it with Lesson 1.5 and again the week you register. Ages 15 and up.
- **SEC: What We Do**: Free, official. The Securities and Exchange Commission explains its own three-part mission in plain language. Read it with Lesson 1.3 after you learn why Congress created the agency in 1934. Ages 14 and up.
- **Investor.gov: Introduction to Investing**: Free, official. The SEC's site for ordinary investors — the people an adviser serves. Browse it with Lesson 1.1 to see the questions real clients bring to an adviser's desk. Ages 13 and up.
- ***Fifty Years in Wall Street*, by Henry Clews (1908)**: Free on the Internet Archive. A famous old broker's memories of panics, plungers and honest dealing from the 1850s onward. Dip into a chapter or two with Lesson 1.2 for the flavor of the old Wall Street. Ages 14 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

1.1 The Investment Adviser: A Fiduciary's Calling — 3 sessions of 50 minutes

1.2 From Buttonwood to Black Thursday: How American Markets Grew

3 sessions of 50 minutes

1.3 Truth After the Crash: The Securities Acts of 1933 and 1934

3 sessions of 50 minutes

1.4 The Investment Advisers Act of 1940 and the Blue-Sky Laws

3 sessions of 50 minutes

1.5 The Series 65 Exam: Format, Enrollment and Your Study Plan

3 sessions of 50 minutes

Unit 1 test

Closed book, closed notebook. Twenty four-choice questions, 5 points each, 100 points total. Time yourself at about 83 seconds per question — set a timer for 28 minutes and finish inside it, exactly as you will on exam day. Answer every question; an unanswered question is simply wrong. Where a question says “in this example” or “as of 2026,” use the figures given, and remember that real-world fees and thresholds are checked at nasaa.org, finra.org and sec.gov. Choose the one BEST answer.

1. **5 pts**

   A firm is in the business of giving advice about securities and is paid an annual percentage of the assets it manages. Under federal law this firm is:

   A. A broker-dealer

   B. An investment adviser

   C. An exchange

   D. A transfer agent

2. **5 pts**

   The fiduciary standard requires an investment adviser to:

   A. Guarantee clients against losses

   B. Avoid ever having a conflict of interest

   C. Place the client's interest first and fully disclose material conflicts

   D. Recommend only securities listed on an exchange

3. **5 pts**

   In SEC v. Capital Gains Research Bureau (1963), the Supreme Court:

   A. Held that scalping without disclosure is fraud under the Investment Advisers Act

   B. Required proof that subscribers lost money

   C. Ruled that newsletters are exempt from all regulation

   D. Created the suitability standard for advisers

4. 5 pts

An adviser's undisclosed practice of receiving service fees from funds she recommends is best described as:

A. Acceptable if the funds are suitable

B. A material conflict of interest that must be disclosed

C. Permitted compensation requiring no disclosure

D. Legal because fees are paid by the fund, not the client

5. 5 pts

The Buttonwood Agreement of 1792 was:

A. The first federal securities statute

B. A pact among 24 brokers that grew into the New York Stock Exchange

C. The charter of the Securities and Exchange Commission

D. The first blue-sky law

6. 5 pts

An investor buys 300 existing shares of a listed company through an exchange. The proceeds of the sale go to:

A. The issuing company

B. The exchange

C. The investor who sold the shares

D. The SEC

7. 5 pts

In this example, a 1929 investor buys $10,000 of stock with 10% down. A 10% decline in the stock's price costs him:

A. 10% of his own money

B. 50% of his own money

C. All of his $1,000 equity

D. Nothing until he sells

8. 5 pts

Black Tuesday, the heaviest day of the 1929 crash, fell on:

A. October 24, 1929

B. October 29, 1929

C. September 3, 1929

D. July 8, 1932

9. 5 pts

The Securities Act of 1933 primarily requires:

A. Registration of exchanges and broker-dealers

B. Registration of new public offerings and delivery of a prospectus

C. Federal licensing of investment advisers

D. State registration of agents

10. 5 pts

The Securities and Exchange Commission was created by:

A. The Securities Act of 1933

B. The Securities Exchange Act of 1934

C. The Investment Advisers Act of 1940

D. The Uniform Securities Act of 1956

11. 5 pts

A municipal bond is sold without a federal registration statement, and the seller misrepresents the issuer's finances. Which is TRUE?

A. The bond offering was illegal for failure to register

B. The seller is safe because the security is exempt

C. The fraud is actionable even though the security is exempt from registration

D. Municipal bonds must always register with the SEC

12. 5 pts

Rule 10b-5 prohibits fraud, misstatements and deceptive practices:

A. Only in registered securities

B. Only on national exchanges

C. In connection with the purchase or sale of any security

D. Only by registered broker-dealers

13. 5 pts

The first comprehensive blue-sky law was enacted in:

A. New York in 1792

B. Kansas in 1911

C. Washington, D.C. in 1933

D. Delaware in 1956

14. 5 pts

The Uniform Securities Act of 1956 is:

A. A federal statute administered by the SEC

B. A model act adopted by states and enforced by state Administrators

C. An SEC rule on uniform fees

D. The law that created NASAA

15. 5 pts

Under NSMIA (1996), a federal covered adviser:

A. Registers with the SEC; states may not require registration but retain antifraud authority

B. Registers with every state in which it has clients

C. Registers with both the SEC and its home state

D. Is regulated by FINRA

16. 5 pts

The Investment Advisers Act became law in:

A. 1933

B. 1934

C. 1940

D. 1956

17. 5 pts

As of 2026, the Series 65 exam consists of:

A. 130 scored questions plus 10 unscored pretest questions, with 180 minutes allowed

B. 140 scored questions with 150 minutes allowed

C. 100 scored questions with 120 minutes allowed

D. 130 scored questions, all essay

18. 5 pts

A candidate answers 92 of the 130 scored questions correctly. As of 2026 she has:

A. Failed, because 92/130 is below 75%

B. Passed, because the standard is 92 correct, not a percentage

C. Passed only if her pretest questions were also correct

D. Earned a conditional pass pending SEC review

19. 5 pts

A candidate without a sponsoring firm enrolls for the Series 65 by:

A. Filing Form U4 through a broker-dealer

B. Filing Form U10 with FINRA, which opens a 120-day window to test at a Prometric center

C. Petitioning the state Administrator for admission

D. Registering with NASAA directly

20. 5 pts

After passing the Series 65, a candidate may lawfully work as an investment adviser representative:

A. Immediately, anywhere in the United States

B. Only after the state Administrator registers him, and an unregistered pass is valid for two years as of 2026

C. Only after joining FINRA

D. Only after five years of apprenticeship

ANSWER KEY

1. B. Advice about securities, as a business, for compensation — all three prongs of the investment adviser definition. A broker-dealer is paid for effecting transactions, not for advice.
2. C. Loyalty plus full and fair disclosure is the standard; conflicts may exist but must be disclosed (B overshoots), and no standard guarantees results (A).
3. A. The Court read the Advisers Act as a fiduciary statute: recommending a security while secretly planning to sell into the rise is fraud, with no need to prove intent to injure or actual loss (B).
4. B. A fiduciary must disclose material conflicts so the client can weigh the advice; suitability (A) does not cure concealment, and the source of the payment (D) does not remove the conflict.
5. B. Twenty-four brokers agreed to trade with one another at a minimum commission; their successors organized the exchange renamed the NYSE in 1863. Federal statutes (A, C) came only after 1929, and the first blue-sky law was Kansas, 1911 (D).
6. C. Exchange trading is the secondary market: investors trade with investors, and the issuer receives money only in the primary market, when the securities are first issued.
7. C. His equity is $1,000 and the decline is $1,000; at 10% margin, a 10% fall is a 100% loss of equity — the arithmetic that turned the October 1929 decline into forced selling. D ignores the margin call that arrives regardless.
8. B. October 29 was Black Tuesday, with over 16 million shares traded; October 24 was Black Thursday (A), September 3 the Dow's peak (C), and July 1932 the eventual bottom (D).
9. B. The 1933 Act is the truth-in-securities law for the primary market. Exchanges and broker-dealers belong to the 1934 Act (A), advisers to the 1940 Act (C), and agents to state law (D).
10. B. The 1934 Act created the SEC (the FTC had administered the 1933 Act in the meantime). This is the exam's favorite wire-crossing trap.
11. C. Exempt securities such as municipals skip 1933 Act registration, but no security and no person is exempt from the antifraud provisions.
12. C. The 10b-5 net under Section 10(b) of the 1934 Act covers any person and any security — registered, exempt, listed or obscure.

13. B. Kansas, March 1911, under bank commissioner J. N. Dolley — twenty-two years before Congress acted; the Supreme Court's phrase about “so many feet of blue sky” (1917) named the whole family of state laws.
14. B. The USA is the model for state law — the exam's home territory — enforced in each adopting state by its Administrator. It is not federal (A), and NASAA predates it, founded in 1919 (D).
15. A. NSMIA divided the field: larger advisers have one primary regulator, the SEC, while states keep antifraud jurisdiction and may require notice filings — which are not registration (so C is wrong).
16. C. August 22, 1940 — signed the same day as the Investment Company Act, after the SEC's study of the investment-counsel business ordered in 1935.
17. A. 140 questions appear on screen — 130 scored and 10 unidentified pretest — in a 180-minute, multiple-choice sitting.
18. B. Passing is exactly 92 correct of 130 — about 70.8%, stated as a question count. Pretest questions never affect the score (C), and no SEC review of results exists (D).
19. B. No sponsor is needed for the Series 65: individuals use Form U10 (sponsored candidates use U4), then schedule within the 120-day enrollment window.
20. B. The exam qualifies; the state registers. An unregistered pass lapses after two years (extendable in states adopting NASAA's Exam Validity Extension Program), and FINRA membership (C) is a broker-dealer matter, not an IAR requirement.

PORTFOLIO PIECE: MY PATHWAY FILE

Assemble the file that maps your profession and your path to it: the one-page profession map contrasting investment adviser and broker-dealer (Lesson 1.1), the completed timeline of markets and laws from Buttonwood 1792 to NSMIA 1996 with its federal and state layers (Lessons 1.2–1.4), your dated Series 65 facts sheet with every figure sourced to nasaa.org or finra.org, and your countersigned 33-week study calendar (Lesson 1.5). Add a one-page cover letter addressed to your future first client, explaining in your own words what a fiduciary is, where the word comes from, and why — citing Joseph in Genesis 39 and 1 Corinthians 4:2 — they will be able to trust you with what is theirs.

LOOK FOR	WHAT IT MEANS
Profession map	Adviser and broker-dealer are correctly contrasted by service sold, compensation, conduct standard and governing statute, with the three-prong definition stated and the six test cases correctly sorted.
Timeline	All anchor events are present, dated and on the correct layer — 1792, 1867, 1911, 1917, 1929, 1933, 1934, 1940, 1956, 1996 — and the student can narrate the line aloud in under three minutes without errors.
Exam facts sheet	Every fact carries a number and an official source, at least five rows are check-marked as actually verified, the facts are dated “as of,” and section weights sum to 100% and 130 questions.
Study calendar	Thirty-three numbered weeks with a fixed weekly review, the 83-second drill, two timed practice exams in the final month, a realistic exam target date and a parent's countersignature.
Cover letter and reflection	The letter defines fiduciary accurately, uses the Scripture honestly rather than decoratively, and connects the student's own study habits to the faithfulness the profession requires.

1.1 The Investment Adviser: A Fiduciary's Calling

OBJECTIVES

- Define an investment adviser as a person paid to give advice about securities, and a broker-dealer as a person paid to effect securities transactions.
- Explain the fiduciary standard and contrast it with the suitability standard.
- Tell the story of SEC v. Capital Gains Research Bureau (1963) and define scalping.
- Describe what an investment adviser representative actually does in a working week.
- Explain the adviser's work as stewardship, using Joseph in Genesis 39 as the pattern.

> **Warm-up.** In five minutes, write two sentences: one describing what you think a stockbroker does for his pay, and one describing what you think a financial adviser does for his pay. Keep the paper — at the end of the lesson, correct your own definitions.

WATCH

What's an Investment Adviser? (SIE + Series 7, 10, 63, 65, 66)

Basic Wisdom · 13:14

https://www.youtube.com/watch?v=jumz_KyUFiU

> **WHEN TO WATCH**
> Watch after reading the big idea; pause each time the teacher names one of the three prongs — advice, business, compensation — and write it in your notebook.

BACKUP VIDEO

Investment Advisers vs Broker-Dealers Explained for the Series 65 Exam!

Business with Mr. G · 17:13

https://www.youtube.com/watch?v=MNWuFDd9xRM

A second pass through the two-profession distinction aimed squarely at this exam; watch it before the project if the chart's rows feel fuzzy.

KEY TERMS

investment adviser (IA)

A person or firm that, for compensation, engages in the business of advising others about the value of securities or the advisability of buying or selling them.

investment adviser representative (IAR)

An individual who works for an investment adviser and gives advice, manages accounts, solicits clients or supervises those who do.

broker-dealer (BD)

A firm in the business of effecting securities transactions — as broker for the accounts of others, or as dealer for its own account.

fiduciary

One who must act in the best interest of another, placing the client's interest ahead of his own and disclosing every material conflict; from the Latin fiducia, trust.

suitability

The traditional broker-dealer standard: a recommendation must fit the customer's situation and objectives, but need not be the choice best for the customer.

scalping

Buying a security, recommending it to others, and selling into the price rise the recommendation causes — fraud when the plan is not disclosed.

compensation

Any economic benefit received for advice — a flat fee, an hourly rate, a subscription or a percentage of assets under management — one prong of the three-part adviser test.

assets under management (AUM)

The total market value of the client assets an adviser manages, on which percentage fees are usually charged.

CORE IDEAS

The story. In the early 1960s a New York firm called Capital Gains Research Bureau sold an investment newsletter, *A Capital Gains Report*, to several thousand subscribers. On several occasions its president quietly bought shares of a stock, then recommended that same stock to his readers as a sound long-term investment, and then — within days, as the readers' buying pushed the price up — sold his own shares into the rise. He never told the readers any of it. The Securities and Exchange

Commission sued, asking a court to make the firm disclose the practice, which traders call **scalping.** The lower courts balked: under the old common law of fraud, the SEC would have to prove an intent to injure and actual harm. In December 1963 the Supreme Court, in *SEC v. Capital Gains Research Bureau,* swept that aside. The Investment Advisers Act of 1940, the Court held, reflects a congressional recognition of the "delicate fiduciary nature" of the advisory relationship, and was meant to eliminate — or at least expose — every conflict of interest that might tempt an adviser to give advice that was not disinterested. The adviser did not have to be proven a villain; he had to tell the truth. From that day the word every Series 65 student must know — **fiduciary** — has stood at the center of American advisory law.

How they figured it out. The word itself carries the idea. *Fiduciary* comes from the Latin *fiducia,* trust, from *fidere,* to trust — the same root as *fidelity* and *faithful.* The law has always imposed special duties on people who hold what belongs to others: guardians over orphans' estates, trustees over trusts, executors over wills. The Capital Gains court simply recognized that a person paid for investment advice holds something just as delicate — the client's confidence that the advice serves the client. An adviser may still have conflicts; he is human, and he is in business. What he may never do is hide them. Full and fair disclosure of every material fact, and loyalty when interests collide: that is the fiduciary standard in one breath.

The big idea. The two professions of the securities world are divided by how they are paid. An **investment adviser** is in the business of giving *advice* about securities, for *compensation* — the exam calls these the three prongs: advice, business, compensation. He typically charges a fee: a percentage of assets under management, a flat or hourly rate, or a subscription. A **broker-dealer** is in the business of *effecting transactions* — executing trades — as broker for customers or as dealer from its own inventory, and it earns commissions and markups per trade. The adviser is paid for his opinion; the broker-dealer is paid for the transaction. Because the adviser sells judgment itself, the law holds him to the fiduciary standard. The broker-dealer has traditionally answered to the **suitability** standard — a recommendation must fit the customer, though it need not be the best or cheapest choice available. Since 2020 brokers recommending to retail customers must also act in the customer's best interest under the SEC's Regulation Best Interest, but the exam still expects you to know the classic line: adviser — fiduciary, compensated by fees; broker-dealer — transaction-based, compensated by commissions.

The distinction matters in practice because the same person can wear both hats. A large firm may be registered as a broker-dealer and as an investment adviser; the law asks, for each account and each act, which service is being sold. Watch the compensation: if a firm's advice is "solely incidental" to its brokerage and it earns no special compensation for the advice, it is acting as a broker-dealer, not an adviser — an exclusion you will study closely in Unit 9. If it charges a fee for managing or advising an account, it is an adviser and owes fiduciary duties to that account. The Series 65 is the examination for people on the advisory side: pass it, register, and you become an **investment adviser representative**, an IAR.

So what does an IAR actually do all day? Less glamour than the movies, more stewardship. He meets clients and asks questions — age, income, family, debts, goals, fears — because advice begins with knowing the person. He drafts financial plans and investment policy statements. He builds and rebalances portfolios, usually from ordinary instruments: funds, bonds, cash. He explains markets to worried people in bad weeks, which is half the job. And he does paperwork, endlessly and honestly: disclosure brochures, account agreements, notes of every recommendation and the reason for it. The work is a long faithfulness in small things — which is why this course keeps calling it a *calling* and not merely a job.

Scripture gives the pattern its oldest name: the **steward**. When Joseph served in Potiphar's house, "he left all that he had in Joseph's hand" (Genesis 39:6) — full authority over another man's goods, held in trust. Joseph's master prospered, and when temptation came, Joseph refused precisely because the trust was not his to spend: "neither hath he kept back any thing from me but thee." That is a fiduciary before the word existed: entrusted with everything, entitled to nothing that was not given, faithful when no one watched. An adviser who manages a widow's savings or a family's college fund stands where Joseph stood. The law can compel disclosure; only character supplies faithfulness.

On the exam today. The Series 65 opens this door on nearly every form. Know the three-prong definition of an investment adviser — advice about securities, as a business, for compensation — and that all three must be present. Know that the adviser's fiduciary duty comes from the Investment Advisers Act of 1940 as read in *SEC v. Capital Gains Research Bureau* (1963), and that the cure for a conflict of interest is disclosure, not necessarily abstinence. Expect a scalping question: recommending a security while secretly planning to sell it is fraud even if the recommendation was

honest investment advice on its face. And watch the exam's favorite trap — swapping the standards: a broker-dealer's traditional standard is suitability, an adviser's is fiduciary, and a question that says an adviser must merely make “suitable” recommendations is selling the profession short.

PICTURE STUDY

The Moneylender and His Wife, Quentin Matsys, 1514 · Oil on panel · The Louvre, Paris

Image: Wikimedia Commons, public domain

Quentin Matsys was the leading painter of Antwerp when that city was the money market of Europe, and in 1514 he painted a money-changer at the exact moment of weighing coins while his wife looks up from her prayer book. The frame once carried a motto from Leviticus — “Thou shalt have a just balance and just weights” — and every object in the picture weighs commerce against conscience. It opens this lesson because the adviser's calling is the same balance: skill with money, held steady by faithfulness.

Look closely

- Find the balance in the man's hand. What is he weighing, and how carefully is he holding it?
- Notice the wife's eyes. She is turning the page of a prayer book, but where is she looking?
- Find the small convex mirror on the table. It reflects a window and a figure — the world outside the counting room, watching in.
- Look at the shelves behind the couple: books, papers, a snuffed candle. Which objects speak of business, and which of eternity?

Talk about it

1. The painting's old frame quoted Leviticus: “a just balance and just weights.” How is an adviser's disclosure like an honest scale?
2. The wife's attention is pulled from prayer to gold. What does the painter suggest money can do to the heart, and how does a fiduciary guard against it?
3. The mirror shows someone outside watching the money-changer. Who watches an investment adviser today — and Who watches when no regulator does?

PROJECT

The Profession Map: Adviser or Broker-Dealer?

You will build the one-page map that anchors your whole Pathway File: a side-by-side chart of the two professions, tested against six real-world cases. This page will hang at the front of your exam notebook for all 33 weeks, because half the law questions on the Series 65 begin by asking which kind of firm is in the story.

You will need

- One sheet of unlined paper (or a single spreadsheet page), ruled into two columns
- Your exam notebook and pen
- This lesson's key terms and the Investor.gov introduction pages from the kit

Steps

1. Head the left column INVESTMENT ADVISER and the right column BROKER-DEALER.
2. Fill five rows for each: what it sells (advice / transactions), how it is paid (fees / commissions and markups), its conduct standard (fiduciary / suitability, with a note on Regulation Best Interest), its key statute (Investment Advisers Act of 1940 / Securities Exchange Act of 1934), and the people who work for it (IARs / agents, also called registered representatives).
3. Below the chart, write the three prongs of the adviser definition — advice, business, compensation — and circle the word ALL: all three must be present.
4. Now test the map. Write these six cases in the margin and mark each IA, BD or neither: a firm paid 1% of AUM to manage portfolios; a firm earning commissions executing orders; a newsletter publisher paid subscriptions for stock picks tailored to no one (look up the publisher's exclusion — careful!); a bank teller; a planner charging $300 flat for a written investment plan; your uncle giving free advice at Thanksgiving.

5. For the newsletter case, write one sentence about Capital Gains Research Bureau: even a publisher paid only subscriptions commits fraud by scalping.
6. Add a one-line banner across the top of the page: THE ADVISER IS A FIDUCIARY — fiducia, TRUST.
7. Date the page and clip it into your Pathway File.

Tips

- Keep each cell to five words or fewer; a map you can redraw from memory in three minutes is worth ten pages of notes.
- Use two ink colors — one per profession — and keep those colors for the rest of the course whenever the two firms appear in one problem.

Check your work

- ☐ My chart states both compensation models and both conduct standards correctly.
- ☐ I marked all six test cases correctly and can defend each in one sentence.
- ☐ I can recite the three prongs without looking.
- ☐ My page names both statutes with their years.

EXAM NOTEBOOK

1. Make a flashcard for each key term in this lesson, with the term on the front and the one-sentence definition on the back; start your course flashcard box with them.
2. Draw a two-circle diagram: one circle labeled PAID FOR ADVICE (adviser), one labeled PAID PER TRADE (broker-dealer), and in the overlap write "dual registrant — ask which hat."
3. Write a five-line trap list titled "Fiduciary vs. suitability," ending with: the cure for a conflict is DISCLOSURE.

> **From history.** The investment counsel profession was young when the 1940 Act passed. Boston counselors — the founders of Scudder, Stevens & Clark (1919) among them — had built fee-only advice firms precisely to escape the commission conflicts of brokerage houses, and their trade group, the Investment Counsel Association of America, actually supported federal regulation — they wanted the law to protect the title from the touts and tipsters who had borrowed it.

WORKED EXAMPLES

Example 1. A client has $200,000 invested. Adviser A charges a 1% annual fee on assets under management. Broker B charges a $50 commission per trade, and the client expects 12 trades a year. In this example, what does each cost per year, and when does the fee model cost more?

Show solution

1. Adviser A's fee: $0.01 \times \$200{,}000 = \$2{,}000$.
2. Broker B's commissions: $12 \times \$50 = \$600$.
3. The fee model costs $1,400 more in this example — but notice what each payment buys: the fee pays for continuous advice and management all year; the commissions pay only for execution of 12 orders.
4. Notice also the incentives. The commissioned broker earns more only when the client trades more; the fee adviser earns more only when the account grows. Neither incentive is evil, but each must be disclosed, and the fiduciary must not let his incentive steer his advice.

Answer: Adviser: $2,000; broker: $600. The comparison is of costs *and* of what is purchased: judgment versus execution.

Example 2. Exam style. Which of the following persons is MOST likely an investment adviser under the Advisers Act?

A. A teacher who gives her brother free advice about his mutual funds

B. A firm paid an annual fee to manage clients' stock portfolios on a discretionary basis

C. A firm that executes customers' stock orders for a commission

D. A newspaper of general circulation with a weekly markets column

Show solution

1. Test each against the three prongs: advice about securities, as a business, for compensation.
2. A fails two prongs — the teacher is not in the business of advising and receives no compensation.
3. B gives securities advice, as its regular business, for a fee. All three prongs are present. This is the adviser.
4. C is paid for transactions, not advice — that is a broker-dealer.
5. D is a bona fide newspaper of general and regular circulation, which the Act excludes from the definition (you will study the exclusions in Unit 9).

Answer: B. The fee-paid discretionary manager meets all three prongs; C is a broker-dealer, and A and D fail the business and compensation prongs.

Example 3. Exam style. An adviser buys 5,000 shares of a thinly traded stock, then recommends the stock in his newsletter without mentioning his position, intending to sell when subscribers' purchases lift the price. Under SEC v. Capital Gains Research Bureau, this is:

A. Permissible, because the recommendation itself was honest

B. Permissible, if the stock was suitable for the subscribers

C. Fraud, because the undisclosed plan to sell is a material conflict of interest

D. Fraud, only if the SEC proves the subscribers lost money

Show solution

1. Name the practice: this is scalping, the very conduct in the 1963 case.
2. A and B tempt you with the quality of the advice — but the fraud is in the concealment, not the recommendation.
3. D repeats the lower courts' old common-law view that the Supreme Court rejected: the SEC did not need to prove intent to injure or actual loss.
4. C states the holding: an adviser's undisclosed self-interest in his own recommendation is a fraud on clients under the Advisers Act.

Answer: C. Scalping without disclosure is fraud regardless of whether the advice was otherwise sound or anyone can be shown to have lost money.

PRACTICE

1. Easy What are the three prongs of the investment adviser definition?

   Show answer

   Advice about securities, as a regular business, for compensation — and all three must be present.

2. Easy From what Latin word does fiduciary come, and what does it mean?

   Show answer

   From fiducia, trust (from fidere, to trust) — a fiduciary is one trusted to act in another's best interest.

3. **Easy** Which firm earns commissions per transaction: an investment adviser or a broker-dealer?

Show answer

A broker-dealer. An investment adviser is compensated by fees for advice, such as a percentage of assets under management.

4. **Medium** A client pays an adviser 1.25% annually on a $160,000 account. What is the yearly fee?

Show answer

$0.0125 \times \$160{,}000 = \$2{,}000$

5. **Medium** Which of the following BEST describes the fiduciary standard?
A. Recommendations must be suitable for the client
B. The adviser must place the client's interest first and disclose all material conflicts
C. The adviser must guarantee the client against loss
D. The adviser may never have any conflict of interest

Show answer

B. A fiduciary owes loyalty and full disclosure. A is the broker-dealer's traditional suitability standard; C is a prohibited guarantee no standard requires; D overshoots — conflicts may exist but must be disclosed.

6. **Medium** In SEC v. Capital Gains Research Bureau (1963), the Supreme Court held that the SEC:
A. Had to prove the adviser intended to injure his subscribers
B. Had to prove the subscribers lost money
C. Could compel disclosure of scalping because the Advisers Act imposes fiduciary duties
D. Could not regulate newsletter publishers at all

Show answer

C. The Court read the Advisers Act as a fiduciary statute aimed at eliminating or exposing conflicts; it rejected A and B as relics of common-law fraud, and D contradicts the case itself.

7. Medium Which person is an investment adviser representative (IAR)?

A. A clerk at an advisory firm who only schedules appointments

B. An employee of an advisory firm who manages client portfolios for the firm

C. A customer of the firm

D. A broker-dealer's cashier

Show answer

B. An IAR gives advice, manages accounts, solicits clients or supervises those who do, on behalf of an adviser. Purely clerical staff (A) are not IARs — a distinction the exam loves.

8. Hard A firm executes trades for commissions and also gives occasional advice that is solely incidental to its brokerage, with no special compensation for the advice. Under the Advisers Act this firm is:

A. An investment adviser only

B. A broker-dealer excluded from the adviser definition

C. Both an adviser and a broker-dealer automatically

D. Neither

Show answer

B. Incidental advice with no special compensation keeps a broker-dealer outside the adviser definition. The moment it charges a separate fee for advice (special compensation), it loses the exclusion — C is the trap for students who assume dual status is automatic.

9. Hard An adviser recommends a fund that pays her firm a service fee, without telling the client, though the fund is genuinely suitable. Has she met her fiduciary duty? Explain in two sentences.

Show answer

No. Suitability does not cure concealment: a fiduciary must disclose the material conflict (the service fee) so the client can weigh the advice, and the undisclosed benefit is a fraud under the Capital Gains reading of the Advisers Act.

10. Hard From the story: the lower courts in Capital Gains wanted proof of intent to defraud and actual injury. Why did the Supreme Court say that was the wrong test for the Advisers Act?

Show answer

Because Congress wrote the Act to protect the delicate trust of the advisory relationship, not merely to punish completed swindles; the Act works prophylactically, by eliminating or exposing conflicts of interest, so undisclosed scalping is fraud without proof of evil motive or client losses.

11. Challenge A client with $300,000 can hire a fee adviser at 0.9% of AUM or trade through a commissioned broker at $40 per trade. In this example, how many trades per year would make the commission cost equal the fee, and why does the number itself matter less than the incentive behind it?

Show answer

Fee: $0.009 \times \$300{,}000 = \$2{,}700$; $\$2{,}700 \div \$40 = 67.5$, so about 68 trades. The deeper point: the broker's income grows with trading and the adviser's with the account's growth, so each model carries its own temptation, and the law's answer in both cases is disclosure and a duty to the client.

12. Challenge Joseph in Genesis 39 and a modern IAR both hold “all that he hath” for another. Write three sentences naming two duties they share and the one protection Potiphar never had that a modern client does.

Show answer

Both owe loyalty — managing the master's goods for the master's benefit, not their own — and faithfulness in small, unwatched things. Both must keep back nothing entrusted to them. The modern client adds written disclosure and regulatory oversight: the Advisers Act compels in law what Joseph gave from character.

COMMON MISTAKES

- Saying a broker-dealer is a fiduciary by default — the classic line on the exam is adviser: fiduciary; broker-dealer: suitability (best interest when recommending to retail customers today).
- Forgetting that ALL three prongs — advice, business, compensation — must be present before someone is an investment adviser.

- Thinking a conflict of interest is automatically illegal; the fiduciary breach is the failure to disclose it.
- Believing scalping is only fraud if the recommendation was bad or clients lost money — Capital Gains says the concealment itself is the fraud.
- Calling every employee of an advisory firm an IAR; purely clerical staff are not.

Make it a game · Fiduciary or Suitability?. Write ten short scenarios on slips (an adviser hides a fee; a broker recommends a fitting but pricey fund; an adviser discloses a conflict in writing; a newsletter scalps a stock…). A parent or sibling draws and reads each slip; you have ten seconds to call out ADVISER-FIDUCIARY, BROKER-SUITABILITY, or FRAUD, then one sentence of why. One point per correct call, bonus point if your reason names disclosure. Swap roles for round two — writing good scenarios teaches more than answering them. Best of twenty slips wins.

Scripture. “Moreover it is required in stewards, that a man be found faithful.” (1 Corinthians 4:2, KJV)

Paul's one requirement for a steward is the whole fiduciary standard in seven words. The law can demand disclosure and punish fraud, but faithfulness — the thing actually required — is a matter of character formed long before the exam.

1.2 From Buttonwood to Black Thursday: How American Markets Grew

OBJECTIVES

- Tell the story of the Buttonwood Agreement of 1792 and the growth of the New York Stock Exchange.
- Define primary and secondary markets and say which one the NYSE is.
- Explain how buying stock on 10% margin multiplies both gains and losses.
- Recount the events of October 1929 — Black Thursday and Black Tuesday — with their dates.
- Explain how the stock ticker of 1867 changed who could follow the market.

> **Warm-up.** With pencil and paper: you buy something worth $100 using $10 of your own money and $90 borrowed. If its price falls to $90 and you sell to repay the loan, what is left of your $10? Write the answer in one line — you have just discovered the arithmetic of 1929.

WATCH

The 1929 Stock Market Crash - Black Thursday - Extra History

Extra History · 9:14

https://www.youtube.com/watch?v=D2iuUzkKu9k

> **WHEN TO WATCH**
> Watch after the core ideas; keep a list of every borrowed dollar you hear about — call loans, margin accounts, installment buying — and star the ones that made the crash worse.

BACKUP VIDEO

The Great Depression - 5 Minute History Lesson

The Plain Bagel · 5:40

https://www.youtube.com/watch?v=62DxELjuRec

A brisk second telling that carries the story past the crash into the 1930s; watch it before the project to see where next lesson's laws fit.

KEY TERMS

primary market

The market where an issuer sells new securities to investors and the sale proceeds go to the issuer, as in an initial public offering.

secondary market

The market where investors trade existing securities among themselves, with proceeds going to the selling investor, not the issuer; exchanges are secondary markets.

exchange

An organized marketplace, such as the New York Stock Exchange, where listed securities are bought and sold under set rules.

margin

Buying securities partly with money borrowed from a broker, with the securities as collateral for the loan.

margin call

A broker's demand that a margin customer deposit more money when the value of the collateral falls.

call loan

A loan to a broker, repayable on demand, that financed 1920s margin buying — callable at the worst possible moment.

stock ticker

The telegraph-driven machine of 1867 that printed prices on paper tape, letting people far from the exchange floor follow trades in near-real time.

bull and bear markets

A bull market is a long period of rising prices; a bear market is a long period of falling prices.

CORE IDEAS

The story. On May 17, 1792, twenty-four brokers gathered on Wall Street — by tradition under a buttonwood tree, the New Yorkers' name for a sycamore — and signed a two-sentence pact. They agreed to trade securities only with one another and to charge customers a minimum commission of one quarter of one percent. The city had just been scorched by its first financial panic: the speculator William Duer had borrowed wildly to corner government bonds and bank shares, failed, and gone to debtors' prison while the market collapsed around him. The brokers' little **Buttonwood Agreement** was a promise of orderly dealing among known men, and it grew. In 1817 the signers' successors organized formally as the New York Stock &

Exchange Board, renamed the **New York Stock Exchange** in 1863. What began under a tree became the central secondary market of the United States — and the stage for the great drama of 1929.

How they figured it out. Two inventions made a local club into a national market. The telegraph carried prices between cities from the 1840s. Then in 1867 Edward A. Calahan, an engineer for the American Telegraph Company, built the first **stock ticker**: a printing telegraph that punched out company names and prices on an endless paper tape, chattering like a clock gone mad. (A young telegrapher named Thomas Edison soon sold improvements to it and used the money to open his first workshop.) Before the ticker, you needed a messenger boy or a seat near the floor to know a price; after it, a banker in Chicago or a dentist in Des Moines could watch the tape in a brokerage office. The ticker democratized market information — and in the 1920s, it broadcast a boom into every town in America.

The big idea. Fix this vocabulary now, because the exam assumes it everywhere. In the **primary market**, the issuer sells new securities and keeps the proceeds: a company raising money sells its initial public offering to investors, and the cash builds factories. In the **secondary market**, investors sell to other investors, and the issuer gets nothing: when you buy 100 shares on the NYSE, your money goes to whoever sold them, not to the company. The exchange is a secondary market — the company got its money years ago, at issuance. Both markets need each other: no one would buy new issues (primary) without confidence of being able to resell them (secondary), and the secondary market's prices tell the primary market what new capital should cost.

Now the arithmetic that made 1929 so terrible: **margin**. Through the 1920s a customer could buy stock with as little as 10% down, borrowing the rest from his broker, who in turn borrowed from banks through **call loans** — repayable on demand. Put up $1,000, control $10,000 of stock. If the stock rises 10%, you gain $1,000 — a 100% return on your money, and in a rising market the game feels free. But if the stock falls 10%, your entire $1,000 is gone; fall further and the broker issues a **margin call** — more cash at once, or he sells you out at the market. Multiply that by hundreds of thousands of accounts: falling prices forced selling, which lowered prices, which forced more selling. Leverage turned a decline into an avalanche.

The avalanche came in October 1929. The Dow Jones Industrial Average had peaked at 381.17 on September 3. On **Black Thursday**, October 24, a record 12.9 million shares changed hands and the ticker fell hours behind — men sold without knowing what prices were, because the tape could not keep up. At midday a pool of leading bankers sent the exchange's acting president, Richard Whitney, striding across the floor to bid boldly for U.S. Steel, and the market steadied for a day or two, as it had in panics past. But on **Black Tuesday**, October 29, more than 16 million shares flooded the market and no pool on earth could hold the tide. Margin calls went out by the tens of thousands; accounts built on 10% equity were wiped out by a 10% decline. The slide ran on, with rallies and relapses, until July 1932, when the Dow closed at 41.22 — roughly 89% below its peak. Fortunes, pensions and bank deposits went with it.

Be careful how you tell this story, because glib versions fail exam questions and history alike. The crash did not by itself cause the Great Depression — economists still argue over banking failures, monetary policy and tariffs — and the exam will not ask you to settle that. What the crash did, beyond dispute, was expose how the machinery had been abused: prices pumped by pools and tips, stocks sold on rumor to buyers borrowing 90 cents on the dollar, and no federal rule requiring anyone to tell an investor the truth. Within four years, Congress answered — and that answer, the securities acts of 1933 and 1934, is the next lesson.

On the exam today. Primary versus secondary market is bedrock: the exam asks it straight ("in which market does the issuer receive the proceeds?") and sideways (a client buying listed shares "from the company" — no; from another investor). Know that exchanges are secondary markets. Margin arithmetic appears in the client-recommendation section: leverage multiplies percentage gains and losses on the investor's own equity, and you should be able to compute the wipeout point. The history itself — Buttonwood 1792, ticker 1867, the Crash of 1929 — is rarely tested by date, but it is the reason every statute in this course exists, and examiners write questions assuming you know that the federal securities laws are children of 1929.

PICTURE STUDY

Crowds Outside the New York Stock Exchange, October 1929, Unknown photographer, October 1929 · Photograph · Library of Congress, Washington, D.C.

Image: Wikimedia Commons, public domain

An unknown news photographer caught this scene on Wall Street as the market broke in October 1929. There is no riot in the picture — that is what makes it terrible. Thousands of men in hats simply stand in the street outside the Exchange, because inside, the ticker is hours behind and nobody knows what his stocks are worth or whether his savings still exist. It sits in this lesson as the photograph of the day the margin arithmetic came due.

Look closely

- Find the columns of the Exchange facade. The building projects permanence — compare it with the uncertainty on the street.
- Notice how the men stand: hands in pockets, faces turned different ways. What are they waiting for?
- Find the statue above the crowd (George Washington, at Federal Hall across the street) — the founding era literally overlooking the panic.
- Look for anyone who seems to be in a hurry. The stillness of a crowd that can do nothing is the real subject.

Talk about it

1. Why would falling prices bring people into the street when the trading happened indoors?
2. How did buying on 10% margin turn these bystanders' modest declines into total losses?
3. The photograph shows no villain. Who, if anyone, was to blame for 1929 — and why did Congress decide the answer was disclosure rather than closing the market?

PROJECT

The Market Timeline, 1792–1929

You will build the first half of the law timeline for your Pathway File: a hand-drawn line from the buttonwood tree to Black Tuesday, with the market machinery (exchange, ticker, margin) on top and the warnings (panics) below. Next lesson you will extend it with the laws each disaster produced.

You will need

- A sheet of paper turned sideways (or two taped together), ruler, pencil, two ink colors
- Your exam notebook
- This lesson's core ideas and, if you like, a chapter of Clews's Fifty Years in Wall Street from the kit

Steps

1. Draw a horizontal line and mark even decades from 1790 to 1930.
2. Above the line, add the building of the market: 1792 Buttonwood Agreement (24 brokers, ¼% commission), 1817 New York Stock & Exchange Board, 1863 renamed NYSE, 1867 Calahan's stock ticker, 1920s margin boom at 10% down.
3. Below the line, add the warnings: the Duer panic of 1792, one other panic you find in Clews (1857, 1873, 1893 or 1907 — your choice), and October 1929 with both dates: Black Thursday the 24th, Black Tuesday the 29th.
4. At 1929, write the three numbers of the crash in a box: Dow peak 381.17 (Sept 3, 1929), bottom 41.22 (July 1932), about 89% decline.
5. Add a small two-column legend defining primary market and secondary market, and mark the NYSE's spot on the line with an S for secondary.
6. In the bottom margin, work the warm-up problem cleanly: $100 position, $10 equity, price to $90 — equity gone. Title it “Why 1929 fell so hard.”
7. Leave the right third of the page empty and label it “the laws — next lesson.”

Tips

- Write small and neatly; this timeline gains four more entries in Lessons 1.3 and 1.4 and must stay readable.

- Say the dates aloud as you write them — 1792, 1867, 1929 — until they come without looking.

Check your work

- ☐ My timeline has at least five events above the line and three below, each with a date.
- ☐ I can point to the line and tell the whole story aloud in under three minutes.
- ☐ My legend defines primary and secondary markets correctly.
- ☐ The 1929 box has all three numbers right.

EXAM NOTEBOOK

1. Make a margin table in your notebook: price falls of 5%, 10%, 15%, 20% across the top; 10% down and 50% down as rows; fill in the investor's percentage loss of equity for each cell.
2. Draw the ticker as a one-panel sketch — a glass dome, a chattering wheel, a paper tape — and under it write the one sentence of what it changed: anyone, anywhere, could watch the market.
3. Make flashcards for primary market and secondary market, each with one example on the back, and add them to your box.

KEY FORMULAS

$$\text{Equity} = \text{market value of securities} - \text{amount borrowed}$$

$$\text{Return on equity} = \frac{\text{gain or loss on position}}{\text{investor's own money}}$$

From history. The buttonwood tree itself, an old sycamore at 68 Wall Street, stood until a storm toppled it in 1865 — two years after the exchange that began beneath it took the name it bears today. The minimum-commission rule the twenty-four brokers signed in 1792 outlived the tree by more than a century: fixed commissions on the NYSE lasted until May 1, 1975, a day Wall Street still calls May Day.

WORKED EXAMPLES

Example 1. In 1929 terms: an investor buys $12,000 of stock with 10% down — $1,200 of his own money and $10,800 borrowed. The stock falls 15%. Find his equity and his percentage loss on his own money.

Show solution

1. New market value: $\$12{,}000 \times 0.85 = \$10{,}200$.
2. Equity = market value − loan: $\$10{,}200 - \$10{,}800 = -\$600$. His equity is not just gone — he owes $600 beyond his investment.
3. Loss on his own money: he put in $1,200 and is down $1,800, a loss of $\$1{,}800 / \$1{,}200 = 150\%$.
4. A 15% price decline became a 150% loss of equity — the 10× multiplier of 10% margin, working in reverse.

Answer: Equity $-\$600$ (he owes more than the stock is worth); a 15% market fall cost him 150% of his own money.

Example 2. Exam style. In which of the following transactions does the issuing corporation receive the proceeds of the sale?

A. An investor buys 100 listed shares on the New York Stock Exchange

B. An investor buys shares in a company's initial public offering

C. An investor sells shares back to another investor over the counter

D. An investor inherits shares from an estate

Show solution

1. Ask where the money goes, not where the trade happens.
2. A is a secondary-market trade: the seller is another investor, and the company receives nothing.
3. B is the primary market: the company itself sells new shares and keeps the proceeds to use in its business.
4. C is secondary by its own words, and D involves no sale at all.
5. The exam's favorite disguise is A — students see the famous exchange and assume the company is involved. It is not.

Answer: B. Only in a primary-market transaction, such as an IPO, do sale proceeds go to the issuer; exchange trades are investor-to-investor.

Example 3. An investor buys $5,000 of stock using $2,500 of her own money and $2,500 borrowed (50% margin, the modern initial requirement under Regulation T in this example). The stock rises 20%. Find her return on her own money, and compare it with an all-cash purchase.

Show solution

1. Gain on the position: $0.20 \times \$5{,}000 = \$1{,}000$.
2. Return on her own $2,500: $\$1{,}000 / \$2{,}500 = 40\%$.
3. All cash, she would have earned 20% on $5,000 invested. Margin at 50% doubles the percentage outcome — up and down.
4. Note the historical change: the 10% down of the 1920s multiplied outcomes tenfold; since 1934 the Federal Reserve has set initial margin, 50% for many years.

Answer: A 40% gain on her own money — double the 20% all-cash return, with double the risk on a decline.

PRACTICE

1. Easy What was agreed in the Buttonwood Agreement of 1792?

   Show answer

   Twenty-four brokers agreed to trade securities only with one another and to charge a minimum commission of one quarter of one percent — the seed of the New York Stock Exchange.

2. Easy An investor buys 200 existing shares of a listed company on an exchange. Is this a primary or secondary market transaction, and who receives the money?

   Show answer

   Secondary market: the money goes to the selling investor, not to the company.

3. Easy What were Black Thursday and Black Tuesday, with dates?

   Show answer

   The panic selling days of the 1929 crash: Black Thursday, October 24, 1929 (record 12.9 million shares), and Black Tuesday, October 29, 1929 (over 16 million shares).

4. **Medium** A 1920s investor buys $8,000 of stock with 10% down. How much of his own money is invested, and what price decline wipes out his equity?

   A. $800; a 10% decline

   B. $800; a 90% decline

   C. $7{,}200; a 10% decline

   D. $4{,}000; a 50% decline

   Show answer

   A. He invests $800 and borrows $7,200; a 10% fall ($800) erases his equity exactly. B confuses the equity with the loan share; it is the loan that is 90%.

5. **Medium** Which of the following is a PRIMARY market transaction?

   A. Buying listed shares on the NYSE

   B. Selling shares to a friend in a private resale

   C. Buying newly issued shares in a company's public offering

   D. Buying shares from a dealer's inventory

   Show answer

   C. Only the new issue sends proceeds to the issuer. A, B and D are all investor-to-investor (or dealer-to-investor) trades in existing shares — secondary market, however it is dressed.

6. **Medium** What did Edward Calahan's invention of 1867 do, and why did it matter to ordinary investors?

   Show answer

   The stock ticker printed exchange prices on telegraph-driven paper tape, so people far from the floor could follow trades almost live; market information stopped being the private property of those standing on Wall Street.

7. **Medium** Why does a secondary market make the primary market possible? Answer in two sentences.

   Show answer

   Investors will pay for new issues only if they are confident they can resell them later, which the secondary market provides. Its continuous prices also tell issuers and investors what new securities are worth.

8. Medium A margin customer's stock falls and her broker demands additional cash immediately. What is this demand called, and what happens if she cannot meet it?

   A. A call loan; the loan converts to equity

   B. A margin call; the broker may sell her securities

   C. A tender offer; she must sell to the issuer

   D. A short sale; her position reverses

   Show answer

   B. A margin call demands more equity, and an unmet call lets the broker liquidate the collateral. A call loan (choice A) is the broker's own demand loan from a bank — related machinery, different thing, and a favorite exam mix-up.

9. Hard An investor buys $20,000 of stock at 50% margin. The stock rises 30%. Find her return on her own money, and the return had she paid all cash.

   Show answer

   Own money $10,000; gain $0.30 \times \$20{,}000 = \$6{,}000$; return on equity $\$6{,}000/\$10{,}000 = 60\%$ versus 30% all cash. Margin at 50% doubles the percentage move, in either direction.

10. Hard On Black Thursday the ticker ran hours late. Explain in two or three sentences why late price information made the panic worse.

    Show answer

    Sellers could not learn what prices their orders had actually received, so fear filled the information gap and they sold more to be safe. Margin clerks could not value collateral accurately, so calls went out on stale, falling prices. A market's calm depends on everyone seeing the same current prices — the very service the ticker had provided since 1867.

11. Hard From the story: the Dow peaked at 381.17 in September 1929 and bottomed at 41.22 in July 1932. Compute the percentage decline, and state one reason the decline continued long after the October crash.

    Show answer

    $(381.17 - 41.22)/381.17 \approx 89\%$. The slide continued because forced margin selling, bank failures and shrinking credit kept feeding on one another well past October.

12. **Challenge** A promoter tells your client: “Stocks on the big exchange are safe — the company stands behind every share you buy there.” Write a three-sentence correction using primary market, secondary market and 1929.

Show answer

> Shares bought on an exchange come from other investors, not from the company — the exchange is a secondary market, and the issuer received its money only at the original primary-market issuance. The company does not stand behind the price; buyers and sellers set it minute by minute. 1929 proved that exchange listing is no guarantee of safety, which is why disclosure laws, not promoters' comfort, protect investors.

COMMON MISTAKES

- Thinking the company receives money when its shares trade on an exchange — exchange trades are secondary; only primary-market sales fund the issuer.
- Computing a margin investor's loss on the whole position instead of on his own equity — leverage multiplies the percentage on equity.
- Confusing a margin call (demand on the customer for more equity) with a call loan (the broker's own demand loan from a bank).
- Writing that the 1929 crash alone caused the Great Depression; it exposed abuses and destroyed wealth, but the Depression had several causes historians still weigh.
- Mixing up the two black days: Thursday was October 24, Tuesday — the worse one — October 29.

> **Make it a game · Margin Call.** Each player starts with $1,000 of pretend equity and “buys” $10,000 of stock (10% down, 1929 rules). A parent rolls a die each round for the market: 1–2 the price falls 5%, 3–4 it rises 5%, 5–6 it rises 10%. After every fall, recompute your equity (value minus the $9,000 loan); if it hits zero you are wiped out and start over with $500. First player to double their original equity wins — then replay the same rolls at 50% margin and see who survives. Fastest correct arithmetic each round steals $100 from the slower player.

> **Scripture.** “The rich ruleth over the poor, and the borrower is servant to the lender.” (Proverbs 22:7, KJV)
>
> Margin buying is borrowing, and 1929 showed the proverb exactly: when prices fell, the lenders called, and a million borrowers discovered they were servants — sold out at the bottom whether they wished it or not.

1.3 Truth After the Crash: The Securities Acts of 1933 and 1934

OBJECTIVES

- Tell the story of the Pecora hearings and how they prepared the way for federal securities law.
- State what the Securities Act of 1933 requires: registration of new issues and a prospectus, with certain exempt securities.
- State what the Securities Exchange Act of 1934 does: regulates secondary markets and broker-dealers, and created the SEC.
- Explain the disclosure philosophy — the law compels truth-telling rather than judging investments.
- Explain in plain words the antifraud idea behind Section 10(b) and Rule 10b-5.

> **Warm-up.** In five minutes, write the rules you would have passed in 1933 if Congress had given you the pen — three rules, one line each. At the end of the lesson, compare your rules with the ones Congress actually wrote.

WATCH

The Securities Act of 1933 and the Securities Exchange Act of 1934

Edspira · 7:30

https://www.youtube.com/watch?v=bI9wZenbcs4

> **WHEN TO WATCH**
> Watch after the big idea; each time an act is named, say aloud which market it governs — 1933 new issues, 1934 trading — until the pairing is automatic.

BACKUP VIDEO

The Securities Act of 1933

U.S. Securities and Exchange Commission · 2:28

https://www.youtube.com/watch?v=y3QNNKdu8II

The regulator explains its own founding statute in under three minutes; watch it just before the project as a model of how briefly a law can be summarized.

KEY TERMS

Securities Act of 1933

The federal "truth in securities" law requiring registration of new issues and delivery of a prospectus, with antifraud liability for untrue statements.

Securities Exchange Act of 1934

The federal law governing secondary markets: it created the SEC and regulates exchanges, broker-dealers, trading practices and ongoing company reporting.

Securities and Exchange Commission (SEC)

The federal agency created by the 1934 Act to administer the securities laws and protect investors.

registration statement

The disclosure document an issuer files with the SEC before offering new securities to the public.

prospectus

The disclosure document, drawn from the registration statement, that must be given to buyers of a new issue.

exempt security

A security excused from federal registration — such as U.S. government and municipal securities — though never from the antifraud rules.

Rule 10b-5

The SEC rule under Section 10(b) of the 1934 Act making it unlawful to employ any device to defraud, misstate or omit a material fact, or deceive in connection with the purchase or sale of any security.

Pecora hearings

The Senate Banking Committee's 1932–34 investigation of Wall Street practices, whose revelations built public support for the securities acts.

CORE IDEAS

The story. In January 1933 the Senate Banking Committee's investigation of the crash was going nowhere — until, in January 1933, it hired a new chief counsel: a Sicilian-born former New York prosecutor named **Ferdinand Pecora.** Working for a modest government salary, Pecora put the princes of Wall Street in the witness chair and asked them, politely and relentlessly, to explain their books. The country, huddled around its radios in the worst winter of the Depression, heard astonishing things: Charles E. Mitchell, head of National City Bank, had paid himself enormous bonuses

while his bank's securities affiliate unloaded shaky bonds on its own depositors; J.P. Morgan & Co. kept a "preferred list" of influential men offered stock below the market price; mighty financiers had paid no income tax at all in the crash years. None of it, under the law of the time, was clearly illegal — and that was precisely the scandal. The **Pecora hearings** ran from 1932 to 1934, and they turned public anger into legislative momentum: within eighteen months Congress passed the two statutes this lesson teaches, and Pecora himself became one of the first commissioners of the new SEC.

How they figured it out. Congress faced a choice of philosophies. It could judge investments — let a federal board decide which securities were sound enough to sell, as some state laws tried to do. Or it could compel **disclosure** — let anyone sell almost anything, provided he first told the whole truth about it, under penalty of law. Congress chose disclosure, borrowing the old English idea that sunlight disinfects. President Roosevelt, urging the law on Congress, summarized it in a phrase worth memorizing: the law adds "to the ancient rule of caveat emptor" — let the buyer beware — "the further doctrine, let the seller also beware." The government would not promise that a security was a good investment; it would promise that the seller had told the truth, and punish him if he had not.

The big idea. The **Securities Act of 1933** governs the *primary* market — new issues. Before securities may be offered to the public, the issuer must file a **registration statement** with full financial disclosure, and buyers must receive a **prospectus** — the document that turns the registration statement into a booklet a buyer can hold. Signers of a false registration statement face civil liability, and fraud in any offering is punishable. Certain securities are **exempt** from federal registration — among them U.S. government and municipal securities, and several others you will meet in Unit 9 — but exemption from registration is never exemption from the antifraud provisions. Remember the 1933 Act by its nickname: the truth-in-securities law, the paper act, the new-issues act.

The **Securities Exchange Act of 1934** governs the *secondary* market — everything that happens after the issue is sold. It created the **Securities and Exchange Commission** and handed it the whole apparatus: registration and oversight of exchanges and of **broker-dealers**, ongoing reporting by public companies, regulation of proxies and insider reporting, and authority over manipulation and deception in trading. It also answered 1929's margin madness by giving the Federal Reserve power to set margin

requirements. Where the 1933 Act is a single checkpoint at the gate, the 1934 Act is the police force of the marketplace, on duty every trading day. Its first chairman was Joseph P. Kennedy; its antifraud heart is **Section 10(b)**.

Section 10(b) in plain words: in connection with buying or selling any security, you may not use any scheme to defraud, you may not state a material untruth, you may not omit a fact whose absence makes what you did say misleading, and you may not otherwise deceive. The SEC wrote this out in 1942 as **Rule 10b-5**, and it reaches everyone — issuers, brokers, advisers, printers, barbers with hot tips — and every security, exempt or registered, listed or obscure. When you hear of insider-trading cases, 10b-5 is usually the rule at work. For the Series 65, you need the idea, not the case law: the antifraud net under the American securities market is Section 10(b) of the 1934 Act, and nothing swims under it.

Hold the two acts side by side until the symmetry locks in. 1933: primary market; new issues; registration statements and prospectuses; truth at the moment of sale. 1934: secondary market; trading; created the SEC; regulates exchanges and broker-dealers; ongoing reports; margin authority to the Fed; antifraud in trading. The years themselves teach the order: first the paper (1933), then the police (1934). Every later statute in this course — the Advisers Act of 1940 in the next lesson, the Uniform Securities Act in the states — assumes this federal foundation and builds on it.

On the exam today. The exam tests the pairing constantly and loves to cross the wires: a question will attribute the prospectus requirement to the 1934 Act, or claim the 1933 Act created the SEC (it did not — the Federal Trade Commission administered the 1933 Act for its first year, until the 1934 Act created the SEC). Know that exempt securities — government and municipal issues above all — escape registration but never antifraud. Know that the SEC does not approve or pass on the merits of any security, and that any claim it does is itself a violation. And when a question describes deception in a purchase or sale of any security whatsoever, the answer naming Section 10(b)/Rule 10b-5 of the 1934 Act is pointing at the right statute.

PICTURE STUDY

Ferdinand Pecora, Unknown photographer, About 1933 · Photograph · United States, from the press coverage of the Senate Banking Committee investigation

Image: Wikimedia Commons, public domain

This is the face the bankers saw across the hearing-room table in 1933. Ferdinand Pecora came to America from Sicily as a boy of four, worked his way through law school, and spent a decade prosecuting fraud in New York before the Senate hired him — its fourth try at a chief counsel — for the Wall Street investigation. He asked quiet, exact questions and declined to be awed. The photograph belongs to this lesson because the securities acts began not with a theory but with a man patiently making powerful people explain themselves in public.

Look closely

- Study the eyes and the set of the mouth. Does this look like a man who raises his voice, or one who asks the next question?
- Notice the careful, formal dress of a 1930s professional man — the immigrant prosecutor meeting the financiers on their own ground.
- Find the age in the face. Pecora was about fifty here, with thirty years of courtrooms behind him.
- Compare this single composed face with the anxious crowd photograph from Lesson 1.2 — the problem and the response, four years apart.

Talk about it

1. Why was public questioning — mere exposure, before any new law passed — so powerful in 1933?
2. Pecora found that much of what shocked the country had been perfectly legal. Why is "it was legal" sometimes an indictment of the law itself?
3. The hearings led to disclosure statutes rather than a government that picks good investments. What does that choice assume about ordinary citizens?

PROJECT

Extend the Timeline: The Laws Answer the Crash

You will finish the right side of the timeline you began in Lesson 1.2, adding the Pecora hearings and the two great acts — then write the one-paragraph brief of each act that will serve you for the rest of the course.

You will need

- Your timeline sheet from Lesson 1.2
- Your exam notebook and two ink colors
- The SEC's What We Do page from the kit

Steps

1. On the empty right third of your timeline, add below the line: 1932–34 Pecora hearings, with one revelation that struck you written in five words or fewer.
2. Add above the line: 1933 Securities Act and 1934 Securities Exchange Act, each in its own color.
3. Under 1933, list its three memory hooks: new issues · registration + prospectus · truth in securities.
4. Under 1934, list its four: secondary market · created the SEC · regulates exchanges and broker-dealers · antifraud 10(b).
5. In your notebook, write a five-sentence brief of each act as if explaining it to a younger sibling — no legal words you cannot define.
6. Read the SEC's What We Do page and add one sentence to your 1934 brief about the Commission's three-part mission.
7. Draw a small scale (a balance) at 1933 and label the pans caveat emptor and let the seller also beware.

Tips

- Keep the color coding: everything 1933 in one color, everything 1934 in the other, here and in every future note.
- The five-sentence briefs are worth more than an hour of rereading — write them from memory first, then correct.

Check your work

- ☐ My timeline now runs 1792–1934 with the hearings and both acts placed and dated.
- ☐ My 1933 brief mentions registration, the prospectus and exempt securities.
- ☐ My 1934 brief mentions the SEC, broker-dealers, ongoing regulation and the antifraud rule.
- ☐ I can say which act created the SEC without hesitation.

EXAM NOTEBOOK

1. Make a two-column master table — 1933 ACT | 1934 ACT — with rows for market governed, key documents or powers, who it created, and nickname; this table answers more exam questions than any other page you will write this unit.
2. Write Rule 10b-5's three prohibitions in your own words — no scheme to defraud, no material misstatement or omission, no deceptive practice — and box the phrase “in connection with the purchase or sale of ANY security.”
3. Make flashcards: front “exempt security — registration?” back “No federal registration needed — but antifraud ALWAYS applies.”

> **From history.** The hearings made Pecora a national figure — his face on the cover of Time in June 1933 — but the banking fraternity never forgave him. When the “preferred list” revelations embarrassed J.P. Morgan Jr., Morgan's partners complained of a circus; days later a press agent actually placed a circus performer, the tiny Lya Graf, on Morgan's knee for photographers, and the picture of the banker and the sideshow artist became the era's emblem of Wall Street's fallen dignity. Pecora's own memoir of the investigation, published in 1939, bore a title straight from this course: Wall Street Under Oath.

WORKED EXAMPLES

Example 1. Exam style. Which of the following is a requirement of the Securities Act of 1933?

A. Registration of securities exchanges

B. Registration of new public offerings and delivery of a prospectus

C. Creation of the Securities and Exchange Commission

D. Federal Reserve authority over margin requirements

Show solution

1. Sort each choice by market: new issues (1933) or trading machinery (1934).
2. A is exchange registration — the 1934 Act's territory.
3. B is the heart of the 1933 Act: register the new issue, deliver the prospectus.
4. C and D are both 1934 Act provisions — the SEC and margin authority were created there, five years after the crash began.
5. The classic trap is C: students reason "securities act, securities commission" — but the SEC is a child of 1934.

Answer: B. The 1933 Act is the truth-in-securities law for new issues; exchanges, the SEC and margin rules all come from the 1934 Act.

Example 2. A customer wants to buy $9,000 of listed stock in a margin account. With the Federal Reserve's initial margin requirement at 50% under Regulation T in this example, how much must the customer deposit, and which act gave the Fed this power?

Show solution

1. Initial margin: $0.50 \times \$9{,}000 = \$4{,}500$.
2. The customer deposits $4,500 and borrows $4,500 from the broker-dealer.
3. Compare 1929: at 10% down the deposit would have been only $900, with $8,100 borrowed — the leverage Congress acted to tame.
4. The Securities Exchange Act of 1934 gave the Federal Reserve authority to set margin requirements.

Answer: $4,500, under margin authority the 1934 Act assigned to the Federal Reserve.

Example 3. Exam style. A city issues general obligation bonds without filing a federal registration statement, and a salesman selling them lies about the city's finances. Which statement is TRUE?

A. The bonds violated the 1933 Act by not registering

B. The salesman cannot be prosecuted because the bonds are exempt

C. The bonds are exempt from registration, but the fraud is still unlawful

D. Municipal bonds must register with the SEC like corporate stock

Show solution

1. Municipal securities are exempt securities under the 1933 Act, so no registration statement was required — A and D fall.
2. B states the trap in its purest form: exemption from registration is NOT exemption from antifraud.
3. The lie about the city's finances is fraud in the offer or sale of a security, reachable under the antifraud provisions regardless of exemption.
4. C states both halves correctly.

Answer: C. Exempt securities skip registration paperwork, but the antifraud provisions cover every offer and sale of any security, exempt or not.

PRACTICE

1. Easy Which act is called the “truth in securities” law, and what market does it govern?

   Show answer

   The Securities Act of 1933; it governs the primary market — new issues offered to the public.

2. Easy Which act created the SEC?

   Show answer

   The Securities Exchange Act of 1934.

3. Easy Name two securities exempt from registration under the 1933 Act.

   Show answer

   U.S. government securities and municipal securities (among others) — exempt from registration, never from antifraud rules.

4. **Medium** Who was Ferdinand Pecora and why do the securities acts carry his fingerprints?

Show answer

The former New York prosecutor who, as chief counsel to the Senate Banking Committee (1932–34), exposed Wall Street's practices in public hearings; the outrage his questioning produced carried the 1933 and 1934 Acts through Congress, and he became an early SEC commissioner.

5. **Medium** A company offering new shares to the public must deliver which document to buyers?

A. A proxy statement

B. A prospectus

C. An annual report

D. A margin agreement

Show answer

B. The prospectus, drawn from the registration statement, is the 1933 Act's disclosure document for new issues. Proxy statements and periodic reports belong to the 1934 Act's ongoing regime.

6. **Medium** The SEC reviews a registration statement and lets it become effective. This means:

A. The SEC has approved the security as a sound investment

B. The SEC guarantees the accuracy of the prospectus

C. The required disclosures appear complete; the SEC passes no judgment on merit

D. The security cannot lose value in its first year

Show answer

C. The SEC never approves, guarantees or passes on the merits of a security — and claiming it does is itself a violation. A and B restate the single most common civilian misunderstanding of the system.

7. Medium Which of the following falls under the Securities Exchange Act of 1934?

A. Registration of a corporation's initial public offering

B. The prospectus delivery requirement

C. Regulation of broker-dealers and securities exchanges

D. The federal exemption for municipal new issues

Show answer

C. The 1934 Act polices the secondary market — exchanges, broker-dealers, trading. A, B and D all describe the 1933 Act's new-issue territory.

8. Medium State Roosevelt's summary of the 1933 Act's philosophy and explain it in one sentence.

Show answer

To the ancient rule of caveat emptor is added: let the seller also beware — the government would not pick good investments, but it would force sellers to tell the whole truth and punish those who did not.

9. Hard A promoter sells unregistered interests in a private venture and lies about its finances. He argues Rule 10b-5 cannot touch him because the interests were never registered or listed. Evaluate his argument.

Show answer

It fails. Section 10(b) and Rule 10b-5 prohibit fraud in connection with the purchase or sale of ANY security — registered or unregistered, exempt or listed. Registration status affects paperwork duties, never the antifraud net.

10. Hard In this example, a customer buys $14,000 of stock on margin when Regulation T initial margin is 50%. State the required deposit, the amount borrowed, and the statute under which the Fed sets the requirement.

Show answer

Deposit $7,000; borrowed $7,000; the Securities Exchange Act of 1934 gave the Federal Reserve margin authority.

11. Hard Why did Congress choose disclosure over merit review in 1933? Give two reasons in three sentences.

Show answer

A federal board picking "sound" investments would make the government the guarantor of markets it cannot actually predict, and an effective stamp of approval would lull buyers rather than inform them. Disclosure instead equips the buyer to judge and leaves responsibility with seller and buyer alike. Sunlight, not certification, was the chosen disinfectant.

12. Challenge Arrange in correct order with one identifying phrase each: Securities Exchange Act, Pecora hired, Black Tuesday, Securities Act, SEC opens its doors.

Show answer

Black Tuesday (Oct. 29, 1929 — the crash); Pecora hired (Jan. 1933 — the investigation finds its counsel); Securities Act (May 1933 — truth in new issues); Securities Exchange Act (June 1934 — trading regulated); SEC opens its doors (mid-1934 — the new commission, with Joseph P. Kennedy its first chairman, takes over from the FTC).

COMMON MISTAKES

- Attributing the SEC's creation to the 1933 Act — the SEC was created by the Securities Exchange Act of 1934.
- Thinking exempt securities are exempt from antifraud provisions; exemption touches registration only.
- Saying the SEC "approves" securities or vouches for their merit — it reviews disclosure and judges nothing.
- Assigning the prospectus requirement to the 1934 Act; the prospectus belongs to the 1933 Act's new-issue regime.
- Forgetting that Rule 10b-5 covers ANY security and ANY person — not just listed stocks or registered firms.

Make it a game · 1933 or 1934?. Write a dozen features on slips: prospectus, created the SEC, registers new issues, regulates broker-dealers, margin authority to the Fed, truth in securities, exchanges register, Rule 10b-5, proxy rules, exempt securities list, ongoing company reports, primary market. Shuffle. A parent flashes one slip at a time and you have five seconds to slap the correct year — make two paper mats labeled 1933 and 1934 — one point each, minus one for a wrong slap. Then reverse roles: you flash, the parent slaps, and you referee with your notebook open. Best score of two rounds wins the week.

Scripture. “A false balance is abomination to the LORD: but a just weight is his delight.” (Proverbs 11:1, KJV)

The securities acts are a national set of just weights: the registration statement and prospectus exist so the scale reads true before money changes hands. God's hatred of the false balance long preceded the SEC's.

1.4 The Investment Advisers Act of 1940 and the Blue-Sky Laws

OBJECTIVES

- Explain why Congress passed the Investment Advisers Act of 1940 and what it requires in broad terms.
- Tell the story of Kansas's 1911 blue-sky law and bank commissioner J. N. Dolley.
- Explain what the Uniform Securities Act of 1956 is and why the Series 65 tests it.
- State what NSMIA (1996) did: dividing federal covered advisers from state-registered advisers.
- Place all the securities laws of this unit on one timeline, federal above and state below.

> **Warm-up.** With pencil and paper, spend five minutes designing a swindle-stopper: a traveling salesman is selling shares in a gold mine nobody has seen. Write the one requirement your state could impose before he may sell. Keep it — Kansas's actual answer of 1911 comes in the story.

WATCH

Series 65 Exam Prep: Investment Advisers Act of 1940 | Pass the Series Unit 9

Pass the Series · 12:08

https://www.youtube.com/watch?v=3N-wj4KHhOs

> **WHEN TO WATCH**
> Watch after the core ideas; this teacher previews details you will master in Unit 9, so note anything unfamiliar as a question in your notebook margin rather than a worry.

BACKUP VIDEO

Explanation of Blue Sky Laws - Series 63 Exam, Series 65 Exam and Series 66 Exam

Series 7 Guru · 3:09

https://www.youtube.com/watch?v=c85NdOAT05c

A three-minute refresher on the state side; watch it right before the project to hold the blue-sky layer firm while you draw.

KEY TERMS

Investment Advisers Act of 1940

The federal law requiring investment advisers to register and dealing with their conduct, read since 1963 as imposing fiduciary duties.

blue-sky laws

State securities laws — named for schemes backed by nothing but "so many feet of blue sky" — beginning with Kansas in 1911.

Uniform Securities Act (USA) of 1956

The model state law, drafted so states could adopt matching securities statutes; the version of state law the Series 65 tests.

Administrator

The state official (or agency) who enforces a state's securities law — the single most-named character on the Series 65.

NSMIA

The National Securities Markets Improvement Act of 1996, which divided regulation: larger advisers register federally with the SEC, smaller ones with the states.

federal covered adviser

An adviser registered with the SEC under the Advisers Act (generally the larger firms by assets under management), exempt from state registration though not from state antifraud authority.

NASAA

The North American Securities Administrators Association, the organization of state regulators that writes the Series 65 exam.

registration

The licensing process by which securities, firms and individuals qualify with a regulator before doing business.

CORE IDEAS

The story. Kansas, 1911. The state's bank commissioner, Joseph Norman Dolley — a grocer and banker from Maryville who had watched farm families traded out of their savings — had heard enough. Promoters roamed the prairie selling shares in gold mines that had no gold, oil companies that had no oil, and ventures whose only asset, as the saying went, was the sky over Kansas. Dolley pushed through the legislature the nation's first comprehensive **blue-sky law** (March 1911): before securities could be sold in Kansas, the seller had to file with the commissioner and obtain a permit, and the commissioner could refuse ventures that promised what

they could not deliver. Other states copied it within a few years, and promoters sued, claiming states had no such power. In 1917 the Supreme Court upheld the laws in *Hall v. Geiger-Jones Co.*, with Justice McKenna writing that states could protect their citizens from "speculative schemes which have no more basis than so many feet of 'blue sky.'" The nickname stuck to the whole family of state securities laws — and it is why the Series 65, a *state*-law exam at heart, exists at all.

How they figured it out. Notice that the states acted first — Kansas beat Congress to securities regulation by twenty-two years — and that the state approach differed in kind. Many blue-sky laws were *merit* laws: the commissioner could judge whether a deal was fair, not merely whether it was disclosed. The federal acts of 1933 and 1934 chose disclosure instead, and the two systems have run in parallel ever since: federal law requiring truth, state law licensing the people and sometimes weighing the merits, each with its own antifraud power. A security sold in America may answer to both. The federal government completed its half in 1940. Congress had ordered the SEC to study investment companies and the investment-counsel business (a mandate tucked into the Public Utility Holding Company Act of 1935); the SEC's reports found an advisory profession full of honest counselors — and of tipsters, touts and self-dealers indistinguishable from them on a letterhead. On August 22, 1940, President Roosevelt signed the twin results: the Investment Company Act of 1940 for funds, and the **Investment Advisers Act of 1940** for advisers.

The big idea. The Advisers Act is short and plain by federal standards. It defines an investment adviser (the three prongs you learned in Lesson 1.1), requires advisers within its reach to **register** with the SEC, and — in Section 206 — forbids any adviser, registered or not, to defraud clients. It is the statute the Supreme Court read in *Capital Gains* as imposing fiduciary duties. Its exclusions and exemptions, its brochure rule, its custody and fee rules are the meat of Unit 9; for now, fix its purpose: after 1940, advising Americans about securities for compensation became a regulated profession with a register you could check and duties you could enforce.

The states, meanwhile, had a problem of their own making: forty-some blue-sky laws, no two alike, a maze for any firm doing business across state lines. The answer came in 1956, when the National Conference of Commissioners on Uniform State Laws approved the **Uniform Securities Act** — a model statute, drafted under the Harvard scholar Louis Loss, that any state could adopt as its own. Most states did,

with local variations. The USA (the exam uses the abbreviation without a wink) regulates four registrations in one framework: broker-dealers, their agents, investment advisers and their representatives — plus the securities themselves — all under a state official the act calls the **Administrator**. When a Series 65 question speaks of "the Administrator," it is speaking the USA's language, and the exam tests the model act, not any single state's variation.

One more reform completes the map. By the 1990s a mid-sized adviser might register with the SEC *and* a dozen states — duplicate filings, duplicate audits. The **National Securities Markets Improvement Act of 1996 (NSMIA)** divided the field: larger advisers (by assets under management) register federally and are called **federal covered advisers**, and the states may not require them to register, though states keep antifraud jurisdiction over everyone and may require notice filings. Smaller advisers register with their states. The dollar thresholds have moved over the years (generally $100 million as of 2026 — the exact bands are Unit 9 work), but the architecture is what matters now: one adviser, one primary regulator — SEC for the large, the state Administrator for the rest. The IARs who work for either kind register with the states; that is what the Series 65 qualifies you to do.

Step back and see the whole structure you have built across three lessons. Federal layer: 1933 (new issues tell the truth), 1934 (trading policed, SEC created), 1940 (advisers registered and bound as fiduciaries). State layer: 1911 Kansas and the blue-sky movement, gathered into the Uniform Securities Act of 1956, coordinated with the federal layer by NSMIA in 1996. The exam's own writers — **NASAA**, the association of state securities Administrators, founded back in 1919 — sit on the state side of the map, which is why the Series 65 leans so heavily on the USA and its Administrator. You now know where every rule you will learn in this course lives.

On the exam today. The exam expects the architecture cold. Advisers Act of 1940 — federal, advisers, fiduciary; Uniform Securities Act — state model law, the Administrator, the exam's home turf; NSMIA — federal covered advisers register with the SEC, state advisers with the Administrator, and no adviser registers with both. The favorite traps: asking who regulates a federal covered adviser (the SEC — the state may take notice filings and fees and may always prosecute fraud, but may not require registration), and sliding the word "approve" into a registration question — an Administrator clears registrations; neither the SEC nor any Administrator ever vouches for an investment. And when a date question appears, 1940 belongs to

advisers and investment companies, 1956 to the model state act, 1996 to the federal-state division of labor.

PICTURE STUDY

The Kansas House of Representatives, Topeka, George R. Lawrence Company, 1905 · Photograph · Library of Congress, Washington, D.C.

Image: Wikimedia Commons, public domain

The Chicago photographer George R. Lawrence — famous for enormous cameras and panoramic views — recorded the Kansas House of Representatives at Topeka in 1905. Six years later, in this very chamber, the legislature passed bank commissioner J. N. Dolley's securities bill of March 1911, the nation's first comprehensive blue-sky law. The photograph sits in this lesson because the protection of small investors began not on Wall Street but in a prairie statehouse: rows of farmers' and shopkeepers' representatives at wooden desks, twenty-two years ahead of Congress.

Look closely

- Count the rows of desks curving toward the rostrum. Each seat is a Kansas district — wheat farmers and small-town merchants, the very people the promoters fleeced.
- Find the speaker's rostrum where a bill would be read aloud. Imagine Dolley's securities bill of 1911 crossing that desk.
- Notice the grandeur — columns, galleries, coffered ceiling — built by a farm state. What does the room say about how Kansans regarded self-government?

- Look for the electric light standards, brand new in 1905: a modernizing state, about to modernize investor protection too.

Talk about it

1. Why did investor protection begin in a farm state rather than in New York, where the markets were?
2. Kansas's law made sellers qualify before selling; the federal acts of 1933–34 made them disclose. What are the strengths and dangers of each approach?
3. The states kept their securities laws even after Congress acted. What is gained by having two levels of regulators — and what does NSMIA's division of labor fix?

PROJECT

Complete the Timeline, 1792–1996

You will finish the master timeline for your Pathway File — the full map of American securities law, state and federal — and write the thirty-second oral history you will recite before every unit test in this course.

You will need

- Your timeline sheet from Lessons 1.2 and 1.3
- Exam notebook, ruler, your two ink colors plus a third for state law
- This lesson's core ideas

Steps

1. Extend the line's dates to 1996 if needed, keeping the decades evenly spaced.
2. In your new third color, add the state layer BELOW the line: 1911 Kansas blue-sky law (J. N. Dolley), 1917 Hall v. Geiger-Jones ("so many feet of blue sky"), 1956 Uniform Securities Act, 1919 NASAA founded.
3. Above the line, in federal colors, add: 1940 Investment Advisers Act (with a star — your statute) and the Investment Company Act beside it, and 1996 NSMIA with a two-way arrow between the layers labeled "who registers whom."
4. Draw a small box at the right edge: FEDERAL COVERED ADVISER → SEC; STATE ADVISER → Administrator; IARs → the states; everyone → antifraud, everywhere.
5. On the back, write the thirty-second history: from Buttonwood to NSMIA in eight sentences, one per event you consider essential.
6. Recite it to a parent, timeline hidden, and have them check dates against the sheet.
7. Clip the finished timeline into your Pathway File next to your profession map.

Tips

- The two-layer picture — federal above, state below — is itself exam knowledge; keep the geometry when you redraw from memory.

- If a date will not stick, attach it to its story: Dolley's gold mines for 1911, the twins signed together for 1940.

Check your work

- ☐ My timeline shows 1911, 1917, 1933, 1934, 1940, 1956 and 1996, each on the correct layer.
- ☐ My registration box sends each registrant to the right regulator.
- ☐ I recited the eight-sentence history within about thirty seconds with no date errors.
- ☐ The Advisers Act is starred as the statute behind my future license.

EXAM NOTEBOOK

1. Draw the two-layer map as a standalone notebook page: a federal shelf (1933, 1934, 1940) above a state shelf (1911, 1956), with NSMIA 1996 as the bracket joining them.
2. Make flashcards for the four years that anchor this lesson — 1911, 1940, 1956, 1996 — each with its law on the back in five words or fewer.
3. Write a trap list titled “Who registers where,” ending with: NO adviser registers with both the SEC and a state.

> **From history.** Commissioner Dolley was a promoter in his own cause: he claimed Kansas's new law saved its citizens millions in its first year, and he answered critics with prairie bluntness, reportedly dismissing the fancier Eastern objections with the remark that he was protecting people from being sold the blue sky itself. Wall Street journals mocked the law; within two years more than twenty states had copied it, and by the time Congress finally acted in 1933, nearly every state had some blue-sky statute on its books.

Example 1. Exam style. An investment adviser has $450 million in assets under management. As of 2026, with the federal registration threshold at $100 million in this example, the adviser registers with:

A. The Administrator of every state where it has an office

B. The SEC, as a federal covered adviser

C. Both the SEC and its home state

D. NASAA

Show solution

1. Apply NSMIA's division: large advisers by AUM are federal covered advisers.
2. $450 million is far above the $100 million line in this example, so the adviser registers with the SEC — answer B.
3. A describes a state-registered adviser; C violates the one-primary-regulator design (states may require notice filings, which are not registration); D is a trade association of regulators, not a registrar.
4. Remember the leftover state power: even over a federal covered adviser, states keep antifraud jurisdiction.

Answer: B. Above the AUM threshold an adviser is federal covered and registers with the SEC only; states retain antifraud power and may require notice filings, not registration.

Example 2. Exam style. The phrase “blue-sky laws” refers to:

A. Federal aviation securities rules

B. State securities laws, the first comprehensive one passed by Kansas in 1911

C. SEC rules on weather derivatives

D. The exemption of farm cooperatives from registration

Show solution

1. Recall the story: Kansas bank commissioner J. N. Dolley, 1911, promoters selling schemes backed by nothing real.
2. The Supreme Court's 1917 phrase — schemes with no more basis than “so many feet of blue sky” — named the whole family of state laws.
3. A and C take the sky literally; D is a genuine exemption topic but has nothing to do with the name.
4. B states both the meaning and the history.

Answer: B. Blue-sky laws are state securities laws; Kansas passed the first comprehensive one in 1911 under bank commissioner J. N. Dolley.

Example 3. A state-registered adviser's business grows. In this example the SEC registration threshold is $100 million of AUM, and the adviser's AUM rises from $82 million to $12,000,000 more than that. Compute the new AUM and state the registration consequence in principle.

Show solution

1. New AUM: $\$82{,}000{,}000 + \$12{,}000{,}000 = \$94{,}000{,}000$... careful — reread the problem. The AUM rises to $12 million MORE than the threshold.
2. New AUM: $\$100{,}000{,}000 + \$12{,}000{,}000 = \$112{,}000{,}000$. The trap was reading speed — the Series 65's favorite weapon. RTFQ: read the full question.
3. In principle: having crossed the federal threshold, the adviser becomes eligible to register with the SEC as a federal covered adviser and transitions from state registration (the exact buffer bands and timing are Unit 9 material).
4. Its IARs remain registered at the state level — NSMIA moved the firm's regulator, not the representatives'.

Answer: $112 million; the firm moves from state registration to SEC registration as a federal covered adviser, while its IARs still register with the states.

PRACTICE

1. Easy What was the first comprehensive blue-sky law, and who championed it?

   Show answer

   Kansas's securities law of March 1911, championed by state bank commissioner Joseph N. Dolley.

2. Easy Where does the phrase “blue sky” come from?

   Show answer

   From the description, made famous by the Supreme Court in Hall v. Geiger-Jones Co. (1917), of speculative schemes with no more basis than “so many feet of blue sky.”

3. Easy What two acts did President Roosevelt sign on August 22, 1940?

Show answer

The Investment Company Act of 1940 (for funds) and the Investment Advisers Act of 1940 (for advisers).

4. Medium The Uniform Securities Act of 1956 is best described as:

A. A federal statute enforced by the SEC

B. A model law states may adopt, under which a state Administrator regulates securities business

C. A stock exchange rulebook

D. An international treaty on securities

Show answer

B. The USA is a model act drafted so state laws would match; each adopting state enforces its own version through its Administrator. It is state law, so A is the classic wrong answer.

5. Medium Why did Congress order the study that led to the Investment Advisers Act of 1940?

Show answer

The Public Utility Holding Company Act of 1935 directed the SEC to study investment companies and the investment-counsel business; the study found no way for the public to tell honest counsel from tipsters and touts, so Congress required advisers to register and bound their conduct.

6. Medium Under NSMIA, a federal covered adviser:

A. Must register with the SEC and every state where it does business

B. Registers with the SEC; states may not require registration but keep antifraud authority

C. Registers only with NASAA

D. Is exempt from all regulation

Show answer

B. NSMIA gave large advisers one primary regulator — the SEC — while preserving state antifraud power and notice filings. A describes the duplication NSMIA abolished; C mistakes the examiners' association for a regulator.

7. Medium Who is “the Administrator” on the Series 65?

Show answer

The state official or agency that enforces a state's securities law under the Uniform Securities Act — the exam's most frequently named character.

8. Medium Which organization writes the Series 65 exam?

A. The SEC

B. The Federal Reserve

C. NASAA, the association of state securities Administrators

D. The New York Stock Exchange

Show answer

C. NASAA (founded 1919) writes the Uniform Investment Adviser Law Examination, which FINRA administers at its testing vendors — fitting, since the exam's heart is state law.

9. Hard A state Administrator discovers that a federal covered adviser defrauded clients in her state. May she act? Explain in two sentences.

Show answer

Yes. NSMIA removed the state's power to require registration of federal covered advisers, but it expressly preserved every state's antifraud jurisdiction, so the Administrator may investigate and prosecute the fraud.

10. Hard Contrast a merit-review blue-sky law with the federal disclosure philosophy in three sentences.

Show answer

A merit law lets the state official judge whether an offering is fair and refuse the unfair, as Kansas's 1911 commissioner could. The federal acts instead compel full, true disclosure and leave the judgment of merit to the informed buyer. Merit review blocks bad deals but makes the state a gatekeeper of soundness; disclosure trusts sunlight and keeps the government out of picking investments.

11. Hard As of 2026, in this example, an adviser manages $96 million and expects $8 million of new client assets this year. State its current regulator in principle and what the growth may change.

Show answer

At $96 million it is below the general $100 million federal threshold, so it is state-registered with the Administrator. Reaching $104 million would carry it over the line toward SEC registration as a federal covered adviser — the exact buffer bands and timing rules come in Unit 9, and current thresholds should always be checked at sec.gov.

12. Challenge Your warm-up asked you to design a swindle-stopper. Compare your 1911 rule with Dolley's, and say in three sentences which protects better and what it costs.

Show answer

Dolley's rule made every seller file with the state and obtain a permit before offering securities, with the commissioner empowered to refuse hollow schemes. Pre-approval stops frauds before money moves — stronger protection at the point of sale than punishing lies afterward. Its cost is friction and official discretion: honest offerings wait in line, and a gatekeeper must judge soundness — which is why the federal system of 1933 chose disclosure instead, and America has kept both.

COMMON MISTAKES

- Calling the Uniform Securities Act a federal law — it is a model for STATE law, enforced by state Administrators.
- Having a federal covered adviser register with both the SEC and the states; NSMIA's whole point is one primary regulator (notice filings are not registration).
- Forgetting that states keep antifraud jurisdiction over everyone, including federal covered advisers.
- Confusing NASAA (the state regulators' association, which writes the exam) with a registration authority — nobody registers “with NASAA.”
- Mixing the anchor years: 1911 Kansas, 1940 Advisers Act, 1956 Uniform Securities Act, 1996 NSMIA.

Make it a game · Blue Sky Pitch. A parent plays a 1910 traveling promoter pitching a worthless venture — the Sunflower Gold & Sky Company — with three claims, at least one factual lie and one honest-sounding puff. You play the Kansas bank commissioner: in two minutes you must ask three questions, name the red flags, and rule — permit granted or refused — citing one idea from this lesson (filing, merit review, antifraud). Score a point per red flag caught and two for a correct ruling with a correct citation. Swap roles with a new scheme each round; three rounds, highest score is named Commissioner Dolley.

Scripture. “For rulers are not a terror to good works, but to the evil. Wilt thou then not be afraid of the power? do that which is good, and thou shalt have praise of the same: For he is the minister of God to thee for good.” (Romans 13:3-4, KJV)

Paul's account of the magistrate fits the honest Administrator exactly: a terror to the tout and the swindler, no burden to the faithful adviser. Regulation done rightly is one of God's ordinary mercies to people who cannot audit a gold mine themselves.

1.5 The Series 65 Exam: Format, Enrollment and Your Study Plan

OBJECTIVES

- State the Series 65 exam's format, length, passing score and fee as of 2026, and name the official sources to check.
- Describe enrollment — Form U10 (or U4 through a firm), the 120-day window, Prometric test centers — and the retake waiting periods.
- Name the exam's four content sections with their weights and question counts.
- Explain what happens after a pass: state registration as an IAR and the two-year validity of an unregistered pass.
- Build the 33-week study plan this course follows, including the 83-second timing habit.

> **Warm-up.** Compute with pencil and paper: 92 correct out of 130 scored questions — what percent is that, to one decimal place? And 180 minutes shared among 130 scored questions — how many seconds each? These two numbers run this whole course; check them against the lesson.

WATCH

What is the Series 65 exam, and how do you PASS it?

Pass Masters · 8:00

https://www.youtube.com/watch?v=Rf-PaEtJ6lM

> **WHEN TO WATCH**
> Watch after reading the facts; write down any figure the teacher states and check it afterward against nasaa.org — practicing the verify-the-source habit this lesson preaches.

BACKUP VIDEO

How to Pass the Series 65 Exam by Knowing the Series 65 Exam. Test Specifications.

Series 7 Guru · 11:09

https://www.youtube.com/watch?v=gz1kOCRtcZA

A veteran tutor walks the official test specifications; watch while building your facts sheet and pause to fill in each row as he reaches it.

KEY TERMS

Series 65

NASAA's Uniform Investment Adviser Law Examination, the qualification exam for investment adviser representatives, administered through FINRA.

Form U10

The form an individual without a sponsoring firm uses to enroll for the exam; firm-sponsored candidates enroll through Form U4.

enrollment window

The 120-day period, opened by paying the exam fee, within which the candidate must schedule and sit the exam.

Prometric

The testing company at whose centers FINRA-administered exams, including the Series 65, are delivered by computer.

pretest questions

The 10 unscored, unidentified questions mixed into the exam to test future items; they look identical to scored questions.

passing score

For the Series 65, 92 questions correct out of the 130 scored — a question count, not a percentage, as of 2026.

waiting period

The required gap before retaking a failed exam: 30 days after the first and second attempts and 180 days after a third attempt within two years, as of 2026.

investment adviser representative registration

The state licensing that follows a pass — the exam qualifies you; only the state Administrator's registration lets you work.

CORE IDEAS

The story. Picture the morning itself, because you will live it. A candidate — call him Daniel, eighteen, three weeks past graduation — arrives at a Prometric testing center in a strip-mall office park at 7:40 for an 8:00 appointment. He brings a government-issued photo ID and nothing else that matters: phone, notes, even his watch go into a small locker. He signs in, is photographed, turns out his pockets, and is walked to a cubicle with a computer, earplugs, and an erasable noteboard with a marker. The screen offers a short tutorial; he takes it, breathes, and begins. One hundred forty questions stand between him and the license — 130 that count and 10 unscored

pretest questions wearing perfect disguises — with 180 minutes on the clock. He answers every question, because unanswered is simply wrong; he flags eleven for review and changes only two, both times because he had misread. With forty minutes to spare he clicks End, answers a short survey, and the screen shows the word he has drilled toward for thirty-three weeks: PASS. At the front desk they hand him a printed result. The whole drama took one morning — and every fact in it is in this lesson.

How they figured it out — the facts of the exam. All figures here are as of 2026; check nasaa.org and finra.org before you enroll, because fees and rules change. The Series 65 has **130 scored** multiple-choice questions plus **10 unscored pretest** questions, mixed in and unidentified. You have **180 minutes**. Passing is **92 correct** — a question count, about 70.8%, not a rounded "70%." The fee is $187. No sponsor is needed: an individual enrolls through FINRA with **Form U10** (a firm-sponsored candidate uses Form U4), and paying opens a **120-day window** in which to schedule a seat at a **Prometric** test center. Fail, and you wait **30 days** to retake; fail twice, 30 again; fail a third time within two years, **180 days** (NASAA has announced a shorter third wait beginning in 2027 — another reason to check the source).

The big idea — what the exam covers. NASAA publishes the blueprint, and this course follows it. Four sections, as of 2026: **Economic Factors and Business Information** — 15%, 20 questions; **Investment Vehicle Characteristics** — 25%, 32 questions; **Client Investment Recommendations and Strategies** — 30%, 39 questions; **Laws, Regulations and Guidelines** (with ethics) — 30%, 39 questions. Add them: 100% and 130 questions. Read the weights as marching orders: three-fifths of the exam is recommendations plus law and ethics, which is why this course spends its longest units there, and why a student who only loves the math of bonds and betas can still fail on suitability and statutes.

After the pass comes the real goal: **registration**. Passing the Series 65 licenses nothing by itself — it qualifies you to apply, and the state Administrator decides registration as an IAR under state law (registrants are adults, so plan on 18 or older; requirements vary by state). An unregistered pass stays valid for **two years**; register within that window or the result lapses — though under NASAA's Exam Validity Extension Program, adopting states extend validity for up to three additional years for candidates who meet its conditions. Know the neighboring exams in one breath: the **SIE** is FINRA's introductory securities exam; the **Series 7** qualifies general

securities representatives at broker-dealers and requires firm sponsorship; the **Series 63** is NASAA's state-law exam for broker-dealer agents; and the **Series 66** combines the 63 and 65 for candidates who also hold the Series 7. Your path — adviser's side, no sponsor needed — runs straight through the 65.

Now the plan, because a 33-week course needs one from week one. First, **the notebook**: one bound exam notebook for the whole course — every key-term table, trap list, formula page and timeline goes in it, dated; it becomes your personal study guide and the last thing you review before test day. Second, **the flashcard box**: every key term in this course goes on a card the day you meet it; shuffle and run the box twice a week, retiring cards only after two perfect passes. Third, **the timing habit**: 180 minutes over 130 scored questions is about **83 seconds each** — so from this week on, every practice set is timed at 83 seconds a question, and your weekly drill is ten questions in fourteen minutes. Fourth, **the calendar**: lay out all 33 weeks — one unit roughly every three weeks, a weekly review half-hour on a fixed day, two full timed practice exams in the final month, and nothing new in the last three days before the real exam, only your notebook and your box.

Steward the preparation itself. You are sixteen or seventeen now; you will likely sit the real exam near or after graduation, which means this course is a long obedience — the kind Scripture calls counting the cost before building the tower. Decide now what a faithful week looks like (five lessons' worth of sessions, one review, one drill), and keep it when it is boring, because the exam is passed in the boring weeks. And keep honest accounts with yourself: a practice score you inflate by peeking is a false balance in your own books. The habit of exact, unflattering self-measurement is worth more than any single fact in this unit — it is also, not incidentally, the first professional virtue of the fiduciary you intend to become.

On the exam today. This lesson's facts are the frame around everything the exam will ask, and a few appear as questions in their own right on practice exams and in interviews: that passing is 92 correct, not a percentage; that no sponsor is required and Form U10 is the self-enrollment route; that the pass alone does not let you solicit clients — state registration does; and that an unregistered pass runs out in two years. Expect this course's unit tests to mimic the real format exactly — four choices, one best answer, every question answered, about 83 seconds each — so that by week 33 the format itself is as familiar as your own handwriting. And begin tonight the habit the whole profession runs on: when a number matters, check the official source

— nasaa.org for the exam, finra.org for enrollment — and write down the date you checked.

PICTURE STUDY

The School Examination, Albert Anker, 1862 · Oil on canvas · Kunstmuseum Bern, Switzerland

Image: Wikimedia Commons, public domain

Albert Anker, Switzerland's beloved painter of village life, was commissioned by the canton of Bern to record its village-school examinations, and in 1862 he painted the day itself: the room garlanded, the children in their best clothes (the poorest still barefoot), the examiners at their long table, and one boy on his feet, reciting. It hangs in this lesson because every examination day since has kept the same shape — preparation, a public standard, a moment of truth — and because Anker honors both sides of the table: the seriousness of the examiners and the dignity of the child who stands and is ready.

Look closely

- Find the boy on his feet. How does his posture show both nerves and preparation?
- Study the examiners' faces along the table. Are they adversaries or witnesses? Find the one leaning in to listen.
- Notice the garlands and the crowded doorway — the village treats examination day as a festival. Who is watching from the back?
- Find the barefoot children. Anker shows that the standard is the same for rich and poor — the recitation, not the shoes, is what counts.

Talk about it

1. The village held its examinations in public. Your exam will be utterly private — a cubicle, a screen, a locker for your phone. What is gained and lost in each arrangement?
2. The boy cannot control the questions, only his preparation. Which parts of your 33-week plan are the ones fully in your control?
3. Why might a community celebrate an examination? What does a standard honestly met do for everyone — including, one day, the clients of a licensed adviser?

PROJECT

The Exam Facts Sheet and the 33-Week Calendar

You will build the final two pages of your Pathway File: a one-page sheet of every checkable fact about the Series 65, each with its official source, and the 33-week study calendar you will actually follow. Together with your profession map and your timeline, they complete the file this unit set out to build.

You will need

- Two sheets of paper or two clean spreadsheet pages
- Your exam notebook
- The NASAA Exam FAQs from the kit, and a parent to countersign the calendar

Steps

1. Head the first page SERIES 65 — THE FACTS, AS OF (today's date). Rule three columns: FACT, NUMBER, SOURCE.
2. Fill the rows from this lesson: scored questions; pretest questions; minutes; passing score; fee; enrollment form with and without a sponsor; enrollment window; the three waiting periods; validity of an unregistered pass; the age-and-state note on registration.
3. Add the four content sections with weight and question count, and check they sum to 100% and 130.
4. For every row, write the source (nasaa.org or finra.org) — and actually open the NASAA FAQ from the kit to verify at least five rows, checking them off as verified.
5. On the second page, draw the 33-week calendar: number the weeks, mark one unit per three weeks or so, a fixed weekly review slot, the weekly 10-questions-in-14-minutes drill, two full timed practice exams in the last month, and a final three days of notebook-and-flashcards only.
6. Write your target exam season (the month after graduation, for most students) at the bottom, with the enrollment math: fee paid opens a 120-day window, so mark the week you would file Form U10.

7. Have a parent read both pages and countersign the calendar as witness to the plan.
8. Clip both pages into your Pathway File, behind the profession map and timeline.

Tips

- Date the facts sheet prominently; when you re-verify it the month you enroll, you will see at a glance which figures aged.
- Build the calendar around your real life — harvest, sports, church commitments — because a plan that ignores them is a plan you will abandon in week six.

Check your work

- ☐ Every fact on my sheet has a number and a source, and at least five are check-marked verified.
- ☐ My four section weights sum to 100% and my question counts to 130.
- ☐ My calendar shows 33 numbered weeks, review slots, drills, two practice exams and a countersignature.
- ☐ I can state the passing score, the fee and the enrollment window from memory.

EXAM NOTEBOOK

1. Make the timing card: a flashcard reading 83 SECONDS on the front and the arithmetic (180 × 60 ÷ 130) on the back; tape a copy above your study desk.
2. Draw the four content sections as a simple bar chart by weight (15/25/30/30) and label each bar with its question count — your first picture of where the battle will be won.
3. Write a half-page letter to yourself dated week 33, telling the graduate who will read it what you did this week to make his exam morning calm.

KEY FORMULAS

$$\text{Passing rate} = \frac{92}{130} \approx 70.8\%$$

$$\text{Seconds per scored question} = \frac{180 \times 60}{130} \approx 83$$

From history. Licensing examinations for securities professionals are younger than the laws themselves. For decades after 1911, many states licensed salesmen on an application and a fee; written qualification exams spread through the mid-twentieth century, and NASAA — the state regulators' association founded in Kansas's wake in 1919 — eventually built the uniform exams (63, 65, 66) so that a single test could serve every adopting state. The computer replaced the paper answer sheet in the 1990s, which is why your result appears before you reach the parking lot.

WORKED EXAMPLES

Example 1. Daniel has answered 100 questions in 120 minutes. At that pace, will he finish all 140 on-screen questions in 180 minutes? Show the arithmetic and the adjustment.

Show solution

1. His pace: $120 \times 60 = 7{,}200$ seconds for 100 questions, or 72 seconds per question.
2. Remaining: 40 questions in 60 minutes — $3{,}600/40 = 90$ seconds available each. His pace leaves room to spare.
3. Check the full-exam budget: $140 \times 77 \approx 10{,}780$ seconds — 140 questions at 77 seconds each just fits 180 minutes, which is why this course trains at 83 seconds per scored question and expects easy questions to run faster.
4. The lesson: bank seconds on the easy questions, spend them on calculations, and never stall three minutes on one question — flag it, answer something (blank is always wrong), and return.

Answer: Yes — at 72 seconds a question he finishes with time to review; the trained habit is about 83 seconds per scored question with a flag-and-return rule.

Example 2. Exam style. A candidate answers 95 questions correctly out of the 130 scored questions. Which is TRUE as of 2026?

A. She fails, because passing requires 73%

B. She passes, because passing is 92 correct out of 130

C. She passes only if she also answered the pretest questions correctly

D. Her result depends on which 95 she got right

Show solution

1. Recall the standard: 92 correct of 130 scored, a question count, not a percentage.
2. 95 ≥ 92, so she passes — B.
3. A invents a percentage threshold; the real ratio is about 70.8%, and NASAA states the standard as a count.
4. C is the pretest trap: the 10 pretest questions are unscored and cannot help or hurt. D is false; all scored questions count equally.

Answer: B. 95 correct exceeds the 92-question passing standard; pretest questions never affect the score.

Example 3. A student plans the money side: the exam fee is $187 in this example, and she budgets for one possible retake plus $60 of study materials. What should she set aside, and what non-monetary cost does a retake add?

Show solution

1. Two sittings: $2 \times \$187 = \$374$.
2. Plus materials: $\$374 + \$60 = \$434$.
3. The non-monetary cost: a first retake waits 30 days — a month of fading momentum — and a third failure within two years waits 180 days as of 2026.
4. Moral of the budget: the cheapest exam is the one you pass once; thorough preparation is the discount.

Answer: $434 set aside; a retake also costs a 30-day wait (180 after a third attempt, as of 2026), which is the stronger argument for overpreparing.

PRACTICE

1. Easy How many questions does the Series 65 present on screen, and how many count?

Show answer

140 on screen: 130 scored plus 10 unscored, unidentified pretest questions.

2. Easy What is the passing standard, and why is calling it "70%" sloppy?

Show answer

92 correct out of 130 scored questions, as of 2026. It is a question count, not a percentage — 92/130 is about 70.8%, and NASAA states it as a count.

3. Easy How long is the exam, and about how many seconds does that give each scored question?

Show answer

180 minutes; $180 \times 60 \div 130 \approx 83$ seconds per scored question.

4. Medium A candidate with no sponsoring firm wants to take the Series 65. She enrolls by:
A. Form U4, which requires a broker-dealer sponsor
B. Form U10, since no sponsor is required for the Series 65
C. Asking the state Administrator for a seat
D. Applying directly to Prometric

Show answer

B. The Series 65 needs no sponsor; individuals file Form U10 with FINRA (firm candidates use U4). Prometric only delivers the exam; the Administrator registers you after you pass.

5. Medium Name the four content sections of the Series 65 as of 2026, with weights.

Show answer

Economic Factors and Business Information 15% (20 questions); Investment Vehicle Characteristics 25% (32); Client Investment Recommendations and Strategies 30% (39); Laws, Regulations and Guidelines, including ethics, 30% (39).

6. Medium A candidate fails the exam twice and then a third time within two years. As of 2026, how long must she wait after each failure?

Show answer

30 days after the first attempt, 30 days after the second, and 180 days after the third within two years — and the current rules should be checked at nasaa.org, which has announced a shorter third-attempt wait starting in 2027.

7. Medium Which is TRUE of the 120-day window?

A. It is the time allowed to finish the exam

B. It is how long a pass remains valid

C. It is the period, opened by enrollment, within which the candidate must sit the exam

D. It is the waiting period after a third failure

Show answer

C. Paying the fee opens a 120-day enrollment window for scheduling and sitting the exam at a Prometric center. B confuses it with the two-year validity of an unregistered pass.

8. Medium True or false, with one sentence: passing the Series 65 permits you to begin advising clients for compensation.

Show answer

False — the pass only qualifies you; you may act as an IAR only after the state Administrator registers you (generally as an adult, with requirements the state decides).

9. Hard A student passes at eighteen but does not register. What happens to the pass, and what program can change the answer?

Show answer

An unregistered pass is valid for two years; if he registers within that window it never expires while he stays registered. In states adopting NASAA's Exam Validity Extension Program, candidates who meet its conditions can extend validity up to three more years — details and current rules at nasaa.org.

10. Hard Match each exam to its one-line role: SIE, Series 7, Series 63, Series 66.

Show answer

SIE — FINRA's introductory securities exam; Series 7 — general securities representative at a broker-dealer, sponsor required; Series 63 — NASAA's state-law exam for broker-dealer agents; Series 66 — NASAA's combined 63-plus-65 for candidates who also hold the Series 7.

11. Hard Using the section weights, about how many of the exam's scored questions concern client recommendations plus laws and ethics together, and what does that imply for a student who is strong in math but weak in law?

Show answer

$39 + 39 = 78$ of 130 — 60% of the exam. A student could answer every economics and investment-vehicle question correctly (52) and still fall 40 questions short of passing; the law and recommendations sections cannot be crammed last.

12. Challenge Design the final month of the 33-week plan in five lines: place two full timed practice exams, the notebook, the flashcard box and the last three days — and give the reason for each placement.

Show answer

Weeks 30 and 32: full 140-question practice exams at 180 minutes, to train endurance and pacing under real conditions. Week 31: rework every question missed in the first practice exam from the notebook, because errors cluster. Daily: one run of the flashcard box, since spaced recall beats rereading. Last three days: no new material — only the notebook and the box — because late novelty breeds doubt. Exam morning: arrive twenty minutes early with ID, having slept; the preparation is already in the hands, like the boy in Anker's painting.

COMMON MISTAKES

- Quoting the passing score as a percentage — it is 92 correct out of 130, a question count, as of 2026.
- Forgetting the 10 pretest questions exist and panicking at question 140, or believing they affect the score — they do not.

- Leaving questions blank; an unanswered question is scored wrong, so answer everything and flag for review.
- Thinking the exam license itself lets you practice — only state registration as an IAR does, and the unregistered pass lapses after two years.
- Treating the fee, waits and thresholds as eternal facts instead of checking nasaa.org and finra.org the month you enroll.

Make it a game · Eighty-Three Seconds. Build a deck of twenty question cards from this unit's practice problems (or have a parent pick them unseen). The parent runs a timer in strict 83-second rounds: one card per round, answer locked when the timer sounds — no answer counts as wrong, exactly like the real exam. Score one point per correct answer; the parent scores a point whenever the timer beats you. Then play a lightning round of five cards at 60 seconds each for double points. Sixteen of twenty is a pass; beat your own score each week until week 33.

Scripture. “For which of you, intending to build a tower, sitteth not down first, and counteth the cost, whether he have sufficient to finish it?” (Luke 14:28, KJV)

Christ's picture of the tower-builder is the picture of this lesson: the exam is passed by those who sit down first — count the weeks, the fee, the facts and the habits — and then finish what they counted.

UNIT 1

The Calling and the Path

Before you memorize a single rule, you should know what the work is and where its rules came from. In this unit you will meet the **investment adviser** — a person paid to give advice about securities — and learn why the law holds him to the **fiduciary standard**, the duty of a steward who puts his client first. You will watch the Supreme Court read that duty into the law in *SEC v. Capital Gains Research Bureau* (1963), and you will walk the whole road that led there: twenty-four brokers signing the **Buttonwood Agreement** under a Wall Street sycamore in 1792, the ticker tape of 1867, the margin madness of the 1920s, and the terrible October of 1929 that brought it all down.

Out of that wreckage came the laws the Series 65 tests: the **Securities Act of 1933**, the **Securities Exchange Act of 1934** that created the SEC, the **Investment Advisers Act of 1940**, and the state **blue-sky laws** that began in Kansas in 1911 and grew into the Uniform Securities Act of 1956. The unit ends at the door of the testing center: you will learn exactly what the Series 65 exam is — its 130 scored questions, its 180 minutes, its passing score of 92 — and you will build the 33-week study plan this course follows. By the end you will know the profession, its history, its laws, and your path to the license.

PREREQUISITES

- Can work comfortably with percents and decimals (find 70.8% of a number, convert a fraction to a percent)
- Can read a timeline and keep a tidy, dated notebook
- Can look up a source online (nasaa.org, sec.gov, investor.gov) and record what it says
- Has completed a basic personal-finance course or can define stock, bond and interest in one sentence each

MASTERY CHECKLIST

- ☐ I can define an investment adviser and a broker-dealer and tell them apart by how each is paid.
- ☐ I can explain the fiduciary standard, contrast it with suitability, and tell the story of SEC v. Capital Gains Research Bureau (1963).
- ☐ I can tell the story of American markets from the Buttonwood Agreement (1792) to the Crash of 1929, and define primary and secondary markets.
- ☐ I can state what the Securities Act of 1933 and the Securities Exchange Act of 1934 each regulate and which one created the SEC.
- ☐ I can explain why the Investment Advisers Act of 1940 was passed and what blue-sky laws, the Uniform Securities Act of 1956 and NSMIA each do.
- ☐ I can state the Series 65 exam's format, fee, passing score, enrollment steps and retake rules as of 2026, and say where to check them.
- ☐ I can name the four content sections of the exam with their weights and question counts.
- ☐ I can lay out a 33-week study calendar with a weekly review habit and an 83-second-per-question timing drill.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **NASAA Exam FAQs (Series 63, 65 and 66)**: Free, official. The exam's own writers answer every question about fees, scoring, waiting periods and enrollment. Read it with Lesson 1.5 and again the week you register. Ages 15 and up.
- **SEC: What We Do**: Free, official. The Securities and Exchange Commission explains its own three-part mission in plain language. Read it with Lesson 1.3 after you learn why Congress created the agency in 1934. Ages 14 and up.
- **Investor.gov: Introduction to Investing**: Free, official. The SEC's site for ordinary investors — the people an adviser serves. Browse it with Lesson 1.1 to see the questions real clients bring to an adviser's desk. Ages 13 and up.
- ***Fifty Years in Wall Street*, by Henry Clews (1908)**: Free on the Internet Archive. A famous old broker's memories of panics, plungers and honest dealing from the 1850s onward. Dip into a chapter or two with Lesson 1.2 for the flavor of the old Wall Street. Ages 14 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

1.1 The Investment Adviser: A Fiduciary's Calling — 3 sessions of 50 minutes

1.2 From Buttonwood to Black Thursday: How American Markets Grew

3 sessions of 50 minutes

1.3 Truth After the Crash: The Securities Acts of 1933 and 1934

3 sessions of 50 minutes

1.4 The Investment Advisers Act of 1940 and the Blue-Sky Laws

3 sessions of 50 minutes

1.5 The Series 65 Exam: Format, Enrollment and Your Study Plan

3 sessions of 50 minutes

Unit 1 test

Closed book, closed notebook. Twenty four-choice questions, 5 points each, 100 points total. Time yourself at about 83 seconds per question — set a timer for 28 minutes and finish inside it, exactly as you will on exam day. Answer every question; an unanswered question is simply wrong. Where a question says “in this example” or “as of 2026,” use the figures given, and remember that real-world fees and thresholds are checked at nasaa.org, finra.org and sec.gov. Choose the one BEST answer.

1. **5 pts**

   A firm is in the business of giving advice about securities and is paid an annual percentage of the assets it manages. Under federal law this firm is:

   A. A broker-dealer

   B. An investment adviser

   C. An exchange

   D. A transfer agent

2. **5 pts**

   The fiduciary standard requires an investment adviser to:

   A. Guarantee clients against losses

   B. Avoid ever having a conflict of interest

   C. Place the client's interest first and fully disclose material conflicts

   D. Recommend only securities listed on an exchange

3. **5 pts**

   In SEC v. Capital Gains Research Bureau (1963), the Supreme Court:

   A. Held that scalping without disclosure is fraud under the Investment Advisers Act

   B. Required proof that subscribers lost money

   C. Ruled that newsletters are exempt from all regulation

   D. Created the suitability standard for advisers

4. 5 pts

An adviser's undisclosed practice of receiving service fees from funds she recommends is best described as:

A. Acceptable if the funds are suitable

B. A material conflict of interest that must be disclosed

C. Permitted compensation requiring no disclosure

D. Legal because fees are paid by the fund, not the client

5. 5 pts

The Buttonwood Agreement of 1792 was:

A. The first federal securities statute

B. A pact among 24 brokers that grew into the New York Stock Exchange

C. The charter of the Securities and Exchange Commission

D. The first blue-sky law

6. 5 pts

An investor buys 300 existing shares of a listed company through an exchange. The proceeds of the sale go to:

A. The issuing company

B. The exchange

C. The investor who sold the shares

D. The SEC

7. 5 pts

In this example, a 1929 investor buys $10,000 of stock with 10% down. A 10% decline in the stock's price costs him:

A. 10% of his own money

B. 50% of his own money

C. All of his $1,000 equity

D. Nothing until he sells

8. 5 pts

Black Tuesday, the heaviest day of the 1929 crash, fell on:

A. October 24, 1929

B. October 29, 1929

C. September 3, 1929

D. July 8, 1932

9. 5 pts

The Securities Act of 1933 primarily requires:

A. Registration of exchanges and broker-dealers

B. Registration of new public offerings and delivery of a prospectus

C. Federal licensing of investment advisers

D. State registration of agents

10. 5 pts

The Securities and Exchange Commission was created by:

A. The Securities Act of 1933

B. The Securities Exchange Act of 1934

C. The Investment Advisers Act of 1940

D. The Uniform Securities Act of 1956

11. 5 pts

A municipal bond is sold without a federal registration statement, and the seller misrepresents the issuer's finances. Which is TRUE?

A. The bond offering was illegal for failure to register

B. The seller is safe because the security is exempt

C. The fraud is actionable even though the security is exempt from registration

D. Municipal bonds must always register with the SEC

12. 5 pts

Rule 10b-5 prohibits fraud, misstatements and deceptive practices:

A. Only in registered securities

B. Only on national exchanges

C. In connection with the purchase or sale of any security

D. Only by registered broker-dealers

13. 5 pts

The first comprehensive blue-sky law was enacted in:

A. New York in 1792

B. Kansas in 1911

C. Washington, D.C. in 1933

D. Delaware in 1956

14. 5 pts

The Uniform Securities Act of 1956 is:

A. A federal statute administered by the SEC

B. A model act adopted by states and enforced by state Administrators

C. An SEC rule on uniform fees

D. The law that created NASAA

15. 5 pts

Under NSMIA (1996), a federal covered adviser:

A. Registers with the SEC; states may not require registration but retain antifraud authority

B. Registers with every state in which it has clients

C. Registers with both the SEC and its home state

D. Is regulated by FINRA

16. 5 pts

The Investment Advisers Act became law in:

A. 1933

B. 1934

C. 1940

D. 1956

17. 5 pts

As of 2026, the Series 65 exam consists of:

A. 130 scored questions plus 10 unscored pretest questions, with 180 minutes allowed

B. 140 scored questions with 150 minutes allowed

C. 100 scored questions with 120 minutes allowed

D. 130 scored questions, all essay

18. **5 pts**

A candidate answers 92 of the 130 scored questions correctly. As of 2026 she has:

A. Failed, because 92/130 is below 75%

B. Passed, because the standard is 92 correct, not a percentage

C. Passed only if her pretest questions were also correct

D. Earned a conditional pass pending SEC review

19. **5 pts**

A candidate without a sponsoring firm enrolls for the Series 65 by:

A. Filing Form U4 through a broker-dealer

B. Filing Form U10 with FINRA, which opens a 120-day window to test at a Prometric center

C. Petitioning the state Administrator for admission

D. Registering with NASAA directly

20. **5 pts**

After passing the Series 65, a candidate may lawfully work as an investment adviser representative:

A. Immediately, anywhere in the United States

B. Only after the state Administrator registers him, and an unregistered pass is valid for two years as of 2026

C. Only after joining FINRA

D. Only after five years of apprenticeship

ANSWER KEY

1. B. Advice about securities, as a business, for compensation — all three prongs of the investment adviser definition. A broker-dealer is paid for effecting transactions, not for advice.
2. C. Loyalty plus full and fair disclosure is the standard; conflicts may exist but must be disclosed (B overshoots), and no standard guarantees results (A).
3. A. The Court read the Advisers Act as a fiduciary statute: recommending a security while secretly planning to sell into the rise is fraud, with no need to prove intent to injure or actual loss (B).
4. B. A fiduciary must disclose material conflicts so the client can weigh the advice; suitability (A) does not cure concealment, and the source of the payment (D) does not remove the conflict.
5. B. Twenty-four brokers agreed to trade with one another at a minimum commission; their successors organized the exchange renamed the NYSE in 1863. Federal statutes (A, C) came only after 1929, and the first blue-sky law was Kansas, 1911 (D).
6. C. Exchange trading is the secondary market: investors trade with investors, and the issuer receives money only in the primary market, when the securities are first issued.
7. C. His equity is $1,000 and the decline is $1,000; at 10% margin, a 10% fall is a 100% loss of equity — the arithmetic that turned the October 1929 decline into forced selling. D ignores the margin call that arrives regardless.
8. B. October 29 was Black Tuesday, with over 16 million shares traded; October 24 was Black Thursday (A), September 3 the Dow's peak (C), and July 1932 the eventual bottom (D).
9. B. The 1933 Act is the truth-in-securities law for the primary market. Exchanges and broker-dealers belong to the 1934 Act (A), advisers to the 1940 Act (C), and agents to state law (D).
10. B. The 1934 Act created the SEC (the FTC had administered the 1933 Act in the meantime). This is the exam's favorite wire-crossing trap.
11. C. Exempt securities such as municipals skip 1933 Act registration, but no security and no person is exempt from the antifraud provisions.
12. C. The 10b-5 net under Section 10(b) of the 1934 Act covers any person and any security — registered, exempt, listed or obscure.

13. B. Kansas, March 1911, under bank commissioner J. N. Dolley — twenty-two years before Congress acted; the Supreme Court's phrase about “so many feet of blue sky” (1917) named the whole family of state laws.
14. B. The USA is the model for state law — the exam's home territory — enforced in each adopting state by its Administrator. It is not federal (A), and NASAA predates it, founded in 1919 (D).
15. A. NSMIA divided the field: larger advisers have one primary regulator, the SEC, while states keep antifraud jurisdiction and may require notice filings — which are not registration (so C is wrong).
16. C. August 22, 1940 — signed the same day as the Investment Company Act, after the SEC's study of the investment-counsel business ordered in 1935.
17. A. 140 questions appear on screen — 130 scored and 10 unidentified pretest — in a 180-minute, multiple-choice sitting.
18. B. Passing is exactly 92 correct of 130 — about 70.8%, stated as a question count. Pretest questions never affect the score (C), and no SEC review of results exists (D).
19. B. No sponsor is needed for the Series 65: individuals use Form U10 (sponsored candidates use U4), then schedule within the 120-day enrollment window.
20. B. The exam qualifies; the state registers. An unregistered pass lapses after two years (extendable in states adopting NASAA's Exam Validity Extension Program), and FINRA membership (C) is a broker-dealer matter, not an IAR requirement.

PORTFOLIO PIECE: MY PATHWAY FILE

Assemble the file that maps your profession and your path to it: the one-page profession map contrasting investment adviser and broker-dealer (Lesson 1.1), the completed timeline of markets and laws from Buttonwood 1792 to NSMIA 1996 with its federal and state layers (Lessons 1.2–1.4), your dated Series 65 facts sheet with every figure sourced to nasaa.org or finra.org, and your countersigned 33-week study calendar (Lesson 1.5). Add a one-page cover letter addressed to your future first client, explaining in your own words what a fiduciary is, where the word comes from, and why — citing Joseph in Genesis 39 and 1 Corinthians 4:2 — they will be able to trust you with what is theirs.

LOOK FOR	WHAT IT MEANS
Profession map	Adviser and broker-dealer are correctly contrasted by service sold, compensation, conduct standard and governing statute, with the three-prong definition stated and the six test cases correctly sorted.
Timeline	All anchor events are present, dated and on the correct layer — 1792, 1867, 1911, 1917, 1929, 1933, 1934, 1940, 1956, 1996 — and the student can narrate the line aloud in under three minutes without errors.
Exam facts sheet	Every fact carries a number and an official source, at least five rows are check-marked as actually verified, the facts are dated “as of,” and section weights sum to 100% and 130 questions.
Study calendar	Thirty-three numbered weeks with a fixed weekly review, the 83-second drill, two timed practice exams in the final month, a realistic exam target date and a parent's countersignature.
Cover letter and reflection	The letter defines fiduciary accurately, uses the Scripture honestly rather than decoratively, and connects the student's own study habits to the faithfulness the profession requires.

UNIT 2

Economic Factors and Business Information

An investment adviser is asked, every working day, some version of one question: **what is the economy doing, and what should we do about it?** This unit gives you the tools the Series 65 expects you to have in hand before you answer. You will walk the four phases of the **business cycle** with Wesley Mitchell and the economists who first learned to date it, and watch Simon Kuznets build the national income accounts in 1934 because no one in Washington could say how bad the Depression actually was. You will learn to sort **economic indicators** into leading, coincident and lagging, and to read the **CPI**, an index born in the shipyards of the First World War. You will see the Panic of 1907 push America into creating the **Federal Reserve**, and learn the Fed's classic tools one by one.

Then you will cross to the other side of the street: **fiscal policy**, the taxing and spending that belong to Congress and the President, beginning with Alexander Hamilton's 1790 promise to pay the new republic's debts at par. You will finish with the subject that ruins more bondholders than any other — **inflation** — told through Germany's terrible year of 1923, and with the **yield curve**, the simple picture of interest rates that has quietly signaled trouble before recessions for decades. Economics is about 15 percent of your exam; by the end of this unit the questions from its economics half should feel like old friends.

PREREQUISITES

- Can work confidently with percents, decimals and large numbers (millions, billions, trillions)
- Can read a simple line graph and sketch one from a table of values
- Knows the basic bond vocabulary from Unit 1: issuer, interest, maturity, price
- Can look up a statistic on an official website with a parent and record its source and date

MASTERY CHECKLIST

- ☐ I can name the phases of the business cycle in order and describe what happens to output, jobs and prices in each.
- ☐ I can define GDP, say what counts and what does not, and explain the difference between real and nominal GDP.
- ☐ I can sort the classic economic indicators into leading, coincident and lagging without hesitation.
- ☐ I can explain what the CPI measures, calculate an inflation rate from two CPI values, and say why the CPI is a lagging indicator.
- ☐ I can name the Federal Reserve's classic monetary policy tools and trace what easy and tight money do to interest rates, borrowing and the dollar.
- ☐ I can distinguish fiscal policy from monetary policy and say who controls each.
- ☐ I can explain who gains and who loses from a strong or weak dollar, and name the extra risk in foreign bonds and ADRs.
- ☐ I can compute a real return from a nominal return and inflation, and read a normal, flat or inverted yield curve.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **FRED — Federal Reserve Economic Data**: Free from the Federal Reserve Bank of St. Louis: hundreds of thousands of data series with instant charts. You will use it in Lessons 2.1 and 2.2 and for the unit portfolio. Ages 14 and up.
- **Bureau of Labor Statistics: Consumer Price Index**: Free and official. The home of the CPI, with the latest monthly release and plain-language answers about how the index is built. Use it with Lesson 2.2 and the portfolio. Ages 14 and up.
- **BEA: Measuring the Economy — A Primer on GDP and the National Income and Product Accounts**: Free from the Bureau of Economic Analysis, the agency that publishes GDP. A short primer that continues what Kuznets began in 1934. Read the opening sections with Lesson 2.1. Ages 15 and up.
- **St. Louis Fed: Economic Education**: Free courses, videos and podcasts from the Federal Reserve Bank of St. Louis on inflation, monetary policy and GDP. The Economic Lowdown series pairs well with Lessons 2.3 and 2.5. Ages 13 and up.
- **NBER: Business Cycle Dating**: Free. The National Bureau of Economic Research's own page listing every official peak and trough of the American business cycle since the 1850s — the work Wesley Mitchell started. Use it with Lesson 2.1. Ages 15 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

2.1	**The Business Cycle and GDP: Measuring the Economy**	3 sessions of 50 minutes
2.2	**Economic Indicators: Leading, Lagging and the CPI**	3 sessions of 50 minutes
2.3	**Money and the Federal Reserve: Monetary Policy**	3 sessions of 50 minutes
2.4	**Fiscal Policy, Sovereign Debt and Exchange Rates**	3 sessions of 50 minutes
2.5	**Inflation, Interest Rates and the Yield Curve**	3 sessions of 50 minutes

Unit 2 test

Closed book. Allow about 28 minutes — roughly 83 seconds per question, the pace of the real Series 65. Choose the single best answer for each question; answer every question, since there is no penalty for guessing. Where a problem says "in this example," use the figures given, not current data. Each question is worth 5 points; 100 points total.

1. **5 pts**

   The phases of the business cycle, in order beginning from the bottom, are:

   A. Trough, expansion, peak, contraction

   B. Trough, peak, expansion, contraction

   C. Contraction, peak, expansion, trough

   D. Expansion, trough, peak, contraction

2. **5 pts**

   The classic definition of a recession is:

   A. Six consecutive quarters of declining real GDP

   B. Two or more consecutive quarters of declining real GDP

   C. Any month the NBER declares

   D. A 20% decline in stock prices

3. **5 pts**

   Which of the following would be included in GDP?

   A. A Social Security check

   B. The resale of a three-year-old truck

   C. Newly built housing

   D. The purchase of 500 shares of an existing stock

4. **5 pts**

   Nominal GDP rose 4% while inflation ran 6%. Real GDP:

   A. Rose 2%

   B. Rose 10%

   C. Fell about 2%

   D. Was unchanged

5. 5 pts

An adviser expecting a recession would most likely favor which industries?

A. Automobiles and homebuilding

B. Utilities and food

C. Steel and machinery

D. Luxury retail and airlines

6. 5 pts

Which list contains only leading indicators?

A. Building permits, stock prices, initial jobless claims

B. CPI, prime rate, duration of unemployment

C. Nonfarm payrolls, industrial production, personal income

D. Building permits, CPI, nonfarm payrolls

7. 5 pts

The Consumer Price Index is best described as:

A. A leading indicator computed by the Federal Reserve

B. A lagging indicator computed by the Bureau of Labor Statistics

C. A coincident indicator computed by the Commerce Department

D. A leading indicator computed by the NBER

8. 5 pts

In this example, the CPI rises from 260.0 to 270.4 over a year. The inflation rate is:

A. 10.4%

B. 4.0%

C. 2.6%

D. 0.4%

9. 5 pts

Inflation has declined from 7% to 2%. This is best described as:

A. Deflation

B. Disinflation

C. Stagflation

D. Devaluation

10. 5 pts

To stimulate a weakening economy, the Federal Reserve would most likely:

A. Sell Treasury securities and raise the discount rate

B. Buy Treasury securities and lower the discount rate

C. Raise reserve requirements and sell securities

D. Ask Congress to cut taxes

11. 5 pts

Open market operations are directed by:

A. The U.S. Treasury

B. The Federal Open Market Committee

C. Congress

D. The Securities and Exchange Commission

12. 5 pts

When the Fed tightens monetary policy, the most likely results are:

A. Rising bond prices and a weaker dollar

B. Falling interest rates and more borrowing

C. Rising interest rates, falling bond prices and a stronger dollar

D. Rising inflation and falling rates

13. 5 pts

The rate the Federal Reserve charges banks that borrow directly from it is the:

A. Federal funds rate

B. Prime rate

C. Discount rate

D. Broker call rate

14. 5 pts

Fiscal policy is determined by:

A. The Federal Reserve Board

B. The FOMC

C. Congress and the President

D. The Treasury acting alone

15. 5 pts

Keynesian economists would respond to a deep recession with:

A. Higher taxes and reduced spending

B. Increased government spending or tax cuts, accepting a deficit

C. Sales of securities by the central bank

D. A balanced-budget amendment

16. 5 pts

A weakening U.S. dollar most benefits:

A. U.S. importers and American tourists abroad

B. U.S. exporters and American investors holding foreign securities

C. Foreign companies exporting to the United States

D. American consumers of imported goods

17. 5 pts

An American owns an ADR of a Swiss company. Which risk remains despite the dollar pricing?

A. Currency risk

B. Settlement risk only

C. No risk — ADRs are guaranteed

D. Reinvestment risk only

18. 5 pts

In this example, a portfolio returned 8% in a year when inflation was 3.5%. The approximate real return was:

A. 11.5%

B. 8%

C. 4.5%

D. 3.5%

19. 5 pts

Prolonged unexpected inflation hurts which investor most?

A. A homeowner with a fixed-rate mortgage

B. A holder of long-term fixed-rate bonds

C. An owner of rental real estate

D. A company able to raise its prices

20. **5 pts**

Three-month Treasury yields exceed ten-year Treasury yields, and the spread between junk bonds and Treasuries is widening. Together these conditions suggest:

A. Confidence and expansion ahead

B. Markets bracing for economic trouble

C. Imminent hyperinflation

D. Nothing — the signals cancel each other

ANSWER KEY

1. A. From the trough the economy expands to a peak, then contracts to the next trough. The other orders scramble turning points and periods.
2. B. Two consecutive down quarters of real GDP. A is the common rule of thumb for depression, and D describes a bear market, not the economy.
3. C. New construction is current production (part of investment). Transfers, used goods and trades of existing assets add no new production.
4. C. Real ≈ nominal − inflation = 4% − 6% = −2%. Growth measured in dollars can hide shrinkage measured in goods.
5. B. Utilities and food are defensive — demand persists through downturns. The other three choices are all classic cyclicals.
6. A. Permits, stock prices and initial claims all turn before the economy. B is the lagging list, C the coincident list, and D mixes all three.
7. B. The BLS publishes the CPI, and inflation trails the cycle, making it a lagging indicator — the pairing the exam tests most.
8. B. (270.4 − 260.0) ÷ 260.0 = 10.4 ÷ 260 = 4%. Choice A mistakes the point change for a percentage.
9. B. Prices are still rising, more slowly — disinflation. Deflation requires prices actually falling; stagflation is high inflation with stagnant growth.
10. B. Buying securities adds reserves and lowering the discount rate cheapens credit — easy money. A and C tighten, and D is fiscal policy, outside the Fed's power.
11. B. The FOMC — the seven governors, the New York Fed president and four rotating regional presidents — directs the buying and selling of Treasuries.
12. C. Tightening drains reserves: rates rise, bond prices fall by the see-saw, and higher yields attract foreign capital, strengthening the dollar.
13. C. The discount rate is the Fed's own lending rate. Federal funds is bank-to-bank overnight; prime is banks to best customers.
14. C. Taxing and spending are enacted as law by the elected branches. Both Fed choices are the standard planted distractors.
15. B. Keynes argued government should replace missing demand in slumps, running deficits. A is contractionary and C is tight monetary policy.
16. B. Weak dollar: American goods cheapen abroad (exporters win) and foreign currencies convert to more dollars (foreign holdings gain). A, C and D all prefer

a strong dollar.

17. A. The exchange rate is embedded in the ADR's dollar price, so a falling Swiss franc lowers the ADR even in a flat Zurich market. Nothing about an ADR is guaranteed.
18. C. Real ≈ 8% − 3.5% = 4.5%. The unsubtracted 8% is the planted near-miss.
19. B. Fixed coupons for decades lose purchasing power with every inflationary year — the 1923 lesson in miniature. The others hold real assets, pricing power, or owe fixed dollars.
20. B. An inverted curve has historically preceded recessions, and widening credit spreads show fear and a flight to quality; the signals point the same direction. Neither implies hyperinflation.

PORTFOLIO PIECE: MY ECONOMY DASHBOARD

Assemble a one-page pretend briefing — the kind an adviser might pin above a desk — that captures the economy as it stands this month. It must contain: (1) your judgment of where we are in the business cycle, in one labeled sentence; (2) three economic indicators with their latest values, each looked up from an official source (bls.gov, bea.gov, or FRED at fred.stlouisfed.org) and labeled leading, coincident or lagging, with value, release date and source; (3) a hand-drawn yield curve plotted from current Treasury yields, dated, with its shape named; and (4) two sentences on what this picture would mean for a cautious imaginary client — hedged, historical, and offering advice to no real person. Everything on one page, neat enough that a stranger could read it in ninety seconds.

LOOK FOR	WHAT IT MEANS
Sources	All three indicators and every Treasury yield carry an official source and a release date; nothing is quoted from memory or from a commentary site.
Classification	Each indicator is correctly labeled leading, coincident or lagging, and the cycle-phase judgment names the evidence behind it.
Yield curve	The hand-drawn curve plots at least five maturities accurately with labeled axes, is dated, and its shape (including any partial inversion) is named honestly.
Client reading	The two-sentence reading connects the data to a cautious posture using historical patterns, with honest hedging and no advice to real people.
Craftsmanship	One page, legible and orderly: a stranger could grasp the whole briefing in ninety seconds.

2.1 The Business Cycle and GDP: Measuring the Economy

OBJECTIVES

- Name and describe the phases of the business cycle: expansion, peak, contraction and trough.
- Define GDP, state what is counted and what is excluded, and distinguish real from nominal GDP.
- State the classic definitions of recession and depression used on the exam.
- Classify industries as cyclical, defensive or counter-cyclical and explain how each behaves across the cycle.

> **Warm-up.** Draw a wavy line rising gently from left to right across your page, like a hill range that climbs overall. Mark a point near a crest, one on a downslope, one in a valley bottom, and one on an upslope. Label each with one word for how a shopkeeper would feel there. Keep the drawing; you will label it properly in ten minutes.

WATCH

What is Gross Domestic Product (GDP)?

Marginal Revolution University · 4:35

https://www.youtube.com/watch?v=mjJmo5mN5yA

> **WHEN TO WATCH**
> After the story, before the big idea: as you watch, write down the three things the narrator says GDP leaves out.

BACKUP VIDEO

The business cycle | Aggregate demand and aggregate supply | Macroeconomics | Khan Academy

Khan Academy · 11:14

https://www.youtube.com/watch?v=TXrOpjG4dUs

If you want the cycle drawn out slowly: Sal Khan sketches the wave and its phases; copy his diagram into your sketchbook as he draws.

KEY TERMS

business cycle

The repeating rise and fall of economic activity around its long-term growth path: expansion, peak, contraction, trough, and recovery into the next expansion.

expansion

The phase in which output, employment and incomes are rising; the longest phase of most American cycles.

peak

The turning point at which an expansion ends and activity begins to fall.

contraction (recession)

The phase of falling output and rising unemployment; the classic exam definition of recession is two or more consecutive quarters of declining real GDP.

trough

The low turning point at which the decline ends and recovery begins.

gross domestic product (GDP)

The total market value of all final goods and services produced within a country's borders in a given period.

real GDP

GDP adjusted to remove the effect of price changes, so that growth reflects actual output rather than inflation.

cyclical industry

An industry whose sales rise and fall strongly with the cycle, such as automobiles, homebuilding, steel and luxury goods.

defensive industry

An industry whose sales hold steady through downturns because people buy its products regardless, such as food, utilities and medicine.

counter-cyclical industry

An industry that tends to do better when the economy does worse, such as discount retailers and repair services.

CORE IDEAS

The story. In the winter of 1932, the United States Senate wanted to know how badly the Depression had wounded the country — and discovered that nobody could tell them. There was no official measure of the nation's income. The government could

count pigs, rail cars and bank failures, but not the economy itself. The Senate passed a resolution directing the Commerce Department to find out, and the job fell to a quiet young economist named Simon Kuznets of the National Bureau of Economic Research. Kuznets and a small team spent more than a year combing tax records, payroll reports and industry censuses, and in January 1934 delivered a report titled *National Income, 1929–1932*. Its finding was grim and precise: the nation's income had fallen by roughly half in three years. For the first time, America could see its whole economy in one number. Kuznets's accounts grew into the GDP figures the Bureau of Economic Analysis still publishes, and in 1971 he received the Nobel Prize in economics largely for this work.

How they figured it out. Kuznets was a student of Wesley C. Mitchell, who had helped found the National Bureau of Economic Research in 1920 to study one stubborn question: why does business life move in waves? Mitchell's researchers gathered thousands of monthly series — freight loadings, pig iron, bank clearings — and found that the waves, though never identical, had a common anatomy: a rise, a turning point, a fall, a bottom, and a rise again. The NBER began dating each **peak** and **trough** of the American economy, and its successors still do; when you hear that a recession "officially" began in a certain month, that is the NBER speaking. Mitchell's lesson and Kuznets's lesson fit together: you cannot steer what you cannot measure, and you cannot date a cycle without honest numbers.

The big idea. The **business cycle** has four phases, and the exam expects you to walk them in order. In **expansion**, output, employment and incomes rise, and confidence rises with them. At the **peak**, the economy tops out; sales flatten, inflation is often at its worst, and the seeds of the downturn are already sown. In **contraction**, output falls, unemployment climbs and inventories pile up; a contraction severe enough is called a **recession** — classically defined, and tested, as two or more consecutive quarters of declining real GDP. At the **trough**, the fall stops; then **recovery** carries the economy back up into a new expansion. A **depression** is a contraction of unusual depth and length; many exam courses use a rule of thumb of six quarters or more of decline. Remember that the phases repeat but are not regular — expansions in modern America have run anywhere from about a year to about a decade.

GDP, carefully. Gross domestic product is the market value of all *final* goods and services produced *within the country's borders* in a period. Each word earns its keep. *Final* means the flour sold to the baker is not counted separately from the bread, or

the bread would be counted twice. *Produced* means used goods resold, purely financial transactions such as stock trades, and government transfer payments such as Social Security checks are all excluded — nothing new was made. *Within the borders* distinguishes GDP from the older measure GNP, which followed the nationality of the producer rather than the place of production. In plain words, the accountants add up spending: what households consume, what businesses invest, what government buys, and net exports — exports minus imports. That is the famous identity $C + I + G + (X - M)$.

Real versus nominal. If every price in the country doubled overnight, nominal GDP would double while not one additional loaf of bread was baked. So economists deflate: **nominal GDP** is measured in current prices, and **real GDP** is measured in constant prices, using a price index to strip inflation out. Growth, recession and the cycle are always judged by *real* GDP. An exam question that shows output rising 3 percent while inflation runs 5 percent is describing an economy that is actually shrinking in real terms — nominal up, real down. That trap appears in many costumes; learn to check which GDP a question means before answering.

Industries across the cycle. Companies do not feel the cycle equally. **Cyclical** industries sell things people can postpone — cars, houses, steel, machinery, vacations, luxury goods — so their sales and profits swing hard with the economy. **Defensive** (non-cyclical) industries sell things people buy in good times and bad — food, electricity, water, medicine, household staples — so they fall less in recessions and lag in booms. **Counter-cyclical** businesses actually improve when times worsen: discount retailers gain customers trading down, and repair shops thrive when people fix the old car instead of buying a new one. An adviser expecting contraction tilts a cautious portfolio toward defensive names; one expecting early recovery looks at cyclicals, which historically move first and hardest off the trough.

On the exam today. The Series 65 asks this topic straight and in costume. Straight: name the phase order (expansion, peak, contraction, trough), define recession (two consecutive quarters of declining real GDP), and know that the NBER dates cycles. In costume: “Which industry would be *least* affected by a recession?” (utilities or food — defensive), or “An investor who believes the economy is entering recovery would favor…” (cyclical stocks). The exam loves three traps here: swapping real and nominal GDP, calling transfer payments part of GDP (they are not — nothing is

produced), and confusing defensive industries with *defense* contractors, which are a different thing entirely. Read the word “defensive” slowly when you see it.

PICTURE STUDY

Tractored Out, Dorothea Lange, 1938 · Gelatin silver photograph (Farm Security Administration) · Library of Congress, Washington, D.C.

Image: Wikimedia Commons, public domain

Dorothea Lange photographed the Depression for the Farm Security Administration, a government project to show Americans what the slump looked like far from the cities. Here, in Childress County, Texas, in 1938, tractor furrows run clear to the doorstep of an empty tenant house: power farming had replaced the family that lived there, in the very years Kuznets's new accounts were measuring how far the nation's income had fallen. Statistics and photographs told the same story — one in numbers, one in light.

Look closely

- Find the furrows. Notice how they curve around nothing and stop for nothing — the field is being farmed, but by whom?
- Find the house's windows and door. What small details tell you no one lives here now?
- Notice how low the horizon sits and how much sky the photographer included. What feeling does all that emptiness create?
- Look for anything alive in the picture. What does its absence say about where the people went?

Talk about it

1. This photograph shows a contraction reaching one family. What can a single number like GDP hide, and why did the government also pay photographers?
2. The tractor that plowed these furrows made the farm more productive even as it displaced the tenant. How can the same event look different in national statistics and in one household?
3. Why does it matter for honest government — and honest advising — that someone measures the economy carefully, as Kuznets did?

PROJECT

Date the Cycle Yourself

The NBER dates the American business cycle from data much like what you can pull from FRED for free. In this project you will chart real GDP across the last twenty years, mark the official peaks and troughs, and see for yourself how the dating committee's calls line up with the numbers.

You will need

- Internet access with a parent: fred.stlouisfed.org and nber.org/research/business-cycle-dating
- Graph paper or a free spreadsheet
- Exam notebook and two colored pencils

Steps

1. On FRED, search for "Real Gross Domestic Product" and display the last twenty years. Notice the gray bars — FRED shades officially dated recessions automatically.
2. Copy the quarterly values for the last twenty years into your spreadsheet or onto graph paper, and plot them as a line.
3. On the NBER business cycle dating page, find the peak and trough months that fall inside your twenty years, and mark each on your chart in color.
4. Label each stretch of your chart with its phase: expansion, peak, contraction, trough, recovery.
5. For each contraction, count how many quarters real GDP actually declined, and note whether the two-consecutive-quarters rule of thumb would have called it a recession.
6. Look up nominal GDP for the same period and plot it lightly behind real GDP. Write two sentences on where the two lines tell different stories.
7. Finish with a paragraph: which phase is the economy in right now, in your judgment, and what two numbers would you watch to find out if you are wrong?

Tips

- FRED lets you download any series as a CSV file — faster and more accurate than copying by hand.
- The NBER dates cycles by months using many indicators, not just quarterly GDP, so small mismatches with the two-quarter rule are normal and worth noting, not fixing.

Check your work

- ☐ My chart shows real GDP with every official peak and trough marked and labeled.
- ☐ I counted the declining quarters in each contraction and compared them with the classic definition.
- ☐ I wrote where the cycle stands now and named the evidence I would watch.
- ☐ Every number on my chart has a source and a date.

EXAM NOTEBOOK

1. Draw the business cycle as one labeled wave: expansion, peak, contraction, trough, recovery — and under each phase write what output, unemployment and inflation are doing.
2. Make a three-column industry table — cyclical, defensive, counter-cyclical — with at least five industries in each column.
3. Write the GDP identity C + I + G + (X − M) at the top of a fresh page, then list five things that are NOT counted in GDP and one sentence each on why.

KEY FORMULAS

$$\text{GDP} = C + I + G + (X - M)$$

$$\text{Real GDP} = \frac{\text{Nominal GDP}}{\text{price index}} \times 100$$

From history. Wesley Mitchell's 1913 book Business Cycles made his name, but his deeper legacy was institutional: the NBER's patient, nonpartisan measurement. With Arthur Burns he published Measuring Business Cycles in 1946, defining methods still in use. Kuznets, his student, went on to warn Congress against worshiping his own creation — national income, he insisted, measures output, not welfare. A country can grow richer in GDP and poorer in things no account can hold.

WORKED EXAMPLES

Example 1. In this example, a small country's nominal GDP rises from $500 billion to $530 billion in a year, while prices rise 4%. Did real output grow, and by roughly how much?

Show solution

1. Nominal growth: $\$30 \div \$500 = 6\%$.
2. Subtract inflation for an approximation of real growth: $6\% - 4\% = 2\%$.
3. Check with the deflator method: real GDP $= \$530 \div 1.04 = \$509.6$ billion, which is about 1.9% above $500 billion.

Answer: Yes — real output grew about 2%. Most of the 6% nominal gain was only higher prices.

Example 2. Exam style. The economy has shown declining real GDP for two consecutive quarters. This period is best described as:

A. A depression
B. A recession
C. A trough
D. A correction

Show solution

1. A: a depression is a far deeper and longer decline — many courses say six quarters or more. Two quarters does not qualify.
2. B: two or more consecutive quarters of declining real GDP is the classic definition of recession. This fits exactly.
3. C: the trough is a single turning point at the bottom, not a period of decline.
4. D: a correction is a drop in *stock prices* (commonly about 10%), not a phase of the business cycle. The exam plants market words in economy questions to catch skimmers.

Answer: B. Two consecutive quarters of declining real GDP defines a recession; a depression is much more severe, and a trough is a point, not a period.

Example 3. Exam style. An investment adviser representative believes the economy is about to pass its peak and contract. Which portfolio tilt is most consistent with that view?

A. Add automobile and homebuilding stocks

B. Add utility and food stocks

C. Add luxury goods retailers

D. Add steel producers

Show solution

1. A and D are classic cyclicals — cars, houses and steel are postponable purchases that fall hard in contractions. Wrong direction.
2. C: luxury goods are among the most postponable of all. Wrong direction.
3. B: utilities and food are defensive — people heat their homes and eat in every phase of the cycle, so these earnings hold up best in a downturn.

Answer: B. Defensive industries (utilities, food, medicine) are the shelter position ahead of a contraction; every other choice is cyclical.

PRACTICE

1. Easy Starting from the bottom of the business cycle, the correct order of what follows is:

   A. Trough, expansion, peak, contraction

   B. Trough, contraction, peak, expansion

   C. Peak, expansion, trough, contraction

   D. Expansion, trough, contraction, peak

   Show answer

   A. From the trough the economy expands up to a peak, then contracts down to the next trough. B reverses the direction of travel, and C and D begin mid-cycle and scramble turning points with periods.

2. Easy The classic definition of a recession tested on the exam is:

A. Any quarter of declining real GDP

B. Two or more consecutive quarters of declining real GDP

C. Six consecutive quarters of declining real GDP

D. A 10% drop in stock prices

Show answer

B. Two consecutive down quarters of real GDP is the classic recession definition. C is the rule of thumb many courses use for a depression, and D describes a market correction, not the economy.

3. Easy Which of the following is counted in GDP?

A. The sale of a used car

B. A Social Security payment to a retiree

C. A haircut purchased at a barbershop

D. The purchase of 100 shares of stock

Show answer

C. A haircut is a final service produced this period. The used car was counted when new, the Social Security check is a transfer with no production behind it, and a stock trade merely changes ownership of an existing asset.

4. Medium Nominal GDP grew 5% last year while inflation was 7%. Real GDP:

A. Grew about 2%

B. Grew about 12%

C. Fell about 2%

D. Cannot be determined

Show answer

C. Real growth ≈ nominal growth − inflation = 5% − 7% = −2%. Choice A subtracts in the wrong direction — the most common error — and B adds when it should subtract.

5. Medium Which industry group is most likely to outperform during a contraction?

A. Homebuilders

B. Luxury automakers

C. Pharmaceutical and food companies

D. Steel producers

Show answer

C. Medicine and food are defensive — demand barely falls in recessions. Homebuilders, luxury autos and steel are all classic cyclicals whose sales can be postponed.

6. Medium From the story: why did the Senate commission Simon Kuznets's 1934 report, and what did it find?

Show answer

In 1932 no official measure of national income existed, so no one could say how severe the Depression was. Kuznets's report, National Income, 1929–1932, built the first national income accounts and showed the nation's income had fallen by roughly half in three years.

7. Medium A discount retailer's sales rise as the economy weakens because shoppers trade down. This firm is best described as:

A. Cyclical

B. Defensive

C. Counter-cyclical

D. Growth

Show answer

C. Counter-cyclical businesses move opposite the cycle — they do better when the economy does worse. Defensive (B) merely holds steady; the tempting near-miss is the difference between "holds up" and "improves."

8. Hard In this example, nominal GDP is $24.0 trillion and the price index is 120 (base 100). Find real GDP.

Show answer

$\$24.0 \div 120 \times 100 = \$20.0$ trillion. Dividing by the index strips out the 20% of price inflation.

9. Hard Which organization officially dates United States business cycle peaks and troughs?

   A. The Bureau of Economic Analysis

   B. The Federal Reserve Board

   C. The National Bureau of Economic Research

   D. The Securities and Exchange Commission

   Show answer

   C. The NBER — the private research bureau Wesley Mitchell helped found in 1920 — dates the cycle. The BEA publishes GDP but does not date recessions, and the Fed and SEC have no role in dating at all.

10. Hard An economy's output of final goods and services is unchanged, but every price doubles. What happens to nominal GDP, real GDP, and the position in the business cycle as properly measured?

    Show answer

    Nominal GDP doubles; real GDP is unchanged, because the same quantity was produced; the cycle position is judged by real GDP, so it is unchanged too. Inflation alone is not growth.

11. Challenge A client says: "GDP rose last quarter, so the recession must be over — buy cyclicals." Give two careful corrections an adviser should make before acting.

    Show answer

    First, one quarter of rising GDP does not end a recession by the classic two-quarter logic, and the NBER dates troughs months later with many indicators — a single print can be revised or reversed. Second, check whether the rise was real or merely nominal; if prices rose faster than output, real GDP may still be falling. (A third fair point: markets often move before official data, so the timing case needs more than one number.)

COMMON MISTAKES

- Judging the cycle by nominal GDP instead of real GDP — inflation can masquerade as growth.
- Counting transfer payments, used goods or stock trades in GDP; none involves new production.

- Confusing defensive industries (food, utilities) with defense contractors — the exam exploits the word.
- Calling the trough a period; peaks and troughs are turning points, expansions and contractions are periods.
- Assuming cycles are regular and predictable in length; they repeat in shape, not on schedule.

Make it a game · Phase Snap. Make four cards: EXPANSION, PEAK, CONTRACTION, TROUGH. A parent or sibling reads invented one-line headlines — "Factories hiring, wages up a third year running," "Car sales collapse, layoffs spread," "Prices at records as growth stalls," "Economists say the worst is finally behind us." First player to slap the right phase card wins the point; wrong slap loses one. Then switch decks: the reader names an industry (steel, groceries, discount stores, cruise lines) and players slap CYCLICAL, DEFENSIVE or COUNTER-CYCLICAL cards instead. First to ten points wins. Ten minutes, no mercy.

Scripture. "Behold, there come seven years of great plenty throughout all the land of Egypt: and there shall arise after them seven years of famine; and all the plenty shall be forgotten in the land of Egypt; and the famine shall consume the land." (Genesis 41:29–30, KJV)

Joseph's Egypt is the oldest business-cycle lesson on record: plenty and famine alternate, and the steward's duty is to recognize the phase and prepare during expansion for contraction. An adviser who stores up in the seven fat years serves clients the way Joseph served Egypt.

2.2 Economic Indicators: Leading, Lagging and the CPI

OBJECTIVES

- Classify the classic economic indicators as leading, coincident or lagging.
- Explain what the CPI measures, how it is built, and why it is a lagging indicator.
- Calculate an inflation rate from two CPI values.
- Describe the main employment indicators and explain the trade deficit and balance of payments in plain words.

> **Warm-up.** Before a storm arrives you see clouds; while it rages you hear thunder; after it passes you count puddles. Write three economic parallels: one sign that comes before a downturn, one that happens during it, and one that shows up only afterward. Guess freely — you will check yourself against the official lists today.

WATCH

Two Leading Economic Indicators tested on your SIE Exam and Series 65 Exam

Series 7 Guru · 4:17

https://www.youtube.com/watch?v=oQ16mxh3CIs

> **WHEN TO WATCH**
> After the big idea: an exam teacher drills exactly how the test asks about leading indicators — note which two he singles out and why.

BACKUP VIDEO

Inflation Explained | Measuring Inflation Data

Federal Reserve Bank of St. Louis · 3:05

https://www.youtube.com/watch?v=avwZ0MVPWoI

Before the worked examples: the St. Louis Fed shows how inflation data are actually gathered and read — listen for the market-basket idea you met in the shipyard story.

KEY TERMS

economic indicator

A regularly published statistic used to judge where the economy is in the business cycle.

coincident indicator

A statistic that moves with the economy in real time, such as nonfarm payrolls, personal income and industrial production.

Consumer Price Index (CPI)

The Bureau of Labor Statistics measure of the average change in prices paid by urban consumers for a fixed market basket of goods and services; the standard gauge of inflation.

initial jobless claims

The weekly count of new filings for unemployment insurance; because layoffs rise early in downturns, it is a leading indicator.

balance of payments

The full accounting of a country's transactions with the rest of the world, including trade, income flows and investment flows.

leading indicator

A statistic that tends to turn before the economy does, such as building permits, stock prices, new manufacturing orders and initial jobless claims.

lagging indicator

A statistic that turns only after the economy has turned, such as the average duration of unemployment and the CPI.

unemployment rate

The percentage of the labor force that is without work and actively seeking it.

trade deficit

The amount by which a country's imports of goods and services exceed its exports in a period.

CORE IDEAS

The story. The Consumer Price Index was born in the shipyards. When America entered the First World War in 1917, shipbuilding became a national emergency, and

shipyard workers' wages became a national argument: prices were climbing fast, and the unions wanted pay to climb with them. The Shipbuilding Labor Adjustment Board agreed to adjust wages as living costs rose — and immediately faced a problem Washington had met before and never solved: nobody knew what living costs were. The Bureau of Labor Statistics had food prices, but a family does not live on food alone. So between 1917 and 1919 the BLS sent agents into shipbuilding cities, and then into ninety-two industrial centers across the country, to record what working families actually spent on rent, clothing, fuel, furniture and food. From those family budgets it built a weighted "market basket," began publishing cost-of-living indexes for thirty-two cities in 1919, and from 1921 published a regular national index, estimated back to 1913. After the Second World War the measure took its modern name: the Consumer Price Index.

How they figured it out. The insight behind the CPI is humble and powerful: measure the price of the *same basket* again and again. If the basket cost $100 last year and $104 today, consumer prices rose 4 percent, whatever any single price did. Everything hard about the index flows from keeping the basket honest — what should be in it, in what proportions, and how to handle goods that change quality or disappear. The same wartime logic produced the index's first great use, which it still serves: **escalation**. Wages, union contracts, Social Security benefits and the interest on inflation-protected Treasury bonds are all adjusted by the CPI, exactly as shipyard wages were adjusted by its ancestor.

The big idea. Indicators are sorted by their timing against the business cycle, and the Series 65 tests the sorting cold. **Leading indicators** turn first: building permits (builders stop filing before they stop building), stock prices (markets anticipate), new orders for manufactured goods, average weekly hours (employers cut hours before cutting jobs), initial jobless claims (layoffs begin early), consumer expectations, and the interest-rate spread. **Coincident indicators** move with the economy: nonfarm payrolls, industrial production, personal income less transfers, and manufacturing and trade sales. **Lagging indicators** confirm what has already happened: the average *duration* of unemployment, the prime rate, outstanding commercial loans, and — this surprises people — the **CPI**. Inflation keeps rising after a peak and keeps easing after a trough, so price indexes trail the cycle.

Employment, carefully. The employment statistics repay a careful eye, because the exam hides distinctions in them. The **unemployment rate** counts only people

without work who are *actively looking*; a discouraged worker who stops searching leaves the labor force and, paradoxically, can make the rate look better. Weekly **initial jobless claims** lead the cycle; monthly **nonfarm payrolls** coincide with it; the average **duration** of unemployment lags it, because the long-term unemployed are re-hired last. One subject, three timings — a favorite exam construction.

Prices, carefully. The inflation rate is the percentage change in the CPI: inflation $= \frac{\text{CPI}_{\text{new}} - \text{CPI}_{\text{old}}}{\text{CPI}_{\text{old}}} \times 100\%$. Note what a falling *inflation rate* means: prices still rising, just more slowly — that is **disinflation**. Prices actually falling is **deflation**, a different and rarer animal. Headline CPI includes everything; "core" measures strip out volatile food and energy to show the trend. The producer price index (PPI) tracks prices at the wholesale stage and often foreshadows consumer prices — but on the exam, the measure of consumer inflation is the CPI.

Trade and the balance of payments, in plain words. A country keeps books with the rest of the world. When Americans buy more goods and services from abroad than foreigners buy from America, the difference is the **trade deficit**. The **balance of payments** is the complete ledger: trade in goods and services, income flowing across borders, and investment moving in and out. The ledger balances by construction — dollars that go abroad for imports come back as foreign purchases of American goods, bonds, stocks or property. So a trade deficit is financed by a matching inflow of foreign investment. Neither side of the ledger is sin or virtue by itself; what matters to an adviser is the direction of flows and what they imply for the dollar and for interest rates, which you will meet again in Lesson 2.4.

On the exam today. Expect two or three questions that are pure sorting: "Which of the following is a leading indicator?" The reliable leaders to memorize: building permits, stock prices, new orders, average weekly hours, initial jobless claims. The reliable laggards: duration of unemployment, prime rate, CPI. The traps are twins that point in opposite directions — initial jobless claims (leading) versus duration of unemployment (lagging); payroll employment (coincident) versus both. And the exam loves the CPI-is-lagging fact precisely because students assume anything famous must be leading. When a question says inflation "as measured by," the answer is the CPI; when it says prices are rising more slowly, the answer is disinflation, not deflation.

PICTURE STUDY

Hog Island Ship Yards, Bain News Service (photographer unknown), January 1918 · Glass-negative photograph · George Grantham Bain Collection, Library of Congress, Washington, D.C.
Image: Wikimedia Commons, public domain

Hog Island, built on the Delaware River below Philadelphia in 1917–18, was for a time the largest shipyard in the world, thrown up almost overnight to build the fleet America needed for the First World War. In this photograph the yard's thousands of workers crowd the canteen at noon, reading the Hog Island News. It was for men like these that the Shipbuilding Labor Adjustment Board promised wages that would keep pace with living costs — and it was to keep that promise honestly that the Bureau of Labor Statistics built the index that became the CPI.

Look closely

- Find the men reading. How many are holding the yard newspaper, and what does that say about workers and information?
- Find the signs for the canteen and entrance. What do the rough, unpainted buildings tell you about how fast this yard was built?
- Look at the mud and the duckboards. What season is it, and what would a day's work here have been like?
- Look at the crowd's size. Why would wage disputes at a yard like this become a national problem in wartime?

Talk about it

1. The CPI exists because these men's wages were promised to keep pace with living costs. Why does an honest promise require an honest measurement?
2. Workers here are reading the news at noon. What information does a worker — or an investor — need regularly, and from whom?
3. Wartime urgency created a statistic we still use a century later. What does that suggest about how durable good measurement is?

PROJECT

Indicator Scorecard

Professional economists keep dashboards of indicators sorted by timing. You will build a one-page scorecard of nine real indicators — three leading, three coincident, three lagging — with current values from official sources, and practice reading them together the way an adviser would.

You will need

- Internet access with a parent: fred.stlouisfed.org and bls.gov
- Exam notebook and a ruler
- One sheet of card stock or heavy paper for the finished scorecard

Steps

1. Rule your card into three bands labeled LEADING, COINCIDENT and LAGGING.
2. Choose three indicators for each band from the lesson's lists (for example: building permits, initial jobless claims and stock prices; nonfarm payrolls, industrial production and personal income; duration of unemployment, prime rate and CPI).
3. Find each indicator's latest value on FRED or bls.gov. Record the value, the release date and the source next to its name.
4. Beside each value, draw an arrow: is it rising or falling compared with six months ago? (FRED's charts make this a ten-second check.)
5. Compute the latest twelve-month inflation rate from the CPI level now and the level a year ago, using the lesson formula, and compare your answer with the BLS's own published rate.
6. Study your nine arrows together and write a five-sentence reading: what do the leaders suggest is coming, what do the coinciders say is happening, and what have the laggards confirmed?
7. Present the scorecard to a parent in three minutes, pointing with a pencil, as if they were a client who asked, "How's the economy?"

Tips

- Dates matter as much as values: a “latest” number from last quarter may already have been revised. Write the release date every time.
- If two leading indicators point opposite directions, say so plainly — honest uncertainty reads better than false confidence, on the exam and in life.

Check your work

- ☐ My scorecard shows nine indicators correctly sorted into three bands.
- ☐ Every value carries its source and release date.
- ☐ My computed inflation rate matches the BLS figure within rounding.
- ☐ My five-sentence reading distinguishes what leaders suggest from what laggards confirm.

EXAM NOTEBOOK

1. Make a three-column master table of indicators — leading, coincident, lagging — and star the five the lesson says the exam tests most: permits, stock prices, new orders, jobless claims, and the lagging CPI.
2. Write the inflation-rate formula at the top of a page and work it three times: CPI 200→210, CPI 300→309, and CPI 250→245 (note the negative answer and name it).
3. Make a flashcard pair for the twins: “initial jobless claims — LEADING” and “average duration of unemployment — LAGGING,” with one sentence on each card explaining why.

KEY FORMULAS

$$\text{Inflation rate} = \frac{\text{CPI}_{\text{new}} - \text{CPI}_{\text{old}}}{\text{CPI}_{\text{old}}} \times 100\%$$

From history. The index born in the shipyards went on to run much of American economic life. During the Second World War the “Cost-of-Living Index” became a battleground itself — unions argued it understated wartime price rises, and a technical committee was convened to settle the matter. After the war the measure was renamed the Consumer Price Index, partly to stop implying it captured the full “cost of living.” Today the CPI escalates Social Security benefits, tax brackets and the principal of Treasury Inflation-Protected Securities — a shipyard wage tool become the republic’s yardstick.

WORKED EXAMPLES

Example 1. In this example, the CPI stood at 250.0 a year ago and stands at 257.5 today. Find the inflation rate for the year.

Show solution

1. Change in the index: $257.5 - 250.0 = 7.5$.
2. Divide by the starting value: $7.5 \div 250.0 = 0.03$.
3. Convert to percent: 3%.

Answer: Inflation ran 3% for the year. Note the index itself (257.5) is not a percent; only its change is.

Example 2. Exam style. Which of the following is a leading economic indicator?

A. Average duration of unemployment
B. Industrial production
C. Building permits for new private housing
D. The Consumer Price Index

Show solution

1. A: duration of unemployment lags — the long-term unemployed are rehired last, so this number keeps worsening after recovery begins.
2. B: industrial production moves with the economy — coincident.
3. C: builders file permits before they build; permits turn down before the economy does. Leading.
4. D: the CPI is lagging; inflation trails the cycle. The exam counts on you assuming the famous index must lead.

Answer: C. Building permits lead; industrial production coincides; unemployment duration and the CPI lag.

Example 3. Exam style. The rate of inflation has fallen from 6% to 3%. Consumer prices are:

A. Falling

B. Rising more slowly than before

C. Unchanged

D. Rising faster than before

Show solution

1. Inflation of 3% still means prices are rising 3% a year — only the speed of the rise has dropped.
2. A describes deflation, which would require inflation below zero. The near-miss the exam wants you to grab.
3. B states it exactly: rising, more slowly. This is disinflation.
4. C and D contradict the given numbers.

Answer: B. Falling inflation is disinflation — prices still rise, just more slowly. Deflation means prices actually decline.

Example 4. In this example, Americans import \$3.2 trillion of goods and services in a year and export \$2.6 trillion. State the trade balance and say in one sentence how the difference is financed.

Show solution

1. Exports minus imports: $\$2.6 - \$3.2 = -\$0.6$ trillion — a trade deficit of \$600 billion.
2. The dollars sent abroad return as foreign investment: purchases of American securities, businesses and property recorded elsewhere in the balance of payments.

Answer: A \$600 billion trade deficit, financed by an offsetting inflow of foreign investment — the balance of payments balances by construction.

PRACTICE

1. Easy Which of the following is a lagging indicator?

A. Building permits

B. Stock prices

C. Average duration of unemployment

D. New orders for manufactured goods

Show answer

C. The long-term unemployed are rehired last, so duration keeps rising after recovery begins. A, B and D are all classic leading indicators.

2. Easy The Consumer Price Index measures:

A. The prices producers receive at the wholesale stage

B. The average change in prices paid by urban consumers for a fixed market basket

C. The total output of final goods and services

D. The cost of employing a worker, including benefits

Show answer

B. The CPI prices the same consumer market basket again and again; it is published monthly by the Bureau of Labor Statistics. A describes the PPI, C describes GDP, and D describes an employment cost measure.

3. Easy Nonfarm payrolls and industrial production are examples of:

A. Leading indicators

B. Coincident indicators

C. Lagging indicators

D. Monetary policy tools

Show answer

B. They move with the economy in real time. Payrolls trip students who expect anything about jobs to lead; only initial claims lead.

4. **Medium** The CPI rises from 240.0 to 244.8 over a year. The inflation rate is:

   A. 4.8%

   B. 2.0%

   C. 0.2%

   D. 4.0%

   Show answer

   B. (244.8 − 240.0) ÷ 240.0 = 0.02 = 2%. Choice A is the raw point change mistaken for a percent — the standard trap.

5. **Medium** Which pairing is correct?

   A. Initial jobless claims — lagging

   B. CPI — leading

   C. Building permits — leading

   D. Stock prices — coincident

   Show answer

   C. Permits lead because filing precedes building. Claims lead (not lag), the CPI lags (not leads), and stock prices lead because markets anticipate.

6. **Medium** From the story: what wartime problem created the ancestor of the CPI, and what did the BLS do to solve it?

   Show answer

   Shipyard wage boards promised to adjust wages as living costs rose, but no measure of living costs existed. The BLS surveyed working families' budgets in shipbuilding cities and then 92 industrial centers (1917–19), built a weighted market basket, and began publishing cost-of-living indexes — city indexes in 1919 and a regular national index from 1921.

7. Medium A discouraged worker stops looking for work. Strange as it sounds, the unemployment rate may:

A. Rise, because he is still jobless

B. Fall, because he leaves the labor force

C. Stay exactly the same by definition

D. Double-count him until he returns

Show answer

B. The rate counts only active seekers; when he stops searching he exits the labor force, and the measured rate can improve while the reality worsens. The exam likes this paradox.

8. Hard Inflation fell from 9% to 4% over two years. Which statement is accurate?

A. The price level fell 5%

B. The economy experienced deflation

C. The economy experienced disinflation

D. Real incomes necessarily fell

Show answer

C. Prices rose both years — just more slowly in the second. Deflation (B) requires inflation below zero, and A confuses the inflation rate with the price level.

9. Hard In this example, a country exports $1.8 trillion and imports $2.1 trillion. Name the trade position, give its size, and state what offsets it in the balance of payments.

Show answer

A trade deficit of $300 billion. It is offset by a net inflow of foreign investment — foreigners use the dollars to buy American securities, businesses and property, so the full balance of payments balances.

10. Hard Why is the CPI classified as a lagging indicator when it is the most famous economic statistic in the country?

Show answer

Fame is not timing. Inflation continues rising after the economy peaks and continues easing after the trough, because wages and prices adjust slowly; so the CPI confirms turns rather than predicting them.

11. **Challenge** Leading indicators have weakened for three straight months, coincident indicators are flat, and lagging indicators are still improving. Write the two-sentence briefing an adviser might give a cautious client — using no numbers.

Show answer

Example: “The statistics that usually turn first have been softening for a quarter, while measures of current activity have stalled; the figures still improving are the kind that only confirm the past. Taken together, the data suggest the expansion is aging, so this is a season for positions that do not depend on strong growth.” (Any answer that reads leaders as forward-looking, laggards as backward-looking, and draws a cautious, non-specific conclusion earns full credit.)

COMMON MISTAKES

- Classifying the CPI as leading because it is famous; it lags the cycle.
- Confusing initial jobless claims (leading) with average duration of unemployment (lagging).
- Reading a falling inflation rate as falling prices; disinflation is slower rising, deflation is actual falling.
- Using the CPI point change (244.8 − 240.0 = 4.8) as the inflation percent instead of dividing by the starting index.
- Treating a trade deficit as a simple loss; it is financed by offsetting investment inflows in the balance of payments.

> **Make it a game · Lead, Lag or Now.** Write each of these on its own slip: building permits, stock prices, new factory orders, average weekly hours, initial jobless claims, consumer expectations, nonfarm payrolls, industrial production, personal income, duration of unemployment, prime rate, CPI. Shuffle. A parent or sibling flips slips one at a time and you call “LEAD,” “NOW” or “LAG” before they count three seconds aloud. Right answer keeps the slip; wrong or slow, the dealer keeps it. Play the deck twice; most slips wins. For a rematch, the loser must also give the one-sentence why for each slip they lost.

Scripture. “Ye hypocrites, ye can discern the face of the sky and of the earth; but how is it that ye do not discern this time?” (Luke 12:56, KJV)

Christ assumes His hearers can read weather signs — clouds rising in the west, the south wind blowing — and rebukes them for not reading the signs that matter more. Economic indicators are the sky-signs of markets: a steward should learn to read them honestly, while remembering that the most important discernment is not economic at all.

2.3 Money and the Federal Reserve: Monetary Policy

OBJECTIVES

- Explain why the Federal Reserve was created in 1913 and what the FOMC does.
- Name and explain the classic tools of monetary policy: open market operations, the discount rate and reserve requirements.
- Trace the effects of easy and tight money on interest rates, borrowing, the economy and the dollar.
- Distinguish the Federal Reserve's role from the Treasury's and from fiscal policy.

> **Warm-up.** Imagine your town has one water tower serving every house. List three ways the tower's keeper could raise or lower the water pressure for the whole town at once. Keep the list: today you will meet the keeper of the money supply, who has exactly three classic valves.

WATCH

Monetary policy tools | Financial sector | AP Macroeconomics | Khan Academy

Khan Academy · 9:27

https://www.youtube.com/watch?v=C8Eb4-Wz27A

> **WHEN TO WATCH**
> After the big idea: as you watch, make a three-row table of the tools and write what the Fed does with each one to ease and to tighten.

BACKUP VIDEO

What are Open Market Operations?

Marginal Revolution University · 2:28

https://www.youtube.com/watch?v=Vy6gSr2AtUE

A two-minute sharpener on the chief tool alone — watch it the day before the unit test and recite the easy-money chain as it plays.

KEY TERMS

Federal Reserve System

The central bank of the United States, created by the Federal Reserve Act of 1913: a Board of Governors in Washington and twelve regional Federal Reserve Banks.

FOMC

The Federal Open Market Committee, the Fed body that directs open market operations; its twelve voting members are the seven governors, the president of the New York Fed, and four other regional bank presidents in rotation.

open market operations

The Fed's buying and selling of U.S. government securities to add or drain bank reserves; the most used tool of monetary policy.

discount rate

The interest rate the Federal Reserve charges member banks that borrow directly from it.

reserve requirement

The fraction of deposits banks are required to hold in reserve rather than lend; the bluntest and least used tool.

federal funds rate

The market rate banks charge one another for overnight loans of reserves; the FOMC's target rate.

easy (accommodative) money

Policy that expands money and credit — the Fed buys securities, cuts rates — to stimulate a weak economy.

tight (restrictive) money

Policy that shrinks money and credit — the Fed sells securities, raises rates — to cool inflation.

lender of last resort

The central bank's role of lending to solvent banks in a panic so that fear alone cannot destroy the banking system.

CORE IDEAS

The story. In October 1907 a failed attempt to corner the stock of a copper company set off runs on the New York banks associated with the schemers, and the fear jumped, as fear does, to institutions that had done nothing wrong. On October 22 the Knickerbocker Trust Company — one of the largest trusts in the city — paid out

depositors by the hour until it suspended, and the Panic of 1907 was on. The United States had no central bank; there was no public lender who could stand behind solvent banks facing a stampede. There was only J. Pierpont Morgan, seventy years old, who made his library on 36th Street the headquarters of the rescue. For three weeks Morgan and his men decided which institutions were sound and marshaled money to defend them — and on the famous night of November 2 he locked the city's trust company presidents into the library and did not open the door until, near dawn, they had pledged twenty-five million dollars to hold the line. The panic passed. But the country had seen its financial system saved by the willpower of one old man, and sober people found that intolerable.

How they figured it out. Congress responded in layers. The Aldrich–Vreeland Act of 1908 provided emergency currency and created the National Monetary Commission to study central banking. Senator Nelson Aldrich's studies — including a famously secretive drafting session at Jekyll Island, Georgia, in 1910 — led through years of argument to the **Federal Reserve Act**, signed by President Wilson on December 23, 1913. The design answered American fears of concentrated power with structure: not one central bank but twelve regional Reserve Banks, coordinated by a Board of Governors in Washington, owned in form by member banks but charged with a public duty — an elastic currency and a **lender of last resort**, so that the next panic would meet an institution instead of depending on a Morgan.

The big idea. The Fed conducts **monetary policy**: managing money and credit to pursue its mandate of stable prices and maximum employment. The exam still tests the classic three tools. First and foremost, **open market operations**, directed by the **FOMC**: when the Fed *buys* Treasury securities, it pays with newly created reserves — banks have more to lend, short-term rates fall, money is easier. When it *sells*, reserves drain, lending tightens, rates rise. (Repurchase agreements — repos — are simply short-term, self-reversing versions of these operations.) Second, the **discount rate**, the rate the Fed itself charges banks that borrow at its window: raised to tighten, lowered to ease. Third, the **reserve requirement**, the fraction of deposits banks must hold idle: the bluntest tool, rarely moved. Today the requirement actually stands at zero and the Fed steers chiefly by paying interest on bank reserves — but the exam's questions are built on the classic three, so master them first and know the modern note second.

Easy and tight, traced through. Follow easy money step by step, because exam questions walk the chain: the Fed buys securities → bank reserves rise → banks lend more cheaply → the federal funds rate and other short rates fall → businesses and households borrow and spend → output and employment rise, and bond prices rise as yields fall. Lower American rates also make dollar deposits less attractive to the world, which tends to *weaken the dollar*. Tight money is the same chain reversed: sell securities, drain reserves, rates rise, borrowing slows, inflation cools, bond prices fall — and higher rates tend to strengthen the dollar. If you remember one picture, remember the see-saw: Fed buying lifts bond prices and sinks yields; Fed selling sinks prices and lifts yields.

What the Fed is not. The Fed is not the Treasury: the Treasury is an arm of the executive that collects taxes, pays the government's bills and *issues* the national debt; the Fed is independent within government and merely buys and sells that debt in the open market. The Fed does not set fiscal policy — taxing and spending belong to Congress and the President, as the next lesson explains. And the Fed does not set the **prime rate**; commercial banks set prime for their best customers, though it follows the federal funds rate closely. One more Fed power worth filing for later units: under the Securities Exchange Act of 1934, the Federal Reserve Board sets **margin requirements** — Regulation T — governing how much credit brokers may extend on securities.

The FOMC, precisely. The Federal Open Market Committee has twelve voting members: the seven members of the Board of Governors, the president of the Federal Reserve Bank of New York (always, because New York's trading desk executes the operations), and four of the other eleven regional bank presidents, voting in annual rotation. It meets regularly through the year — about eight scheduled meetings — and its statements move markets more than any other words in finance. For the exam: the FOMC directs *open market operations*; the Board of Governors sets the discount rate (formally reviewing requests of the regional banks) and reserve requirements.

On the exam today. The Series 65 asks monetary policy with relentless directional logic: "The Fed buys Treasuries — what happens to rates? To bond prices? To the money supply?" (Falls, rises, grows.) Know the three classic tools and which body wields which; know that open market operations are the most used tool and reserve requirement changes the rarest; know easy money weakens and tight money

strengthens the dollar, other things equal. The traps: confusing the discount rate (set by the Fed) with the federal funds rate (a market rate the Fed targets) and with prime (set by banks); thinking the Fed issues Treasury debt (that is the Treasury); and reversing the see-saw between bond prices and interest rates. When in doubt, draw the chain with arrows before choosing an answer.

PICTURE STUDY

The Panic of 1907 on Wall Street, Unknown photographer, October 1907 · Photograph · Widely reproduced in the American press; this print preserved via Wikimedia Commons

Image: Wikimedia Commons, public domain

An unknown photographer leaned out over Wall Street in October 1907 and caught the panic itself: depositors, brokers and onlookers packing the street beneath the statue of Washington at Federal Hall, with Trinity Church — the tallest spire in old New York — watching from the end of the street. Somewhere a few blocks away, J. P. Morgan was deciding which institutions would be saved. Six years later, because of these weeks, the Federal Reserve existed.

Look closely

- Find Washington's statue above the crowd. What is the irony of the first president presiding over a financial panic?
- Look at the crowd's dress — nearly every man in a dark suit and hat. Are these ruined paupers or frightened savers and clerks? How can you tell?
- Find Trinity Church in the distance. What does its place in this picture quietly say about what stands behind and beyond the market?
- Notice there is no visible violence — only density. What does a run on a bank actually look like, and why is fear itself the danger?

Talk about it

1. No law forced these depositors to run; fear did. Why can fear alone break a bank that made only sound loans?
2. After 1907, Americans decided a lender of last resort should be an institution, not one rich man. What are the strengths and dangers of each arrangement?
3. What duties does an adviser have when clients are frightened and everyone else is running?

PROJECT

The Policy Chain Poster

Exam questions on monetary policy are chains of cause and effect. You will build a two-sided poster that traces easy money and tight money link by link, then drill it until you can run either chain from any starting link.

You will need

- One large sheet of paper or poster board, ruled into two columns
- Exam notebook, ruler, two colors of pen
- Index cards for the drill

Steps

1. Head the left column EASY MONEY and the right column TIGHT MONEY.
2. Down the left side, draw the chain with arrows: Fed buys securities → bank reserves rise → short-term rates fall → borrowing and spending rise → output and employment rise → bond prices rise → dollar tends to weaken.
3. Down the right side, draw the reversed chain for Fed selling, ending with inflation cooling, bond prices falling and the dollar tending to strengthen.
4. Add a tool box at the bottom of each column: what the discount rate and reserve requirement do in that direction, plus one sentence noting the modern facts (requirement at zero; interest paid on reserves).
5. Add a who-does-what strip: FOMC — open market operations; Board of Governors — discount rate and reserve requirements; Treasury — issues the debt; banks — set prime.
6. Copy each link of both chains onto its own index card. Shuffle. Draw a card and recite the chain forward from that link without looking; have a parent check you against the poster.
7. Hang the poster where you study until the unit test, and run the card drill for five minutes at the start of each session.

Tips

- Say the chains aloud; the exam's wrong answers are chains with exactly one reversed arrow, and your ear will catch what your eye misses.

- Color helps: use one color for quantities (reserves, money supply) and another for prices (rates, bond prices, the dollar).

Check your work

- ☐ My poster's two chains are complete, with every arrow pointing the right way.
- ☐ The who-does-what strip correctly assigns each tool and role.
- ☐ I can recite either chain from any link without looking.
- ☐ The modern notes (zero requirement, interest on reserves) are present but clearly marked as side notes.

EXAM NOTEBOOK

1. Make a three-row tool table: open market operations, discount rate, reserve requirements — with columns for "to ease," "to tighten," "who controls it," and "how often used."
2. Draw the bond see-saw: a plank labeled PRICE on one end and YIELD on the other, with "Fed buys" and "Fed sells" arrows showing which end goes up.
3. Write a dated timeline card: 1907 Panic → 1908 Aldrich–Vreeland Act → 1910 Jekyll Island → 1913 Federal Reserve Act — one sentence on each.

KEY FORMULAS

$$\text{Maximum new money from new reserves} \approx \frac{\text{new reserves}}{\text{reserve requirement}}$$

From history. The Federal Reserve's design bears the fingerprints of American suspicion of concentrated power: twelve regional banks rather than one, a board answerable to Congress rather than a ministry, and governors with long staggered terms to insulate them from elections. The system has been reorganized since — notably by the Banking Acts of 1933 and 1935, which created the modern FOMC — but the 1913 bargain stands: a public lender of last resort, so that the republic never again waits on the willpower of one man in a library.

Example 1. In this example, banks face a 10% reserve requirement and the Fed buys $1 billion of Treasury securities from the public. What is the maximum amount by which the money supply could eventually grow?

Show solution

1. The purchase creates $1 billion of new bank reserves.
2. Each dollar of reserves can support $1 \div 0.10 = 10$ dollars of deposits as banks lend and re-lend.
3. Maximum expansion: $1 billion $\times$ 10 = $10 billion. In practice leakages keep the real figure smaller.

Answer: Up to $10 billion — the money multiplier is the reciprocal of the reserve requirement.

Example 2. Exam style. To combat rising inflation, the FOMC would most likely:

A. Buy Treasury securities in the open market
B. Lower the discount rate
C. Sell Treasury securities in the open market
D. Lower reserve requirements

Show solution

1. Inflation calls for tight money — draining reserves and raising rates.
2. A, B and D all ease: buying adds reserves, and lowering the discount rate or reserve requirements makes lending cheaper and larger.
3. C drains reserves from the banking system, pushing rates up and credit down — restrictive, as required.
4. Note the committee trap too: the FOMC conducts open market operations; it does not set the discount rate or reserve requirements.

Answer: C. Selling securities is the tightening move; every other choice stimulates. The FOMC's own tool is open market operations.

Example 3. Exam style. The Federal Reserve eases monetary policy significantly. Which result is most likely, other things equal?

A. Bond prices fall and the dollar strengthens

B. Bond prices rise and the dollar weakens

C. Bond prices rise and the dollar strengthens

D. Bond prices fall and the dollar weakens

Show solution

1. Easing means rates fall. Bond prices move inversely to rates, so bond prices rise. That eliminates A and D.
2. Lower U.S. rates make dollar deposits less attractive to global investors, so the dollar tends to weaken. That eliminates C.
3. B joins both effects correctly: prices up, dollar down.

Answer: B. Easy money: rates down, bond prices up, dollar weaker. Tight money reverses every arrow.

PRACTICE

1. Easy The most frequently used tool of monetary policy is:

   A. Changing reserve requirements

   B. Changing the discount rate

   C. Open market operations

   D. Setting the prime rate

   Show answer

   C. The Fed buys and sells Treasuries daily through the FOMC's desk. Reserve requirement changes are rare and blunt, the discount rate is secondary, and prime is set by commercial banks, not the Fed.

2. Easy When the Fed buys Treasury securities in the open market, the money supply _____ and interest rates tend to _____.

   Show answer

   Grows; fall. The purchase creates new bank reserves, which expand lending and push short-term rates down.

3. **Easy** The Federal Reserve was created by an act of Congress in:

A. 1907

B. 1913

C. 1933

D. 1934

Show answer

B. The Federal Reserve Act was signed December 23, 1913 — six years after the Panic of 1907 exposed the need. 1933 and 1934 are the great securities acts, a different family of laws.

4. **Medium** The discount rate is the rate:

A. Banks charge their best corporate customers

B. Banks charge each other for overnight loans

C. The Federal Reserve charges banks that borrow from it

D. The Treasury pays on newly issued T-bills

Show answer

C. A is the prime rate, B is the federal funds rate, and D is a Treasury auction yield. The exam lists all four rates as choices precisely because students blur them.

5. **Medium** Which body directs open market operations?

A. The Board of Governors alone

B. The Federal Open Market Committee

C. The U.S. Treasury

D. The New York Stock Exchange

Show answer

B. The FOMC — seven governors, the New York Fed president, and four rotating regional presidents — directs the buying and selling. The Treasury issues debt but does not conduct monetary policy.

6. **Medium** From the story: what happened in J. P. Morgan's library on the night of November 2, 1907, and why did it help lead to the Federal Reserve?

Show answer

Morgan locked the trust company presidents in until, near dawn, they pledged $25 million to stop the runs. The rescue worked, but the country had depended on one private man; Congress created the National Monetary Commission (1908) and then the Federal Reserve (1913) so an institution would be lender of last resort instead.

7. **Medium** A tightening Fed would most likely cause, other things equal:

A. Rising bond prices and a weaker dollar
B. Falling bond prices and a stronger dollar
C. Rising bond prices and a stronger dollar
D. Falling bond prices and a weaker dollar

Show answer

B. Tightening raises rates: bond prices fall (the see-saw) and higher yields attract foreign capital, strengthening the dollar. A describes easing; C and D each reverse one arrow.

8. **Hard** In this example, the reserve requirement is 8% and the Fed injects $2 billion of new reserves by purchasing securities. Compute the theoretical maximum money-supply expansion.

Show answer

Multiplier $= 1 \div 0.08 = 12.5$; maximum expansion \$2 billion $\times$ $12.5 = \$25$ billion. Leakages make the practical figure smaller.

9. Hard Which statement about the modern Fed is accurate?

A. Reserve requirements are currently the chief policy tool

B. The Fed sets the prime rate directly each quarter

C. The reserve requirement has been set at zero, and the Fed also steers rates by paying interest on reserves

D. The FOMC sets margin requirements under Regulation T

Show answer

C. The requirement is zero and interest on reserve balances does much of the steering — though the exam still tests the classic three tools. Prime is set by banks; margin requirements are set by the Board of Governors, not the FOMC.

10. Hard Distinguish the Federal Reserve from the U.S. Treasury in two sentences an examiner would accept.

Show answer

The Treasury is part of the executive branch: it collects taxes, pays the government's bills and issues the national debt. The Federal Reserve is the independent central bank: it conducts monetary policy, including buying and selling Treasury securities in the open market, but it does not issue them.

11. Challenge A repurchase agreement (repo) by the Fed's trading desk is best understood as:

A. A permanent purchase of securities

B. A short-term, self-reversing open market operation that adds reserves temporarily

C. A loan from the Treasury to the Fed

D. A change in reserve requirements lasting one week

Show answer

B. In a repo the desk buys securities with an agreement to sell them back shortly, adding reserves for days rather than permanently — open market operations with a built-in reverse gear. The other choices confuse repos with outright purchases, fiscal borrowing, or rule changes.

12. **Challenge** From the story and the lesson: why is a lender of last resort able to stop a panic even without rescuing insolvent institutions?

Show answer

Runs feed on the fear that cash will run out; when a credible lender stands ready to lend freely against sound assets, depositors know solvent banks can always pay, so the reason to run disappears. The lender saves the system by lending to the sound, not by bailing out the broken — which is what Morgan's library accomplished privately and the Fed was built to do publicly.

COMMON MISTAKES

- Reversing the see-saw: when the Fed buys securities, rates fall and bond prices rise — not both in the same direction.
- Confusing the discount rate (Fed charges banks), federal funds rate (banks charge each other; FOMC targets it) and prime rate (banks charge best customers).
- Assigning open market operations to the Board of Governors or the Treasury; they belong to the FOMC.
- Thinking the Fed issues the national debt; the Treasury issues, the Fed trades.
- Forgetting that easy money tends to weaken the dollar and tight money to strengthen it.

Make it a game · Fed Chair for Fifteen Minutes. A parent or sibling is the economy; you are the Fed chair. They announce conditions one at a time — "Inflation is running hot," "Unemployment is surging," "Banks are afraid to lend," "The dollar is collapsing" — and start a five-second count. Before they finish counting you must announce a coherent action with the right tool and direction: "Sell securities — tighten," "Buy securities — ease," "Lower the discount rate." One point per correct call; lose a point if the economy stumps you or you reverse a direction. After ten rounds, switch chairs. The family record holder keeps the title of Chair until beaten.

Scripture. "A prudent man foreseeth the evil, and hideth himself: but the simple pass on, and are punished." (Proverbs 22:3, KJV)

The Panic of 1907 punished the unprepared, and the prudent response was not merely to survive it but to build against the next one — which is what the Federal Reserve Act attempted. Prudence in Scripture is foresight joined to action: the steward who sees trouble coming and makes provision, for a household or a nation.

2.4 Fiscal Policy, Sovereign Debt and Exchange Rates

OBJECTIVES

- Define fiscal policy and distinguish it from monetary policy, naming who controls each.
- Explain deficits, the national debt, and Keynes's case for countercyclical spending as settled history.
- Describe sovereign debt and the risks of foreign government bonds, including default and currency risk.
- Determine who benefits and who is hurt by a strong or weak dollar, including investors in ADRs and foreign bonds.

> **Warm-up.** Your family's "government" runs on allowance and chores. Invent one "tax cut" and one "spending program" a parent could use to boost activity in a sleepy household economy, and write one sentence on what each would cost. You have just drafted fiscal policy.

WATCH

Introduction to Fiscal Policy

Marginal Revolution University · 3:26

https://www.youtube.com/watch?v=4FNdUTN4cHY

> **WHEN TO WATCH**
> After the story of Hamilton, before the big idea: note the video's two levers — spending and taxes — and who pulls them.

BACKUP VIDEO

Exchange rate primer | AP Macroeconomics | Khan Academy

Khan Academy · 7:25

https://www.youtube.com/watch?v=-5x6j_P1OSI

Before the project if exchange rates feel slippery: follow the primer with pencil out, converting each of its examples into your winners-and-losers table.

KEY TERMS

fiscal policy

The use of government taxing and spending to influence the economy; set by Congress and the President, not the Federal Reserve.

budget deficit

The amount by which government spending exceeds revenue in a single year; a surplus is the reverse.

national debt

The accumulated total of past deficits minus surpluses — the government's outstanding borrowing.

Keynesian economics

The school, after John Maynard Keynes, holding that government should spend more or tax less in downturns to lift total demand, and reverse in booms.

sovereign debt

Bonds issued by national governments; its safety depends on the issuing country's ability and willingness to pay.

default risk

The risk that a borrower — including a government — fails to pay interest or principal as promised.

exchange rate

The price of one currency in terms of another, such as how many dollars one euro costs.

currency (exchange-rate) risk

The risk that changes in exchange rates reduce the dollar value of a foreign investment, even one that performs well in its own currency.

American Depositary Receipt (ADR)

A receipt, traded in dollars on U.S. markets, representing shares of a foreign company held abroad; convenient, but still exposed to currency risk.

CORE IDEAS

The story. In 1790 the United States was a new government wearing an old debt. The Revolution had been fought on borrowed money — loans from France and Holland,

certificates pressed on soldiers and farmers — and much of that paper had sunk to a fraction of its face value, because few believed the young republic would ever pay. Alexander Hamilton, the first Secretary of the Treasury, delivered his *Report on Public Credit* to Congress in January 1790 and proposed something audacious: pay it all, at full face value — the foreign debt, the domestic debt, and the states' war debts besides, assumed by the national government. The outcry was fierce; speculators had bought soldiers' certificates cheap and would reap the gain. Hamilton answered that the point was not who held the paper but whether the republic's promise meant anything. The bargain that carried it was struck over Thomas Jefferson's dinner table in June 1790 — assumption of the debts in exchange for placing the future capital on the Potomac. The Funding Act passed that summer. American credit, worthless a decade before, became good; within a few years United States securities were selling in European markets on terms that put old monarchies on notice, and the phrase *full faith and credit* began to mean exactly what it said.

How they figured it out. Hamilton reasoned like a lender. A nation that pays only when convenient borrows dearly or not at all; a nation that pays at par through pain borrows cheaply forever after, because its promise has been tested. He also understood the uses of a funded debt: Treasury securities became collateral, bank reserves and a safe asset for savers — "a national debt, if it is not excessive," he had written, could be "a national blessing," though he underlined *if not excessive* more heavily than his critics remember. The lesson generalizes to every sovereign borrower you will ever analyze: the first question about government debt is not arithmetic but character — ability to pay joined to willingness to pay.

The big idea. Fiscal policy is taxing and spending used to steer the economy, and its owners are **Congress and the President** — passed as law, like any budget or tax code. This is the bright line the exam draws again and again: monetary policy is the Federal Reserve; fiscal policy is the elected branches. The intellectual father of modern fiscal policy is **John Maynard Keynes**, whose 1936 *General Theory* argued that in deep slumps government should spend more or tax less to replace missing private demand, running deficits in bad years and tightening in good ones. Expansionary fiscal policy means spending increases or tax cuts; contractionary means the reverse. When spending exceeds revenue in a year, the gap is the **deficit**; the accumulated pile of deficits is the **national debt**, financed by issuing Treasury

securities. Fiscal action is powerful but slow — budgets take months to pass — while monetary policy turns faster; exam questions sometimes hinge on that contrast.

Sovereign debt and its risks. Every national government borrows, and the market grades them all. United States Treasuries are the world's reference asset, backed by the full faith and credit Hamilton purchased in 1790. Other sovereigns range from comparably strong to chronically troubled; history is littered with **sovereign defaults**, because no court can seize a country. A buyer of foreign government bonds therefore weighs **default risk** — ability and willingness to pay — and two risks on top of it: **currency risk**, if the bond pays in foreign money whose dollar value can fall, and **political risk**, the chance that law or regime changes strand the investment. Bonds issued by less developed countries carry the highest of all three. Note the fine print the exam likes: a foreign government bond can default even when denominated in the issuer's own currency, but the more common squeeze on American holders is a falling foreign currency quietly shrinking their return.

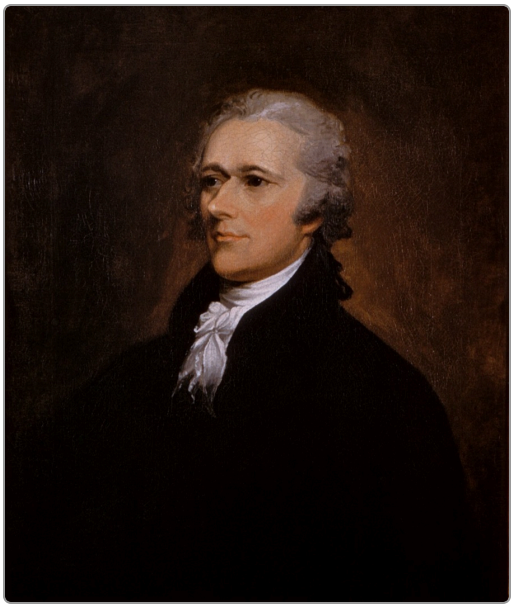
Exchange rates, in plain words. An exchange rate is just a price — dollars per euro, yen per dollar — set minute by minute in the world's largest market. A **strong dollar** buys more foreign currency: imports and foreign vacations get cheaper for Americans, but American goods get dearer abroad, so *exporters suffer* and import-competing firms feel the squeeze too. A **weak dollar** reverses it: *exporters flourish* because foreign buyers find American goods cheap, while imports cost Americans more. Carry the logic into portfolios and you have the exam's favorite twist: an American holding foreign stocks or bonds *gains* from a weakening dollar, because the foreign currency those assets live in now converts into more dollars — and loses from a strengthening dollar the same way. Strong dollar: good for importers, tourists abroad, and foreign goods; bad for exporters and for American investors' foreign holdings. Weak dollar: mirror image.

ADRs and the practical channel. Most Americans touch foreign stocks through **American Depositary Receipts**: a U.S. bank holds the foreign shares abroad and issues dollar-denominated receipts that trade on American exchanges, with dividends converted to dollars. ADRs remove the mechanics of foreign settlement — but not the economics. The receipt's dollar price silently embodies the exchange rate, so a Japanese company's ADR can fall on a bad yen in a flat Tokyo market. On the exam, the one risk an ADR never eliminates is **currency risk**. (ADR holders

typically receive dividends and can sell freely, but usually do not vote the underlying shares — a detail that resurfaces in a later unit.)

On the exam today. Three reliable question families. First, the jurisdiction question: "Fiscal policy is determined by…" — Congress and the President; any choice containing the Federal Reserve is wrong, and the exam will offer it every time. Second, the Keynes question, asked as settled history: Keynesians favor increased government spending or lower taxes to fight recession. Third, the dollar table: who benefits from a weak dollar? — U.S. exporters and U.S. investors holding foreign securities; who benefits from a strong dollar? — importers, American tourists abroad, and foreign exporters selling here. The traps: reversing the investor line (students remember exporters and forget portfolios), assuming a trade deficit worsens when the dollar weakens (it tends to narrow), and crediting the Fed with tax policy. Answer the jurisdiction first, then the direction.

PICTURE STUDY



Alexander Hamilton, John Trumbull, 1806 · Oil on canvas · The White House, Washington, D.C.

Image: Wikimedia Commons, public domain

John Trumbull, the painter-veteran of the Revolution who gave America its great scenes of independence, painted Hamilton several times from a life portrait; this 1806 canvas, made two years after Hamilton's death, hangs in the White House. Here is the Treasury secretary who argued, against every easy alternative, that the new republic should pay its debts at par — and who thereby bought the United States the credit it has traded on ever since.

Look closely

- Study the expression. Trumbull painted him after his death — is this a face at rest, or a mind still arguing?
- Notice the plain black coat and white cravat. How does this sobriety compare with the royal portraits of Europe in 1806, and what does it claim about the republic?
- Find the light. Where does it fall, and what does the darkness around him leave out?
- Consider the age of the face. Hamilton was in his thirties when he wrote the Report on Public Credit — what in this portrait suggests the energy of that decade?

Talk about it

1. Paying the debt at par rewarded some speculators who had bought soldiers' certificates cheap. Was Hamilton right that keeping the promise mattered more? What would breaking it have cost?
2. What does "full faith and credit" mean, and why is willingness to pay as important as ability to pay in a sovereign borrower?
3. How does a nation's — or a person's — credit resemble a reputation, and how is each lost?

PROJECT

The Dollar's Winners and Losers

You will build a decision table for exchange-rate questions — the single most missed economics item on practice exams — and test it against a week of real exchange-rate movement.

You will need

- Exam notebook and ruler
- Internet access with a parent: a free exchange-rate chart (FRED carries major rates, such as dollars per euro)
- Six index cards

Steps

1. Rule a table with two columns, STRONG DOLLAR and WEAK DOLLAR, and six rows: U.S. exporters, U.S. importers, American tourists abroad, foreign tourists in America, U.S. investors in foreign securities, foreign investors in U.S. securities.
2. Fill every cell with GAINS or HURT, reasoning each aloud as you write; check the lesson's table when done.
3. On FRED, chart the dollar–euro exchange rate for the past year. Mark where the dollar strengthened and weakened, remembering to check which way the quote runs.
4. Pick one stretch of movement and write three sentences: who in your table was helped during that stretch, who was hurt, and what it meant for an American holding European stocks.
5. Make six flashcards, one per row of your table, with the row on the front and both cells on the back.
6. Drill with a parent: they call a card and a dollar direction; you answer GAINS or HURT in under three seconds, with the reason in one breath.
7. Finish with a short paragraph: why does an ADR priced in dollars still carry currency risk? Use your table to explain.

Tips

- Always anchor on the exporter: weak dollar, happy exporter. Every other cell can be derived from that one by asking who is on the other side of the trade.
- Watch quote direction on charts — dollars per euro rising means a weaker dollar, but euros per dollar rising means a stronger one.

Check your work

- ☐ My twelve table cells are all correct and I can defend each in one sentence.
- ☐ My FRED chart is marked with at least one strengthening and one weakening stretch.
- ☐ I can answer any flashcard in under three seconds.
- ☐ My ADR paragraph correctly locates the hidden exchange rate inside the dollar price.

EXAM NOTEBOOK

1. Copy the twelve-cell winners-and-losers table into your notebook in ink, and star the row the exam tests most: U.S. investors in foreign securities.
2. Make a two-column jurisdiction page: FISCAL (Congress and the President — taxes, spending) versus MONETARY (Federal Reserve — money, rates), with three example actions under each.
3. Write a timeline card for Hamilton's funding plan: January 1790 Report on Public Credit → June 1790 dinner-table bargain → summer 1790 Funding Act, with one sentence each.

KEY FORMULAS

$$\text{Dollar price of a foreign asset} = \text{foreign-currency price} \times \text{dollars per unit of foreign currency}$$

From history. The dinner-table bargain of June 1790 — Jefferson's table, Madison's votes, Hamilton's funding plan, and the capital moved to the Potomac — is among the earliest great compromises of the Constitution era, and it was struck over public debt. Jefferson later said he regretted the deal more than any act of his life; yet the credit it secured helped the republic borrow through the War of 1812, the Civil War and every crisis since. Nations, like households, discover their character in how they treat old promises.

WORKED EXAMPLES

Example 1. In this example, a U.S. investor buys a German bond for €10,000 when €1 = $1.10. A year later the bond is still worth €10,000 but the euro has fallen to $1.00. Find the dollar gain or loss.

Show solution

1. Cost in dollars: $10{,}000 \times \$1.10 = \$11{,}000$.
2. Value a year later: $10{,}000 \times \$1.00 = \$10{,}000$.
3. Change: $\$10{,}000 - \$11{,}000 = -\$1{,}000$.

Answer: A loss of $1,000 — about 9.1% — from currency movement alone, though the bond never missed a payment. That is currency risk.

Example 2. Exam style. Which parties would benefit most from a weakening U.S. dollar?

A. U.S. importers and American tourists in Europe

B. U.S. exporters and U.S. investors holding foreign securities

C. Foreign exporters selling into the United States

D. U.S. consumers of imported goods

Show solution

1. A weak dollar makes American goods cheap abroad — exporters win. It also means foreign currencies convert into more dollars — American holders of foreign assets win. That is B, both halves.
2. A and D are strong-dollar beneficiaries: imports and foreign travel get cheaper when the dollar is strong, dearer when it is weak.
3. C: foreign exporters find their goods more expensive for Americans when the dollar weakens — they are hurt, not helped.

Answer: B. Weak dollar: exporters and American owners of foreign assets gain. The tempting error is A — it is the exact strong-dollar list.

Example 3. Exam style. Fiscal policy in the United States is conducted by:

A. The Federal Reserve Board

B. The Federal Open Market Committee

C. Congress and the President

D. The Securities and Exchange Commission

Show solution

1. Fiscal policy is taxing and spending — passed as law. Only elected branches pass laws: Congress and the President.
2. A and B are the monetary policy bodies, present as bait in nearly every version of this question.
3. D regulates securities markets and has no policy lever over taxes or spending.

Answer: C. Taxing and spending belong to Congress and the President; the Fed choices are the planted wrong answers.

Example 4. In this example, the government collects \$4.4 trillion in revenue and spends \$6.1 trillion in a fiscal year. State the deficit and what happens to the national debt.

Show solution

1. Deficit: $\$6.1 - \$4.4 = \$1.7$ trillion.
2. The Treasury finances the gap by issuing securities, so the national debt grows by roughly the deficit.

Answer: A \$1.7 trillion deficit, added to the national debt through new Treasury borrowing. Deficit is one year's gap; debt is the accumulation.

PRACTICE

1. Easy Fiscal policy refers to:

   A. The Federal Reserve's control of the money supply

   B. Government decisions about taxing and spending

   C. Bank regulation by the FDIC

   D. The SEC's oversight of securities markets

   Show answer

   B. Taxing and spending, set by Congress and the President. A is monetary policy — the planted confusion in nearly every version of this question.

2. Easy A budget deficit is _____; the national debt is _____.

   Show answer

   One year's excess of spending over revenue; the accumulated total of past deficits (less surpluses), financed by outstanding Treasury securities.

3. Easy The economist whose name is attached to the case for deficit spending in recessions is:

   A. Adam Smith

   B. John Maynard Keynes

   C. Simon Kuznets

   D. Wesley Mitchell

   Show answer

   B. Keynes's General Theory (1936) made the case for countercyclical fiscal policy. Kuznets built the income accounts and Mitchell dated cycles — same era, different work.

4. Medium Which is an example of expansionary fiscal policy?

   A. The Fed buys Treasury securities

   B. Congress cuts income tax rates

   C. The Fed lowers the discount rate

   D. Banks lower the prime rate

   Show answer

   B. Tax cuts are fiscal — an act of Congress. A and C are monetary expansion by the Fed, and D is a private banking decision; the exam mixes the two policies in one list on purpose.

5. **Medium** A U.S. automobile exporter would benefit most from:
   A. A strengthening dollar
   B. A weakening dollar
   C. Higher U.S. tariffs on imported steel it uses
   D. A stronger euro making European vacations dearer
   Show answer

   B. A weak dollar makes American cars cheaper for foreign buyers. A prices the exporter out of foreign markets, and C raises its input costs.

6. **Medium** From the story: what did Hamilton's 1790 funding plan propose, and what did the republic get in exchange for the pain of paying at par?
   Show answer

   Paying the foreign, domestic and assumed state war debts at full face value, funded by new federal securities. In exchange the United States gained tested credit — the ability to borrow cheaply because its promise had been kept when breaking it would have been easy — which is what "full faith and credit" came to mean.

7. **Medium** An American investor owns a mutual fund of Japanese stocks. The yen weakens sharply against the dollar while Japanese share prices are unchanged. The fund's dollar value:
   A. Rises, because the dollar is stronger
   B. Falls, because the yen holdings convert into fewer dollars
   C. Is unchanged, because the shares did not move
   D. Cannot be affected, because mutual funds hedge automatically
   Show answer

   B. The assets live in yen; fewer dollars per yen means a lower dollar value even with flat markets. D is false — hedging exists but is never automatic, and C ignores the conversion entirely.

8. Hard Which investor faces the greatest combined default and currency risk?
A. A buyer of U.S. Treasury bonds
B. A buyer of an emerging-market government's bonds denominated in its own currency
C. A buyer of a blue-chip U.S. corporate bond
D. A buyer of an insured municipal bond

Show answer

B. A less developed country's sovereign bond carries meaningful default risk and, in local currency, full exchange-rate risk on every payment. A has essentially no default risk and no currency risk for an American; C and D carry modest default risk and none of the currency kind.

9. Hard An ADR for a French company trades in dollars in New York. Which risk does the dollar pricing eliminate?
A. Market risk
B. Currency risk
C. Neither — the exchange rate is embedded in the dollar price
D. Political risk

Show answer

C. The receipt converts at the market rate continuously, so a falling euro lowers the ADR's dollar price even if the Paris shares are flat. Dollar denomination is convenience, not protection — the exam's favorite ADR point.

10. Hard In this example, a British bond pays £1,000 of interest when £1 = $1.25. By the next payment the pound has fallen to $1.15. Find the dollar value of each payment and the percentage drop.

Show answer

First: $1{,}000 \times \$1.25 = \$1{,}250$. Second: $1{,}000 \times \$1.15 = \$1{,}150$. Drop: $\$100 \div \$1{,}250 = 8\%$ — the coupon never changed; the currency did.

11. **Challenge** “Deficits are fiscal policy; the debt is its memory.” Using Hamilton and Keynes, write three sentences on when government borrowing has served a republic well and what keeps it from becoming a snare.

Show answer

Hamilton’s funded debt turned worthless promises into tested credit, giving the young republic a safe asset and cheap borrowing when survival required it. Keynes argued, as settled history records, that borrowing in slumps can replace missing demand — provided the borrowing reverses in good years. What keeps debt from becoming a snare is the discipline both men assumed and politics often forgets: that it be limited, purposeful and honestly repaid — Hamilton’s own “if it is not excessive.”

COMMON MISTAKES

- Assigning fiscal policy to the Federal Reserve; taxes and spending belong to Congress and the President.
- Reversing the investor rule: a weak dollar helps American holders of foreign securities, and a strong dollar hurts them.
- Thinking an ADR’s dollar price removes currency risk; the exchange rate is embedded in the price.
- Confusing one year’s deficit with the accumulated national debt.
- Treating sovereign bonds as automatically safe because a government issued them; countries can and do default.

Make it a game · Strong or Weak. Write eight characters on slips: Iowa tractor exporter, New York importer of Italian shoes, family touring Paris, Japanese tourist in Yellowstone, American holding a European stock fund, German buying Florida oranges, U.S. airline buying French jets, retiree holding British bonds. A parent draws a slip and flips a coin — heads the dollar strengthens, tails it weakens — and you have five seconds to shout “CHEERS” or “GROANS” for that character, then one sentence why. Score a point per correct call-and-reason; miss the reason, half a point. Two rounds through the deck; winner names the next game night.

> **Scripture.** “In whose eyes a vile person is contemned; but he honoureth them that fear the LORD. He that sweareth to his own hurt, and changeth not.” (Psalm 15:4, KJV)
>
> The psalm describes the one who may dwell on God’s holy hill — and includes the man who keeps his promise even when keeping it costs him. Hamilton’s case for paying at par was this verse in public finance: a promise kept “to his own hurt” is the only kind that builds credit, for a man or a nation.

2.5 Inflation, Interest Rates and the Yield Curve

OBJECTIVES

- Explain who gains and who loses from inflation and deflation, especially debtors, creditors and fixed-income holders.
- Compute real returns from nominal returns and inflation.
- Describe interest rates as the price of money and name the benchmark rates.
- Draw and interpret normal, flat and inverted yield curves, and explain credit spreads.

> **Warm-up.** Suppose your grandmother lends you $100 for one year at 4% interest, and during that year prices rise 7%. Work out in your head who actually came out ahead and by about how much. Write your answer in one sentence; by the end of this lesson you will be able to defend it with a formula.

WATCH

Inflation - Economic Lowdown

Federal Reserve Bank of St. Louis · 4:55

https://www.youtube.com/watch?v=TQIlLHAlgqU

> **WHEN TO WATCH**
> After the story of 1923, before the big idea: as you watch, write the episode's definition of inflation and compare it word for word with your key terms.

BACKUP VIDEO

Introduction to the yield curve | Stocks and bonds | Finance & Capital Markets | Khan Academy

Khan Academy · 9:56

https://www.youtube.com/watch?v=b_cAxh44aNQ

Before the project: Sal Khan builds the curve point by point from actual yields — pause and plot each point on your own graph paper as he does.

KEY TERMS

inflation

A sustained rise in the general level of prices, which is the same thing as a fall in the purchasing power of money.

deflation

A sustained fall in the general price level; it rewards cash and creditors and punishes debtors.

hyperinflation

Inflation so extreme that money loses its usefulness, as in Germany in 1923.

purchasing power risk

The risk that inflation erodes the real value of an investment's payments; it falls hardest on fixed-income securities.

nominal return

An investment's stated return in dollars, before adjusting for inflation.

real return

The return after inflation: approximately the nominal return minus the inflation rate.

interest rate

The price of borrowed money, expressed as a percent per year.

yield curve

A graph of the yields of bonds of the same quality (classically U.S. Treasuries) across maturities from shortest to longest.

inverted yield curve

A curve on which short-term yields exceed long-term yields; historically it has preceded recessions.

credit spread

The extra yield a riskier bond pays over a Treasury of the same maturity; spreads widen when investors grow fearful.

CORE IDEAS

The story. In the autumn of 1923, Germany printed a banknote for five hundred billion marks — and it would not buy what a gold-backed twenty-mark coin had bought a decade earlier. The Great War had been financed with borrowing and the printing press, and after the war the printing never stopped. By 1922 prices were doubling in months; by the autumn of 1923, at the worst, in days. Workers were paid twice a day so their wives could race the money to the shops at noon before

afternoon prices arrived; cash went to market in wheelbarrows and laundry baskets, and the story was told that thieves took the wheelbarrow and left the marks. By mid-November 1923 a single American dollar traded for around 4.2 *trillion* marks, and the government struck the zeros away with a new currency, the Rentenmark. Now consider one quiet casualty: the patient German who had done everything right — saved, and lent his savings to his government by buying war bonds. He was repaid to the letter, in marks. The marks were confetti. Every thrifty bondholder, every pensioner, every widow living on fixed payments was ruined — not by default, but by repayment in money that had died.

How they figured it out. Germany's case was extreme, but the mechanism is universal, and Americans relearn it in milder forms every generation. Inflation is a transfer: it moves wealth silently from those who are owed fixed sums of money to those who owe them. The **debtor** repays in cheaper dollars and smiles; the **creditor** — the bondholder, the saver, the pensioner — receives every dollar promised and finds them smaller. Economists learned to split every interest rate into parts: compensation for waiting, compensation for risk, and compensation for *expected inflation*. When lenders expect more inflation, they demand higher nominal rates; when they are surprised by inflation, they simply lose. That is why the quiet American lesson of 1923 is this: **inflation is the patient bondholder's enemy**, and the longer and more fixed the promise, the deeper the wound.

The big idea. Keep nominal and real apart and half this lesson is yours. The **nominal return** is the stated one; the **real return** is what your purchasing power actually gained: real $\approx$ nominal $-$ inflation. A bond paying 5% during 3% inflation earns about 2% real; the same bond during 7% inflation earns about −2% — the holder is paid, and poorer. This is **purchasing power risk**, and it falls hardest on long-term, fixed-payment investments: bonds, fixed annuities, cash under the mattress. Historically, common stocks and real assets have been better long-run inflation defenses, because earnings and rents can rise with prices — a regularity the exam tests, not a promise to any client. **Deflation** reverses the whole table: falling prices enrich creditors and cash-holders and crush debtors, which is why farm debtors in America's deflations suffered as German creditors did in 1923.

Interest rates, the price of money. An interest rate is a price like any other, set where the supply of saving meets the demand for borrowing — with the Federal Reserve leaning on the short end by the tools of Lesson 2.3. You should recognize the

benchmark cast: the **federal funds rate** (overnight, bank to bank; the Fed's target), the **discount rate** (the Fed to banks), the **prime rate** (banks to best customers), and Treasury yields from bills to bonds, the baseline for everything else. Rates and expected inflation travel together; rates and bond prices travel opposite. When a question says "interest rates rose," hear "bond prices fell" in the same breath.

The yield curve. Plot Treasury yields by maturity — three months, two years, ten years, thirty — and connect the dots: that is the **yield curve**. Its **normal** shape slopes upward, because lenders demand more for locking money away longer and bearing more inflation risk. A **flat** curve means short and long yields are nearly equal, often a sign of transition. An **inverted** curve — short yields above long — is the famous one: it means markets expect rates and growth to fall, and historically an inversion has come before U.S. recessions time and again over recent decades, with leads of months to a year or more and occasional false alarms. The exam does not ask you to prophesy; it asks the shapes, their causes and the historical signal. Learn to sketch all three freehand with labeled axes — maturity across, yield up.

Credit spreads. One more curve lives above the Treasury curve: the yields of riskier borrowers. The gap between a corporate bond's yield and a Treasury's at the same maturity is the **credit spread**, and it is a fear gauge. In confident times spreads narrow — investors accept little extra for risk; in frightened times they **widen**, as money stampedes toward quality (a *flight to quality*), lifting Treasury prices and dumping risky bonds. Widening spreads and an inverting curve together are the bond market clearing its throat before bad news. For a cautious client, the practical readings are simple: inversion counsels patience about aggressive positions, and wide spreads mean the market is already paying you to be careful — or warning you that others were not.

On the exam today. Four dependable question families. First, the real-return subtraction: nominal 6%, inflation 4% — real about 2%; the exam often asks it with the word "approximately," and the near-miss answer is the unsubtracted 6%. Second, who is hurt by unexpected inflation: fixed-income holders and creditors; who is helped: debtors — and the mirror question for deflation. Third, the curve shapes: normal up, flat in transition, inverted when short exceeds long, with inversion as the classic recession signal. Fourth, spreads: fear widens them, confidence narrows them, and the spread between Treasuries and low-grade corporates widening means investors expect trouble. The traps: confusing disinflation with deflation (Lesson

2.2's point, retested here), forgetting that bonds' *prices* can rise even as their holders lose to inflation, and reading an inverted curve as high long rates when it is actually high short rates.

PICTURE STUDY

Five Hundred Billion Mark Note, Reichsbank, Berlin, October 26, 1923 · Printed banknote · Surviving notes are common in collections and museums — millions were printed

Image: Wikimedia Commons, public domain

This is what the death of a currency looks like: five hundred billion marks, printed in Berlin on October 26, 1923, on plain paper with hurried, almost apologetic design — no portraits, no engraved landscapes, because there was no time. Notes like this were printed by the trainload in the hyperinflation's final weeks, when a dollar bought trillions of marks and wages were spent the hour they were paid. Three weeks after this note's date, the Rentenmark arrived and the old mark was swept away — along with the savings of everyone who had trusted it.

Look closely

- Read the number and the date. In 1913, ten years earlier, twenty marks was solid money. What happened to the zeroes in between?
- Notice the plainness — thin paper, one-sided simplicity, no elaborate engraving. Why does hurried money look hurried?
- Find the small print promising payment in Berlin and the clause about exchange from February 1924. What is a promise printed on a dying currency worth?
- Find the printed signatures of the bank directors. What does it mean to sign your name, by the million, to money you know is failing?

Talk about it

1. A German who had saved for thirty years and bought government bonds was repaid in full — in these. Was he defaulted on? What exactly was taken from him, and by what means?
2. Why does inflation strike hardest at the patient, the thrifty and the old, rather than at the quick and the indebted?
3. Proverbs condemns the false balance. In what sense is debased money a false weight used on an entire nation at once?

PROJECT

Draw Today's Yield Curve

Professionals glance at the yield curve the way sailors glance at the sky. You will draw today's actual Treasury curve by hand from official data, classify its shape, and write the two-sentence client briefing it implies — the same exercise your unit portfolio will polish.

You will need

- Internet access with a parent: the U.S. Treasury's daily yield curve rates page (home.treasury.gov) or FRED
- Graph paper, pencil and ruler
- Exam notebook

Steps

1. Look up today's Treasury yields for these maturities: 3-month, 6-month, 1-year, 2-year, 5-year, 10-year and 30-year. Record each with the date and source.
2. On graph paper, put maturity on the horizontal axis (not to scale is fine — label the points) and yield on the vertical axis, scaled to fit your numbers.
3. Plot the seven points and connect them with a smooth freehand curve.
4. Classify the shape: normal, flat, inverted — or mixed (partly inverted curves are common; say where the inversion sits if there is one).
5. Compute the 10-year-minus-3-month and 10-year-minus-2-year differences, the two spreads watchers quote most, and note their signs.
6. Below the chart, write the two-sentence briefing for a cautious imaginary client: what the shape is, and what it has historically suggested — hedged honestly, with no prediction and no advice to any real person.
7. Repeat the lookup a week later on the same chart in a second pencil shade, and note in one sentence what, if anything, moved.

Tips

- Yields move daily; your curve is a photograph, not a portrait. Date everything.

- If your two computed spreads disagree in sign, you have found a partly inverted curve — say so plainly; precision beats tidiness.

Check your work

- ☐ My curve plots seven dated, sourced yields with labeled axes.
- ☐ My classification matches the plotted shape and names any partial inversion honestly.
- ☐ My two spreads are computed correctly with signs.
- ☐ My briefing is two sentences, hedged, historical and addressed to no real person.

EXAM NOTEBOOK

1. Draw the three textbook curves — normal, flat, inverted — side by side with axes labeled, and write under each one line on what it has historically meant.
2. Make a winners-and-losers table for inflation and deflation: debtors, creditors, fixed-income holders, cash holders — four rows, two columns, no blanks.
3. Write the real-return approximation at the top of a page and work it five times, including one negative answer (nominal 3%, inflation 8%) circled in red as a warning.

KEY FORMULAS

$$\text{Real return} \approx \text{nominal return} - \text{inflation rate}$$

$$\text{Credit spread} = \text{yield on risky bond} - \text{yield on Treasury of same maturity}$$

From history. Germany stabilized almost overnight: the Rentenmark of November 1923, backed by a mortgage on the nation's land and issued in strictly limited amounts, held — largely because the printing stopped and people believed it had stopped. The deeper wound outlived the cure: a generation of thrifty Germans had learned that patience could be confiscated, with consequences for that nation's politics that historians still weigh. American inflations have been far milder, but the arithmetic is identical at every scale, which is why the United States now issues Treasury Inflation-Protected Securities — bonds whose principal rises with the CPI, an armistice between the government and the patient bondholder.

WORKED EXAMPLES

Example 1. In this example, a bond fund returned 6.5% last year while the CPI rose 4.1%. Approximate the investor's real return.

Show solution

1. Apply the approximation: real ≈ nominal − inflation.
2. $6.5\% - 4.1\% = 2.4\%$.
3. Sense check: the investor has more dollars (6.5% more) but each buys about 4% less; the true gain in purchasing power is the small difference.

Answer: About 2.4% real. (The exact figure, $1.065 \div 1.041 - 1 = 2.3\%$, is close; the exam accepts the subtraction.)

Example 2. Exam style. Unexpected inflation would benefit which of the following most?

A. A retiree living on a fixed pension
B. A homeowner with a large fixed-rate mortgage
C. An investor holding long-term bonds to maturity
D. A bank that made long fixed-rate loans

Show solution

1. Inflation transfers from those owed fixed dollars to those who owe them.
2. A and C receive fixed payments — both lose purchasing power. D is a creditor collecting fixed interest — it loses too.
3. B owes fixed dollars and repays them with cheapened money while wages and house prices tend to rise around him. The debtor wins.

Answer: B. Debtors with fixed-rate obligations gain from unexpected inflation; creditors and fixed-income receivers — the other three — lose.

Example 3. Exam style. The yield on 3-month Treasury bills is 5.1% and the yield on 10-year Treasury notes is 4.2%. The yield curve is:

A. Normal, and signals expansion

B. Flat, and signals nothing

C. Inverted, and has historically preceded recessions

D. Humped, and signals rising inflation

Show solution

1. Compare short to long: 5.1% short exceeds 4.2% long.
2. Short above long is the definition of inversion — eliminate A and B at once.
3. The historical association the exam wants: inversions have preceded recessions, with varying lead times.
4. D invents a shape to distract; a humped curve exists but is not what these two points show.

Answer: C. Short yields above long yields is an inverted curve, the classic (though not infallible) recession signal.

Example 4. In this example, a 10-year Treasury yields 4.0%. A 10-year bond of a solid corporation yields 5.2%, and a 10-year low-grade (junk) bond yields 8.5%. Find both credit spreads, and state what it means if the junk spread widens to 7 percentage points while Treasuries are unchanged.

Show solution

1. Investment-grade spread: $5.2\% - 4.0\% = 1.2\%$ (120 basis points).
2. Junk spread: $8.5\% - 4.0\% = 4.5\%$ (450 basis points).
3. A widening to 7 points means junk yields rose toward 11% — junk prices fell hard relative to Treasuries. Investors are frightened and fleeing to quality.

Answer: Spreads of 1.2% and 4.5%; a widening junk spread signals growing fear of defaults and a flight to quality — the bond market bracing for trouble.

PRACTICE

1. Easy An investment returned 7% in a year when inflation ran 3%. The approximate real return is:

   A. 10%

   B. 7%

   C. 4%

   D. 3%

   Show answer

   C. Real ≈ nominal − inflation = 7% − 3% = 4%. B is the unsubtracted nominal — the standard near-miss — and A adds instead of subtracting.

2. Easy Unexpected inflation generally benefits:

   A. Creditors who hold fixed-rate loans

   B. Retirees receiving fixed pensions

   C. Debtors with fixed-rate obligations

   D. Holders of long-term bonds

   Show answer

   C. Debtors repay in cheaper dollars, so inflation quietly lightens their burden. Creditors, pensioners and bondholders — the other three — all receive fixed payments whose purchasing power shrinks.

3. Easy A normal yield curve:

   A. Slopes upward, with long maturities yielding more than short

   B. Slopes downward

   C. Is perfectly flat

   D. Shows corporate bonds yielding less than Treasuries

   Show answer

   A. Lenders demand extra yield for longer lockups and more inflation risk. D is impossible for same-maturity comparisons — riskier issuers yield more, not less.

4. **Medium** Which investor is hurt most by a long period of unexpected inflation?
   A. A farmer with a fixed-rate land mortgage
   B. A retiree holding 30-year fixed-rate bonds
   C. A homeowner whose wages rise with prices
   D. A merchant whose inventory rises in value

   Show answer

   B. Three decades of fixed coupons shrink year after year in purchasing power — the patient bondholder is inflation's chief victim. A and C are debtors or wage-earners who keep pace; D holds real goods.

5. **Medium** Short-term Treasury yields have risen above long-term Treasury yields. Historically, this inversion has most often preceded:
   A. Rapid expansion
   B. Recession
   C. Hyperinflation
   D. A stock market bubble

   Show answer

   B. Inverted curves have come before U.S. recessions again and again in recent decades, with varying lead times and occasional false alarms. Nothing in an inversion implies hyperinflation — if anything, markets expect rates to fall.

6. **Medium** From the story: a German bought his government's war bonds and was repaid in full in 1923. Explain how he was ruined without a default, and state the quiet American lesson.

   Show answer

   He was repaid in marks that had lost essentially all purchasing power — by November 1923 around 4.2 trillion marks traded for one dollar — so full repayment delivered nearly nothing real. The lesson: inflation is the patient bondholder's enemy; fixed promises are only as good as the money they are paid in.

7. Medium The yield difference between low-grade corporate bonds and Treasuries of the same maturity suddenly widens. This most likely signals:
A. Growing investor confidence
B. Growing fear of defaults and a flight to quality
C. Falling Treasury prices
D. An imminent rise in the discount rate
Show answer

B. Widening spreads mean investors demand much more yield to hold risk — fear — while money runs to Treasuries. A is the opposite; C has it backwards, since a flight to quality lifts Treasury prices.

8. Hard A savings account pays 2% while inflation runs 5%. State the saver's approximate real return and what this period would be called for cash holders.
Show answer

Real ≈ 2% − 5% = −3%: the account grows in dollars and shrinks in purchasing power every year. Cash and near-cash holders are losing silently — a negative real-rate environment.

9. Hard During a severe deflation, which is most likely?
A. Debtors benefit as their obligations shrink
B. Creditors benefit as fixed payments gain purchasing power
C. Holders of long-term bonds suffer most
D. Cash loses value fastest
Show answer

B. Deflation is inflation's mirror: every fixed dollar owed to you grows in real value, so creditors and bondholders gain while debtors are crushed. C and D describe inflation, and A reverses the deflation story.

10. Hard Explain why long-term fixed-rate bonds carry more purchasing power risk than short-term ones, in two sentences.
Show answer

A short bond returns principal soon, letting the investor relend at rates that include any new inflation; a long bond locks its fixed coupons for decades, so every year of unexpected inflation bites every remaining payment. The longer and more fixed the promise, the deeper inflation cuts.

11. **Challenge** Nominal GDP growth is 5%, the CPI is rising 6%, the yield curve has inverted, and junk spreads are widening. Write the three-sentence internal memo a careful adviser might file — no predictions, just honest reading.

Show answer

Example: “Real output appears to be contracting — nominal growth of 5% trails 6% inflation — while the inverted curve shows markets pricing lower rates and slower growth ahead. Widening low-grade spreads say credit investors are already demanding to be paid for fear. The historical weight of these signals together counsels defensive positioning and patience, held with the humility that every such signal has sometimes been early or wrong.” (Credit any answer that converts nominal to real correctly and reads both signals as caution, not prophecy.)

COMMON MISTAKES

- Reporting the nominal return when the question asks for real; always subtract inflation.
- Mixing up who inflation helps: debtors gain, creditors and fixed-income holders lose — deflation reverses it.
- Reading an inverted curve as “long rates are high” when it means short rates exceed long.
- Treating the inversion signal as a guarantee; it has historically preceded recessions, with false alarms.
- Confusing widening credit spreads (fear) with narrowing spreads (confidence).

> **Make it a game · The Wheelbarrow Auction.** Cut forty slips of paper money in 1, 5 and 10 “mark” notes and split them evenly among players; a parent is the auctioneer with five small prizes (a cookie, an apple, choosing dinner). Auction the first prize normally. Then announce “the printing press ran all night” and double every player’s cash before the next auction — and double it again before each one after. Watch what happens to prices as the money multiplies while the prizes do not. After the last auction, each player answers in one sentence: who in 1923 Germany was in the position of the player who saved marks between rounds? Fastest right answer keeps the last cookie.

> **Scripture.** “A false balance is abomination to the LORD: but a just weight is his delight.” (Proverbs 11:1, KJV)
>
> A merchant with a false balance steals a little from each customer invisibly; money that loses its value steals from every saver the same way, silently and at scale. Scripture’s demand for just weights and measures reaches the measure of value itself — and a steward should prize, and seek, honest money and honest accounting.

UNIT 2

Economic Factors and Business Information

An investment adviser is asked, every working day, some version of one question: **what is the economy doing, and what should we do about it?** This unit gives you the tools the Series 65 expects you to have in hand before you answer. You will walk the four phases of the **business cycle** with Wesley Mitchell and the economists who first learned to date it, and watch Simon Kuznets build the national income accounts in 1934 because no one in Washington could say how bad the Depression actually was. You will learn to sort **economic indicators** into leading, coincident and lagging, and to read the **CPI**, an index born in the shipyards of the First World War. You will see the Panic of 1907 push America into creating the **Federal Reserve**, and learn the Fed's classic tools one by one.

Then you will cross to the other side of the street: **fiscal policy**, the taxing and spending that belong to Congress and the President, beginning with Alexander Hamilton's 1790 promise to pay the new republic's debts at par. You will finish with the subject that ruins more bondholders than any other — **inflation** — told through Germany's terrible year of 1923, and with the **yield curve**, the simple picture of interest rates that has quietly signaled trouble before recessions for decades. Economics is about 15 percent of your exam; by the end of this unit the questions from its economics half should feel like old friends.

PREREQUISITES

- Can work confidently with percents, decimals and large numbers (millions, billions, trillions)
- Can read a simple line graph and sketch one from a table of values
- Knows the basic bond vocabulary from Unit 1: issuer, interest, maturity, price
- Can look up a statistic on an official website with a parent and record its source and date

MASTERY CHECKLIST

- ☐ I can name the phases of the business cycle in order and describe what happens to output, jobs and prices in each.
- ☐ I can define GDP, say what counts and what does not, and explain the difference between real and nominal GDP.
- ☐ I can sort the classic economic indicators into leading, coincident and lagging without hesitation.
- ☐ I can explain what the CPI measures, calculate an inflation rate from two CPI values, and say why the CPI is a lagging indicator.
- ☐ I can name the Federal Reserve's classic monetary policy tools and trace what easy and tight money do to interest rates, borrowing and the dollar.
- ☐ I can distinguish fiscal policy from monetary policy and say who controls each.
- ☐ I can explain who gains and who loses from a strong or weak dollar, and name the extra risk in foreign bonds and ADRs.
- ☐ I can compute a real return from a nominal return and inflation, and read a normal, flat or inverted yield curve.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **FRED — Federal Reserve Economic Data**: Free from the Federal Reserve Bank of St. Louis: hundreds of thousands of data series with instant charts. You will use it in Lessons 2.1 and 2.2 and for the unit portfolio. Ages 14 and up.
- **Bureau of Labor Statistics: Consumer Price Index**: Free and official. The home of the CPI, with the latest monthly release and plain-language answers about how the index is built. Use it with Lesson 2.2 and the portfolio. Ages 14 and up.
- **BEA: Measuring the Economy — A Primer on GDP and the National Income and Product Accounts**: Free from the Bureau of Economic Analysis, the agency that publishes GDP. A short primer that continues what Kuznets began in 1934. Read the opening sections with Lesson 2.1. Ages 15 and up.
- **St. Louis Fed: Economic Education**: Free courses, videos and podcasts from the Federal Reserve Bank of St. Louis on inflation, monetary policy and GDP. The Economic Lowdown series pairs well with Lessons 2.3 and 2.5. Ages 13 and up.
- **NBER: Business Cycle Dating**: Free. The National Bureau of Economic Research's own page listing every official peak and trough of the American business cycle since the 1850s — the work Wesley Mitchell started. Use it with Lesson 2.1. Ages 15 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

2.1	**The Business Cycle and GDP: Measuring the Economy**	3 sessions of 50 minutes
2.2	**Economic Indicators: Leading, Lagging and the CPI**	3 sessions of 50 minutes
2.3	**Money and the Federal Reserve: Monetary Policy**	3 sessions of 50 minutes
2.4	**Fiscal Policy, Sovereign Debt and Exchange Rates**	3 sessions of 50 minutes
2.5	**Inflation, Interest Rates and the Yield Curve**	3 sessions of 50 minutes

Unit 2 test

Closed book. Allow about 28 minutes — roughly 83 seconds per question, the pace of the real Series 65. Choose the single best answer for each question; answer every question, since there is no penalty for guessing. Where a problem says "in this example," use the figures given, not current data. Each question is worth 5 points; 100 points total.

1. **5 pts**

   The phases of the business cycle, in order beginning from the bottom, are:

   A. Trough, expansion, peak, contraction

   B. Trough, peak, expansion, contraction

   C. Contraction, peak, expansion, trough

   D. Expansion, trough, peak, contraction

2. **5 pts**

   The classic definition of a recession is:

   A. Six consecutive quarters of declining real GDP

   B. Two or more consecutive quarters of declining real GDP

   C. Any month the NBER declares

   D. A 20% decline in stock prices

3. **5 pts**

   Which of the following would be included in GDP?

   A. A Social Security check

   B. The resale of a three-year-old truck

   C. Newly built housing

   D. The purchase of 500 shares of an existing stock

4. **5 pts**

   Nominal GDP rose 4% while inflation ran 6%. Real GDP:

   A. Rose 2%

   B. Rose 10%

   C. Fell about 2%

   D. Was unchanged

5. 5 pts

An adviser expecting a recession would most likely favor which industries?

A. Automobiles and homebuilding

B. Utilities and food

C. Steel and machinery

D. Luxury retail and airlines

6. 5 pts

Which list contains only leading indicators?

A. Building permits, stock prices, initial jobless claims

B. CPI, prime rate, duration of unemployment

C. Nonfarm payrolls, industrial production, personal income

D. Building permits, CPI, nonfarm payrolls

7. 5 pts

The Consumer Price Index is best described as:

A. A leading indicator computed by the Federal Reserve

B. A lagging indicator computed by the Bureau of Labor Statistics

C. A coincident indicator computed by the Commerce Department

D. A leading indicator computed by the NBER

8. 5 pts

In this example, the CPI rises from 260.0 to 270.4 over a year. The inflation rate is:

A. 10.4%

B. 4.0%

C. 2.6%

D. 0.4%

9. 5 pts

Inflation has declined from 7% to 2%. This is best described as:

A. Deflation

B. Disinflation

C. Stagflation

D. Devaluation

10. 5 pts

To stimulate a weakening economy, the Federal Reserve would most likely:

A. Sell Treasury securities and raise the discount rate

B. Buy Treasury securities and lower the discount rate

C. Raise reserve requirements and sell securities

D. Ask Congress to cut taxes

11. 5 pts

Open market operations are directed by:

A. The U.S. Treasury

B. The Federal Open Market Committee

C. Congress

D. The Securities and Exchange Commission

12. 5 pts

When the Fed tightens monetary policy, the most likely results are:

A. Rising bond prices and a weaker dollar

B. Falling interest rates and more borrowing

C. Rising interest rates, falling bond prices and a stronger dollar

D. Rising inflation and falling rates

13. 5 pts

The rate the Federal Reserve charges banks that borrow directly from it is the:

A. Federal funds rate

B. Prime rate

C. Discount rate

D. Broker call rate

14. 5 pts

Fiscal policy is determined by:

A. The Federal Reserve Board

B. The FOMC

C. Congress and the President

D. The Treasury acting alone

15. 5 pts

Keynesian economists would respond to a deep recession with:

A. Higher taxes and reduced spending

B. Increased government spending or tax cuts, accepting a deficit

C. Sales of securities by the central bank

D. A balanced-budget amendment

16. 5 pts

A weakening U.S. dollar most benefits:

A. U.S. importers and American tourists abroad

B. U.S. exporters and American investors holding foreign securities

C. Foreign companies exporting to the United States

D. American consumers of imported goods

17. 5 pts

An American owns an ADR of a Swiss company. Which risk remains despite the dollar pricing?

A. Currency risk

B. Settlement risk only

C. No risk — ADRs are guaranteed

D. Reinvestment risk only

18. 5 pts

In this example, a portfolio returned 8% in a year when inflation was 3.5%. The approximate real return was:

A. 11.5%

B. 8%

C. 4.5%

D. 3.5%

19. 5 pts

Prolonged unexpected inflation hurts which investor most?

A. A homeowner with a fixed-rate mortgage

B. A holder of long-term fixed-rate bonds

C. An owner of rental real estate

D. A company able to raise its prices

20. **5 pts**

Three-month Treasury yields exceed ten-year Treasury yields, and the spread between junk bonds and Treasuries is widening. Together these conditions suggest:

A. Confidence and expansion ahead

B. Markets bracing for economic trouble

C. Imminent hyperinflation

D. Nothing — the signals cancel each other

ANSWER KEY

1. A. From the trough the economy expands to a peak, then contracts to the next trough. The other orders scramble turning points and periods.
2. B. Two consecutive down quarters of real GDP. A is the common rule of thumb for depression, and D describes a bear market, not the economy.
3. C. New construction is current production (part of investment). Transfers, used goods and trades of existing assets add no new production.
4. C. Real ≈ nominal − inflation = 4% − 6% = −2%. Growth measured in dollars can hide shrinkage measured in goods.
5. B. Utilities and food are defensive — demand persists through downturns. The other three choices are all classic cyclicals.
6. A. Permits, stock prices and initial claims all turn before the economy. B is the lagging list, C the coincident list, and D mixes all three.
7. B. The BLS publishes the CPI, and inflation trails the cycle, making it a lagging indicator — the pairing the exam tests most.
8. B. (270.4 − 260.0) ÷ 260.0 = 10.4 ÷ 260 = 4%. Choice A mistakes the point change for a percentage.
9. B. Prices are still rising, more slowly — disinflation. Deflation requires prices actually falling; stagflation is high inflation with stagnant growth.
10. B. Buying securities adds reserves and lowering the discount rate cheapens credit — easy money. A and C tighten, and D is fiscal policy, outside the Fed's power.
11. B. The FOMC — the seven governors, the New York Fed president and four rotating regional presidents — directs the buying and selling of Treasuries.
12. C. Tightening drains reserves: rates rise, bond prices fall by the see-saw, and higher yields attract foreign capital, strengthening the dollar.
13. C. The discount rate is the Fed's own lending rate. Federal funds is bank-to-bank overnight; prime is banks to best customers.
14. C. Taxing and spending are enacted as law by the elected branches. Both Fed choices are the standard planted distractors.
15. B. Keynes argued government should replace missing demand in slumps, running deficits. A is contractionary and C is tight monetary policy.
16. B. Weak dollar: American goods cheapen abroad (exporters win) and foreign currencies convert to more dollars (foreign holdings gain). A, C and D all prefer

a strong dollar.

17. A. The exchange rate is embedded in the ADR's dollar price, so a falling Swiss franc lowers the ADR even in a flat Zurich market. Nothing about an ADR is guaranteed.
18. C. Real ≈ 8% − 3.5% = 4.5%. The unsubtracted 8% is the planted near-miss.
19. B. Fixed coupons for decades lose purchasing power with every inflationary year — the 1923 lesson in miniature. The others hold real assets, pricing power, or owe fixed dollars.
20. B. An inverted curve has historically preceded recessions, and widening credit spreads show fear and a flight to quality; the signals point the same direction. Neither implies hyperinflation.

PORTFOLIO PIECE: MY ECONOMY DASHBOARD

Assemble a one-page pretend briefing — the kind an adviser might pin above a desk — that captures the economy as it stands this month. It must contain: (1) your judgment of where we are in the business cycle, in one labeled sentence; (2) three economic indicators with their latest values, each looked up from an official source (bls.gov, bea.gov, or FRED at fred.stlouisfed.org) and labeled leading, coincident or lagging, with value, release date and source; (3) a hand-drawn yield curve plotted from current Treasury yields, dated, with its shape named; and (4) two sentences on what this picture would mean for a cautious imaginary client — hedged, historical, and offering advice to no real person. Everything on one page, neat enough that a stranger could read it in ninety seconds.

LOOK FOR	WHAT IT MEANS
Sources	All three indicators and every Treasury yield carry an official source and a release date; nothing is quoted from memory or from a commentary site.
Classification	Each indicator is correctly labeled leading, coincident or lagging, and the cycle-phase judgment names the evidence behind it.
Yield curve	The hand-drawn curve plots at least five maturities accurately with labeled axes, is dated, and its shape (including any partial inversion) is named honestly.
Client reading	The two-sentence reading connects the data to a cautious posture using historical patterns, with honest hedging and no advice to real people.
Craftsmanship	One page, legible and orderly: a stranger could grasp the whole briefing in ninety seconds.

UNIT 3

Reading the Numbers

A company tells its story three times: once in the **income statement** (did it earn money this year?), once in the **balance sheet** (what does it own and owe today?), and once in the **cash flow statement** (where did the cash actually go?). In this unit you will learn to read all three, and to distrust them politely — the way the whole world learned to in 1932, when Ivar Kreuger, the Swedish "Match King" whose securities sat in dressers across America, died in Paris and his invented profits died with him. You will meet Benjamin Graham, who taught his Columbia students (one of them a young Warren Buffett) to read the numbers instead of the ticker tape, and you will work the ratios he loved: current, quick, debt-to-equity, earnings per share, P/E, price-to-book and dividend yield.

Then the unit turns from a single company to money and time itself. You will learn the compound-interest formula that Fibonacci was already teaching merchants in 1202 and that Benjamin Franklin trusted enough to leave two cities a 200-year experiment; you will discount future dollars back to the present and decide projects by **net present value** and **internal rate of return**. You will weigh an ox with Francis Galton's crowd at Plymouth in 1906 and come away owning the statistics the exam loves — mean, median, standard deviation, correlation, beta and alpha. And you will finish with the map of **risk** itself: which risks diversification can cure, which it cannot, and who stands where on the ladder when a company is liquidated — a ladder the examiners climb again and again.

PREREQUISITES

- Can work confidently with percents, decimals and exponents (find 8% of an amount; compute (1.06)^3 with a calculator)
- Can read a simple table and keep two-column figures lined up in a notebook
- Knows the Unit 1 vocabulary: security, issuer, stock, bond, dividend, interest
- Can use a basic spreadsheet: enter numbers, write a formula, copy it down a column

MASTERY CHECKLIST

- ☐ I can name the three major financial statements, say what question each answers, and connect net income to retained earnings and cash.
- ☐ I can tell audited filings from unaudited ones and match the 10-K, 10-Q, 8-K, annual report and proxy statement to what each contains.
- ☐ I can compute and interpret the current ratio, quick ratio, working capital and debt-to-equity ratio from a balance sheet.
- ☐ I can compute earnings per share, P/E, price-to-book, dividend payout and dividend yield, and say what high and low P/E suggest about growth and value stocks.
- ☐ I can move money across time with FV = PV(1+r)^n, estimate doubling time with the rule of 72, and decide a project by net present value and internal rate of return.
- ☐ I can compute mean, median, mode and range, read a standard deviation as volatility, and explain correlation, beta and alpha in one sentence each.
- ☐ I can sort any named risk into systematic or unsystematic and say which diversification can reduce.

- ☐ I can recite the liquidation ladder in order, from secured creditors down to common stockholders.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **Beginners' Guide to Financial Statements (SEC)**: Free from the SEC's Office of Investor Education. A short, plain-English walk through the balance sheet, income statement and cash flow statement, with the same ratios as Lessons 3.1 and 3.2. Read it alongside those lessons. Ages 14 and up.
- ***How to Invest Money*, by George Garr Henry (1908)**: Free on Project Gutenberg. A Guaranty Trust banker explains, in 1908 English, why security of principal comes first and how railroad mortgage bonds were judged — the very bonds of Lesson 3.5's receivership story. The chapters on general principles and railroad bonds fit Lessons 3.3 and 3.5. Ages 14 and up.
- **Khan Academy: Finance and Capital Markets**: Free. The full video course behind several lessons in this unit — balance sheets, P/E, present value, statistics — with exercises. Use it whenever a lesson's arithmetic needs a second pass. Ages 14 and up.
- **"Vox Populi," by Francis Galton (Nature, 1907)**: Free at galton.org. The original two-page article behind Lesson 3.4's story — Galton's own account of the ox-weighing contest at Plymouth, with his table of quartiles. Read it after the lesson and find the median yourself. Ages 15 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

3.1 Financial Reports: The Income Statement, Balance Sheet and Cash Flow

3 sessions of 50 minutes

3.2 Ratios: Liquidity, Leverage and Valuation — 3 sessions of 50 minutes

3.3 The Time Value of Money: Present Value, NPV and IRR — 3 sessions of 50 minutes

3.4 Statistics for Investors: Mean, Median and Standard Deviation

3 sessions of 50 minutes

Unit 3 test

Closed book, closed notes — the real exam gives you no formula sheet, so this test does not either. Allow about 28 minutes for the 20 questions (the real exam's pace is roughly 83 seconds each) and answer every question; there is no penalty for a wrong guess, on this test or on the Series 65. Where a question says "in this example," the figures are for practice — rates and limits in the world change, but the methods do not. A calculator and scratch paper are allowed, as at the testing center.

1. **5 pts**
   Which financial statement reports a company's revenues and expenses over a period of time?
   A. Balance sheet
   B. Income statement
   C. Cash flow statement
   D. Proxy statement

2. **5 pts**
   A public company's quarterly report filed with the SEC is the:
   A. 10-K, and it is audited
   B. 10-Q, and it is audited
   C. 10-Q, and it is unaudited
   D. 8-K, and it is unaudited

3. **5 pts**
   Under accrual accounting, a sale made in November on credit and collected in January is recorded as revenue:
   A. In November, when it was earned
   B. In January, when the cash arrived
   C. Half in each month
   D. In whichever month the company chooses

4. 5 pts

A company has total assets of $1,800,000 and shareholders' equity of $700,000. Its total liabilities are:

A. $2,500,000

B. $1,100,000

C. $700,000

D. Cannot be determined without the income statement

5. 5 pts

In this example, a firm shows current assets of $400,000 (of which inventory is $160,000) and current liabilities of $200,000. Its current and quick ratios are:

A. 2.0 and 1.2

B. 2.0 and 0.8

C. 1.2 and 2.0

D. 2.0 and 2.8

6. 5 pts

A company earns net income of $1,200,000, pays $200,000 in preferred dividends, and has 500,000 common shares outstanding. Its EPS is:

A. $2.40

B. $2.00

C. $2.80

D. $0.40

7. 5 pts

A stock trading at $36 with EPS of $3.00 and an annual dividend of $1.20 has a P/E ratio and dividend yield of:

A. P/E 12; yield 3.3%

B. P/E 12; yield 40%

C. P/E 30; yield 3.3%

D. P/E 0.083; yield 10%

8. 5 pts

Compared with a value stock, a growth stock typically shows:

A. A lower P/E and a higher dividend yield

B. A higher P/E and a lower (or no) dividend

C. A lower price-to-book ratio

D. A higher dividend payout ratio

9. 5 pts

$4,000 is invested at 5% compounded annually for 2 years. Its future value is:

A. $4,400.00

B. $4,410.00

C. $4,200.00

D. $4,020.00

10. 5 pts

Using the rule of 72, an investment earning 6% annually will double in approximately:

A. 6 years

B. 9 years

C. 12 years

D. 72 years

11. 5 pts

An adviser discounts a project's expected cash flows at her required 9% and finds their present value exceeds the project's cost. She should conclude:

A. NPV is negative; reject

B. NPV is positive; the project earns more than 9% — accept

C. The IRR is exactly 9%

D. The project doubles her money in 8 years

12. 5 pts

The internal rate of return of an investment is the discount rate at which:

A. Future value equals twice present value

B. The investment's net present value equals zero

C. The rule of 72 holds exactly

D. The arithmetic and geometric means are equal

13. 5 pts

A fund's returns in five years were 12%, 3%, 8%, −1% and 8%. The median return was:

A. 6%

B. 8%

C. 3%

D. 12%

14. 5 pts

A portfolio's annual return has a mean of 7% and a standard deviation of 3%, roughly normally distributed. About 68% of years should fall between:

A. 1% and 13%

B. 4% and 10%

C. −2% and 16%

D. 0% and 14%

15. 5 pts

A portfolio with a beta of 1.5 returns 14% in a year when the market returns 10%. Its alpha is:

A. +4

B. −1

C. +14

D. 0

16. 5 pts

An adviser wants the greatest diversification benefit from adding one asset to a stock portfolio. She should prefer the asset whose correlation with the portfolio is:

A. +1.0

B. +0.5

C. 0.0

D. −0.4

17. 5 pts

Even the owner of a portfolio diversified across hundreds of companies in every industry remains exposed to:

A. Business risk

B. Financial risk

C. Interest-rate risk

D. Regulatory risk

18. 5 pts

In a corporate liquidation, place these in payment order: (I) subordinated debentures; (II) secured bondholders; (III) common stock; (IV) preferred stock; (V) general unsecured creditors.

A. II, V, I, IV, III

B. II, I, V, IV, III

C. V, II, I, III, IV

D. II, V, IV, I, III

19. 5 pts

In this example, an investor leaves $5,000 idle for one year instead of buying a Treasury bill yielding 4%. His opportunity cost is:

A. $0, because he lost nothing

B. $200

C. $5,200

D. $50

20. 5 pts

A retiree living entirely on fixed bond interest is MOST exposed to which risk, and can diversification among many bond issuers remove it?

A. Business risk; yes

B. Purchasing-power risk; no

C. Purchasing-power risk; yes

D. Liquidity risk; no

ANSWER KEY

1. B. The income statement covers a period and ends in net income. The balance sheet is a one-date snapshot; the cash flow statement traces cash, not accrual revenue and expense.
2. C. The 10-Q is filed for each of the first three quarters and its statements are unaudited; the audited annual filing is the 10-K; the 8-K reports current events.
3. A. Accrual accounting recognizes revenue when earned, regardless of when cash moves; recording at collection would be cash-basis accounting.
4. B. Assets = liabilities + equity, so liabilities $= \$1{,}800{,}000 - \$700{,}000 = \$1{,}100{,}000$. Choice A adds instead of subtracting.
5. A. Current: $400 \div 200 = 2.0$; quick: $(400 - 160) \div 200 = 1.2$. Choice B subtracts the inventory twice over; D adds it back.
6. B. EPS = (net income − preferred dividends) ÷ common shares $= \$1{,}000{,}000 \div 500{,}000 = \$2.00$. Choice A skips the preferred-dividend subtraction.
7. A. P/E $= 36 \div 3 = 12$; yield $= \$1.20 \div \$36 = 3.3\%$. Choice B's 40% is the payout ratio (dividend ÷ EPS), not the yield — the exam's favorite switch.
8. B. Growth stocks command high multiples of current earnings and usually reinvest rather than pay dividends; value stocks show low P/Es, lower price-to-book and fatter yields.
9. B. $\$4{,}000 \times (1.05)^2 = \$4{,}000 \times 1.1025 = \$4{,}410$. Choice A is simple interest without compounding; C stops after one year.
10. C. $72 \div 6 = 12$ years. Nine years (B) is the doubling time at 8% — know both, because the exam swaps them.
11. B. PV of inflows above cost means positive NPV: the project clears the 9% hurdle, so its IRR is above 9%. C would require NPV of exactly zero.
12. B. IRR makes NPV exactly zero — the rate the investment itself earns. For a bond, that rate is its yield to maturity, a connection Unit 4 builds on.
13. B. Ordered: −1, 3, 8, 8, 12; the middle value is 8%. Choice A is the mean — the exam expects you to compute the wrong center in a hurry.
14. B. One standard deviation either side of the mean: $7\% \pm 3\%$ gives 4% to 10%. Choice A is the two-sigma (95%) band.
15. B. Beta predicts $1.5 \times 10\% = 15\%$; alpha $= 14\% - 15\% = -1$. Choice A compares against the raw market return and forgets the beta multiplication.

16. D. The lower (more negative) the correlation, the more the new asset's motion offsets the portfolio's. Zero correlation helps; negative correlation helps more; +1.0 adds nothing but size.
17. C. Interest-rate risk is systematic — rising rates press on all securities at once, so diversification within the market cannot remove it. The other three are company- or industry-specific.
18. A. Secured first, then unsecured creditors, then subordinated debentures, then preferred, then common. Choice D pays preferred stockholders before a debt class — no stockholder ever collects before a creditor.
19. B. The forgone alternative would have earned $0.04 \times \$5{,}000 = \$200$ — that unearned return is the opportunity cost. Choice A is the buried talent's own defense, and the parable's master rejected it.
20. B. Inflation erodes every fixed payment from every issuer alike — it is systematic, so adding issuers cannot diversify it away. C names the right risk but the wrong remedy.

PORTFOLIO PIECE: MY ANALYST'S FILE

Across the unit you have built, piece by piece, a working analyst's file for one small pretend company — your lemonade enterprise. Assemble it now as a single document: a one-page map of the three financial statements (income statement, balance sheet and cash flow statement, with the arrows showing how net income becomes retained earnings and how the cash reconciles); the ratio sheet with all its liquidity, leverage and valuation figures and their plain-English verdicts; the PV/FV table you built in a spreadsheet, with your rule-of-72 checks and the Franklin calculation; the vox populi report from your household guessing experiment; and the risk map with the liquidation ladder drawn as an actual ladder, rung by rung from secured creditors down to the common stockholder standing in the puddle. Bind it, title it, and present it to a parent in a five-minute walk-through — the file is finished only when someone else can follow it.

LOOK FOR	WHAT IT MEANS
The three-statement map	All three statements are present, correctly structured and arithmetically exact; the connections (net income to retained earnings, cash flow to the balance-sheet cash line) are drawn and the balance sheet balances to the dollar.
The ratio sheet	Current, quick, working capital, debt-to-equity, EPS (with the preferred dividend handled), P/E, price-to-book, payout and yield are all computed correctly from the student's own statements, each with a sensible one-sentence interpretation.
The PV/FV spreadsheet table	The table is generated by a correct compound-interest formula, reads accurately in both directions (future value and present value), and includes the rule-of-72 comparison and the Franklin check with honest commentary.
Statistics and the vox populi report	The guessing experiment was actually run with independent guesses; mean, median, mode, range and standard deviation are correct; the report draws the Galton comparison and explains what copying between guessers does to a crowd.

LOOK FOR	WHAT IT MEANS
The risk map and liquidation ladder	All nine risks sit in the correct systematic/unsystematic columns with applied sentences; the ladder's five rungs are in exact order with each claimant identified; the $100 liquidation exercise runs out at a defensible rung and the student can defend the order aloud.

3.1 Financial Reports: The Income Statement, Balance Sheet and Cash Flow

OBJECTIVES

- Name the three major financial statements and state the question each one answers.
- Write the accounting equation and use it to find a missing assets, liabilities or equity figure.
- Distinguish cash-basis from accrual accounting and say which public companies must use.
- Distinguish audited from unaudited statements and explain what an independent auditor's opinion adds.
- Match the SEC filings — 10-K, 10-Q, 8-K, annual report to shareholders and proxy statement — to what each contains and how often it appears.

> **Warm-up.** Take five minutes and make two columns for your own household or your own room: OWN (bike, laptop, savings) and OWE (money borrowed from a sibling, a library fine). Guess a dollar value for each line. Subtract the second column from the first. You have just drafted your first balance sheet; keep it for the project.

WATCH

FINANCIAL STATEMENTS: all the basics in 8 MINS!

Accounting Stuff · 9:05

https://www.youtube.com/watch?v=Fi1wkUczuyk

> **WHEN TO WATCH**
> After the big idea, before the worked examples. As each statement appears, write its name and the one question it answers in your exam notebook.

BACKUP VIDEO

Balance sheet and income statement relationship | Finance & Capital Markets | Khan Academy

Khan Academy · 3:40

https://www.youtube.com/watch?v=hZvjH3Az87A

After the worked examples, to see net income flow into equity as retained earnings — the bridge your sketchbook map draws.

KEY TERMS

income statement

The statement showing revenues minus expenses over a period of time, ending in net income (the "bottom line"); also called the profit and loss statement.

balance sheet

A snapshot on one date of what a company owns (assets), what it owes (liabilities) and what is left for the owners (shareholders' equity, or net worth).

cash flow statement

The statement tracing actual cash in and out over a period, sorted into operating, investing and financing activities.

accrual accounting

Recording revenue when it is earned and expenses when they are incurred, whether or not cash has changed hands; required of public companies.

cash-basis accounting

Recording revenue only when cash is received and expenses only when cash is paid, as a household checkbook does.

audited statement

A financial statement examined by an independent public accountant who gives an opinion on whether it fairly presents the company's condition.

Form 10-K

A corporation's annual report filed with the SEC, containing audited financial statements.

Form 10-Q

A corporation's quarterly report filed with the SEC, containing unaudited financial statements; filed for each of the first three quarters.

Form 8-K

A current report filed with the SEC within four business days of a major event, such as a merger, a bankruptcy, a change of auditors or the departure of a top officer.

proxy statement

The document sent to shareholders before a vote, describing the matters to be decided, the board candidates and executive compensation.

CORE IDEAS

The story. Through the 1920s the most widely held securities in America were not issued by a railroad or an oil company but by a quiet Swedish engineer named Ivar

Kreuger — the "Match King." His companies made two-thirds of the world's matches, and he did something bolder: he lent hard currency to whole governments — France, Germany, Poland and more — in exchange for national match monopolies, and raised the money by selling securities of his International Match Corporation to ordinary Americans. His reported profits never faltered, and his dividends arrived like clockwork. Then, on March 12, 1932, with credit tightening everywhere after the Crash, Kreuger was found dead in his Paris apartment, and the accountants finally got inside his books. They found profits that had been invented for years, assets pledged twice over, and — most shocking — forged Italian government bills sitting in the vault as if they were real. The dividends had been paid, in large part, out of new investors' own money. Tens of thousands of families who thought they held the safest paper in the world held paper.

How they figured it out. The scandal taught Congress a precise lesson: it was not enough to punish fraud after the money was gone; investors needed to see honest numbers before they bought. Kreuger had refused real audits — his accountants saw only what he chose to show them — and no law had required more. So when Congress wrote the Securities Act of 1933 and the Securities Exchange Act of 1934, it put **disclosure** at the center: a company offering securities to the public must publish financial statements, and those statements must be examined by independent accountants who stake their own name on the result. The New York Stock Exchange began requiring audits of listed companies in the same era. The cure for darkness was not a smarter policeman but a brighter lamp — "Sunlight is said to be the best of disinfectants," as Louis Brandeis had put it years before.

The big idea. A company tells its story in three statements, and each answers one question. The **income statement** answers: *did the company earn money over this period?* It starts with revenue, subtracts the cost of goods sold to get gross profit, subtracts operating expenses to get operating income, then subtracts interest and taxes to reach **net income**. The **balance sheet** answers: *what does the company own and owe on this one date?* It always balances by the accounting equation — Assets = Liabilities + Shareholders' equity — because the owners' stake is simply what would remain if every asset were used to pay every debt. The **cash flow statement** answers: *where did the cash actually come from, and where did it go?* It sorts every dollar into operating activities (the business itself), investing activities (buying or selling equipment and securities) and financing activities (borrowing, repaying, issuing

stock, paying dividends). The three connect: net income flows into the balance sheet as retained earnings, and the cash flow statement reconciles net income with the change in actual cash.

Why three statements instead of one? Because each can flatter alone. A company can report handsome net income while its cash drains away — customers promising to pay are counted as revenue under **accrual accounting**, which records revenue when it is *earned* and expenses when they are *incurred*, not when cash moves. Accrual is the required method for public companies because it matches effort to result; but it also means net income is an opinion, while cash is a fact. A household checkbook is **cash-basis**: money counts when it arrives. Kreuger's genius was to exploit the gap — paper profits on the income statement, while the cash flowing in was really new investors' capital. A student who reads all three statements together would have seen it: the profits never turned into operating cash.

An **audited** statement has been examined by an independent certified public accountant, who tests the records and issues an opinion — the clean, or unqualified, opinion says the statements fairly present the company's position according to standard accounting principles. The audit does not guarantee the business will prosper; it testifies that the numbers were honestly kept. Read the **footnotes** too: that is where the accounting choices, the lawsuits, the lease obligations and the fine print live. Professionals say the statements are the sermon and the footnotes are the confession.

The exam expects you to know where these statements are published. The **Form 10-K** is the annual report filed with the SEC, with audited statements — the fullest picture a public company gives. The **Form 10-Q** is the quarterly version, filed three times a year, and its statements are *unaudited*. The **Form 8-K** is the "current report": when something material happens between reports — a merger, a bankruptcy filing, a change of auditors, a director's resignation — the company must tell the public within four business days. The **annual report to shareholders** is the glossy booklet mailed to owners, with the chairman's letter and the audited figures; and the **proxy statement** arrives before the annual meeting, telling shareholders what they will vote on, who is nominated to the board, and what the executives are paid. All of it sits free on the SEC's EDGAR database — the lamp Congress lit in 1933 still burns.

On the exam today. The Series 65 asks this material straight and often. Know the one-line job of each statement, and that the balance sheet is a *point in time* while the income and cash flow statements cover a *period*. Expect a question pairing filings with contents: the favorite trap is the 10-Q — quarterly and *unaudited* — against the audited 10-K; another is hiding executive compensation in the wrong answer (it lives in the *proxy statement*); a third describes a merger announcement and wants the 8-K. And when a question says a firm "recognizes revenue when earned, not when received," that is accrual accounting by definition — do not be lured by "cash basis" just because the sentence mentions receiving cash.

PICTURE STUDY

Ivar Kreuger, the Match King, Agence Rol press photograph, March 1932 · Press photograph · Bibliothèque nationale de France, Paris

Image: Wikimedia Commons, public domain

This press photograph of Ivar Kreuger circulated in March 1932, when his death in Paris was front-page news on two continents. The French caption called him *roi des allumettes* — the king of matches. Study the face that persuaded bankers, governments and tens of thousands of small investors: the lesson of this unit is that a face, however calm, is not a financial statement.

Look closely

- Find the details of success: the tailored suit, the composed posture, the steady gaze. This is how trustworthiness was dressed in 1930.
- Notice that nothing in the picture shows matches, factories or money — only the man. Investors bought the man.
- Look at the eyes and ask what they give away. Contemporaries called him unreadable and took it for depth.
- Notice this is a press photograph, made to be printed beside headlines. Ask what headline it first accompanied — and what headline it accompanied in March 1932.

Talk about it

1. Kreuger's investors trusted dividends that arrived on time. Why is a steady dividend not proof that profits are real?
2. What specific documents, honestly prepared, would have exposed the fraud years earlier?
3. The law's answer was disclosure — sunlight — rather than forbidding risky investments. Why is that a fitting remedy for this kind of wrong?

PROJECT

The Lemonade Company's Three Statements

You will invent a small summer lemonade company and write its three financial statements for one month, honestly and in order. This set of statements is the first page of your unit portfolio, "My Analyst's File," and the ratio work in Lesson 3.2 will be built on it — so keep the numbers tidy and keep the file.

You will need

- Ledger notebook or three sheets of paper, one per statement
- Calculator
- A spreadsheet if available (one tab per statement)
- Pencil and a straightedge for ruling columns

Steps

1. Invent the month's activity and write it as a plain list: cups sold and price, cost of lemons, sugar and cups, a stand you bought, money a neighbor still owes you, a loan from a parent, cash you put in yourself.
2. Build the income statement for the month: revenue at the top, then cost of goods sold, gross profit, operating expenses and net income. Include the neighbor's unpaid order as revenue — you are on the accrual basis.
3. Build the balance sheet as of the last day of the month: assets (cash, the amount receivable from the neighbor, the stand), liabilities (the parent loan), and equity as the balancing figure. Check the accounting equation to the dollar.
4. Build the cash flow statement: operating cash (cash actually collected minus cash actually paid), investing cash (the stand you bought), financing cash (the loan and your own capital). End with the change in cash and make it match the cash on your balance sheet.
5. Circle in red every place net income and operating cash differ, and write one sentence explaining each difference (the neighbor's IOU will be one).
6. Write a three-line "filing guide" for your company: what your 10-K, 10-Q and 8-K would be. Invent one 8-K-worthy event (the stand blew over; you changed

your recipe supplier).

7. Have a parent audit you: they pick any three numbers and you must trace each back to the activity list. If a number cannot be traced, fix the books, not the story.

Tips

- Small round numbers are fine; the discipline is in the structure, not the size.
- If the balance sheet will not balance, the error is almost always a forgotten IOU or the loan counted on the wrong side.

Check your work

- ☐ My income statement runs from revenue to net income in the right order.
- ☐ My balance sheet balances exactly, and I can say why equity is what it is.
- ☐ My cash flow statement's ending cash equals the cash on my balance sheet.
- ☐ I can explain every difference between net income and operating cash.

EXAM NOTEBOOK

1. Draw the three-statement map on one page: three boxes labeled with each statement's question, an arrow from net income to retained earnings, and an arrow from the cash flow statement to the cash line of the balance sheet.
2. Make a five-row filings table: 10-K, 10-Q, 8-K, annual report to shareholders, proxy statement — with columns for how often, audited or not, and what the exam says it contains.
3. Make two flashcards: one with "accrual = earned/incurred" and "cash basis = received/paid," and one with the accounting equation solved three ways (for assets, for liabilities, for equity).

KEY FORMULAS

$$\text{Assets} = \text{Liabilities} + \text{Shareholders' equity}$$

$$\text{Net income} = \text{Revenue} - \text{Expenses}$$

From history. The 1933 act's audit requirement remade a profession. In 1932 the accountant was a back-office figure; within a generation, the certified public accountant's opinion letter had become the toll gate of American capital markets. Kreuger's own Swedish match company, reorganized honestly after the collapse, outlived him by nearly a century — proof that the business was real even when the books were not.

WORKED EXAMPLES

Example 1. In this example, a small company reports revenue of $840,000, cost of goods sold of $390,000, operating expenses of $300,000, interest expense of $20,000 and taxes of $32,500. Build the income statement down to net income.

Show solution

1. Gross profit: $\$840{,}000 - \$390{,}000 = \$450{,}000$.
2. Operating income: $\$450{,}000 - \$300{,}000 = \$150{,}000$.
3. Before taxes: $\$150{,}000 - \$20{,}000 = \$130{,}000$.
4. Net income: $\$130{,}000 - \$32{,}500 = \$97{,}500$.

Answer: Net income is $97,500. Each subtraction is a floor of the income statement: gross, operating, pre-tax, net.

Example 2. A company's balance sheet shows total assets of $2,400,000 and total liabilities of $1,550,000. Find shareholders' equity. Then: the company borrows $200,000 in cash from a bank. What happens to assets, liabilities and equity?

Show solution

1. Equity: $\$2{,}400{,}000 - \$1{,}550{,}000 = \$850{,}000$.
2. The loan adds $200,000 of cash (an asset) and $200,000 of debt (a liability).
3. New totals: assets $2,600,000, liabilities $1,750,000, equity unchanged at $850,000.

Answer: Equity is $850,000 and borrowing does not change it — the equation balances with both sides rising by $200,000. Equity changes when the company earns, loses or pays out, not when it borrows.

Example 3. Exam style. An investor wants to review a public company's most recent *audited* financial statements and also find what its chief executive is paid. She should consult, respectively:

A. The 10-Q and the 8-K

B. The 10-K and the proxy statement

C. The 8-K and the 10-K

D. The proxy statement and the 10-Q

Show solution

1. A: the 10-Q is quarterly and unaudited, and the 8-K reports current events, not pay — wrong on both counts.
2. B: the 10-K is the annual SEC filing with audited statements, and executive compensation is disclosed in the proxy statement — both correct.
3. C: an 8-K is an event report with no regular audited statements; backwards.
4. D: reverses the documents' jobs — the proxy is for votes and pay, the 10-Q is unaudited quarterly figures.

Answer: B. Audited annual statements live in the 10-K; executive compensation lives in the proxy statement. The 10-Q is the exam's favorite wrong answer because it sounds official but is unaudited.

PRACTICE

1. Easy Which financial statement answers the question "what does the company own and owe on this date?"

   A. Income statement

   B. Balance sheet

   C. Cash flow statement

   D. Proxy statement

   Show answer

   B. The balance sheet is a snapshot of assets, liabilities and equity on one date. The income and cash flow statements cover a period, and the proxy is not a financial statement at all.

2. **Easy** A company has assets of $750,000 and equity of $290,000. Find total liabilities.

Show answer

$$\$750{,}000 - \$290{,}000 = \$460{,}000$$

3. **Easy** Which SEC filing contains a corporation's *audited* annual financial statements?

A. Form 10-Q

B. Form 8-K

C. Form 10-K

D. Form U10

Show answer

C. The 10-K is the audited annual filing. The 10-Q is quarterly and unaudited, the 8-K reports current events, and Form U10 is how an unsponsored person enrolls for an exam like the Series 65 — a distractor from Unit 1.

4. **Medium** A company reports revenue of $96,000, cost of goods sold of $41,000 and operating expenses of $33,000. Find gross profit and operating income.

Show answer

Gross profit $\$96{,}000 - \$41{,}000 = \$55{,}000$; operating income $\$55{,}000 - \$33{,}000 = \$22{,}000$.

5. **Medium** A landscaping company finishes a $2,000 job in June and is paid in August. Under accrual accounting, when is the revenue recorded?

A. In June, when the work was earned

B. In August, when the cash arrived

C. Half in June and half in August

D. Whenever the company's fiscal year ends

Show answer

A. Accrual accounting records revenue when earned, regardless of when cash arrives. B describes cash-basis accounting — the tempting answer because the question mentions the August payment.

6. **Medium** A public company's outside auditors resign in the middle of the year. Which filing tells the public, and roughly how quickly?

   A. The next 10-Q, within the quarter

   B. A Form 8-K, within four business days

   C. The next 10-K, at year end

   D. The proxy statement, before the next shareholder vote

   Show answer

   B. A change of auditors is a reportable current event, disclosed on Form 8-K within four business days. Waiting for the next scheduled report (A and C) is exactly what the 8-K exists to prevent.

7. **Medium** On which statement, and in which section, would the purchase of a new delivery truck for cash appear?

   A. Income statement, as an operating expense

   B. Cash flow statement, investing activities

   C. Cash flow statement, financing activities

   D. Balance sheet only; cash purchases are not reported elsewhere

   Show answer

   B. Buying long-lived equipment is an investing activity. Financing activities (C) are borrowing, repaying and dealings with owners; the truck's cost reaches the income statement only gradually, as depreciation.

8. **Medium** From the story: name two specific deceptions found in Kreuger's books after March 1932, and state the reform principle Congress built into the 1933 and 1934 acts in response.

   Show answer

   Invented (fictitious) profits and forged Italian government bills were found, with dividends effectively paid from new investors' money. Congress's principle was mandatory disclosure: published financial statements, audited by independent accountants, before and after securities are sold.

9. Hard A company reports net income of $50,000 for the year, yet its cash fell by $20,000. Which of the following, by itself, best explains the gap?

A. The company uses cash-basis accounting

B. Customers owing large sums have not yet paid, and the company bought equipment for cash

C. The auditors issued an unqualified opinion

D. Net income must have been overstated fraudulently

Show answer

B. Under accrual accounting, earned-but-unpaid sales raise income without raising cash, and an equipment purchase drains cash without touching income. A is contradictory (a cash-basis firm's income tracks cash), C is irrelevant, and D is possible but not the *best* explanation — honest timing differences do this constantly.

10. Hard A shareholder wants to know what the board nominees' qualifications are and what the top officers were paid last year. Which single document serves both needs?

A. Form 10-K

B. Form 8-K

C. The proxy statement

D. The annual report to shareholders

Show answer

C. The proxy statement is written for the shareholder vote: nominees, proposals and executive compensation. The 10-K and annual report carry the financial story; the 8-K carries events.

11. Hard At year start a company's equity is $400,000. During the year it earns net income of $65,000 and pays $25,000 in dividends, and the owners add no new capital. Find year-end equity, and name the balance-sheet account that carried the change.

Show answer

$\$400{,}000 + \$65{,}000 - \$25{,}000 = \$440{,}000$. The change flows through retained earnings — the bridge between the income statement and the balance sheet.

12. **Challenge** An analyst reads three years of a private firm's statements: net income rises every year, operating cash flow is negative every year, and the firm keeps raising money from new investors, from whom the dividends are paid. The statements are unaudited. Which statement of the three exposes the Kreuger pattern most directly, and what two demands should the analyst make before anyone invests?

Show answer

> The cash flow statement — rising "profits" that never become operating cash, with financing inflows funding the dividends, is the classic pattern. Demand independently audited statements and a reconciliation of net income to operating cash (with the footnotes); if the firm refuses an audit, as Kreuger always did, walk away.

COMMON MISTAKES

- Treating the balance sheet as covering a period. It is a snapshot of one date; the income and cash flow statements cover the period.
- Calling the 10-Q audited. Quarterly statements are unaudited; the audited ones are in the 10-K.
- Looking for executive compensation in the 10-K summary instead of the proxy statement, where the exam says it lives.
- Confusing accrual with cash-basis: "recognized when earned" is accrual, no matter how temptingly the question talks about checks arriving.
- Assuming net income means cash in the bank. Accrual income and cash can move in opposite directions in the same year.

> **Make it a game · Statement Sort.** Write the three statement names on three cards and lay them out. A parent or sibling calls out items one at a time — "cash paid for lemons," "money a customer still owes," "loan from the bank," "sold 40 cups," "bought a delivery wagon" — and you slap the card where the item lands first, saying the line it goes on. One point per correct slap; an item that touches two statements (most do) earns a bonus point if you can name the second. First to ten points deals the next round and invents the items.

> **Scripture.** “And he called him, and said unto him, How is it that I hear this of thee? give an account of thy stewardship; for thou mayest be no longer steward.” (Luke 16:2, KJV)
>
> The rich man’s demand is the whole theory of financial reporting in one sentence: a steward manages what belongs to another, and must render an honest account of it. An audited statement is exactly that — an account of stewardship, checked by a witness.

3.2 Ratios: Liquidity, Leverage and Valuation

OBJECTIVES

- Compute and interpret the current ratio, the quick (acid-test) ratio and working capital from a balance sheet.
- Compute the debt-to-equity ratio and explain what leverage means for risk.
- Compute earnings per share and the price-to-earnings ratio, and say what high and low P/E suggest about growth and value stocks.
- Compute price-to-book, dividend payout ratio and dividend yield.
- Choose the right ratio for a stated question — paying this year's bills, surviving a downturn, or judging a stock's price.

> **Warm-up.** In five minutes: you have $120 in cash and your brother owes you $30; your own debts due this month are $60. Divide what you can raise by what you owe. That number — 2.5 — is your personal current ratio. Would you feel differently if it were 0.8? Write one sentence.

WATCH

Introduction to the price-to-earnings ratio | Finance & Capital Markets | Khan Academy

Khan Academy · 14:46

https://www.youtube.com/watch?v=cppxO67e6eo

> **WHEN TO WATCH**
> After the valuation paragraphs, before the worked examples. Each time Sal prices a company, pause and compute the P/E yourself before he does.

BACKUP VIDEO

3 Liquidity Ratios You Should Know

Accounting Stuff · 5:36

https://www.youtube.com/watch?v=4_GoWaMLGHI

Before the liquidity worked example if the current/quick distinction is still fuzzy; compute each ratio along with the presenter.

KEY TERMS

current ratio

Current assets divided by current liabilities; a measure of a company's ability to pay its bills over the coming year.

quick ratio (acid test)

Current assets excluding inventory, divided by current liabilities; liquidity measured without counting goods that still must be sold.

working capital

Current assets minus current liabilities — a dollar amount, not a ratio.

debt-to-equity ratio

A company's long-term debt divided by its shareholders' equity; the higher it is, the more leveraged the company.

earnings per share (EPS)

Net income available to common stockholders (after preferred dividends) divided by the number of common shares outstanding.

price-to-earnings (P/E) ratio

Market price per share divided by earnings per share; the price of one dollar of a company's earnings.

price-to-book ratio

Market price per share divided by book value (net worth) per share.

dividend payout ratio

Annual dividends per common share divided by earnings per share; the portion of earnings paid out to owners.

dividend yield

Annual dividends per share divided by the market price per share; the cash return at today's price.

CORE IDEAS

The story. In 1928 a young money manager named Benjamin Graham began teaching an evening course at Columbia University in New York, and kept teaching it, in one form or another, for almost thirty years. The timing was providential: his students watched the market mania of 1928–29 from their classroom, then watched the Crash take roughly ninety percent off the great industrial averages by 1932 — and Graham himself was badly wounded, his investment accounts cut to a fraction. Out of that humiliation he built a discipline. While the ticker tape told what a crowd

would pay this hour, Graham taught his students to open the company's reports and ask what the business was *worth*: what it owned, what it owed, what it earned, and what price those facts justified. In 1934 he and his colleague David Dodd put the method into a thick book, *Security Analysis*, which is still in print; and among the students who later sat in his classroom was a young man from Omaha named Warren Buffett, who called the training the foundation of everything he did afterward.

How they figured it out. Graham's insight was that the statements you learned to read in Lesson 3.1 become far more useful when you divide one number by another. A company with $1,000,000 in the bank sounds rich — but not if $2,000,000 of bills come due in March. A stock at $10 is not "cheaper" than a stock at $100 — not until you ask how much earning power each dollar of price buys. A **ratio** strips away size so that a corner bakery and a continental railroad can be judged by the same yardsticks. Graham called the habit *margin of safety*: buy only where the numbers leave room to be wrong.

The big idea — liquidity. Liquidity ratios ask: *can the company pay its bills this year?* The **current ratio** is current assets divided by current liabilities — "current" meaning convertible to cash, or due, within about a year. A current ratio of 2.0 means two dollars ready for every dollar due. The **quick ratio**, or acid test, is stricter: it throws inventory out of the numerator, because unsold goods must still find a buyer before they are cash. $\text{Quick} = (\text{current assets} - \text{inventory}) \div \text{current liabilities}$. **Working capital** is current assets *minus* current liabilities — notice it is a number of dollars, not a ratio; the exam checks whether you know the difference.

The big idea — leverage. The **debt-to-equity ratio** — long-term debt divided by shareholders' equity — measures how much of the company is built on borrowed money. Leverage is a lever indeed: in good years, debt multiplies the owners' gains, because the lenders get only their fixed interest and the owners keep all the rest; in bad years the interest must still be paid, and losses land on the owners first. A highly leveraged company is said to carry *financial risk* — remember that phrase, because it returns in Lesson 3.5 as one of the diversifiable risks.

The big idea — valuation. Valuation ratios connect the company's numbers to its stock price. **Earnings per share** comes first: net income, minus any preferred dividends, divided by the common shares outstanding — the preferred holders are

paid before the common get their claim on earnings, so their dividend comes out of the numerator. Then the **P/E ratio**: market price divided by EPS. A stock at $60 earning $4 a share sells at 15 times earnings — you pay $15 for each dollar of annual earning power. **Growth stocks** carry high P/Es, because buyers are paying for earnings they expect tomorrow; **value stocks** carry low P/Es and often high dividend yields, because buyers expect little growth and want the numbers cheap today. Neither is "correct" — but Graham's students learned to know exactly which they were buying.

Three more valuation tools complete your kit. **Price-to-book** divides the market price by book value per share — book value being the balance sheet's equity, the accountant's estimate of liquidation worth; Graham hunted stocks selling below it. The **dividend payout ratio** divides dividends per share by EPS: a utility paying $3 out of $4 of earnings has a 75% payout, a young growth firm often pays nothing and reinvests everything. The **dividend yield** divides the annual dividend by today's price — the cash-on-cash return; notice that when a stock's price falls and the dividend holds, its yield *rises*, which is why a suspiciously fat yield can be a distress signal rather than a bargain.

On the exam today. The Series 65 tests these as quick arithmetic and as vocabulary traps. Know by heart: quick ratio *excludes inventory*; working capital is *dollars, not a ratio*; EPS subtracts *preferred dividends* before dividing by *common* shares; high P/E suggests *growth*, low P/E with high yield suggests *value*; and dividend yield uses the *current market price*, not what the investor originally paid. A favorite question gives you net income, preferred dividends, shares and price, and wants the P/E in two steps — do the EPS first, every time. Another names four companies' current and quick ratios and asks which depends most on selling its inventory: it is the one with the widest gap between the two.

PICTURE STUDY

Woman Holding a Balance, Johannes Vermeer, About 1664 · Oil on canvas · National Gallery of Art, Washington

Image: Wikimedia Commons, public domain

Johannes Vermeer of Delft painted stillness better than anyone, and here the stillness is the moment before a measurement. Look closely at the balance: its pans are empty. The woman is testing her instrument — letting it settle to a perfect level — before she trusts it with gold. Behind her hangs the Last Judgment, the greater weighing under which every smaller weighing happens. An analyst's ratios are exactly such an instrument: a small balance that must itself be honest before it can tell you what a business weighs.

Look closely

- Find the balance in her hand and look closely at the pans. What is in them?
- Find the pearls, chains and coins on the table, still untouched.
- Follow the light from the high window. What does it fall on first?
- Find the painting on the wall behind her and notice how her head sits against it.

Talk about it

1. Why would a careful person test a balance before weighing anything in it? What is the analyst's version of that habit?

2. A ratio weighs one number against another, as her balance weighs pan against pan. Which ratio from this lesson would you trust most to weigh a company, and why?
3. What does the Last Judgment behind her add to a picture about weighing? What does it say to someone who will someday weigh other people's money?

PROJECT

The Lemonade Company's Ratio Sheet

Using the three statements you built in Lesson 3.1, you will compute every ratio in this lesson for your lemonade company, then judge it the way Graham would — in writing, with a margin of safety. This ratio sheet is the second page of "My Analyst's File."

You will need

- Your three statements from the Lesson 3.1 project
- Calculator or spreadsheet
- One fresh ledger page ruled into three sections: liquidity, leverage, valuation

Steps

1. From your balance sheet, compute the current ratio, the quick ratio (decide honestly what counts as inventory — unsold lemons and sugar do) and working capital in dollars.
2. Add a pretend long-term loan if you have none, then compute debt-to-equity. Write one sentence on what a bad month would do to a leveraged lemonade stand.
3. Invent a share structure: say the company has 100 shares and a cousin holds 20 preferred shares promised $0.10 each per month. Compute EPS from your month's net income.
4. Set a market price per share (ask a sibling what they would really pay) and compute the P/E, price-to-book, payout ratio and dividend yield.
5. Rule a final column headed "So what?" and write one plain-English sentence per ratio — not the formula, the meaning.
6. Compare: find the current P/E of a famous real company in the news (a parent can help) and write two sentences comparing it with yours. No buying, no advice — just reading numbers.
7. Staple or copy the ratio sheet into "My Analyst's File" behind the three statements.

Tips

- If a ratio comes out absurd (a P/E of 300), do not hide it — absurd ratios are the most instructive kind. Explain it.
- Keep every ratio to two decimal places and label which are ratios and which are dollars.

Check your work

- ☐ I computed all eight numbers: current, quick, working capital, debt-to-equity, EPS, P/E, price-to-book, payout and yield.
- ☐ My EPS correctly subtracts the preferred dividend.
- ☐ Every ratio has a one-sentence "so what" in plain English.
- ☐ I can say which single ratio I would check first before lending my company money, and why.

EXAM NOTEBOOK

1. Make a formula page with all four boxed formulas plus debt-to-equity, price-to-book, payout and yield, each with a tiny worked number underneath.
2. Draw the acid-test funnel: current assets at the top, inventory draining out the side, what remains dropping onto current liabilities.
3. Make a two-column trap list: "ratio" vs "dollars" (working capital goes right), "uses market price" vs "uses book numbers" — sort all eight measures into it.

KEY FORMULAS

$$\text{Current ratio} = \frac{\text{current assets}}{\text{current liabilities}}$$

$$\text{Quick ratio} = \frac{\text{current assets} - \text{inventory}}{\text{current liabilities}}$$

$$\text{EPS} = \frac{\text{net income} - \text{preferred dividends}}{\text{common shares outstanding}}$$

$$\text{P/E} = \frac{\text{market price per share}}{\text{EPS}}$$

From history. Graham practiced what he taught under examination conditions: his fund, battered in 1929–32, recovered by buying companies selling for less than their net working capital — in some cases less than the cash in their tills. He later said the market is a voting machine in the short run and a weighing machine in the long run, and his weighing machine was the ratio sheet you built today. He gave his last Columbia lectures in 1956, the year he retired, still setting students the same homework: read the numbers.

WORKED EXAMPLES

Example 1. A balance sheet shows cash $\$40{,}000$, accounts receivable $\$60{,}000$, inventory $\$100{,}000$ and current liabilities $\$80{,}000$. Find the current ratio, the quick ratio and working capital.

Show solution

1. Current assets: $\$40{,}000 + \$60{,}000 + \$100{,}000 = \$200{,}000$.
2. Current ratio: $\$200{,}000 \div \$80{,}000 = 2.5$.
3. Quick ratio: $(\$200{,}000 - \$100{,}000) \div \$80{,}000 = 1.25$.
4. Working capital: $\$200{,}000 - \$80{,}000 = \$120{,}000$.

Answer: Current ratio 2.5; quick ratio 1.25; working capital $\$120{,}000$. Half this company's short-term strength is sitting in unsold inventory — the acid test shows it.

Example 2. In this example, a company earns net income of $2,400,000, pays $400,000 in preferred dividends, and has 500,000 common shares outstanding. The stock trades at $60 and pays a $1.00 annual dividend per common share. Find EPS, the P/E ratio, the dividend payout ratio and the dividend yield.

Show solution

1. EPS: $(\$2{,}400{,}000 - \$400{,}000) \div 500{,}000 = \$4.00$.
2. P/E: $\$60 \div \$4.00 = 15$.
3. Payout ratio: $\$1.00 \div \$4.00 = 25\%$.
4. Dividend yield: $\$1.00 \div \$60 = 1.67\%$.

Answer: EPS $4.00; P/E 15; payout 25%; yield about 1.67%. Forgetting to subtract the preferred dividend would give EPS of $4.80 and a wrong P/E of 12.5 — the exam counts on that slip.

Example 3. Exam style. An investor screens four stocks. Which is *most* likely to be considered a value stock?

A. P/E of 45, no dividend, sales doubling yearly
B. P/E of 9, dividend yield of 4.5%, slow steady sales
C. P/E of 30, dividend yield of 0.5%, new product pipeline
D. P/E equal to the market average, yield equal to the market average

Show solution

1. A: a classic growth profile — a high multiple paid for expected future earnings, nothing paid out today.
2. B: a low multiple and a high yield — the market expects little growth, so today's earnings and dividends come cheap. This is the value profile.
3. C: growth again, only slightly tamer; the pipeline is the thing being paid for.
4. D: average on every measure is neither style — a plausible-sounding distractor that answers no one's question.

Answer: B. Value stocks show low P/E and above-average dividend yield; growth stocks show high P/E and little or no dividend. The exam often phrases it in reverse — know both directions.

PRACTICE

1. Easy Current assets are $300,000 and current liabilities are $120,000. Find the current ratio and working capital.

Show answer

Current ratio $\$300{,}000 \div \$120{,}000 = 2.5$; working capital $\$300{,}000 - \$120{,}000 = \$180{,}000$.

2. Easy Which item is excluded from the numerator of the quick (acid-test) ratio?

A. Cash
B. Accounts receivable
C. Inventory
D. Marketable securities

Show answer

C. The acid test removes inventory because goods must still be sold before they become cash. Cash, receivables and marketable securities all stay in.

3. Easy A stock trades at $48 and its EPS is $3.00. Its P/E ratio is:

A. 0.0625
B. 16
C. 45
D. 144

Show answer

B. $\$48 \div \$3.00 = 16$ — the buyer pays $16 for each dollar of annual earnings. Choice A divides EPS by price, the upside-down fraction; C subtracts instead of dividing.

4. Medium A company has current assets of $500,000 including inventory of $220,000, and current liabilities of $250,000. Its quick ratio is closest to:

A. 2.0
B. 1.12
C. 0.88
D. 1.4

Show answer

B. $(\$500{,}000 - \$220{,}000) \div \$250{,}000 = 1.12$. Choice A (2.0) is the current ratio — the exam's favorite near-miss; C subtracts inventory from the wrong side.

5. **Medium** In this example, net income is $900,000, preferred dividends are $100,000, and 400,000 common shares are outstanding. EPS is:

   A. $2.25

   B. $2.00

   C. $2.50

   D. $1.80

   Show answer

   B. ($900,000 − $100,000) ÷ 400,000 = $2.00. Choice A forgets to subtract the preferred dividend — the single most common EPS error.

6. **Medium** A stock pays an annual dividend of $2.40 and trades at $80. Its EPS is $6.00. Find the dividend yield and the payout ratio.

   Show answer

   Yield $2.40 ÷ $80 = 3%; payout $2.40 ÷ $6.00 = 40%. Yield compares the dividend with the *price*; payout compares it with *earnings*.

7. **Medium** A stock with a very high P/E ratio and no dividend is most likely described as:

   A. A value stock

   B. A growth stock

   C. A defensive stock

   D. An income stock

   Show answer

   B. High multiple, nothing paid out — investors are paying today for earnings expected tomorrow. Value stocks show low P/Es; income and defensive stocks are bought for steady dividends.

8. **Medium** From the story: Graham taught students to read reports rather than ticker tape. In one sentence, what question does the ticker answer, and what question do the statements answer?

   Show answer

   The ticker tells what the crowd will pay this hour; the statements tell what the business owns, owes and earns — what it is worth. Graham's method prices the second and only then looks at the first.

9. Hard A company's book value per share is $25 and the stock trades at $20. The price-to-book ratio is:

   A. 1.25

   B. 0.80

   C. 5.00

   D. Cannot be determined without EPS

   Show answer

   B. $\$20 \div \$25 = 0.80$ — the stock sells below book value, Graham's hunting ground. A inverts the fraction; D confuses price-to-book with P/E.

10. Hard Two firms each earn $1,000,000 of operating income. Firm X has no debt; Firm Y pays $600,000 of interest on its borrowings. Next year operating income falls 40% at both. Show what happens to each firm's pre-tax profit, and name the risk illustrated.

    Show answer

    Income falls to $600,000. X keeps $600,000; Y keeps $\$600{,}000 - \$600{,}000 = \$0$. A 40% business dip wiped out 100% of the leveraged firm's profit: financial risk, the risk created by debt in the capital structure.

11. Hard A stock's price falls from $50 to $25 while its $2 dividend is unchanged. An adviser notes the dividend yield has risen from 4% to 8%. Which statement best completes the analysis?

    A. The stock is now objectively a better investment

    B. The yield rose only because the price fell; the market may be signaling the dividend is at risk

    C. The payout ratio must also have doubled

    D. The P/E ratio must have risen

    Show answer

    B. Yield is dividend over *price*, so a collapsing price inflates it; a fat yield after a price collapse can be a distress flag. C is wrong because payout depends on earnings, not price; D is wrong because a falling price lowers the P/E if earnings hold.

12. **Challenge** In this example, a firm shows: cash $50,000, receivables $150,000, inventory $400,000, current liabilities $300,000; net income $240,000, no preferred, 120,000 shares, price $30. Compute the current ratio, quick ratio, EPS and P/E — then write the one-sentence Graham verdict the numbers support.

Show answer

Current $600{,}000 \div 300{,}000 = 2.0$; quick $200{,}000 \div 300{,}000 \approx 0.67$; EPS $\$240{,}000 \div 120{,}000 = \$2.00$; P/E $\$30 \div \$2 = 15$. Verdict: the price is ordinary and earnings are real, but liquidity leans almost entirely on unsold inventory — the acid test fails, so the margin of safety is thinner than the current ratio pretends.

COMMON MISTAKES

- Leaving inventory in the quick ratio. The acid test exists precisely to remove it.
- Calling working capital a ratio. It is current assets minus current liabilities — dollars.
- Computing EPS without subtracting preferred dividends from net income.
- Dividing EPS by price instead of price by EPS; a P/E below 1 on the exam almost always means the fraction is upside down.
- Reading a high dividend yield as automatic value; if the yield is high because the price collapsed, the dividend itself may be about to be cut.

Make it a game · Ratio Race. A parent rolls four dice twice to invent a tiny balance sheet: first roll makes current assets in tens of thousands (one die of it is declared "inventory"), second roll makes current liabilities. On "go," race a sibling — or the clock — to call out the current ratio, the quick ratio and working capital, in that order. Three correct calls wins the round; a wrong call passes the turn. Five rounds; the loser must recite the EPS formula with the preferred-dividend subtraction, perfectly, twice.

Scripture. "A false balance is abomination to the LORD: but a just weight is his delight." (Proverbs 11:1, KJV)

The moneylender's scale and the analyst's ratio are both balances, and both can be tilted — by a forged coin or a flattering number. The proverb makes honest measurement a matter of worship, not merely of prudence: the steward weighs justly because the owner he serves is watching.

3.3 The Time Value of Money: Present Value, NPV and IRR

OBJECTIVES

- Compute future value with the compound-interest formula FV = PV(1+r)^n.
- Discount a future amount to present value and explain why a dollar today is worth more than a dollar tomorrow.
- Estimate doubling time with the rule of 72.
- Compute a simple net present value and state the decision rule: invest if NPV is positive.
- Define internal rate of return as the discount rate that makes NPV zero, and connect it to a bond's yield to maturity.

> **Warm-up.** Offer yourself a choice, in writing: $100 today or $110 one year from today. Which do you take if the bank pays 4%? If it pays 15%? Work both with pencil — what does $100 grow to in a year each way? — and circle your two answers.

WATCH

Time value of money | Interest and debt | Finance & Capital Markets | Khan Academy

Khan Academy · 8:15

https://www.youtube.com/watch?v=733mgqrzNKs

> **WHEN TO WATCH**
> After the big idea, before the worked examples. Copy Sal's timeline drawing — money moving left is discounted, money moving right is compounded — into your exam notebook.

BACKUP VIDEO

NPV and IRR explained

The Finance Storyteller · 6:47

https://www.youtube.com/watch?v=Fw5-wccViOM

After the NPV and IRR paragraphs, before practice. Watch for the moment NPV crosses zero as the rate changes — that crossing point is the IRR.

KEY TERMS

time value of money

The principle that a dollar today is worth more than a dollar in the future, because today's dollar can be invested and earn a return.

future value (FV)

What a sum invested today will grow to by a future date at a given rate of compound interest.

present value (PV)

What a future sum is worth today, found by discounting it at a given rate.

compound interest

Interest earned on both the original principal and on previously earned interest.

discount rate

The rate used to shrink future dollars back to present value; the higher the rate, the smaller the present value.

rule of 72

A quick estimate of doubling time: 72 divided by the annual rate of return gives the approximate years for money to double.

net present value (NPV)

The present value of an investment's expected cash flows minus its cost; a positive NPV means the investment earns more than the discount rate.

internal rate of return (IRR)

The discount rate at which an investment's net present value equals exactly zero; the return the investment itself earns.

yield to maturity (YTM)

A bond's internal rate of return: the single rate that makes the present value of all its remaining payments equal its market price.

CORE IDEAS

The story. In 1202 a young man of Pisa, Leonardo — called Fibonacci — published the *Liber Abaci*, the "Book of Calculation," and changed how the West did arithmetic. He had learned the Hindu-Arabic numerals as a boy in the customs house of Bugia on the North African coast, where his father served Pisa's merchants, and his book showed Italian traders how to use them. It was no abstract treatise: chapter after

chapter works merchants' problems — dividing profits among partners, converting currencies, and, crucially, problems of interest and of payments arriving at different times. One famous problem compares two streams of payments to decide which is worth more today — which is to say, Fibonacci was teaching present-value thinking three centuries before anyone printed a compound-interest table. Nearly six hundred years later, Benjamin Franklin staked his own legacy on the same mathematics: dying in 1790, he left £1,000 each to Boston and Philadelphia on the condition that the money be lent out and left to compound — part to be spent after one hundred years, the remainder only after two hundred. By 1890 Boston's fund had grown to roughly $431,000, and when the two-century clock ran out in 1990 the funds — Boston's near five million dollars, Philadelphia's near two million — went to trade schools and institutes that bear his name to this day. Franklin had done the arithmetic in his will and grinned across two centuries.

How they figured it out. The engine under both stories is one idea: money breeds. A sum PV invested at rate r becomes $PV(1+r)$ after a year; leave it alone and the next year's interest is earned on the larger sum, so after n years it is $PV(1+r)^n$ — interest on interest, which Franklin understood is slow at first and astonishing late. Run the engine backward and you get discounting: if money grows by $(1+r)^n$ going forward, then a promise of FV arriving n years from now is worth $FV \div (1+r)^n$ today. Every valuation tool on the Series 65 — bond prices, NPV, IRR, even the dividend models of later units — is this one engine, run forward or backward.

The big idea. Memorize the pair. Future value: $FV = PV(1+r)^n$. Present value: $PV = FV \div (1+r)^n$. The discount rate is the price of time: raise it and present values shrink; lower it and they swell. That inverse relationship — rates up, present values down — is worth underlining twice, because it is also why bond prices fall when interest rates rise, as Unit 4 will make much of. For speed, carry the **rule of 72:** money doubles in about $72 \div r$ years, with the rate written as a whole number — at 8%, about nine years; at 6%, about twelve. It is an approximation, and the exam uses it as one.

Compounding frequency matters at the margins. Interest compounded semiannually, quarterly or monthly is credited more often, so interest starts earning interest sooner: $1,000 at 8% compounded annually becomes $1,080 in a year, but compounded semiannually it becomes $\$1{,}000 \times 1.04^2 = \$1{,}081.60$. More frequent compounding means a higher effective yield from the same stated rate — a small

edge per year that, as Franklin's two centuries showed, becomes a large edge over time.

Net present value turns discounting into a decision. To judge a project or an investment: discount every expected cash flow back to today at your required rate (the discount rate), add them up, and subtract the cost. If the result — the NPV — is *positive*, the investment earns more than your required rate: take it. If it is negative, the price is too high for the promised stream: decline. An NPV of exactly zero means the investment earns precisely the discount rate, no more, no less. Note what the NPV quietly respects: distant dollars count for less, risky streams get higher discount rates, and a glamorous story with no cash flows has an NPV of nothing.

The **internal rate of return** asks the same question from the other side. Instead of choosing a rate and asking whether NPV is positive, the IRR asks: *what rate would make this investment's NPV exactly zero?* That rate is the return the investment itself generates. If a project's IRR is 9% and you require 7%, its NPV at 7% is positive and the two rules agree, as they generally do for ordinary investments. Plant one seed now for Unit 4: a bond's **yield to maturity is its IRR** — the one discount rate that makes the present value of all the bond's remaining coupons and principal equal today's market price. When you meet YTM there, you have already learned it here.

On the exam today. The Series 65 keeps the arithmetic humane — one or two periods, round rates — but it is exact about the concepts. Expect a rule-of-72 question ("about how long to double at 6%?" — twelve years); expect "a dollar today is worth more than a dollar tomorrow because it can be invested" as the definition of time value; and expect NPV framed as a decision: positive NPV, invest. The classic traps: confusing present value with future value and multiplying when you should divide (if your "present value" came out *bigger* than the future payment, you went the wrong way); forgetting that a higher discount rate means a *lower* present value; and missing the definition of IRR as the rate where NPV equals zero. When a question says a bond's yield to maturity equates the present value of its payments to its price, it is testing whether you recognize IRR wearing a bond's clothes.

PICTURE STUDY

The Two Tax Gatherers, Marinus van Reymerswaele, About 1540 · Oil on panel · The National Gallery, London

Image: Wikimedia Commons, public domain

Marinus van Reymerswaele, a Dutch painter of the early 1500s, returned again and again to men at counting tables — tax farmers, money changers, misers — painted with sharp faces and sharper satire. Here two tax gatherers tally a town's dues in an open ledger, every coin and receipt within reach. The counting house he mocks is nevertheless the birthplace of this lesson's mathematics: it was for exactly such tables — dues received now, payments promised later — that Fibonacci's merchant arithmetic of interest and present value was written.

Look closely

- Find the open ledger and the hand actually writing. Every entry is a payment located in time — received today, or promised for a day to come.
- Count the kinds of paper in the room: the bound book, loose documents, bundles filed on shelves. A counting house runs on records, not memory.
- Look at the two faces — one absorbed in the page, one eyeing you. Painters of this school used exaggerated dress and grasping expressions to preach against greed without a word.
- Find the coins and judge the artist's care: every piece on the table is rendered with a jeweler's precision. Exactness about money and satire of money-love

live in the same picture.

Talk about it

1. A ledger line says a debtor will pay 100 florins in two years. Why is that line not worth 100 florins today, and what would Fibonacci do to price it?
2. The painter mocks men who love the coins on the table. Is the mathematics of compounding itself greedy, or is it neutral — and what makes the difference? Consider Franklin's bequest.
3. Matthew 25:27 commends putting money to the exchangers to earn increase. How do you reconcile that verse with this painting's warning?

PROJECT

The PV/FV Table: A Spreadsheet Time Machine

You will build a compound-interest table in a spreadsheet — rates across the top, years down the side — and use it to answer real questions, including Franklin's. The printed table is the third page of "My Analyst's File."

You will need

- A spreadsheet (any program, or a shared family computer)
- Your exam notebook for the questions and answers
- A printer, or neat hand-copying of the finished table

Steps

1. Across the top row enter rates: 2%, 4%, 6%, 8%, 10%, 12%. Down the first column enter years: 1, 5, 10, 20, 30, 50.
2. In the body, write one formula for the future value of $1: the growth factor (1+rate)^years. Copy it across the whole table and format to three decimals.
3. Read your table aloud to a parent: "A dollar at 8% for 30 years becomes…" — find the cell. Then flip it: the PV of $1 promised in 30 years at 8% is 1 divided by that cell.
4. Use the table to answer in your notebook: What is $5,000 worth in 20 years at 6%? What is a $20,000 promise 10 years away worth today at 10%? Show the multiplication or division you did.
5. Check the rule of 72 against the table: at 6%, find where the factor first passes 2.000. Is it near year 12? Write how close the rule came for 4%, 6% and 12%.
6. Franklin row: add year 100 at 5% and compute the factor. Multiply by the roughly $4,500 his £1,000 was worth, and compare with Boston's actual $431,000 — then write two sentences on why reality fell short of pure mathematics (loans default; trustees spend; rates change).
7. Print or copy the table neatly, title it, and file it in "My Analyst's File" behind your ratio sheet.

Tips

- If the spreadsheet formula fights you, build one column by hand first (multiply by 1.06 repeatedly) so you know what the formula must reproduce.
- Lock the row and column references (or just retype the formula per column) — a skewed table is obvious the moment you check year 1.

Check your work

- ☐ My table's year-1 row equals 1 plus each rate, exactly.
- ☐ I can find both a future value and a present value using the same cell.
- ☐ I checked the rule of 72 against the table at three rates and wrote the comparison.
- ☐ My Franklin calculation is filed with two honest sentences about why compounding projections and history differ.

EXAM NOTEBOOK

1. Draw the timeline arrow page: a horizontal line with "today" at left, dollars moving right getting multiplied by (1+r)^n, dollars moving left getting divided — one worked number on each arrow.
2. Make a rule-of-72 ready-reckoner card: rates 3, 4, 6, 8, 9, 12 and their doubling times, with "approximation!" written across the top.
3. Write the NPV decision rule as a three-line flowchart (NPV > 0 invest; NPV < 0 decline; NPV = 0 earns exactly the discount rate) and beneath it, in red: "IRR = the rate that makes NPV zero = a bond's YTM."

KEY FORMULAS

$$FV = PV\,(1+r)^n$$

$$PV = \frac{FV}{(1+r)^n}$$

$$\text{Years to double} \approx \frac{72}{r}$$

$$\text{NPV} = \text{PV of expected cash flows} - \text{cost}$$

From history. Fibonacci's book did more than teach interest problems: it carried the digits 0 through 9 into European commerce against real resistance — some cities, suspicious of forgery, for a time required merchants' books in Roman numerals. The merchants won, because you cannot do compound interest in Roman numerals with any joy. The modern financial economist William Goetzmann has argued that a problem in the Liber Abaci — choosing between payment streams by what each is worth today — is the earliest known present-value analysis.

WORKED EXAMPLES

Example 1. Find the future value of $\$2{,}000$ invested for 3 years at 6% compounded annually, and estimate how long the money would take to double at that rate.

Show solution

1. Growth factor: $(1.06)^3 = 1.191016$.
2. Future value: $\$2{,}000 \times 1.191016 = \$2{,}382.03$.
3. Rule of 72: $72 \div 6 = 12$ years to double, approximately.

Answer: $\$2{,}382.03$ after three years; doubling takes about 12 years at 6%.

Example 2. In this example, a trust will pay a student $\$10{,}000$ in 5 years. Using an 8% discount rate, what is that promise worth today?

Show solution

1. Growth factor for 5 years: $(1.08)^5 = 1.46933$.
2. Discount: $\$10{,}000 \div 1.46933 = \$6{,}805.83$.
3. Check by running forward: $\$6{,}805.83 \times 1.46933 \approx \$10{,}000$ — the engine reverses cleanly.

Answer: About $\$6{,}805.83$. The present value came out *smaller* than the future payment — as it always must when the rate is positive.

Example 3. Exam style. A project costs $10,000 today and is expected to pay $4,000 at the end of each of the next 3 years. An adviser discounts at 10% and finds the present value of the three payments is about $9,947. The adviser should conclude:

A. NPV is about +$53, so the project beats the 10% requirement

B. NPV is about −$53, so the project fails to earn 10%; its IRR is slightly below 10%

C. The project's IRR is exactly 10%

D. The project should be accepted because total payments of $12,000 exceed the $10,000 cost

Show solution

1. NPV = PV of inflows minus cost: $\$9{,}947 - \$10{,}000 = -\$53$ — negative, so reject at a 10% requirement. That eliminates A, which has the sign backwards.
2. C: IRR is the rate making NPV exactly zero; at 10% the NPV is slightly negative, so the IRR sits slightly *below* 10%, not at it.
3. D: adding undiscounted dollars ignores time value entirely — $12,000 spread over three years is not $12,000 today. This is the trap the whole lesson exists to remove.
4. B states the negative NPV, the rejection, and the IRR's position correctly.

Answer: B. A negative NPV at 10% means the project earns less than 10% — its IRR is just under the discount rate. Undiscounted totals (choice D) are the exam's most reliable wrong answer.

Example 4. A grandmother invests $1,000 for her newborn granddaughter at 9%, Franklin-style. Using the rule of 72, about how much will it be at age 48?

Show solution

1. Doubling time: $72 \div 9 = 8$ years.
2. Doublings by age 48: $48 \div 8 = 6$.
3. Value: $\$1{,}000 \times 2^6 = \$64{,}000$ approximately.

Answer: About $64,000. Six doublings turn one thousand into sixty-four thousand — compounding is slow at first and astonishing late.

PRACTICE

1. Easy Using the rule of 72, about how many years will money take to double at 8%?

   A. 6 years

   B. 8 years

   C. 9 years

   D. 12 years

   Show answer

   C. $72 \div 8 = 9$ years. Choice D is the doubling time at 6% — the exam likes to swap the two.

2. Easy Find the future value of $1,000 at 5% compounded annually for 2 years.

   Show answer

   $\$1{,}000 \times (1.05)^2 = \$1{,}102.50$

3. Easy A dollar today is worth more than a dollar a year from now primarily because:

   A. Inflation always rises

   B. Today's dollar can be invested to earn a return

   C. Future dollars are taxed at higher rates

   D. Banks charge fees on future deposits

   Show answer

   B. The time value of money rests on the earning power of money in hand. Inflation (A) strengthens the point but is not the definition the exam wants.

4. Medium The present value of $5,000 to be received in 3 years, discounted at 6%, is closest to: (use $(1.06)^3 = 1.191$)

   A. $5,955

   B. $4,198

   C. $4,700

   D. $4,850

   Show answer

   B. $\$5{,}000 \div 1.191 = \$4{,}198$ — smaller than $5,000, as a present value must be. Choice A multiplies instead of dividing: if your "present value" beats the future payment, you went the wrong way down the timeline.

5. **Medium** If the discount rate applied to a future payment is increased, the payment's present value will:

   A. Increase

   B. Decrease

   C. Stay the same

   D. Equal its future value

   Show answer

   B. Discounting divides by (1+r)^n, so a bigger r means a smaller PV. This inverse relationship is the same reason bond prices fall when rates rise.

6. **Medium** An investment's net present value, computed at the investor's required rate of 7%, is exactly zero. This means:

   A. The investment loses money

   B. The investment earns exactly 7% — its IRR is 7%

   C. The investment earns 0%

   D. The discount rate was chosen incorrectly

   Show answer

   B. NPV of zero means the cash flows, discounted at 7%, exactly repay the cost: the investment earns precisely the discount rate, which is the definition of IRR. C confuses an NPV of zero with a return of zero — the classic trap.

7. **Medium** Which amount is larger after one year: $1,000 at 8% compounded annually, or $1,000 at 8% compounded semiannually? Show both.

   Show answer

   Annual: $1,080.00. Semiannual: $\$1{,}000 \times (1.04)^2 = \$1{,}081.60$. More frequent compounding wins, because interest starts earning interest sooner.

8. Medium From the story: Franklin left each city £1,000 with orders to let most of it compound for 200 years. Name the single mathematical fact his plan depended on, and one practical reason the funds grew more slowly than pure arithmetic predicts.

Show answer

He depended on compound interest — growth on growth, the factor (1+r)^n. In practice loans defaulted, trustees spent and rates varied, so Boston reached about $5 million and Philadelphia about $2 million rather than Franklin's grander projection.

9. Hard An investor requires 9% and is offered a contract paying $\$25{,}000$ in 10 years for $\$10{,}000$ today. Should she accept? (Use $(1.09)^{10} \approx 2.367$.)

A. Yes; the NPV at 9% is positive

B. No; the NPV at 9% is negative

C. Yes, but only because the IRR is below 9%

D. No; present value cannot be computed for a single payment

Show answer

A. $\text{PV} = \$25{,}000 \div 2.367 \approx \$10{,}562$, so $\text{NPV} \approx +\$562$ — accept. C contradicts itself (a positive NPV means the IRR is *above* 9%), and D is nonsense with a straight face.

10. Hard A bond's yield to maturity is best described as:

A. The bond's annual coupon divided by its market price

B. The discount rate that makes the present value of the bond's remaining payments equal to its price — the bond's IRR

C. The average of the bond's coupon rate and its current yield

D. The rate guaranteed by the issuer regardless of the purchase price

Show answer

B. YTM is an internal rate of return. Choice A defines *current* yield — the swap the exam loves; keep the two apart now, before Unit 4 raises the stakes.

11. Hard Your sister will sell you her share of a venture for $3,000 today; you expect it to pay you $1,100 a year for 3 years. At a 5% discount rate the three payments are worth about $2,995. At 4% they are worth about $3,053. Between which two rates does the IRR lie, and should you buy if you require 4%?

Show answer

NPV is slightly negative at 5% and positive at 4%, so the IRR lies between 4% and 5% (just under 5%). Requiring only 4%, you buy: at your rate the NPV is about +$53.

12. Challenge A relative boasts: "My plan pays you $2,000 a year for five years on a $9,000 investment — that is $10,000, a guaranteed $1,000 profit." Using the lesson, write the two-sentence correction, then compute the PV of the payments at 8% (factors: 0.926, 0.857, 0.794, 0.735, 0.681) and give the verdict.

Show answer

Undiscounted totals ignore the time value of money: $10,000 arriving over five years is not $10,000 today. PV $= \$2{,}000 \times (0.926 + 0.857 + 0.794 + 0.735 + 0.681) = \$2{,}000 \times 3.993 = \$7{,}986$ — against a $9,000 cost the NPV is about $-\$1{,}014$, so at an 8% requirement the "guaranteed profit" is a real loss.

COMMON MISTAKES

- Multiplying when you should divide: if your "present value" is larger than the future payment, you compounded instead of discounting.
- Forgetting the inverse law: a higher discount rate always means a lower present value.
- Adding up undiscounted future dollars and calling the excess over cost a "profit."
- Treating the rule of 72 as exact; it is an estimate, and exam answers phrase it with "approximately."
- Missing the definition of IRR — it is the rate that makes NPV zero, not the rate that makes profit zero.

> **Make it a game · Double or When?.** One player rolls two dice and adds them: that is the interest rate (2% to 12%). The other must call the doubling time by the rule of 72 before a slow count of five — "at 9%, eight years!" Correct call wins a point; then reverse roles. Variation for the brave: the roller instead names a doubling time and the caller must produce the rate. First to ten points wins; the loser computes one real future value, with pencil, chosen by the winner.

> **Scripture.** “Thou oughtest therefore to have put my money to the exchangers, and then at my coming I should have received mine own with usury.” (Matthew 25:27, KJV)
>
> In the parable of the talents, the master does not rebuke the servant for greed but for burying what was given him: money in time is expected to increase, and the steward answers for the increase foregone. Time value of money is this verse in formula form — and opportunity cost, which Lesson 3.5 names, is the buried talent measured.

3.4 Statistics for Investors: Mean, Median and Standard Deviation

OBJECTIVES

- Compute the mean, median, mode and range of a set of investment returns, including negative ones.
- Interpret standard deviation as volatility and use the one- and two-sigma ranges of the normal distribution.
- Explain correlation of +1, 0 and −1, and why low correlation makes diversification work.
- Interpret beta against a market beta of 1.0 and define alpha as performance beyond what beta predicts.
- Distinguish the arithmetic mean from the geometric mean of a series of returns.

> **Warm-up.** Ask four family members to guess the weight of something hefty — a filled backpack, the dog, a watermelon — and write the guesses down with your own. Compute the mean and find the median. Then weigh the thing. Which came closer? Keep the slip; Galton is about to do this with an ox.

WATCH

Statistics: Standard deviation | Descriptive statistics | Probability and Statistics | Khan Academy

Khan Academy · 13:06

https://www.youtube.com/watch?v=HvDqbzu0i0E

> **WHEN TO WATCH**
> After the standard deviation paragraphs, before the worked examples. Follow the squaring-and-averaging steps once with Sal, then once alone on the lesson's own numbers.

BACKUP VIDEO

Statistics intro: Mean, median, and mode | Data and statistics | 6th grade | Khan Academy

Khan Academy · 8:52

https://www.youtube.com/watch?v=h8EYEJ32oQ8

Before the lesson if mean, median and mode need refreshing — it is gentle review, so run it at speed and save your effort for standard deviation.

KEY TERMS

mean (arithmetic)

The ordinary average: the sum of the values divided by how many there are.

median

The middle value when the data are lined up in order; half the values sit above it and half below.

mode

The value that appears most often in the data.

range

The highest value minus the lowest — the simplest measure of spread.

standard deviation

A measure of how far values typically stray from their mean; in investing, the standard measure of a security's volatility, or total risk.

normal distribution

The bell-shaped pattern in which about 68% of outcomes fall within one standard deviation of the mean and about 95% within two.

correlation

A number from −1 to +1 describing how two investments move together: +1 perfectly together, 0 independently, −1 perfectly opposite.

beta

A measure of a security's volatility relative to the overall market, whose beta is 1.0; a beta of 1.2 tends to move 20% more than the market.

alpha

The part of a portfolio's return above or below what its beta predicted; positive alpha is performance beyond the market's explanation.

geometric mean

The compound average growth rate of a series of returns; it accounts for compounding and is never higher than the arithmetic mean.

CORE IDEAS

The story. In the autumn of 1906, at the West of England Fat Stock and Poultry Exhibition at Plymouth, a fat ox stood in a pen while fairgoers paid sixpence apiece to guess its weight once slaughtered and dressed, the best guess to win a prize. Francis Galton — eighty-four years old, cousin of Darwin, and a man who measured everything from fingerprints to the boredom of audiences — obtained the used tickets when the contest ended. He discarded thirteen as illegible and took home 787 honest guesses: expert butchers and farmers among the crowd, but also clerks and townsfolk with no more expertise than sixpence of hope. Lining the guesses up in order, Galton found the "middlemost" — the median — at 1,207 pounds. The ox dressed out at 1,198. The crowd's middle judgment had come within nine pounds — less than one percent — and the mean of the guesses, computed later, landed within a single pound. Galton published the result in *Nature* in March 1907 under the title "Vox Populi," confessing that the verdict was more creditable to democratic judgment than he had expected.

How they figured it out. The magic was not in any one guesser; it was in the *averaging*. Each ticket was wrong — some wildly high, some wildly low — but the errors pointed in both directions, and stacked against each other they largely canceled, leaving the crowd's center close to the truth. That is why an investor cares about statistics at all: a market price is itself a kind of vox populi, the center of thousands of estimates. Galton also gave finance a second gift. Studying heredity, he noticed that unusually tall parents tend to have children closer to average height — he called it **regression to the mean** — and markets show the same gravity:

spectacular results, good or bad, tend to be followed by more ordinary ones. An adviser who forgets this will chase last year's champion fund straight into its ordinary year.

The big idea — the centers. Given a set of returns, the **mean** is the sum divided by the count; the **median** is the middle value once the list is ordered (with an even count, the mean of the two middle values); the **mode** is the most frequent value; and the **range** is highest minus lowest. The mean is the workhorse, but it is sensitive to extremes: one monstrous year drags it like a shouted guess. The median shrugs at extremes — which is why Galton trusted it first, and why incomes and house prices are usually reported as medians. On skewed data, mean and median part company, and knowing *which way* they part tells you where the long tail lies.

The big idea — the spread. Two funds can share a mean return of 8% while living utterly different lives: one delivering 7%, 8%, 9%, the other −20%, +40%, 4%. The number that separates them is the **standard deviation**: take each value's distance from the mean, square the distances, average the squares, and take the square root. Big deviations, heavily punished by the squaring, produce a big standard deviation. In investing, standard deviation *is* volatility — the standard measure of a security's **total risk**, systematic and unsystematic together. A savings account has a standard deviation near zero; a small mining stock, a huge one.

Many natural scatterings — Galton's guesses among them — pile up in the bell-shaped **normal distribution**: most outcomes near the middle, few far out, symmetric on both sides. For a normal world, carry two numbers: about **68%** of outcomes fall within one standard deviation of the mean, and about **95%** within two. So a fund with a mean return of 8% and a standard deviation of 5% spent roughly two years in three between 3% and 13%, and roughly nineteen in twenty between −2% and 18%. One sober caution the exam respects: markets are not perfectly normal — their rare years are rarer and wilder than the bell curve promises — so treat sigma as a lamp, not a guarantee.

Correlation measures how two investments move together, on a scale from +1 to −1. At **+1** they rise and fall in lockstep; at **0** they move independently; at **−1** one rises exactly as the other falls. Here is the mathematical heart of diversification, worth stating carefully: combining investments with *low or negative* correlation lowers the portfolio's swings, because one holding's bad day is not automatically the other's.

Two airline stocks diversify almost nothing — correlation near +1; an airline and an oil producer, whose fortunes tug opposite ways when fuel prices move, diversify a great deal. Galton's crowd worked for the same reason: 787 *independent* errors cancel; 787 copies of the same error do not.

Two Greek letters finish the toolkit, and both return in Unit 8. **Beta** measures a security's movement *relative to the market*, whose beta is defined as 1.0: a stock with beta 1.2 tends to rise 12% when the market rises 10% and fall 12% when it falls 10%; beta 0.5 means half the market's swing; a negative beta (rare — some gold assets flirt with it) means motion against the market. Beta captures only **systematic** risk — next lesson's word for the risk of the whole market. **Alpha** is what remains: the portfolio's actual return minus what its beta predicted. A fund with beta 1.0 that returns 13% when the market returns 10% has earned an alpha of +3 — performance the market cannot explain, the number active managers are paid to produce and rarely do.

One gentle paragraph on a distinction the exam does test: the **arithmetic mean** of returns is the plain average; the **geometric mean** is the compound rate that would have produced the same ending wealth. Volatility drives the two apart. Gain 50% then lose 50%: the arithmetic mean says 0%, but a dollar became $1.50 and then $0.75, so the true compound result is a loss — the geometric mean is about −13.4% a year. The geometric mean is never higher than the arithmetic, they are equal only when every year is identical, and the honest measure of a long investment record is the geometric one.

On the exam today. The Series 65 asks for arithmetic you can do in your head and definitions you cannot fumble. Find a median of five numbers (order them first — the list arrives shuffled); know that one outlier moves the mean but barely stirs the median; read "standard deviation" as total volatility and "beta" as market-relative volatility — a question asking which fund is riskier *overall* wants standard deviation, while one asking which moves most *with the market* wants beta. Expect the 68%/95% sigma bands with easy numbers, the diversification question answered by the *lowest* correlation on offer (and remember −0.8 diversifies better than 0), and alpha as actual return minus the beta-predicted return. For a record of returns over many years, the exam's phrase "compound annual" or "true long-run growth rate" is pointing at the geometric mean.

PICTURE STUDY

The Horse Fair, Rosa Bonheur, 1852–55 · Oil on canvas · The Metropolitan Museum of Art, New York

Image: Wikimedia Commons, public domain (CC0, The Metropolitan Museum of Art)

Rosa Bonheur, the most celebrated animal painter of the nineteenth century, sketched the Paris horse market for a year and a half to build this enormous canvas — nearly seventeen feet wide — which toured to such crowds that engravings of it hung in parlors across Europe and America. A livestock market is the native habitat of this lesson: every animal in the ring is being appraised by dozens of practiced and unpracticed eyes at once, exactly the crowd of independent judgments whose middle verdict startled Galton at Plymouth.

Look closely

- Count the separate judgments happening in the scene: every handler, rider and bystander is estimating an animal — its strength, temper and price.
- Find the rearing grey. One spectacular, misbehaving data point draws every eye — and would drag a mean while barely moving a median.
- Notice the circle: the horses are paraded so each buyer sees each animal from every side. A market is a machine for collecting many looks at the same thing.
- Step back from the drama and find the average horse — not the rearing one, not the hindmost — the typical animal the fair exists to price.

Talk about it

1. At Plymouth no single guesser matched the crowd's middle. Why can many unexpert judgments, honestly made and independent, beat the expert — and when would they fail (think of 787 copies of one error)?
2. A buyer at this fair who sees one horse rear may conclude all horses here are wild. What statistical mistake is that, and which measure — mean or median — makes it?
3. Galton titled his article "Vox Populi" — the voice of the people. Where should a Christian steward trust the counsel of many, and where must a conscience refuse to follow the crowd?

PROJECT

Run Your Own Vox Populi

You will reproduce Galton's experiment at household scale — a guessing contest, a data table and the full statistical toolkit of this lesson applied to real guesses you collected yourself. The write-up joins "My Analyst's File."

You will need

- A jar of dried beans, coins or buttons (count them secretly first and write the true number in a sealed note)
- Slips of paper and a pencil for each guesser
- At least 8–10 guessers: family, neighbors, teammates, church friends
- Your exam notebook or a spreadsheet for the table

Steps

1. Count the jar's contents privately and seal the true number in an envelope. No peeking privileges for guessers.
2. Collect written guesses from at least eight people. Like Galton's sixpence, ask each guesser to take it seriously — one careful guess per person, no conferring (the guesses must be independent).
3. Line the guesses up in order and compute: mean, median, mode (if any), and range.
4. Open the envelope. Compute each guess's error, the mean's error and the median's error. Which came closest? Write the Galton comparison in three sentences.
5. Compute the standard deviation of the guesses (a spreadsheet's STDEV does the squaring for you — or work the squares by hand for the full Galton experience). How many of your guesses fall within one standard deviation of the mean? Is it near 68%?
6. Spoil it on purpose: let two guessers confer and copy each other, add their duplicate guesses, and recompute the mean. Write two sentences on what correlation between guessers does to the wisdom of a crowd.

7. Write the one-page report — table, calculations, the sealed-envelope reveal and your conclusions — and file it in "My Analyst's File."

Tips

- More guessers make better statistics; a dozen is splendid, eight is the floor.
- If one guess is absurd (a sibling writes one million), keep it in a second version of the table and show what it does to the mean versus the median — that outlier is a gift to your report.

Check your work

- ☐ My table shows every guess, ordered, with mean, median, mode, range and standard deviation.
- ☐ I compared the mean's and median's errors against the true count, in writing.
- ☐ I tested the one-sigma band against my actual guesses.
- ☐ My report explains in plain English why independent guesses helped and copied guesses did not.

EXAM NOTEBOOK

1. Draw the bell curve page: a normal curve with the mean at center, one- and two-sigma bands shaded, and 68% and 95% written in the bands — then mark where a fund year of mean 8%, SD 5%, return −4% would sit.
2. Make a three-row correlation card: +1 (two lines rising together), 0 (scattered dots), −1 (lines crossing in an X), each with a one-line example pair of investments.
3. Make the beta/alpha flashcard: front "market beta = 1.0; beta 1.2 moves 20% more; beta captures systematic risk only"; back "alpha = actual − (beta × market); positive alpha = skill (or luck) beyond the market."

KEY FORMULAS

$$\text{Mean} = \frac{\text{sum of values}}{\text{number of values}}$$

$$\text{Range} = \text{highest value} - \text{lowest value}$$

$$\text{Alpha} = \text{actual return} - \left(\beta \times \text{market return}\right)$$

From history. Galton nearly didn't use the mean at all: his 1907 article championed the middlemost guess because no majority of voters could be outvoted by cranks on either side — an argument about democracy as much as data. A correspondent then computed the mean and found it a single pound from the truth, and Galton conceded the point in print. The ox, the sixpences and the 787 tickets have since become the founding parable of what a later writer called the wisdom of crowds — and of its fine print: the crowd must be large, honest and independent.

WORKED EXAMPLES

Example 1. A fund's returns over five years are 4%, 7%, −2%, 7% and 9%. Find the mean, median, mode and range.

Show solution

1. Mean: $(4 + 7 - 2 + 7 + 9) \div 5 = 25 \div 5 = 5\%$.
2. Order the list: −2, 4, 7, 7, 9. The middle (third) value is the median: 7%.
3. Mode: 7% appears twice — the mode is 7%.
4. Range: $9 - (-2) = 11$ percentage points.

Answer: Mean 5%, median 7%, mode 7%, range 11 points. Note the single negative year pulled the mean two points below the median — exactly how an outlier behaves.

Example 2. In this example, a fund's annual return has a mean of 8% with a standard deviation of 5%, and the returns are roughly normally distributed. Within what range should about 68% of years fall? About 95%?

Show solution

1. One sigma: $8\% - 5\% = 3\%$ up to $8\% + 5\% = 13\%$. About 68% of years land there.
2. Two sigma: $8\% - 10\% = -2\%$ up to $8\% + 10\% = 18\%$. About 95% of years land there.
3. Reading it back: roughly one year in twenty falls *outside* −2% to 18%, half of those below.

Answer: 68% of years between 3% and 13%; 95% between −2% and 18%. One- and two-sigma bands are mean ± one and two standard deviations.

Example 3. Exam style. A portfolio has a beta of 1.2. In a year when the overall market returns 10%, the portfolio returns 15%. The portfolio's alpha for the year is closest to:

A. +5

B. +3

C. −3

D. +15

Show solution

1. Beta's prediction: $1.2 \times 10\% = 12\%$ — what a passenger of this riskiness should have earned just riding the market.
2. Alpha: actual minus predicted, $15\% - 12\% = +3$.
3. A measures against the market's raw 10%, ignoring beta — the standard trap.
4. C flips the subtraction; D forgets to subtract anything.

Answer: B. Alpha is the return beyond what beta predicted: $15\% - (1.2 \times 10\%) = +3$. Any answer that never multiplied by beta was never alpha.

PRACTICE

1. Easy Find the median of these returns: 9%, 2%, 11%, 5%, 7%.

   Show answer

   Ordered: 2, 5, 7, 9, 11 — the median is 7%. Always order the list first; the exam hands it to you shuffled.

2. Easy Which statistic is *least* affected by one extremely large value in a data set?

   A. The mean

   B. The median

   C. The range

   D. The standard deviation

   Show answer

   B. The median only cares about the middle of the ordered list. The mean is dragged toward the outlier, the range is defined by it, and the standard deviation squares it.

3. **Easy** In investing, standard deviation is used as a measure of:

   A. A security's total volatility

   B. A security's movement relative to the market

   C. The average return of a portfolio

   D. The correlation between two assets

   Show answer

   A. Standard deviation is total risk — all volatility from all sources. Movement relative to the market (B) is beta; keep the two straight.

4. **Medium** A fund's returns are normally distributed with a mean of 10% and a standard deviation of 4%. In roughly 95% of years, its return should fall between:

   A. 6% and 14%

   B. 2% and 18%

   C. −2% and 22%

   D. 0% and 20%

   Show answer

   B. Two standard deviations is $2 \times 4 = 8$ points either side of 10%: from 2% to 18%. Choice A is the one-sigma (68%) band — the swap the exam expects you to make in a hurry.

5. **Medium** An adviser seeking the greatest diversification benefit should pair the client's stock portfolio with an asset whose correlation to it is:

   A. +1.0

   B. +0.9

   C. 0.0

   D. −0.6

   Show answer

   D. The lower the correlation, the greater the diversification; a negative correlation means one asset tends to rise when the other falls. Zero (C) helps, but −0.6 helps more; +1 adds no diversification at all.

6. **Medium** A stock has a beta of 0.5. If the market falls 12%, the stock should be expected to:

   A. Fall about 24%

   B. Fall about 6%

   C. Rise about 6%

   D. Be unaffected, because beta measures only rising markets

   Show answer

   B. Beta 0.5 means half the market's move in the same direction: $0.5 \times (-12\%) = -6\%$. A doubles instead of halving; C requires a *negative* beta.

7. **Medium** From the story: Galton found the crowd's median guess within 1% of the ox's true dressed weight. Name the two conditions the 787 guesses satisfied that made the crowd wise, and the lesson for reading a market price.

   Show answer

   The guesses were independent (no copying) and numerous, so errors in both directions canceled. A market price is a crowd's center too — informative when opinions are many and independent, and dangerous when everyone is copying the same story.

8. **Medium** A portfolio with a beta of 1.0 returns 9% in a year when the market returns 11%. Its alpha is:

   A. +2

   B. −2

   C. +9

   D. 0

   Show answer

   B. Predicted return is $1.0 \times 11\% = 11\%$; alpha is $9\% - 11\% = -2$. Underperforming the beta prediction is negative alpha, however positive the raw return.

9. Hard Fund X: mean return 9%, standard deviation 3%. Fund Y: mean return 9%, standard deviation 12%. Which statement best fits the exam's view?
A. The funds are equally risky because the means are equal
B. Fund Y is riskier; its returns stray much further from 9% in a typical year
C. Fund X is riskier because low volatility signals low growth
D. Fund Y must have the higher beta

Show answer

B. Standard deviation is the measure of total risk, and Y's typical year wanders four times further from the mean. D confuses total volatility with market-relative volatility — a high-deviation fund could hold risks unrelated to the market.

10. Hard A portfolio returns +50% in year one and −50% in year two. Find the arithmetic mean of the returns and the actual two-year result on $1,000, and state which mean tells the truth about the record.

Show answer

Arithmetic mean: $(50 - 50) \div 2 = 0\%$. Actual: $1,000 $\rightarrow$ $1,500 $\rightarrow$ $750 — a 25% loss. The geometric (compound) mean, about −13.4% per year, is the honest measure; the arithmetic mean overstates every volatile record.

11. Hard An analyst notes that a fund that ranked first in the nation last year has ranked near the middle this year, with no change of manager or method. The statistical name for this, and its source, is:
A. Negative alpha caused by rising expenses
B. Regression to the mean — extreme results tend to be followed by more ordinary ones
C. Negative correlation between past and future returns
D. A fall in the fund's standard deviation

Show answer

B. Galton's regression to the mean: an extreme outcome usually combines skill with unusual luck, and the luck does not repeat. It needs no villain (A) and is not the same as negative correlation (C).

12. **Challenge** Returns for five years: 6%, 6%, 6%, 6% and −24%. Compute the mean and median; state which is the better summary of what an investor experienced and why; then explain — without computing it — whether the geometric mean of this record is higher or lower than the arithmetic mean.

Show answer

Mean: $(24 - 24) \div 5 = 0\%$; median: 6%. The median describes the typical year, but the mean better warns of the catastrophe an investor actually lived through — each answers a different question, which is the point. The geometric mean is *lower* than the arithmetic (volatility always drags it down; losing 24% costs more wealth than four 6% years rebuild at these sizes).

COMMON MISTAKES

- Taking the median of an unordered list. Sort first, always.
- Giving the one-sigma band when the question says 95%, or vice versa: one sigma is about 68%, two is about 95%.
- Answering "beta" when the question asks about total volatility (that is standard deviation), or "standard deviation" when it asks about movement with the market (that is beta).
- Calling correlation of 0 the best diversifier on offer when a negative correlation is among the choices.
- Computing alpha against the raw market return without first multiplying by beta.
- Reporting a volatile fund's arithmetic mean as its growth rate; the compound (geometric) mean is always the lower, truer figure.

> **Make it a game · Guess the Jar.** Fill a jar with beans or coins, counted secretly. Everyone in the house writes one independent guess — no conferring — and a parent collects the slips. You must then beat the clock: three minutes to compute the mean, the median and the range of the guesses before the jar is opened. Score it Galton's way: if the median or mean lands closer to the truth than every individual guess, the crowd wins and chooses dessert; if one guesser beats them both, that guesser is crowned the household expert until the next jar.

> **Scripture.** “Where no counsel is, the people fall: but in the multitude of counsellors there is safety.” (Proverbs 11:14, KJV)
>
> Scripture commends the multitude of counsellors for the same reason Galton’s median worked: many independent judgments correct each other’s errors. But the proverb says counsellors, not echoes — a thousand voices repeating one opinion are a single counsellor, and diversification fails for portfolios and for advice alike when everything moves together.

3.5 Types of Risk and the Ladder of Liquidation

OBJECTIVES

- Sort named risks into systematic (market, interest-rate, inflation, currency, political) and unsystematic (business, financial, regulatory, liquidity).
- Explain why diversification reduces unsystematic risk but cannot remove systematic risk.
- Define opportunity cost and compute what a forgone alternative would have earned.
- Recite the liquidation priority ladder in order, from secured creditors to common stockholders.
- Connect a security's place in the capital structure to the risk and return its holder should expect.

> **Warm-up.** In five minutes, list five bad things that could happen to a family pizza shop — one that would also hit every business in town (storm, recession), and four that would hit the shop alone (oven breaks, new competitor, cook quits, health-code change). Mark each W (whole town) or S (shop only). You have just sorted systematic from unsystematic risk.

WATCH

Series 65 Exam Prep: Types of Investment Risk | Pass the Series Unit 19

Pass the Series · 6:13

https://www.youtube.com/watch?v=MurXDYxYqUY

> **WHEN TO WATCH**
> After the systematic and unsystematic paragraphs. As each risk is named, write it on the correct side of a two-column page before the presenter tells you which it is.

BACKUP VIDEO

Systematic Risk vs Unsystematic Risk

Edspira · 7:25

https://www.youtube.com/watch?v=qPu4TEGIDYI

After your two-column risk page is drafted, as a check — pause at each example and confirm you filed it in the correct column.

KEY TERMS

systematic risk

Risk that affects the entire market or economy — market, interest-rate, inflation, currency and political risk — and cannot be eliminated by diversification.

unsystematic risk

Risk particular to one company or industry — business, financial, regulatory and liquidity risk — which diversification can largely eliminate.

market risk

The risk that the whole market declines, carrying down even sound securities.

interest-rate risk

The risk that rising interest rates will lower the value of existing securities, especially bonds.

inflation (purchasing-power) risk

The risk that rising prices erode what an investment's dollars will buy; it bears hardest on fixed payments.

currency (exchange-rate) risk

The risk that changes in exchange rates reduce the value of foreign investments when converted back to dollars.

business risk

The risk that a particular company's operations fail — poor management, a product nobody buys, a competitor's triumph.

financial risk

The risk created by a company's debt load: the more borrowed, the more surely trouble reaches the owners; largely avoidable by holding firms with little debt.

liquidity risk

The risk that an asset cannot be sold quickly at a fair price — thinly traded stocks, real estate, collectibles.

opportunity cost

The return given up by not choosing the best alternative use of money — what the buried talent would have earned.

liquidation priority

The order of payment when a company is dissolved: secured creditors, then unsecured creditors and debenture holders, then subordinated debentures, then preferred stockholders, then common stockholders.

CORE IDEAS

The story. The Panic of 1893 broke over American railroads like a wave over sandcastles. The roads had been built on borrowed money — mortgage bonds secured by the tracks themselves, debentures secured by nothing but promises, and mountains of stock — and when the economy seized, the weakest could not pay their interest. By 1894 more than a hundred and fifty railroads had failed, among them giants: the Union Pacific, the Northern Pacific, the Atchison, Topeka and Santa Fe, the Erie, the Reading. Companies owning roughly a quarter of the nation's rail

mileage passed into the hands of court-appointed receivers, and by some counts a third went through reorganization before the decade closed. Yet the trains kept running — receivership is not a bonfire but an orderly queue — and the queue is the lesson. When each road was reorganized, the courts paid claims in order: holders of mortgage bonds, secured by the physical line, generally kept most of their value or took new bonds; unsecured creditors took sharp losses; and the common stockholders, last in line, were often wiped out or forced to pay assessments to keep any stake at all. Investors who had asked only "what does it pay?" learned to ask the prior question: "where do I stand in line?"

How they figured it out. Out of the receivership decade came two durable pieces of investment wisdom. First, the **ladder of claims:** a company's capital structure is a seniority queue, fixed by contract and law before trouble ever comes, and the price of standing higher is accepting a smaller promised return — the mortgage bondholder earns less than the stockholder hopes to, precisely because he collects first when hope fails. Second, the sorting of **risks by reach.** The panic itself — money tightening, traffic vanishing everywhere — was a risk no railroad could dodge and no investor could diversify away, for it struck every road at once. But whether a given road had borrowed itself fragile, or served a region with no freight, or kept honest books — those dangers differed road by road, and an investor spread across many roads and other industries besides felt them only faintly. The whole modern doctrine of risk is in that distinction.

The big idea — systematic risk. Systematic risks strike the entire market, so owning more securities is no escape: every holding is exposed. The exam's list: **market risk**, the tide that lowers all boats in a general decline; **interest-rate risk**, the fall in existing securities' values — bonds above all — when rates rise (remember Lesson 3.3: a higher discount rate shrinks every present value); **inflation or purchasing-power risk**, the quiet thief that makes a safe fixed payment buy less every year, hardest on bonds and fixed annuities; **currency (exchange-rate) risk**, borne by anyone whose investments live in another country's money; and **political (sovereign) risk**, the acts of governments — war, expropriation, upheaval — that strike whole markets, most visible in foreign and emerging markets. Diversification within a market cannot remove these; an investor manages them by asset allocation, hedging and simple acceptance of the market's terms.

The big idea — unsystematic risk. Unsystematic risks belong to one company or one industry, and this is the risk diversification is built to kill. **Business risk**: the product fails, the management stumbles, the competitor wins — the ordinary hazards of any one enterprise. **Financial risk**: the company borrowed heavily, so a modest business setback becomes a crisis for its owners — you watched the arithmetic in Lesson 3.2, and the 1893 roads were its monument. **Regulatory risk**: a rule change rewrites one industry's economics — a new safety standard, a license revoked. **Liquidity risk**: when you must sell, no fair buyer is there — the curse of thinly traded shares, real estate and collectibles. Spread your holdings across enough unrelated companies and industries — recall from Lesson 3.4 that *low correlation* is what does the work — and these particular misfortunes largely cancel; what remains, irreducibly, is the systematic kind. That remainder is exactly what beta measures.

Opportunity cost is the risk of the road not taken: whatever your money does, it is *not* doing something else, and the best forgone alternative is the true cost of your choice. The cash hidden in a drawer for three years dodged every market storm — and silently paid, in safety's name, everything a Treasury bill would have earned. The exam often frames it so: the opportunity cost of holding cash, or of a project, is measured against the **risk-free alternative**, the Treasury bill. The parable of the talents is the same accounting: the buried talent was not stolen, it merely earned nothing, and the master counted that as loss.

The ladder of liquidation. When a corporation is dissolved, claims are paid strictly in order, and the exam wants the order cold: first **secured creditors**, whose bonds are backed by specific collateral — mortgage bonds on property, equipment trust certificates on rolling stock; then **unsecured creditors**, including general creditors and holders of **debentures** (bonds backed only by the issuer's promise); then **subordinated debentures**, which agreed in advance to stand behind the other debt in exchange for a higher coupon; then **preferred stockholders**; and last — collecting only what is left, often nothing — the **common stockholders**. Each step down the ladder trades safety for a larger possible reward: the common holder owns all the upside precisely because he stands last in the rain. Say it as a chant: secured, unsecured, subordinated, preferred, common.

On the exam today. Two question families return year after year. The first names a risk and asks whether diversification helps: memorize that systematic risk — market, interest-rate, inflation, currency, political — *cannot* be diversified away, and

everything company-specific can; the words “even a well-diversified portfolio is still exposed to…” are always followed by a systematic risk. The traps: inflation risk hurting “safe” fixed payments most (the safest-feeling asset carries it worst); liquidity risk defined as inability to sell *quickly at a fair price*, not the fear of losing money generally; and political versus regulatory — a government seizing foreign assets is political and systematic, a new rule reshaping one industry is regulatory and unsystematic. The second family is the ladder. Expect it straight (“who is paid first?” — secured bondholders) and in disguise (“who is paid *last*?” — common stockholders; “where do subordinated debentures stand?” — behind other debt, ahead of preferred). The favorite distractor places preferred stockholders ahead of some class of creditor: no stockholder of any kind ever collects before a creditor of any kind.

PICTURE STUDY

Northern Pacific Train at Livingston, Montana, Unknown photographer, October 7, 1895 · Photograph · University of Washington Libraries Special Collections

Image: Wikimedia Commons, public domain

When this photograph was taken at the Livingston depot in October 1895, the Northern Pacific — the road beneath this very train — was in the hands of court-appointed receivers, two years into the great reorganization that followed the Panic of 1893. Nothing in the picture says so: the engine steams, the crew poses, the timetable holds. That is receivership's strange mercy — the business runs on while, far away in courtrooms, the ladder of claims decides who owns it next.

Look closely

- Count the people who depend on this train running — crew, passengers, the town behind the depot. A receiver's first duty was to keep exactly this scene alive.
- Find the physical collateral: engine, cars, rails, depot. Mortgage bondholders stood first in line because these things secured their bonds.
- Notice what the photograph cannot show: the road's debts, its receivership, its stockholders' ruin. A healthy-looking operation and a healthy balance sheet are different facts.
- Look at the telegraph poles. The wires carried the market's verdict on this railroad daily to exchanges a continent away.

Talk about it

1. The panic of 1893 was systematic; one road's heavy debts were not. Using this railroad, give one example of each kind of risk its investors bore.
2. Mortgage bondholders of the reorganized roads often took new bonds and kept running trains they now controlled, while stockholders were wiped out. Why is it just that those who accepted the smallest promised return collected first?
3. The trains kept running through the whole bankruptcy. What does that suggest about the difference between a business failing and its capital structure failing?

PROJECT

The Risk Map and the Liquidation Ladder

You will finish "My Analyst's File" with its two capstone pages: a full risk map for your lemonade company, and the liquidation ladder drawn as an actual ladder — the one drawing every Series 65 student should be able to make from memory on the back of an envelope.

You will need

- Two clean pages (or one large sheet) and a ruler
- Your lemonade company statements and ratio sheet from Lessons 3.1 and 3.2
- Colored pencils: one color for systematic, one for unsystematic

Steps

1. Rule the risk map page into two columns, SYSTEMATIC and UNSYSTEMATIC, and list the exam's nine: market, interest-rate, inflation, currency, political; business, financial, regulatory, liquidity.
2. For each of the nine, write one honest sentence applying it to your lemonade company (currency risk is allowed to be funny — imported lemons).
3. Mark with a star every risk your family could reduce by also owning, say, a snow-shoveling business in winter — then check: are all your stars in the unsystematic column?
4. On the second page draw a tall ladder with five rungs. Top rung: secured creditors (label the collateral — the stand itself). Then unsecured creditors and debentures (the parent loan), subordinated debentures, preferred stock (the cousin's shares from Lesson 3.2), and on the bottom rung, standing in a puddle, common stock (you).
5. Beside each rung write who holds that claim in your company and what they were promised. Beside the bottom rung, write why the common holder accepts that spot — all the upside belongs to the bottom of the ladder.
6. Pretend liquidation: the company dissolves with $100 raised. Assign it down the ladder honestly (secured first, to the limit of their claim) and show where the money runs out.

7. File both pages in “My Analyst’s File,” which now holds statements, ratio sheet, PV/FV table, the vox populi report and the risk pages. Show the complete file to a parent and walk them through it in five minutes — that walk-through is the real exam.

Tips

- Draw the ladder large; you will redraw it from memory in the unit test and again in Units 4 and 5.
- If a risk sentence could apply to every business in town, it belongs in the systematic column — that is the test.

Check your work

- ☐ All nine risks are in the correct columns with one applied sentence each.
- ☐ Every starred (diversifiable) risk is unsystematic.
- ☐ My ladder has the five rungs in order, each with its holder and promise.
- ☐ My $100 liquidation runs out at a believable rung, and I can defend the order aloud.

EXAM NOTEBOOK

1. Make the two-column risk page: systematic risks on the left (with “CANNOT diversify away” across the top), unsystematic on the right (“diversification kills these”), one-line definitions each.
2. Draw the liquidation ladder small and fast, three times from memory, initialing each attempt — secured, unsecured, subordinated, preferred, common.
3. Make a trap flashcard: front “even a well-diversified portfolio is still exposed to…”; back “systematic risk only: market, interest-rate, inflation, currency, political.”

> **From history.** The 1890s receiverships created modern corporate reorganization almost by accident: judges, unwilling to let vital railroads stop running, kept them operating under receivers while bondholder committees bargained out new capital structures — a practice Congress eventually codified into the bankruptcy reorganization chapters still used today. The banker J. P. Morgan made reorganizing wrecked railroads such a specialty that the press coined a verb for it: to “Morganize” a road meant to cut its debts, consolidate its lines and seat his men on the board.

WORKED EXAMPLES

Example 1. In this example, a family keeps $10,000 in a drawer for 3 years rather than in Treasury bills yielding 4%. Compute the opportunity cost of the drawer.

Show solution

1. What the T-bills would have grown to:
   $\$10{,}000 \times (1.04)^3 = \$10{,}000 \times 1.124864 = \$11{,}248.64.$
2. The drawer returned the same $10,000 it was given.
3. Opportunity cost: $\$11{,}248.64 - \$10{,}000 = \$1{,}248.64.$

Answer: $1,248.64 — the earnings forgone by refusing the best safe alternative. The drawer also took on inflation risk in full: safety from one risk is often exposure to another.

Example 2. Exam style. Even an investor holding a portfolio of 200 stocks diversified across every industry remains exposed to:

A. Business risk
B. Market risk
C. Financial risk
D. Regulatory risk

Show solution

1. A, C and D are unsystematic — specific to single companies or industries. Across 200 unrelated holdings, one firm's bad product, debt load or rule change barely dents the whole.
2. B is systematic: a general market decline lowers essentially all 200 at once. No count of holdings within the market escapes it.
3. Test each choice with the question "could this strike every holding simultaneously?" Only the market-wide decline can.

Answer: B. Diversification eliminates unsystematic risk; what remains is systematic risk, and market risk is its first name. "Even a well-diversified portfolio…" is the exam's standing signal for a systematic answer.

Example 3. Exam style. A corporation is liquidated. Rank these claimants in the order they are paid: (I) common stockholders; (II) holders of mortgage bonds; (III) preferred stockholders; (IV) holders of subordinated debentures.

A. II, IV, III, I

B. II, III, IV, I

C. IV, II, I, III

D. II, IV, I, III

Show solution

1. Mortgage bonds are secured by collateral — paid first in every arrangement offered, so the answer starts with II; C is gone.
2. Subordinated debentures are debt — behind other creditors, but still ahead of every stockholder: IV comes next. B fails by paying preferred stockholders before a creditor class.
3. Among stockholders, preferred stands ahead of common: III then I. D ends with common ahead of preferred — upside down.
4. A reads secured, subordinated, preferred, common — the ladder intact.

Answer: A. Secured creditors, then unsecured, then subordinated debentures, then preferred, then common. Any choice paying a stockholder before a creditor is wrong before you finish reading it.

PRACTICE

1. Easy Which risk CANNOT be reduced through diversification?

   A. Business risk

   B. Market risk

   C. Liquidity risk

   D. Regulatory risk

   Show answer

   B. Market risk is systematic — it strikes every security at once, so owning more securities is no shelter. The other three are company- or industry-specific and diversify away.

2. Easy In a corporate liquidation, who is paid FIRST?

A. Preferred stockholders

B. Common stockholders

C. Secured creditors

D. Holders of subordinated debentures

Show answer

C. Secured creditors collect first, out of their collateral. No stockholder collects before any creditor — strike A and B on sight.

3. Easy The risk that rising prices will erode what a bond's fixed payments can buy is called:

A. Interest-rate risk

B. Inflation (purchasing-power) risk

C. Credit risk

D. Liquidity risk

Show answer

B. Inflation risk is the quiet erosion of purchasing power, and it bears hardest on fixed payments. Interest-rate risk (A) is about prices of existing bonds falling when rates rise — related but distinct.

4. Medium A retiree holds only insured bank CDs and Treasury bills and proudly reports he has eliminated risk. The risk he has most clearly NOT eliminated is:

A. Business risk

B. Default risk

C. Purchasing-power risk

D. Liquidity risk

Show answer

C. The safest fixed-dollar assets carry inflation risk in full: every year the fixed dollars buy less. The exam loves this reversal — the "safest" portfolio holding the most of one particular risk.

5. **Medium** An American investor owns a fine Japanese stock that gains 8% in yen; the yen then falls 10% against the dollar over her holding period. Her problem is called:
   A. Political risk
   B. Currency (exchange-rate) risk
   C. Regulatory risk
   D. Business risk
   Show answer

   B. The company prospered; the exchange rate took the gain away in conversion. Currency risk is classed with the systematic risks and attends any foreign-denominated investment.

6. **Medium** A company with very heavy debt in its capital structure exposes its stockholders chiefly to:
   A. Financial risk
   B. Market risk
   C. Currency risk
   D. Inflation risk
   Show answer

   A. Financial risk is precisely the risk created by leverage: interest must be paid before owners see anything, so modest business trouble becomes owner catastrophe. It is unsystematic — choose low-debt firms and it fades.

7. **Medium** An investor must sell a large position in a thinly traded small-company stock within two days and finds the only bids far below the last quoted price. This illustrates:
   A. Market risk
   B. Interest-rate risk
   C. Liquidity risk
   D. Opportunity cost
   Show answer

   C. Liquidity risk is the inability to sell quickly at a fair price. The market did not fall (A); this one stock simply has no ready buyers at size.

8. Medium From the story: in the railroad reorganizations after 1893, which investors generally fared best and which worst, and what single question did the decade teach investors to ask before buying any security?

Show answer

Holders of mortgage bonds secured by the lines fared best, generally keeping most of their value or receiving new bonds; common stockholders fared worst, often wiped out or assessed. The question: where do I stand in the line of claims — not merely what does it promise to pay?

9. Hard Rank in order of payment at liquidation: (I) general (unsecured) creditors; (II) common stock; (III) equipment trust certificate holders; (IV) preferred stock.

A. III, I, IV, II

B. I, III, IV, II

C. III, IV, I, II

D. I, IV, III, II

Show answer

A. Equipment trust certificates are secured by the equipment itself — first. Then general unsecured creditors, then preferred, then common. C pays a stockholder class before unsecured creditors — impossible on the ladder.

10. Hard A foreign government announces it will nationalize all mines within its borders, foreign-owned ones included. For a U.S. investor in that country's mining shares, this is best described as:

A. Regulatory risk, which diversification within that market would have cured

B. Business risk particular to each mine

C. Political (sovereign) risk, systematic within that market — no diversification among that country's mines escapes it

D. Liquidity risk

Show answer

C. Government seizure is political risk, and within that country it strikes every holding at once, so it behaves as systematic risk there; owning ten of that nation's mines instead of one would have saved nothing. Regulatory risk (A) is a rule change reshaping an industry, not confiscation of a market.

11. Hard A subordinated debenture typically pays a higher coupon than the same issuer's ordinary debenture because:

A. It is secured by subordinate collateral

B. Its holders agreed to stand behind other creditors, accepting more risk, and are paid for it

C. It matures sooner

D. It ranks ahead of all other debt

Show answer

B. Subordination is a contractual step down the ladder — behind other debt, still ahead of all stock — and the higher coupon is the wage of that lower rung. A is a contradiction in terms; D is the opposite of subordination.

12. Challenge In this example, an investor leaves $\$20{,}000$ in cash for 2 years, declining Treasury notes yielding 5%. Compute his opportunity cost; name the systematic risk his cash bore anyway; and explain, in one sentence each, why his cash dodged interest-rate risk but a 30-year bond would not have.

Show answer

Forgone growth: $\$20{,}000 \times (1.05)^2 = \$22{,}050$, so the opportunity cost is $\$2{,}050$. The cash still bore inflation (purchasing-power) risk — fixed dollars buying less. Cash has no price to fall when rates rise, so interest-rate risk passes it by; a 30-year bond's price would drop sharply with rising rates, since its distant fixed payments would be discounted at the new higher rate (Lesson 3.3's inverse law).

COMMON MISTAKES

- Marking interest-rate or inflation risk as diversifiable. The systematic five — market, interest-rate, inflation, currency, political — survive any number of holdings.
- Letting any stockholder collect before any creditor on a liquidation question. Preferred stock stands below even subordinated debentures.
- Confusing liquidity risk (cannot sell quickly at a fair price) with market risk (prices generally falling).
- Forgetting that the "safest" fixed-dollar assets carry the most purchasing-power risk.

- Mixing regulatory risk (a rule reshapes an industry — unsystematic) with political risk (government upheaval or seizure strikes a whole market — systematic).

Make it a game · Ladder Scramble. Write the five rungs — secured creditors, unsecured creditors/debentures, subordinated debentures, preferred stock, common stock — on five index cards. A parent shuffles and deals them face down; on "go," race to lay the ladder in correct paying order. Under ten seconds earns two points, under twenty earns one. Then flip the game: the parent reads risk names (currency! business! inflation!) and you point left hand for systematic, right for unsystematic, faster each round. Three mistakes and you must recite the whole ladder backwards — common to secured — which, the examiners would tell you, is also worth knowing.

Scripture. "Give a portion to seven, and also to eight; for thou knowest not what evil shall be upon the earth." (Ecclesiastes 11:2, KJV)

The Preacher's counsel is diversification stated three thousand years early: divide what you steward among many ventures, because the evil to come is real and its address is unknown. Note the verse's honesty about limits — dividing into eight portions spreads the particular misfortunes, but "evil upon the earth" that falls on all eight at once is systematic risk, and Scripture does not pretend the steward escapes it.

UNIT 3

Reading the Numbers

A company tells its story three times: once in the **income statement** (did it earn money this year?), once in the **balance sheet** (what does it own and owe today?), and once in the **cash flow statement** (where did the cash actually go?). In this unit you will learn to read all three, and to distrust them politely — the way the whole world learned to in 1932, when Ivar Kreuger, the Swedish "Match King" whose securities sat in dressers across America, died in Paris and his invented profits died with him. You will meet Benjamin Graham, who taught his Columbia students (one of them a young Warren Buffett) to read the numbers instead of the ticker tape, and you will work the ratios he loved: current, quick, debt-to-equity, earnings per share, P/E, price-to-book and dividend yield.

Then the unit turns from a single company to money and time itself. You will learn the compound-interest formula that Fibonacci was already teaching merchants in 1202 and that Benjamin Franklin trusted enough to leave two cities a 200-year experiment; you will discount future dollars back to the present and decide projects by **net present value** and **internal rate of return**. You will weigh an ox with Francis Galton's crowd at Plymouth in 1906 and come away owning the statistics the exam loves — mean, median, standard deviation, correlation, beta and alpha. And you will finish with the map of **risk** itself: which risks diversification can cure, which it cannot, and who stands where on the ladder when a company is liquidated — a ladder the examiners climb again and again.

PREREQUISITES

- Can work confidently with percents, decimals and exponents (find 8% of an amount; compute (1.06)^3 with a calculator)
- Can read a simple table and keep two-column figures lined up in a notebook
- Knows the Unit 1 vocabulary: security, issuer, stock, bond, dividend, interest
- Can use a basic spreadsheet: enter numbers, write a formula, copy it down a column

MASTERY CHECKLIST

- ☐ I can name the three major financial statements, say what question each answers, and connect net income to retained earnings and cash.
- ☐ I can tell audited filings from unaudited ones and match the 10-K, 10-Q, 8-K, annual report and proxy statement to what each contains.
- ☐ I can compute and interpret the current ratio, quick ratio, working capital and debt-to-equity ratio from a balance sheet.
- ☐ I can compute earnings per share, P/E, price-to-book, dividend payout and dividend yield, and say what high and low P/E suggest about growth and value stocks.
- ☐ I can move money across time with FV = PV(1+r)^n, estimate doubling time with the rule of 72, and decide a project by net present value and internal rate of return.
- ☐ I can compute mean, median, mode and range, read a standard deviation as volatility, and explain correlation, beta and alpha in one sentence each.
- ☐ I can sort any named risk into systematic or unsystematic and say which diversification can reduce.

- ☐ I can recite the liquidation ladder in order, from secured creditors down to common stockholders.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **Beginners' Guide to Financial Statements (SEC)**: Free from the SEC's Office of Investor Education. A short, plain-English walk through the balance sheet, income statement and cash flow statement, with the same ratios as Lessons 3.1 and 3.2. Read it alongside those lessons. Ages 14 and up.
- ***How to Invest Money*, by George Garr Henry (1908)**: Free on Project Gutenberg. A Guaranty Trust banker explains, in 1908 English, why security of principal comes first and how railroad mortgage bonds were judged — the very bonds of Lesson 3.5's receivership story. The chapters on general principles and railroad bonds fit Lessons 3.3 and 3.5. Ages 14 and up.
- **Khan Academy: Finance and Capital Markets**: Free. The full video course behind several lessons in this unit — balance sheets, P/E, present value, statistics — with exercises. Use it whenever a lesson's arithmetic needs a second pass. Ages 14 and up.
- **"Vox Populi," by Francis Galton (Nature, 1907)**: Free at galton.org. The original two-page article behind Lesson 3.4's story — Galton's own account of the ox-weighing contest at Plymouth, with his table of quartiles. Read it after the lesson and find the median yourself. Ages 15 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

3.1 Financial Reports: The Income Statement, Balance Sheet and Cash Flow
3 sessions of 50 minutes

3.2 Ratios: Liquidity, Leverage and Valuation 3 sessions of 50 minutes

3.3 The Time Value of Money: Present Value, NPV and IRR 3 sessions of 50 minutes

3.4 Statistics for Investors: Mean, Median and Standard Deviation
3 sessions of 50 minutes

Unit 3 test

Closed book, closed notes — the real exam gives you no formula sheet, so this test does not either. Allow about 28 minutes for the 20 questions (the real exam's pace is roughly 83 seconds each) and answer every question; there is no penalty for a wrong guess, on this test or on the Series 65. Where a question says "in this example," the figures are for practice — rates and limits in the world change, but the methods do not. A calculator and scratch paper are allowed, as at the testing center.

1. **5 pts**
   Which financial statement reports a company's revenues and expenses over a period of time?
   A. Balance sheet
   B. Income statement
   C. Cash flow statement
   D. Proxy statement

2. **5 pts**
   A public company's quarterly report filed with the SEC is the:
   A. 10-K, and it is audited
   B. 10-Q, and it is audited
   C. 10-Q, and it is unaudited
   D. 8-K, and it is unaudited

3. **5 pts**
   Under accrual accounting, a sale made in November on credit and collected in January is recorded as revenue:
   A. In November, when it was earned
   B. In January, when the cash arrived
   C. Half in each month
   D. In whichever month the company chooses

4. 5 pts

A company has total assets of $1,800,000 and shareholders' equity of $700,000. Its total liabilities are:

A. $2,500,000

B. $1,100,000

C. $700,000

D. Cannot be determined without the income statement

5. 5 pts

In this example, a firm shows current assets of $400,000 (of which inventory is $160,000) and current liabilities of $200,000. Its current and quick ratios are:

A. 2.0 and 1.2

B. 2.0 and 0.8

C. 1.2 and 2.0

D. 2.0 and 2.8

6. 5 pts

A company earns net income of $1,200,000, pays $200,000 in preferred dividends, and has 500,000 common shares outstanding. Its EPS is:

A. $2.40

B. $2.00

C. $2.80

D. $0.40

7. 5 pts

A stock trading at $36 with EPS of $3.00 and an annual dividend of $1.20 has a P/E ratio and dividend yield of:

A. P/E 12; yield 3.3%

B. P/E 12; yield 40%

C. P/E 30; yield 3.3%

D. P/E 0.083; yield 10%

8. 5 pts

Compared with a value stock, a growth stock typically shows:

A. A lower P/E and a higher dividend yield

B. A higher P/E and a lower (or no) dividend

C. A lower price-to-book ratio

D. A higher dividend payout ratio

9. 5 pts

$4,000 is invested at 5% compounded annually for 2 years. Its future value is:

A. $4,400.00

B. $4,410.00

C. $4,200.00

D. $4,020.00

10. 5 pts

Using the rule of 72, an investment earning 6% annually will double in approximately:

A. 6 years

B. 9 years

C. 12 years

D. 72 years

11. 5 pts

An adviser discounts a project's expected cash flows at her required 9% and finds their present value exceeds the project's cost. She should conclude:

A. NPV is negative; reject

B. NPV is positive; the project earns more than 9% — accept

C. The IRR is exactly 9%

D. The project doubles her money in 8 years

12. 5 pts

The internal rate of return of an investment is the discount rate at which:

A. Future value equals twice present value

B. The investment's net present value equals zero

C. The rule of 72 holds exactly

D. The arithmetic and geometric means are equal

13. 5 pts

A fund's returns in five years were 12%, 3%, 8%, −1% and 8%. The median return was:

A. 6%

B. 8%

C. 3%

D. 12%

14. 5 pts

A portfolio's annual return has a mean of 7% and a standard deviation of 3%, roughly normally distributed. About 68% of years should fall between:

A. 1% and 13%

B. 4% and 10%

C. −2% and 16%

D. 0% and 14%

15. 5 pts

A portfolio with a beta of 1.5 returns 14% in a year when the market returns 10%. Its alpha is:

A. +4

B. −1

C. +14

D. 0

16. 5 pts

An adviser wants the greatest diversification benefit from adding one asset to a stock portfolio. She should prefer the asset whose correlation with the portfolio is:

A. +1.0

B. +0.5

C. 0.0

D. −0.4

17. 5 pts

Even the owner of a portfolio diversified across hundreds of companies in every industry remains exposed to:

A. Business risk

B. Financial risk

C. Interest-rate risk

D. Regulatory risk

18. 5 pts

In a corporate liquidation, place these in payment order: (I) subordinated debentures; (II) secured bondholders; (III) common stock; (IV) preferred stock; (V) general unsecured creditors.

A. II, V, I, IV, III

B. II, I, V, IV, III

C. V, II, I, III, IV

D. II, V, IV, I, III

19. 5 pts

In this example, an investor leaves $5,000 idle for one year instead of buying a Treasury bill yielding 4%. His opportunity cost is:

A. $0, because he lost nothing

B. $200

C. $5,200

D. $50

20. 5 pts

A retiree living entirely on fixed bond interest is MOST exposed to which risk, and can diversification among many bond issuers remove it?

A. Business risk; yes

B. Purchasing-power risk; no

C. Purchasing-power risk; yes

D. Liquidity risk; no

ANSWER KEY

1. B. The income statement covers a period and ends in net income. The balance sheet is a one-date snapshot; the cash flow statement traces cash, not accrual revenue and expense.
2. C. The 10-Q is filed for each of the first three quarters and its statements are unaudited; the audited annual filing is the 10-K; the 8-K reports current events.
3. A. Accrual accounting recognizes revenue when earned, regardless of when cash moves; recording at collection would be cash-basis accounting.
4. B. Assets = liabilities + equity, so liabilities $= \$1{,}800{,}000 - \$700{,}000 = \$1{,}100{,}000$. Choice A adds instead of subtracting.
5. A. Current: $400 \div 200 = 2.0$; quick: $(400 - 160) \div 200 = 1.2$. Choice B subtracts the inventory twice over; D adds it back.
6. B. EPS = (net income − preferred dividends) ÷ common shares $= \$1{,}000{,}000 \div 500{,}000 = \$2.00$. Choice A skips the preferred-dividend subtraction.
7. A. P/E $= 36 \div 3 = 12$; yield $= \$1.20 \div \$36 = 3.3\%$. Choice B's 40% is the payout ratio (dividend ÷ EPS), not the yield — the exam's favorite switch.
8. B. Growth stocks command high multiples of current earnings and usually reinvest rather than pay dividends; value stocks show low P/Es, lower price-to-book and fatter yields.
9. B. $\$4{,}000 \times (1.05)^2 = \$4{,}000 \times 1.1025 = \$4{,}410$. Choice A is simple interest without compounding; C stops after one year.
10. C. $72 \div 6 = 12$ years. Nine years (B) is the doubling time at 8% — know both, because the exam swaps them.
11. B. PV of inflows above cost means positive NPV: the project clears the 9% hurdle, so its IRR is above 9%. C would require NPV of exactly zero.
12. B. IRR makes NPV exactly zero — the rate the investment itself earns. For a bond, that rate is its yield to maturity, a connection Unit 4 builds on.
13. B. Ordered: −1, 3, 8, 8, 12; the middle value is 8%. Choice A is the mean — the exam expects you to compute the wrong center in a hurry.
14. B. One standard deviation either side of the mean: $7\% \pm 3\%$ gives 4% to 10%. Choice A is the two-sigma (95%) band.
15. B. Beta predicts $1.5 \times 10\% = 15\%$; alpha $= 14\% - 15\% = -1$. Choice A compares against the raw market return and forgets the beta multiplication.

16. D. The lower (more negative) the correlation, the more the new asset's motion offsets the portfolio's. Zero correlation helps; negative correlation helps more; +1.0 adds nothing but size.
17. C. Interest-rate risk is systematic — rising rates press on all securities at once, so diversification within the market cannot remove it. The other three are company- or industry-specific.
18. A. Secured first, then unsecured creditors, then subordinated debentures, then preferred, then common. Choice D pays preferred stockholders before a debt class — no stockholder ever collects before a creditor.
19. B. The forgone alternative would have earned $0.04 \times \$5{,}000 = \$200$ — that unearned return is the opportunity cost. Choice A is the buried talent's own defense, and the parable's master rejected it.
20. B. Inflation erodes every fixed payment from every issuer alike — it is systematic, so adding issuers cannot diversify it away. C names the right risk but the wrong remedy.

PORTFOLIO PIECE: MY ANALYST'S FILE

Across the unit you have built, piece by piece, a working analyst's file for one small pretend company — your lemonade enterprise. Assemble it now as a single document: a one-page map of the three financial statements (income statement, balance sheet and cash flow statement, with the arrows showing how net income becomes retained earnings and how the cash reconciles); the ratio sheet with all its liquidity, leverage and valuation figures and their plain-English verdicts; the PV/FV table you built in a spreadsheet, with your rule-of-72 checks and the Franklin calculation; the vox populi report from your household guessing experiment; and the risk map with the liquidation ladder drawn as an actual ladder, rung by rung from secured creditors down to the common stockholder standing in the puddle. Bind it, title it, and present it to a parent in a five-minute walk-through — the file is finished only when someone else can follow it.

LOOK FOR	WHAT IT MEANS
The three-statement map	All three statements are present, correctly structured and arithmetically exact; the connections (net income to retained earnings, cash flow to the balance-sheet cash line) are drawn and the balance sheet balances to the dollar.
The ratio sheet	Current, quick, working capital, debt-to-equity, EPS (with the preferred dividend handled), P/E, price-to-book, payout and yield are all computed correctly from the student's own statements, each with a sensible one-sentence interpretation.
The PV/FV spreadsheet table	The table is generated by a correct compound-interest formula, reads accurately in both directions (future value and present value), and includes the rule-of-72 comparison and the Franklin check with honest commentary.
Statistics and the vox populi report	The guessing experiment was actually run with independent guesses; mean, median, mode, range and standard deviation are correct; the report draws the Galton comparison and explains what copying between guessers does to a crowd.

LOOK FOR	WHAT IT MEANS
The risk map and liquidation ladder	All nine risks sit in the correct systematic/unsystematic columns with applied sentences; the ladder's five rungs are in exact order with each claimant identified; the $100 liquidation exercise runs out at a defensible rung and the student can defend the order aloud.

UNIT 4

Cash and Fixed Income

This unit opens NASAA's second section — investment vehicle characteristics — with the quiet half of the market: cash and bonds. You will start with the money every portfolio keeps on hand (deposits, CDs, Treasury bills, commercial paper, money market funds) and learn why the collapse of the **Penn Central** railroad in 1970 shocked that sleepy market awake. Then you will lend to the government — bills, notes, bonds, **TIPS** and agency securities — the way millions of Americans first did when movie stars sold **Liberty Loans** from the courthouse steps in 1918, and to corporations, cities and foreign governments, the way New York State borrowed in 1817 to dig the **Erie Canal** and paid it back with tolls.

The last two lessons give you the bond desk's tools: coupons, calls, puts and the letter ratings **John Moody** invented in 1909 after the Panic of 1907; then the mathematics — the price–yield seesaw, current yield, yield to maturity, yield to call and **duration** — told through Britain's consols, the bonds that never matured. Fixed income is roughly a fifth of the real Series 65, and its favorite questions (the yield ordering on a premium bond, the call when rates fall, the phantom income on a zero or a TIPS) are all here. By the end you will price, compare and rank bonds like a steward who must answer for other people's money.

PREREQUISITES

- Can convert between percents, decimals and basis points (100 basis points = 1%)
- Can compute present value and future value with a calculator, as practiced in Unit 3
- Can solve a one-step equation for an unknown (for example, find the price when yield is given)
- Can read a simple balance sheet and income statement from Unit 3

MASTERY CHECKLIST

- ☐ I can name the main money market instruments and say which are insured, which are discounted and which are unsecured.
- ☐ I can tell Treasury bills, notes, bonds, STRIPS and TIPS apart by maturity, coupon and tax treatment, and explain phantom income.
- ☐ I can explain why GNMA is backed by the full faith and credit of the United States and FNMA and FHLMC are not, and what prepayment risk does to a mortgage pass-through.
- ☐ I can classify corporate bonds (secured, debenture, subordinated, convertible, high-yield) and municipal bonds (general obligation versus revenue), and compute a taxable-equivalent yield.
- ☐ I can read a bond quote as a percent of par, explain call and put features, and place any rating on the Moody's and S&P scales with the investment-grade line at Baa3/BBB−.
- ☐ I can compute current yield, order nominal yield, current yield, YTM and YTC for premium and discount bonds, and use the price–yield seesaw.
- ☐ I can explain duration — why longer maturities and lower

coupons swing harder — and why a zero-coupon bond's duration equals its maturity.

- ☐ I can explain a credit spread and price a simple zero-coupon bond with present value.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **TreasuryDirect: Marketable Securities**: Free, from the U.S. Treasury itself. Plain-English pages on bills, notes, bonds, TIPS, FRNs and STRIPS, with current auction schedules. The bills page fits Lesson 4.1 and the rest fit Lesson 4.2. Ages 14 and up.
- **MSRB Education Center**: Free, from the Municipal Securities Rulemaking Board: videos and fact sheets on how municipal bonds work, their risks and their lifecycle. Read alongside Lesson 4.3. Ages 14 and up.
- **EMMA — Electronic Municipal Market Access**: Free. The official public database of municipal bonds: look up a real bond issued by your own town or school district and read its official statement for the Lesson 4.3 project. Ages 14 and up, with a parent.
- **Investor.gov: Bonds**: Free, from the SEC's Office of Investor Education: short guides to bonds, ratings, callable bonds and yield. A good review for Lessons 4.4 and 4.5. Ages 14 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

4.1 Cash and the Money Market: Deposits, CDs and Treasury Bills

3 sessions of 50 minutes

4.2 Lending to the Government: Treasuries, TIPS and Agencies

3 sessions of 50 minutes

4.3 Corporate, Municipal and Foreign Bonds — 3 sessions of 50 minutes

4.4 Bond Features: Coupons, Calls and Credit Ratings — 3 sessions of 50 minutes

4.5 Bond Mathematics: Prices, Yields and Duration — 3 sessions of 50 minutes

Unit 4 test

Closed book. Allow about 83 seconds per question — set a timer for 28 minutes. Answer every question; there is no penalty for guessing, on this test or on the real Series 65. Where a problem says "in this example," use the figures given, not current rates or law. Each question is worth 5 points; the test is worth 100.

1. **5 pts**

   Which money market instrument is an unsecured corporate note exempt from Securities Act registration because it matures in 270 days or less?

   A. Banker's acceptance

   B. Negotiable CD

   C. Commercial paper

   D. Repurchase agreement

2. **5 pts**

   A 26-week T-bill with $10,000 face sells for $9,760. The investor's interest if held to maturity is:

   A. $0 — bills pay no interest

   B. $240

   C. $480

   D. $9,760

3. **5 pts**

   As of 2026, FDIC insurance covers deposits up to $250,000 measured:

   A. Per account

   B. Per depositor, per insured bank, per ownership category

   C. Per family

   D. Per branch office

4. 5 pts

A client parks $1.5 million of corporate cash in a money market mutual fund. Which statement to the client is accurate?

A. “The FDIC insures the fund.”

B. “The $1.00 share price is guaranteed by the government.”

C. “The fund seeks a stable $1.00 price, but it is a security and is not insured or guaranteed.”

D. “The fund cannot lose value.”

5. 5 pts

Interest on a 10-year Treasury note is:

A. Exempt from federal income tax

B. Exempt from state and local income tax

C. Exempt from all taxation

D. Taxable by states but not by the federal government

6. 5 pts

A TIPS with a 2% coupon and $1,000 original principal has experienced 10% cumulative inflation. In this example its annual interest in dollars is now:

A. $20.00

B. $22.00

C. $102.00

D. $120.00

7. 5 pts

An investor holds TIPS in a regular taxable account. Which is TRUE?

A. The yearly principal adjustment is taxed as income even though it is not received in cash

B. All taxation waits until maturity

C. The interest is exempt from federal tax

D. The principal adjustment is never taxed

8. 5 pts

Which is backed by the full faith and credit of the United States?

A. FNMA

B. FHLMC

C. Federal Home Loan Bank

D. GNMA

9. 5 pts

Interest rates fall two points. The holder of a GNMA pass-through should expect:

A. Slower prepayments and a longer average life

B. Faster prepayments, returning principal early for reinvestment at lower rates

C. Default on the certificates

D. The coupon rate to adjust upward

10. 5 pts

A corporate bond secured by a lien on the company's factories is a:

A. Debenture

B. Subordinated debenture

C. Mortgage bond

D. Income bond

11. 5 pts

A municipal bond repaid ONLY from the earnings of the airport it financed is a:

A. General obligation bond

B. Revenue bond

C. Double-barreled Treasury

D. Debenture

12. 5 pts

An investor in the 32% federal bracket holds a 3.4% municipal bond. In this example its taxable-equivalent yield is:

A. 3.4%

B. 4.49%

C. 5.00%

D. 10.63%

13. 5 pts

Which recommendation is LEAST suitable on its face?

A. Treasury STRIPS inside an IRA for a known future goal

B. Municipal bonds inside a traditional IRA

C. An insured municipal GO for a high-bracket taxable account

D. T-bills for an emergency reserve

14. 5 pts

A U.S. investor's foreign bond pays every coupon in full, yet her dollar return is negative. The cause is:

A. Credit risk

B. Currency risk

C. Call risk

D. Prepayment risk

15. 5 pts

A corporate bond quoted at $91\frac{1}{2}$ costs:

A. $91.50

B. $910.50

C. $915.00

D. $950.00

16. 5 pts

Issuers are MOST likely to exercise a call feature when:

A. Interest rates have risen

B. Interest rates have fallen

C. Their bonds trade at a discount

D. Their credit rating has been cut

17. 5 pts

In a liquidation, which claimant is paid FIRST?

A. Common stockholders

B. Preferred stockholders

C. Subordinated debenture holders

D. Equipment trust certificate holders

18. **5 pts**

A 6% bond trades at $800. Its current yield is:

A. 4.8%

B. 6.0%

C. 7.5%

D. 8.0%

19. **5 pts**

For a bond trading at a PREMIUM, the correct ordering is:

A. Nominal > current > YTM > YTC

B. YTC > YTM > current > nominal

C. Current > nominal > YTM > YTC

D. All four yields are equal

20. **5 pts**

Which bond's price swings MOST when rates move one point?

A. 2-year, 8% coupon note

B. 10-year, 7% coupon bond

C. 20-year, 6% coupon bond

D. 20-year zero-coupon bond

ANSWER KEY

1. C. Commercial paper is the short unsecured corporate IOU; the 270-day ceiling preserves the registration exemption. A carries a bank guarantee, B is an insured-up-to-the-limit deposit, D is collateralized.
2. B. $\$10{,}000 - \$9{,}760 = \$240$; the discount IS the interest. A confuses "no coupon" with "no interest"; C doubles the half-year figure without cause.
3. B. The limit follows the depositor, the bank and the ownership category — not the number of accounts. Splitting money across two accounts at one bank in one category adds no coverage.
4. C. The $1 price is a goal, not a promise; a money market fund is a security outside FDIC protection. A, B and D each make the guarantee the law forbids claiming.
5. B. Treasuries are federally taxable but state-and-local exempt — the mirror image of municipals. A and D reverse the rule; C belongs to no security.
6. B. Adjusted principal $1,100; coupon $0.02 \times \$1{,}100 = \$22$. A forgets the adjustment; C and D confuse the 10% inflation with the coupon.
7. A. The CPI accretion is phantom income, taxed as it accrues — the classic reason TIPS fit best in sheltered accounts. B describes nothing in the Treasury market; C reverses the federal/state rule; D is wishful.
8. D. Ginnie Mae is a true government agency; its guarantee is the government's own. The other three are government-sponsored enterprises — high quality by reputation, but not full faith and credit.
9. B. Homeowners refinance when rates fall, and their prepayments pass through — principal comes home just when reinvestment pays least. A describes rising rates; C ignores the government guarantee; D invents an adjustable coupon.
10. C. Real property pledged = mortgage bond. A and B are unsecured by definition; an income bond pays interest only if earned — a different animal entirely.
11. B. Project income, not taxes, stands behind a revenue bond; if the airport fails, bondholders cannot reach the tax base. A pledges taxing power; C and D misname the instrument.
12. C. $3.4\% \div (1 - 0.32) = 3.4\% \div 0.68 = 5.0\%$. B divides by (1 + 0.32)'s cousin 0.757 — a made-up step; D divides by the bracket itself, the classic error.
13. B. The IRA already shelters income, wasting the muni's exemption, and withdrawals convert tax-free interest into ordinary taxable income. A, C and D each match the vehicle to its proper home.

14. B. The issuer performed; the exchange rate did not — the foreign currency weakened against the dollar. A requires a missed payment; C and D require features the fact pattern never mentions.
15. C. Quotes are percent of $1,000 par: $91.5\% \times \$1{,}000 = \$915$. B misreads the half point as 50 cents; A forgets the par multiplier.
16. B. Falling rates let the issuer refinance expensive old coupons cheaply — the homeowner's refinance in corporate dress. A and C describe the same rising-rate world where calling would overpay; D makes refinancing harder.
17. D. Secured creditors lead the line; their collateral exists for this day. Then debentures, then subordinated debentures, then preferred, with common stock last — every lender ahead of every owner.
18. C. $\$60 \div \$800 = 7.5\%$. B quotes the nominal yield; A multiplies instead of divides; D divides by a price nobody paid.
19. A. Premium bonds yield down the list: the above-par price drags each fuller measure lower, and the call squeezes the loss into fewer years, making YTC least. B is the discount ordering; D holds only at par.
20. D. Longest maturity plus lowest possible coupon = longest duration; a 20-year zero's duration is 20, beating even the 20-year coupon bond, whose early coupons shorten its duration. A is the calmest of the four.

PORTFOLIO PIECE: MY BOND DESK BOOK

Assemble the desk book a young fixed-income analyst would be proud to open in an interview. Include: your drawn price–yield seesaw with the three-yield ordering written out for premium and for discount bonds (YTC included on the premium side); your ratings ladder from Lesson 4.4 with the investment-grade line in red; your ten-bond pretend portfolio from the Seesaw Lab, with coupons, prices and current yields computed in a spreadsheet and three computations spot-checked by hand; and one closing paragraph matching each bond TYPE — T-bill, Treasury note, TIPS, GNMA, corporate debenture, municipal GO, municipal revenue, high-yield, zero, foreign — to the pretend client it suits and why. Add your money market map, your EMMA memo and your Treasury ladder as supporting exhibits.

LOOK FOR	WHAT IT MEANS
Accuracy	All computations — discounts, TEY, current yields, zero prices — are correct, labeled and shown, with “in this example” or an as-of date on every changeable figure.
The seesaw and orderings	The seesaw drawing is clear, and the premium and discount yield orderings are stated correctly and explained in one sentence each.
The ratings ladder	Both scales are complete and aligned, the Baa3/BBB− line is drawn and labeled, and the footnote states what ratings do not measure.
The ten-bond portfolio	The spreadsheet is complete and tidy; duration reasoning correctly ranks the bonds’ rate sensitivity, with the long zero identified as the most volatile.
Client judgment	The closing paragraph matches each bond type to a sensible pretend client with a reason drawn from this unit — tax, backing, duration or credit — not a slogan.

4.1 Cash and the Money Market: Deposits, CDs and Treasury Bills

OBJECTIVES

- Distinguish demand deposits, insured CDs and jumbo (negotiable) CDs, and state the FDIC insurance limit as of 2026.
- Name the main money market instruments — T-bills, commercial paper, banker's acceptances and repurchase agreements — and the key fact the exam tests about each.
- Explain why commercial paper matures in 270 days or less, and why Penn Central's default in 1970 shook the money market.
- Describe a money market mutual fund: its $1 price goal, its uses and its lack of FDIC insurance.
- Compute the dollar discount and the price of a T-bill sold at a discount.

> **Warm-up.** In five minutes, list every place your family could keep $1,000 for six months: under the mattress, a checking account, a savings account, a CD, a T-bill. For each, write one word for its risk and one for its reward. Keep the list; by the end of the lesson you will know the proper names for all of them.

WATCH

Money Market Instruments - SIE Exam Prep

CertFuel · 9:23

https://www.youtube.com/watch?v=tGptvpee04Y

> **WHEN TO WATCH**
> After the big idea, before the worked examples: a walk through each money market instrument. Pause after each one and write its maturity and its risk in your exam notebook.

BACKUP VIDEO

What are Money Markets?

The CISI · 3:34

https://www.youtube.com/watch?v=ipOYM0sfW7M

A short second pass from the UK's securities institute: watch it after the core ideas and list the instruments it names that match your money market map.

KEY TERMS

demand deposit

Money in a checking account that the depositor may withdraw "on demand," at any time, without notice or penalty.

negotiable (jumbo) CD

A CD of $100,000 or more (usually $1 million or more) that can be sold to another investor in the secondary market instead of being redeemed early.

Treasury bill (T-bill)

A U.S. government obligation of one year or less, sold at a discount from face value and paying no coupon; the interest is the difference.

banker's acceptance (BA)

A short-term time draft guaranteed ("accepted") by a bank, used mainly to finance imports and exports.

money market fund

A mutual fund that buys money market instruments and seeks to keep its share price at a stable $1.00; convenient and conservative, but not FDIC-insured or guaranteed.

certificate of deposit (CD)

A bank time deposit that pays a stated rate for a stated term, with a penalty for early withdrawal; insured by the FDIC up to the legal limit.

money market

The market for high-quality debt maturing in one year or less, where governments, banks and corporations borrow short-term cash.

commercial paper

A corporation's short-term unsecured promissory note, issued at a discount with a maximum maturity of 270 days so it is exempt from registration under the Securities Act of 1933.

repurchase agreement (repo)

A dealer's sale of securities with a promise to buy them back at a slightly higher price, usually overnight — in effect a collateralized loan.

The story. On June 21, 1970, the Penn Central Transportation Company — the merged giant of the old Pennsylvania and New York Central railroads, the largest railroad in the country — filed for bankruptcy. It was the biggest corporate failure in American history to that date, and it fell owing about $200 million of **commercial paper**: short unsecured IOUs that treasurers all over the country had bought as a safe place to park cash for a month or two. Safe, everyone had assumed, because big names do not fail. When Penn Central's paper went bad, lenders fled the whole market at once; sound companies suddenly could not roll over their own maturing paper, and for a few weeks the quietest corner of finance froze. The Federal Reserve calmed the panic not by buying the paper but by opening its discount window wide and loosening a rate ceiling, so banks could lend to the companies the paper market had abandoned.

How they figured it out. The lesson of 1970 was that even "cash" has credit risk, and the market rebuilt itself around that truth. Buyers of commercial paper began demanding credit ratings on short-term paper and unused bank credit lines standing behind it, and they relearned an old distinction the exam still draws: a **Treasury bill** is backed by the United States and is treated as the risk-free benchmark; commercial paper is backed only by one corporation's promise. The rule that commercial paper matures in **270 days or less** is older than the crisis — it is written into the Securities Act of 1933, which exempts such short notes from registration — but 1970 reminded everyone why only strong, well-known companies can sell unsecured promises at all.

The big idea. Cash is a spectrum, not a single thing. A **demand deposit** (checking) can be withdrawn at any moment and earns little or nothing. A **certificate of deposit** locks money up for a stated term at a stated rate, with a penalty for leaving early; bank deposits, including CDs, are insured by the **FDIC** up to $250,000 per depositor, per insured bank, per ownership category (the figure as of 2026 — confirm it at fdic.gov). A **negotiable or jumbo CD** of $100,000 or more escapes the early-withdrawal problem a different way: the holder sells it to someone else in the secondary market; note that amounts above the insurance limit are simply not insured. Beyond the bank lies the **money market** — all high-grade debt maturing within one year.

The money market's cast of characters is small, and the exam tests one or two facts about each. **T-bills** run from four to 52 weeks, carry no coupon, and are sold at a **discount**: you pay, say, $9,800 today and receive $10,000 at maturity, the $200 difference being your interest. **Commercial paper** is a corporation's unsecured note, 270 days or less, also sold at a discount, issued mainly by the strongest companies and finance firms. A **banker's acceptance** is a time draft a bank has guaranteed, the classic tool of import-export trade: the exporter in one country gets a bank's promise instead of a stranger's. A **repurchase agreement** is an overnight loan dressed as a sale: a dealer sells Treasuries to a lender and buys them back tomorrow at a slightly higher price. Each is short, high-quality and liquid; none is exciting — which is the point.

The **money market mutual fund**, invented in the early 1970s, pools small investors' cash and buys these instruments for them. It seeks to hold its share price at a stable $1.00 and pays whatever the portfolio earns. Two exam facts: the $1 price is a goal, not a guarantee, and a money market fund is **not insured by the FDIC** — it is a security, not a deposit. Households use these funds, and T-bills and CDs, for the emergency reserve and for money that will be needed soon; the reward for safety and liquidity is the lowest yield on the menu, and the quiet enemy of cash is inflation, which taxes the patient saver without sending a bill.

On the exam today. The Series 65 loves the boundary lines in this lesson. Know 270 days as the ceiling that keeps commercial paper exempt from registration, and know that it is **unsecured**. Know that T-bills are sold at a discount and pay no coupon; that jumbo CDs are negotiable (sold, not redeemed) and insured only up to the FDIC limit; that a banker's acceptance finances foreign trade; and that a repo is in substance a collateralized overnight loan. The classic trap pairs the money market fund with the bank account: if a choice says a money market fund is "FDIC-insured" or "guaranteed to stay at $1," it is wrong. And when a question asks for the "risk-free" rate, the answer it wants is the Treasury bill.

PICTURE STUDY

The Waiting Room at Pennsylvania Station, Unknown photographer (Library of Congress), 1911 · Photographic print · Library of Congress, Washington, D.C.

Image: Wikimedia Commons, public domain

Pennsylvania Station opened in Manhattan in 1910, a Roman temple built by the Pennsylvania Railroad — then one of the mightiest corporations on earth — with a statue of its late president, Alexander Cassatt, watching from the wall. The photograph sits in this lesson as a parable: sixty years after it was taken, the railroad that built this hall had merged into Penn Central and gone bankrupt, defaulting on the commercial paper this lesson studies. No borrower is too grand to need cash when the bills come due.

Look closely

- Find the human figures. How small are they against the building, and what does that scale say about the company's confidence?
- Find the statue of Cassatt in its niche on the left. Why would a corporation honor its president like a Roman senator?
- Notice the light pouring through the high arched windows. What materials — stone, steel, glass — announce permanence here?
- Look at the travelers' dress and luggage. What did it feel like to pass through this room on an ordinary Tuesday in 1911?

Talk about it

1. This building proclaimed that the Pennsylvania Railroad would last forever; it was demolished in 1963, and the railroad failed in 1970. What is the difference between looking solvent and being solvent?
2. Investors bought Penn Central's commercial paper because the name felt safe. How should a steward decide what is safe, instead of trusting grandeur?
3. Why does the money market demand such short maturities — what does a 90-day loan protect a lender from that a 30-year loan does not?

PROJECT

The Cash Desk: Build a Money Market Map

Every adviser keeps a mental map of where cash can sit and what each spot pays. You will build that map on one large sheet, with real current rates, and present it to a parent as if the parent were a client with $50,000 of short-term money.

You will need

- One large sheet of paper or poster board, ruler and pencils
- Exam notebook and calculator
- Internet access with a parent: treasurydirect.gov for current bill rates, fdic.gov for the insurance limit, and one or two bank websites for CD and savings rates

Steps

1. Rule the sheet into seven rows: demand deposit, savings account, insured CD, jumbo CD, Treasury bill, commercial paper, money market fund.
2. Add five columns: who issues it, typical maturity, insured or not (and by whom), how interest is paid (coupon, discount or stated rate), and one risk.
3. Fill every cell from this lesson and from the official sites; write today's date on the sheet, since every rate you record will change.
4. With a parent, look up the current 13-week and 52-week T-bill rates on treasurydirect.gov and record both.
5. Compute what $50,000 would earn in six months in the best insured option you found and in the 26-week bill.
6. Present the map to your parent in five minutes: where should the pretend $50,000 of short-term money sit, and why?
7. File the sheet in your exam notebook; you will reuse it when the unit test asks which instrument fits which need.

Tips

- Say "as of today" for every rate; the exam itself avoids dated figures by saying "in this example."

- If a yield looks far higher than its neighbors, find the reason — extra risk, longer lockup or a teaser — before you admire it.

Check your work

- ☐ My map names an issuer, maturity, insurance status and risk for all seven rows.
- ☐ My two dollar computations are shown step by step.
- ☐ I can defend my $50,000 recommendation in plain words.

EXAM NOTEBOOK

1. Make a one-page table of the money market instruments with columns for issuer, maximum maturity, secured/unsecured/insured, and the one fact the exam tests (T-bill: discount; commercial paper: 270 days, unsecured; BA: foreign trade; repo: collateralized overnight; money market fund: $1 goal, not insured).
2. Write the FDIC rule as a sentence frame — "$250,000 per _____, per _____, per _____ as of 2026" — and fill the blanks from memory three times.
3. Make a flashcard for Penn Central: front "June 1970 — biggest bankruptcy of its day"; back "defaulted on ~$200 million of commercial paper; proof that cash instruments carry credit risk."

KEY FORMULAS

$$\text{T-bill discount} = \text{face value} - \text{purchase price}$$

$$\text{Rate of return} = \frac{\text{discount}}{\text{purchase price}} \times \frac{360}{\text{days held}}$$

From history. The first money market mutual fund, the Reserve Fund, was created in the early 1970s, when regulations still capped the interest banks could pay small savers while market rates ran higher. By pooling small deposits into jumbo CDs and T-bills, the fund let ordinary families earn what only millionaires had earned before — and within a decade money funds held hundreds of billions of dollars.

WORKED EXAMPLES

Example 1. A 26-week (182-day) T-bill with a $10,000 face value sells at auction for $9,790. Find the dollar discount and the simple rate of return for the half year.

Show solution

1. Discount: $\$10{,}000 - \$9{,}790 = \$210$.
2. Return for the period: $\$210 \div \$9{,}790 = 2.14\%$.
3. Doubled for a rough annual figure: about 4.3%. (Dealers use a 360-day convention; the idea, not the convention, is what the exam tests.)

Answer: A $210 discount, about 2.14% for the half year, roughly 4.3% a year. The interest on a bill is the discount.

Example 2. Exam style — reason through every choice. Which of the following money market instruments is an **unsecured** corporate obligation?

A. Banker's acceptance
B. Commercial paper
C. Repurchase agreement
D. Negotiable certificate of deposit

Show solution

1. A: a banker's acceptance carries a bank's guarantee — the draft is "accepted" by the bank, so the holder is not relying on an unsecured corporate promise. Wrong.
2. B: commercial paper is exactly that — a corporation's short-term unsecured promissory note, 270 days or less. This is the definition the exam wants.
3. C: a repo is collateralized by the securities sold and repurchased; it is the opposite of unsecured. Wrong.
4. D: a negotiable CD is a bank deposit, FDIC-insured up to the limit, not a corporate IOU. Wrong.

Answer: B. Commercial paper is the unsecured one; the other three each have a bank, collateral or insurance standing behind them.

Example 3. In this example, a family keeps $320,000 in one bank in a single ownership category: $250,000 in CDs and $70,000 in checking. As of 2026 the FDIC limit is $250,000 per depositor, per bank, per ownership category. How much is uninsured, and what is the simplest cure?

Show solution

1. Total at the one bank in one category: $320,000.
2. Insured: $250,000. Uninsured: $320,000 − $250,000 = $70,000.
3. Cure: move the excess to a second insured bank (or a different ownership category, such as a joint account), so every dollar sits under a separate $250,000 umbrella.

Answer: $70,000 is uninsured; spreading deposits across banks or ownership categories restores full coverage. The limit applies per depositor, per bank, per category — not per account.

PRACTICE

1. Easy A 52-week T-bill with $1,000 face value is bought at auction for $962. What is the investor's interest if the bill is held to maturity?

   Show answer

   $1,000 − $962 = $38. A bill pays no coupon; the discount is the interest.

2. Easy Which statement about commercial paper is TRUE?

   A. It is secured by the issuer's equipment
   B. It may mature in up to 270 days without SEC registration
   C. It is insured by the FDIC
   D. It is issued mainly by small start-up companies

   Show answer

   B. The Securities Act of 1933 exempts short notes of 270 days or less. A is wrong because paper is unsecured; C is wrong because FDIC insurance covers bank deposits; D is wrong because only strong, well-known companies can borrow unsecured.

3. Easy As of 2026, FDIC insurance covers bank deposits up to:

A. $100,000 per account

B. $250,000 per depositor, per insured bank, per ownership category

C. $250,000 per account

D. $500,000 per household

Show answer

B. The limit follows the depositor, the bank and the ownership category (check fdic.gov for the current figure). C is the classic near-miss — opening a second account at the same bank in the same category adds nothing.

4. Medium An investor needs a place for $2 million of corporate cash for about 60 days and wants to be able to sell the instrument if plans change. Which fits BEST?

A. A 5-year brokered CD

B. A negotiable jumbo CD

C. A passbook savings account

D. An equipment trust certificate

Show answer

B. A negotiable (jumbo) CD is a large short-term deposit that trades in a secondary market. A is far too long; C cannot hold $2 million insured and is not marketable; D is a long-term secured corporate bond, not a cash instrument.

5. Medium Which instrument is used chiefly to finance imports and exports?

A. Repurchase agreement

B. Treasury bill

C. Banker’s acceptance

D. Commercial paper

Show answer

C. A banker’s acceptance is a time draft guaranteed by a bank so that foreign sellers can trust payment. Repos finance dealer inventories overnight; bills fund the government; paper funds corporations generally.

6. Medium A client says: “Put my emergency fund in a money market mutual fund — it’s insured and can’t lose a penny.” Which TWO corrections must an honest adviser make?

Show answer

First, a money market fund is a security, not a bank deposit, so it has no FDIC insurance. Second, the $1.00 share price is a goal, not a guarantee — the fund can lose value. It remains a reasonable conservative choice, but only when described truthfully.

7. Medium In this example, a 13-week (91-day) T-bill with $100,000 face sells for $98,950. Using $\frac{\text{discount}}{\text{price}} \times \frac{360}{91}$, the approximate annualized return is:

A. 1.06%

B. 2.1%

C. 4.2%

D. 8.4%

Show answer

C. Discount $1,050; $1,050 ÷ $98,950 = 1.061% for 91 days; $1.061\% \times \frac{360}{91} \approx 4.2\%$. A stops at the 91-day figure without annualizing — the tempting half-answer.

8. Hard In 1970 the Penn Central railroad failed. Which statement about that episode is TRUE?

A. The FDIC paid off the holders of its commercial paper

B. Its default made lenders doubt all commercial paper, and sound companies briefly could not roll over their own paper

C. The Federal Reserve bought the defaulted paper at face value

D. The crisis proved that money market instruments carry no credit risk

Show answer

B. Fear spread from one name to the whole market — a run. A is wrong because commercial paper is not a deposit; C is wrong because the Fed instead lent to banks through the discount window so banks could lend to the squeezed companies; D is backwards — the episode proved the opposite.

9. Hard Rank from FIRST to LAST the safety of principal: (I) 13-week T-bill, (II) 270-day commercial paper of a strong company, (III) uninsured portion of a jumbo CD at a weak bank.
   A. I, II, III
   B. II, I, III
   C. III, II, I
   D. I, III, II
   Show answer

   A. The T-bill has the full faith and credit of the United States; strong-company paper is next, backed by one firm's promise; the uninsured slice of a CD at a weak bank has neither government backing nor collateral. D tempts by treating any CD as safe — insurance stops at the limit.

10. Hard A dealer sells $10 million of Treasuries to a money market fund today and agrees to repurchase them tomorrow for a price $1,400 higher. What is this transaction, and who is effectively borrowing?
    Show answer

    A repurchase agreement. The dealer is the borrower, raising overnight cash against Treasury collateral; the fund is the lender, earning $1,400 of overnight interest. In substance it is a collateralized loan, whatever it is called.

11. Challenge A corporation needs $40 million for nine months. Its banker proposes rolling 90-day commercial paper four times instead of one 270-day issue. Name one advantage and one risk of the rolling plan, using Penn Central's story.
    Show answer

    Advantage: shorter paper usually carries a lower rate, and the company can stop borrowing early if the need ends. Risk: rollover risk — each maturity requires new lenders, and if confidence breaks (as after Penn Central's default in 1970) the market can refuse to roll even a sound company's paper, forcing it to its bank lines. Cheap funding that must be renewed is never guaranteed funding.

COMMON MISTAKES

- Saying a money market fund is FDIC-insured or that its $1.00 price is guaranteed — it is a security, not a deposit.

- Treating the FDIC limit as per account instead of per depositor, per bank, per ownership category.
- Forgetting that T-bills pay no coupon — the discount is the interest.
- Giving commercial paper a maturity longer than 270 days, or calling it secured.
- Mixing up the banker's acceptance (foreign trade) with the repurchase agreement (overnight collateralized loan).

Make it a game · Park the Cash. Make seven cards: checking, savings, insured CD, jumbo CD, T-bill, commercial paper, money market fund. A parent reads a need — "insured, can't touch for a year," "corporate treasurer, 60 days, might need to sell," "absolutely risk-free, 13 weeks" — and you slap the right card within five seconds. One point per correct slap; lose a point if you call anything "insured" that is not. First to ten wins; then switch roles and read the needs yourself.

Scripture. "There is treasure to be desired and oil in the dwelling of the wise; but a foolish man spendeth it up." (Proverbs 21:20, KJV)

The wise keep a reserve — treasure and oil in the house — before they reach for greater things. Cash instruments are humble, but a household or a portfolio without them is one surprise away from trouble.

4.2 Lending to the Government: Treasuries, TIPS and Agencies

OBJECTIVES

- Place Treasury bills, notes and bonds on the maturity line and describe how each pays interest.
- Explain STRIPS and the phantom-income tax on zero-coupon Treasuries.
- Describe how a TIPS adjusts its principal with the CPI, and why the adjustment is taxed as it accrues — the exam's classic TIPS point.
- Distinguish GNMA (full faith and credit) from FNMA and FHLMC (not), and explain a mortgage pass-through and its prepayment risk.
- State the tax treatment of Treasury interest: federally taxable, exempt from state and local tax.

> **Warm-up.** With pencil and paper, draw a line from "tomorrow" to "30 years." Mark where you would place a loan to the government for: a summer, a car's lifetime, a childhood, a career. Label each mark with a guess at which pays the higher rate and why. Keep the line; the lesson will name the instruments that live at each mark.

WATCH

U.S. Government Securities - Series 65 Exam Prep

CertFuel · 9:10

https://www.youtube.com/watch?v=dESKvgcQbEk

> **WHEN TO WATCH**
> After the big idea: a tour of bills, notes, bonds, TIPS and agencies aimed straight at this exam. Pause at each security and add its maturity and tax treatment to your exam notebook.

BACKUP VIDEO

TIPS Principal Value is Adjusted for CPI but NOT the Coupon! SIE, Series 7 and Series 65/66 Exams

Series 7 Guru · 5:12

https://www.youtube.com/watch?v=LWoHRUTrxO0

After the TIPS paragraph: an exam tutor drills the exact distinction the test loves — principal adjusts, the rate does not. Work his example alongside yours.

KEY TERMS

Treasury note

A U.S. Treasury obligation maturing in 2 to 10 years, paying a fixed coupon semiannually.

Treasury bond

The Treasury's long instrument, 20 or 30 years, paying a fixed semiannual coupon.

STRIPS

Treasury coupons and principal separated and sold as individual zero-coupon securities, backed by the U.S. government and bought at a discount.

TIPS

Treasury Inflation-Protected Securities: the principal adjusts with the Consumer Price Index and the fixed coupon rate is paid on the adjusted principal.

phantom income

Taxable income the holder must report before receiving it in cash — the yearly accretion on a zero-coupon bond or the inflation adjustment on a TIPS.

savings bond

A non-marketable Treasury security (Series EE or I) bought from and redeemed by the government, not traded in any market.

GNMA (Ginnie Mae)

The Government National Mortgage Association, whose mortgage pass-throughs are backed by the full faith and credit of the United States.

FNMA and FHLMC

Fannie Mae and Freddie Mac, government-sponsored enterprises whose securities are NOT backed by the full faith and credit of the United States.

mortgage pass-through

A security whose holders receive monthly shares of the interest and principal paid on a pool of home mortgages.

prepayment risk

The risk that homeowners refinance when rates fall, returning principal early just when it must be reinvested at lower rates.

CORE IDEAS

The story. In April 1917 the United States entered the Great War needing more money than any nation had ever borrowed, and the Treasury decided to borrow it not from a few banks but from everybody. Four **Liberty Loans** in 1917 and 1918, and

a Victory Loan after the armistice, raised on the order of $17 billion — staggering money then — in bonds sold door to door, schoolhouse to schoolhouse, courthouse step to courthouse step. Movie stars led the charge: in April 1918 Douglas Fairbanks and Charlie Chaplin drew tens of thousands to Wall Street itself, selling the Third Liberty Loan in front of the Sub-Treasury, and Boy Scouts and bank clerks took subscriptions from families who had never owned a security of any kind. Millions of Americans learned, with a small engraved certificate, what it means to be the government's creditor.

How they figured it out. The Liberty Loans taught the Treasury that a deep public market for its debt was a national asset, and the machinery never went away: war bonds returned in the 1940s as the Series E savings bond, and the auction system grew into today's regular calendar at treasurydirect.gov, where anyone may buy with $100. The loans also taught investors a lesson in rate risk that this unit will finish in Lesson 4.5 — patriots who paid par for 3½% and 4¼% bonds watched prices sag when later issues paid more. Lending to the safest borrower on earth removes default risk; it removes no other risk.

The big idea. The Treasury's marketable menu is sorted by maturity. **Bills**: one year or less, sold at a discount, no coupon (Lesson 4.1). **Notes**: 2 to 10 years, semiannual coupons. **Bonds**: 20 or 30 years, semiannual coupons. All are direct obligations backed by the government's full faith and credit, and all share one tax rule the exam loves: interest is taxable **federally** but **exempt from state and local income tax** — the mirror image of the municipal rule coming in Lesson 4.3. **STRIPS** are notes and bonds taken apart: each coupon and the principal becomes its own zero-coupon security, bought at a deep discount and paying face value at its date. No cash arrives in between, but the IRS taxes each year's accretion anyway — **phantom income** — which is why zeros and STRIPS sit most comfortably in tax-sheltered retirement accounts. **Savings bonds** (Series EE and I) are the non-marketable cousins: bought from the Treasury, redeemed by the Treasury, never traded.

TIPS solve a problem ordinary bonds cannot: inflation. A TIPS has a fixed coupon rate, but its **principal adjusts with the CPI**. If inflation runs 3%, a $1,000 principal becomes $1,030, and the coupon rate is paid on the adjusted amount, so the dollar coupon rises too; at maturity the holder receives the greater of adjusted or original principal. The exam's favorite TIPS fact is the tax wrinkle: each year's upward principal adjustment is **taxed as income in the year it accrues**, though the investor

will not touch that principal for years — phantom income again. So the two shelter-loving Treasuries are the same pair every exam names: zeros/STRIPS and TIPS.

Agencies are the step beyond the Treasury, and the exam draws one bright line through them. **GNMA** (Ginnie Mae) is a government agency inside HUD, and its securities carry the **full faith and credit of the United States** — the only agency pass-throughs that do. **FNMA** (Fannie Mae) and **FHLMC** (Freddie Mac) are government-*sponsored* enterprises, shareholder-owned creatures of charter; their obligations are considered high quality but are **not** backed by the full faith and credit of the government. All three run on the same engine: the **mortgage pass-through**. Thousands of home loans are pooled; each month the homeowners' interest and principal payments pass through to investors pro rata. Note the differences from a Treasury: monthly income rather than semiannual, each payment partly a return of principal, and the interest fully taxable at every level — no state exemption.

The pass-through's special danger is **prepayment risk**. Homeowners may repay early, and they do it in crowds when interest rates **fall**, refinancing old mortgages at new low rates. The investor then gets principal back early — at exactly the moment it can only be reinvested at lower yields. When rates rise, the opposite nuisance (extension) appears: prepayments slow and the investor is stuck longer at below-market rates. Average life estimates on mortgage securities are therefore honest guesses, not promises.

On the exam today. Match maturities fast: bills ≤ 1 year, notes 2–10, bonds 20–30. Know the state-tax exemption on Treasury interest, and that it does NOT extend to mortgage-security interest. The two phantom-income securities — zeros/STRIPS and TIPS — belong in tax-advantaged accounts; the exam asks this both directly and as a suitability question. The GNMA/FNMA/FHLMC line is tested constantly: only GNMA is full faith and credit. And when a question says rates have fallen and asks what troubles the GNMA holder, the answer is prepayment — principal coming home early to a world of lower yields.

PICTURE STUDY

Douglas Fairbanks at the Third Liberty Loan Rally, Paul Thompson, April 1918 · Photograph · U.S. National Archives, Washington, D.C.

Image: Wikimedia Commons, public domain

Paul Thompson photographed the swashbuckling film star Douglas Fairbanks whipping up a Wall Street crowd in April 1918, selling bonds for the Third Liberty Loan in front of the Sub-Treasury — the building that stands where Washington took his oath. The government needed billions for the war, and it chose to borrow from the whole people. This photograph sits in this lesson because it shows the birth of the mass market for government debt: the first security millions of American families ever owned was a loan to their country.

Look closely

- Find Fairbanks above the crowd. How does one small figure hold the attention of thousands without a microphone?
- Count the hats. What does the sheer density of the crowd say about how public this borrowing was?
- Find the columns and flags of the Sub-Treasury. Why stage the rally at this particular building?
- Look for women and younger faces in the crowd. Who was being asked to lend, and in what amounts?

Talk about it

1. Why would the Treasury want millions of small lenders instead of a few large banks?
2. A Liberty bond paid a modest, fixed coupon for decades. What risks did those patriotic lenders still carry, even with no risk of default?
3. Is it good stewardship to lend at a below-market rate for a cause you believe in? Where is the line between generosity and imprudence?

PROJECT

The Treasury Ladder: Design a Government-Only Portfolio

A pretend client, age 60, hands you $100,000 and one instruction: “United States government backing only, and some protection from inflation.” You will design, document and defend a Treasury portfolio — and discover why even the safest issuer forces real choices.

You will need

- Exam notebook, calculator, graph paper
- Internet access with a parent: treasurydirect.gov for current yields on bills, notes, bonds and TIPS
- A free spreadsheet (Google Sheets or LibreOffice Calc)

Steps

1. With a parent, record today’s yields for the 13-week bill, 2-year note, 10-year note, 30-year bond and 10-year TIPS; date the page.
2. Decide an allocation of the pretend $100,000 across at least four rungs, from bills to long bonds, and state in one sentence what each rung is for.
3. Add a TIPS rung sized to the client’s inflation worry, and write two sentences on the tax consequence of holding TIPS in a taxable account versus an IRA.
4. Build a spreadsheet: each rung’s amount, yield and yearly interest; total the expected annual income.
5. Test the GNMA question: the client asks whether adding a GNMA fund keeps the “government backing only” promise. Write your answer — it can — and note what new risk (prepayment) arrives with it.
6. Draw the ladder on graph paper, maturities on the horizontal axis and dollars on the vertical.
7. Present the plan to your parent in five minutes and take one objection; write the objection and your reply in the notebook.

Tips

- There is no single right allocation; the rubric rewards reasons, not a magic recipe.

- Keep every figure labeled “as of” its date — yields move daily.

Check your work

- ☐ My ladder has at least four maturities and a stated purpose for each.
- ☐ My TIPS paragraph names the phantom-income problem correctly.
- ☐ My GNMA answer draws the full-faith-and-credit line correctly for all three housing agencies.

EXAM NOTEBOOK

1. Draw the Treasury maturity line — bills ≤ 1 year, notes 2–10, bonds 20–30 — and under it write each instrument’s coupon style (discount vs. semiannual) and the state-tax exemption rule.
2. Make a two-column chart: “Full faith and credit” (Treasuries, savings bonds, GNMA) versus “Not” (FNMA, FHLMC); add one line on what a pass-through pays monthly.
3. Write a flashcard pair for phantom income: front “Which two Treasury securities tax you on money you haven’t received?”; back “Zeros/STRIPS (yearly accretion) and TIPS (CPI principal adjustment) — shelter both in retirement accounts.”

KEY FORMULAS

$$\text{TIPS adjusted principal} = \text{par} \times (1 + \text{inflation rate})$$

$$\text{TIPS coupon payment} = \text{adjusted principal} \times \frac{\text{coupon rate}}{2} \quad \text{(semiannual)}$$

From history. The Liberty Loan machinery outlived the war. In 1935 the Treasury introduced the “baby bond,” and in World War II its successor, the Series E Defense Savings Bond, was sold in denominations small enough for schoolchildren, who pasted 10-cent stamps into albums until they added up to a bond. By the war’s end, tens of millions of Americans were creditors of the United States — the broadest bondholder class in history.

WORKED EXAMPLES

Example 1. A TIPS is issued at $1,000 with a 2% coupon. In its first year the CPI rises 4%. Find the adjusted principal and the total coupons for that year (use the year-end principal for both semiannual payments to keep the arithmetic simple).

Show solution

1. Adjusted principal: $\$1{,}000 \times 1.04 = \$1{,}040$.
2. Yearly coupon at 2%: $0.02 \times \$1{,}040 = \$20.80$.
3. Tax note: the holder received $20.80 in cash but must also report the $40 principal adjustment as income this year — phantom income.

Answer: Principal $1,040; coupons about $20.80; taxable income about $60.80 though only $20.80 arrived in cash.

Example 2. Exam style — reason through every choice. Which security is backed by the full faith and credit of the United States?

A. FNMA debentures

B. FHLMC mortgage participation certificates

C. GNMA pass-through certificates

D. Federal Home Loan Bank notes

Show solution

1. A: Fannie Mae is a government-sponsored enterprise, shareholder-owned; its debt is not a direct government obligation. Wrong.
2. B: Freddie Mac is likewise a GSE — high quality by reputation, but no full-faith-and-credit backing. Wrong.
3. C: Ginnie Mae is an actual government agency within HUD, and its guarantee carries the full faith and credit of the United States. Correct.
4. D: the Federal Home Loan Banks are also GSEs; same verdict as A and B. Wrong.

Answer: C. Among the housing agencies, only GNMA's guarantee is the government's own promise — the single most repeated agency fact on the exam.

Example 3. In this example, an investor buys a Treasury STRIPS maturing in 10 years at a price of $6,140 per $10,000 of face value. What roughly is the implied annual yield, and what is the tax consequence each year? (Use $\text{PV} = \dfrac{\text{FV}}{(1+r)^{10}}$ and test $r = 5\%$.)

Show solution

1. Test 5%: $(1.05)^{10} \approx 1.629$, so $\$10{,}000 \div 1.629 \approx \$6{,}139$, almost exactly the price.
2. So the implied yield is about 5% a year, compounded.
3. Each year the IRS taxes that year's accretion — the bond's scheduled growth toward face value — though the investor receives no cash until maturity.

Answer: About 5%. The investor reports phantom income yearly, which is why STRIPS fit best inside IRAs and other tax-sheltered accounts.

PRACTICE

1. Easy Which correctly matches the Treasury instruments to their maturities?

   A. Bills 2–10 years; notes ≤ 1 year; bonds 20–30 years

   B. Bills ≤ 1 year; notes 2–10 years; bonds 20 or 30 years

   C. Bills ≤ 1 year; notes 20–30 years; bonds 2–10 years

   D. Bills 2–10 years; notes 20–30 years; bonds ≤ 1 year

   Show answer

   B. Bills a year or less (sold at a discount), notes 2 to 10 years, bonds 20 or 30 — the maturity line must be automatic before the harder questions arrive.

2. Easy Interest on a Treasury note is:

   A. Exempt from federal tax, taxable by states

   B. Taxable by the federal government, exempt from state and local tax

   C. Fully tax-free

   D. Fully taxable at every level

   Show answer

   B. Treasury interest is federally taxable but state-exempt — the mirror image of municipal interest. D describes mortgage-security interest, the tempting near-miss.

3. **Easy** What does a holder of a GNMA pass-through receive each month?

Show answer

A proportional share of the pool's mortgage payments: interest AND a partial return of principal, guaranteed by the full faith and credit of the United States.

4. **Medium** A TIPS has a 1.5% coupon and $1,000 original principal. After cumulative inflation of 6%, the adjusted principal is $1,060. The annual coupon in dollars is now:

A. $15.00

B. $15.90

C. $31.80

D. $60.00

Show answer

B. $0.015 \times \$1{,}060 = \$15.90$ — the rate is fixed, the dollars grow with the principal. A forgets the adjustment; D confuses the inflation with the coupon.

5. **Medium** Which investor has the LEAST reason to hold TIPS in a regular taxable account?

A. An IRA holder

B. A high-bracket investor with no tax shelter available

C. A tax-exempt foundation

D. A low-bracket retiree

Show answer

B. The high-bracket taxable investor pays tax each year on the phantom principal adjustment with no cash to show for it. A and C feel no sting (sheltered or exempt), and D's low bracket makes it mild.

6. Medium Which TWO features distinguish Series EE and Series I savings bonds from Treasury notes?

A. They are non-marketable and are bought from and redeemed by the Treasury

B. They trade actively on exchanges and pay monthly coupons

C. They are backed by FNMA

D. They mature in 90 days

Show answer

A. Savings bonds never trade in a secondary market; the Treasury itself is the only buyer and seller. B, C and D are all false on their face.

7. Medium Mortgage rates have dropped sharply. A client holding GNMA pass-throughs calls, puzzled that principal is arriving far faster than scheduled. Explain in two sentences.

Show answer

Homeowners in the pool are refinancing at the new lower rates, prepaying their old mortgages, and those prepayments pass straight through to her. This is prepayment risk: she gets her principal back early and must reinvest it at today's lower yields.

8. Hard An investor wants a guaranteed $50,000 for a child's college exactly 12 years from now, with no reinvestment worries along the way. The BEST fit is:

A. A GNMA pass-through

B. Treasury STRIPS maturing in 12 years

C. A 13-week T-bill rolled every quarter

D. A 30-year Treasury bond

Show answer

B. A zero pays a known face amount at a known date with nothing to reinvest. A returns unpredictable monthly principal; C must be reinvested 48 times at unknown rates; D matures 18 years too late and its price in year 12 is unknown.

9. Hard Using $\text{PV} = \dfrac{\text{FV}}{(1+r)^n}$, what price makes a 20-year $1,000 STRIPS yield 6%? (Use $(1.06)^{20} \approx 3.207$.)

Show answer

$1,000 ÷ 3.207 ≈ $311.82. Deep discount is normal for long zeros — and each year's accretion toward par is taxable phantom income.

10. Hard During the Liberty Loan drives of 1917–18, millions bought long-term government bonds at par. When later loans were issued at higher coupons, what happened to the market price of the earlier bonds, and what lesson does the exam draw?

Show answer

The earlier, lower-coupon bonds fell below par — nobody pays full price for 3½% when 4¼% is on offer. Lesson: freedom from default risk is not freedom from interest-rate risk; even Treasuries lose market value when rates rise.

11. Challenge Rank these for a conservative investor seeking government backing AND protection of purchasing power over 20 years, and justify briefly: (I) 20-year Treasury bond, (II) 20-year TIPS, (III) GNMA pass-through fund.
A. I, II, III
B. II, I, III
C. II, III, I
D. III, II, I

Show answer

B. TIPS first: full faith and credit plus a CPI-adjusted principal directly answers both requirements. The fixed Treasury bond is second: perfectly backed, but 20 years of inflation can erode its fixed coupons. GNMA third: the backing is equally good but prepayment risk makes its cash flows least predictable. C tempts those who forget that GNMA's guarantee covers payment, not reinvestment rates.

COMMON MISTAKES

- Granting FNMA and FHLMC the full faith and credit of the United States — only GNMA has it among the housing agencies.
- Saying TIPS are taxed only at maturity; the yearly principal adjustment is taxable as it accrues.

- Claiming Treasury interest is exempt from federal tax — it is state-and-local exempt, federally taxable.
- Forgetting that pass-through checks contain principal as well as interest, so the "income" cannot all be spent.
- Placing prepayment risk in a rising-rate world — refinancing floods come when rates FALL.

Make it a game · Full Faith or Not. A parent calls out securities in random order — T-bill, GNMA, FNMA, Series I savings bond, FHLMC, Treasury STRIPS, 30-year bond, a corporate debenture — and you shout "FULL FAITH" or "NOT" before they count to three. One point each; an extra point if you can add the tested detail ("TIPS — full faith, and phantom income on the adjustment!"). Ten rounds, then swap. A perfect ten earns the right to set next week's game.

Scripture. "They say unto him, Cæsar's. Then saith he unto them, Render therefore unto Cæsar the things which are Cæsar's; and unto God the things that are God's." (Matthew 22:21, KJV)

Christ acknowledges a lawful place for government and its money without surrendering what belongs to God. A citizen may serve as the government's taxpayer and its creditor; neither role is his deepest allegiance.

4.3 Corporate, Municipal and Foreign Bonds

OBJECTIVES

- Classify corporate bonds as secured (mortgage bonds, equipment trust certificates), debentures or subordinated debentures, and describe convertibles and high-yield bonds.
- Distinguish general obligation bonds (backed by taxes) from revenue bonds (backed by project income).
- Explain the federal tax exemption on municipal interest and the in-state double exemption.
- Compute taxable-equivalent yield and use it to compare a municipal bond with a corporate bond.
- Describe sovereign and foreign corporate bonds, currency risk, and (in one sentence) Eurodollar bonds.

> **Warm-up.** Your town wants a new water plant. In five minutes, write two ways it could promise to repay a loan: with everyone's property taxes, or with the water bills the plant itself collects. Under each, write one sentence: who bears the risk if the plant flops? You have just invented GO and revenue bonds.

WATCH

Corporate Bonds - Series 65 Exam Prep

CertFuel · 9:49

https://www.youtube.com/watch?v=HvTm_4T9IHg

> **WHEN TO WATCH**
> After the big idea on corporates, before the municipal paragraphs: the corporate bond types in exam order. List secured, debenture and subordinated in your notebook as he ranks them.

BACKUP VIDEO

GO Bonds vs. Revenue Bonds:SIE Exam Prep Tax-Free Munis Explained

Series 7 Whisperer · 4:31

https://www.youtube.com/watch?v=nA_oxhqP3ww

After the municipal paragraphs: a quick drill on the GO/revenue line and the tax exemption. Predict each answer before he gives it.

KEY TERMS

mortgage bond

A corporate bond secured by a lien on specific real property, such as plants or buildings.

equipment trust certificate

A bond secured by movable equipment — classically railroad cars, aircraft or trucks — whose title is held in trust until the debt is paid.

debenture

An unsecured corporate bond backed only by the issuer's general credit and promise to pay.

subordinated debenture

An unsecured bond that stands in line behind all other debt; higher risk, so higher yield.

convertible bond

A corporate bond the holder may exchange for a set number of the issuer's common shares; the privilege lets the issuer pay a lower coupon.

high-yield (junk) bond

A bond rated below investment grade — below Baa3/BBB− — paying a higher coupon for a markedly higher risk of default.

general obligation (GO) bond

A municipal bond backed by the issuer's full faith, credit and taxing power, usually requiring voter approval.

revenue bond

A municipal bond repaid only from the earnings of the project it finances — tolls, water bills, airport fees — not from taxes.

taxable-equivalent yield

The yield a taxable bond would need to match a tax-free municipal yield: municipal yield divided by (1 − tax bracket).

Eurodollar bond

A bond denominated in U.S. dollars but issued and sold outside the United States.

CORE IDEAS

The story. In 1817 the State of New York proposed to dig a canal 363 miles long, from the Hudson at Albany to Lake Erie at Buffalo — through forest, swamp and solid rock, with no federal help, at a projected cost of about $7 million when the entire federal budget was hardly three times that. Critics called it "Clinton's Folly" after Governor DeWitt Clinton, its champion. The state borrowed the money by selling

bonds — to merchants, to widows, to savings banks, and eventually to eager buyers in London — pledging canal tolls to repay them. The first boats paid tolls in 1820 on finished sections; the whole line opened in October 1825 with cannon fire relayed from Buffalo to New York Harbor; and the tolls poured in so reliably that the construction debt was repaid within about a decade. Freight that had cost roughly $100 a ton to haul overland now moved for a tenth of that, Buffalo and Rochester and Syracuse boomed, and New York became the Empire State on borrowed money honestly repaid.

How they figured it out. The Erie Canal taught America a distinction this lesson still runs on. The canal bonds were, in substance, **revenue bonds**: lenders looked to the tolls of the project itself, and the project delivered. Other states rushed to copy the trick, some borrowing for canals and railroads that earned nothing — and in the 1840s several states defaulted, teaching the second half of the lesson: a pledge is only as good as the revenue or the taxes behind it. Out of that hard schooling grew the modern municipal market's two great families — bonds backed by the **taxing power** and bonds backed by **project earnings** — and the analyst's habit of asking, before anything else: exactly what is pledged to me?

The big idea — corporates. A corporation borrows by selling bonds, and the exam sorts them by what stands behind the promise. **Secured** bonds pledge specific collateral: a **mortgage bond** pledges real property; an **equipment trust certificate** pledges rolling stock — locomotives, aircraft — with title parked in a trust until the loan is paid; a collateral trust bond pledges securities the issuer owns. A **debenture** pledges nothing but the company's general credit — it is the honest word for an unsecured corporate bond — and a **subordinated debenture** agrees to stand behind all other creditors, collecting a fatter coupon for the thinner promise. A **convertible** debenture adds a sweetener: the holder may swap the bond for a fixed number of common shares, so the issuer pays a lower coupon and the holder keeps a ticket to the stock's upside. **High-yield** (junk) bonds are simply bonds rated below investment grade — below Baa3/BBB− — whatever their structure.

The big idea — municipals. States, cities, school districts and authorities borrow too, and their bonds split along the Erie line. A **general obligation (GO)** bond is backed by the issuer's full faith, credit and **taxing power**; it usually requires voter approval, and its analyst studies the tax base — property values, population, existing debt. A **revenue bond** is repaid solely from the earnings of its project — tolls, water and

sewer charges, airport fees, stadium receipts; no voter approval is needed, the analyst studies feasibility and coverage ratios, and if the project fails, the bondholder has no claim on taxes. Some issues are **insured**: a private insurer promises timely payment, lifting the bond's rating toward the insurer's own. The great attraction of the whole family is tax: municipal interest is **exempt from federal income tax**, and if the buyer lives in the issuing state, usually from state (and often local) tax as well — the **in-state double exemption**. Mind the boundary the exam loves: the exemption covers **interest**, not capital gains; sell a muni for more than you paid and the gain is taxable like any other.

Tax exemption changes arithmetic, and the Series 65 tests the conversion both directions. A 4% municipal coupon in the hands of an investor in a 32% bracket is worth what a taxable bond would pay at $4\% \div (1 - 0.32) = 5.88\%$ — the **taxable-equivalent yield**. The higher the bracket, the more the exemption is worth; that is why municipals suit high-bracket taxable accounts and are wasted inside an IRA, where everything is sheltered anyway — a suitability trap the exam sets again and again.

Foreign bonds complete the map. A **sovereign** bond is a national government's debt; a foreign corporate bond is a company's. Both add risks a domestic bond lacks: **currency risk** (a bond can pay every peso promised and still lose dollars when the exchange rate moves), political risk, and sometimes thinner markets and weaker legal recourse. History's honest footnote: governments can and do default — the same 1840s that schooled American states schooled Europe's lenders to them. One sentence suffices for the **Eurodollar bond**: a dollar-denominated bond issued outside the United States, which spares the American buyer currency risk but not the issuer's credit risk.

On the exam today. Rank the corporate ladder cold: secured first, then debentures, then subordinated debentures (equity waits behind them all — Lesson 4.4 finishes that line). Know the equipment trust certificate by its rolling stock and the convertible by its lower coupon. On munis: GO equals taxes and voter approval; revenue equals project income, feasibility and no recourse to taxes; interest is federally exempt but capital gains are not; and the double exemption needs an in-state buyer. Be ready to compute taxable-equivalent yield in ten seconds — $\text{TEY} = \dfrac{\text{muni yield}}{1 - \text{bracket}}$ — and to spot the planted absurdity of a municipal bond recommended

for an IRA. On foreign bonds, the first answer is usually currency risk; on Eurodollar bonds, it is that the dollar denomination removes currency risk for the U.S. holder.

PICTURE STUDY

The Erie Canal at Lockport, Published for Herrmann J. Meyer, About 1855 · Lithograph · From Meyer's Universum, New York

Image: Wikimedia Commons, public domain

This lithograph from Meyer's Universum shows the engineering marvel tourists crossed oceans to see: the flight of locks at Lockport, where the Erie Canal climbed the Niagara Escarpment in stone steps. Every boat in the picture paid a toll, and those tolls repaid the bonds New York sold in 1817. The print sits in this lesson because it is what a revenue pledge looks like when it works: a project earning its own debt service, gate by gate.

Look closely

- Find the double flight of locks. Why build two side-by-side staircases of water instead of one?
- Count the boats waiting below. Each paid a toll — trace in your mind the path from a boatman's coins to a bondholder's coupon.
- Find the mills and warehouses crowding the banks. What did the canal's traffic do to the value of land beside it?
- Notice how small the human figures are against the stonework. What does that say about the scale of the gamble the lenders of 1817 took?

Talk about it

1. The canal's tolls repaid its bonds. What questions would you ask before lending to a project that has no history of earnings at all?
2. Why might a lender prefer a claim on tolls to a claim on taxes — and when would taxes be the stronger pledge?
3. Clinton's critics called the canal a folly. What separates a visionary public project from a boondoggle, and can a lender tell in advance?

PROJECT

Read a Real Municipal Bond on EMMA

Professional analysts read official statements the way you are about to. With a parent, you will find a real bond issued by a government near you on EMMA (emma.msrb.org), the free official database, and answer the analyst's first questions: who promises, what is pledged, and would I lend?

You will need

- Internet access with a parent: emma.msrb.org
- Exam notebook and calculator
- One printed or copied page of the bond's official statement (the cover page is enough)

Steps

1. With a parent, search EMMA for your town, county or school district and pick one bond issue.
2. From the cover of its official statement, record: issuer, purpose, principal amount, coupon(s), maturity date(s) and the rating if shown.
3. Decide: is it a general obligation or a revenue bond? Copy the sentence in the document that tells you what is pledged.
4. If it is a revenue bond, name the revenue source; if a GO, note whether voters approved it.
5. Compute the taxable-equivalent yield of its coupon for a pretend investor in the 32% bracket (and 37% for comparison).
6. Write a five-sentence analyst's memo: what the bond finances, what stands behind it, its rating, its TEY, and whether you would lend your pretend $10,000.
7. File the memo and the cover page in your exam notebook.

Tips

- School and water bonds are the easiest official statements to read; start there.

- The pledge language is usually on the first or second page under “Security for the Bonds.”

Check your work

- ☐ I identified the pledge (taxes or revenues) in the issuer’s own words.
- ☐ My TEY calculations are shown and correct.
- ☐ My memo gives a reason, not just a feeling, for lending or declining.

EXAM NOTEBOOK

1. Draw the corporate claims ladder top to bottom — mortgage bonds and equipment trust certificates, debentures, subordinated debentures, preferred stock, common stock — and star where “secured” ends.
2. Make a GO-versus-revenue table: backing, voter approval, what the analyst studies, and one example of each from your own county.
3. Write the TEY formula large, then compute a 3.5% muni’s TEY at 24%, 32% and 37% brackets — three lines showing the exemption growing more valuable as the bracket rises.

KEY FORMULAS

$$\text{Taxable-equivalent yield} = \frac{\text{tax-free yield}}{1 - \text{tax bracket}}$$

$$\text{Tax-free equivalent} = \text{taxable yield} \times (1 - \text{tax bracket})$$

From history. Baring Brothers of London, the great merchant bank, was among the foreign buyers of early American state canal debt, and European money followed the Erie’s success into dozens of American projects. When Pennsylvania and Maryland suspended payments in the 1840s, the poet William Wordsworth — whose family held Pennsylvania bonds — wrote a sonnet of rebuke, and American state credit in London took a generation to recover. Reputation, once spent, is borrowed back at high interest.

WORKED EXAMPLES

Example 1. An investor in the 35% federal bracket can buy a corporate debenture yielding 6% or an in-state municipal GO yielding 4.2%. In this example, ignore state tax. Which pays more after federal tax?

Show solution

1. Taxable-equivalent yield of the muni:
   $4.2\% \div (1 - 0.35) = 4.2\% \div 0.65 = 6.46\%$.
2. Compare: 6.46% beats the 6% corporate.
3. Check the other direction: the corporate after tax pays $6\% \times 0.65 = 3.9\%$, less than the muni's 4.2%. Same verdict either way.

Answer: The municipal: 4.2% tax-free is worth 6.46% taxable to this investor, beating the 6% debenture.

Example 2. Exam style — reason through every choice. Which municipal bond is backed by the issuer's taxing power?

A. A turnpike revenue bond
B. An airport revenue bond
C. A school district general obligation bond
D. A water and sewer revenue bond

Show solution

1. A: a turnpike bond is paid from tolls — project income, not taxes. Wrong.
2. B: airport bonds live on landing fees, leases and concessions. Wrong.
3. C: a GO bond pledges the district's full faith, credit and taxing power, typically after voter approval. Correct.
4. D: water and sewer bonds are the textbook revenue bond, paid from user charges. Wrong.

Answer: C. "General obligation" means taxes stand behind it; every "revenue" in a name means the project must earn its own keep.

Example 3. In this example, a corporation fails holding: first mortgage bonds, debentures and subordinated debentures. Its plants sell for enough to repay the mortgage bonds in full, and $30 million remains for $40 million of debentures and $20 million of subordinated debentures. Who gets what?

Show solution

1. The mortgage bondholders are already whole — their collateral covered them.
2. The debentures stand next: $30 million against $40 million of claims pays 75 cents on the dollar — $30 million, exhausting the estate.
3. The subordinated debentures, standing behind the debentures by contract, receive nothing; stockholders, behind them, also receive nothing.

Answer: Mortgage bonds 100%, debentures 75 cents on the dollar, subordinated debentures zero. The ladder of claims is the whole reason secured bonds accept lower coupons.

PRACTICE

1. Easy An airline bond is secured by its aircraft, with title held in trust until the debt is paid. This security is:
   A. A mortgage bond
   B. An equipment trust certificate
   C. A debenture
   D. A collateral trust bond

   Show answer

   B. Rolling stock — aircraft, railcars, trucks — in trust is the equipment trust certificate. A pledges real property, D pledges securities, and C pledges nothing at all.

2. Easy A corporate bond backed by nothing but the issuer's promise and general credit is:

   A. A mortgage bond

   B. A debenture

   C. A collateral trust bond

   D. An equipment trust certificate

   Show answer

   B. A debenture is the unsecured corporate bond. A, C and D each name their collateral — property, securities, equipment.

3. Easy Municipal bond interest is generally exempt from which tax?

   Show answer

   Federal income tax; and usually state (often local) tax too when the buyer lives in the issuing state — the in-state double exemption. Capital gains on municipals remain taxable.

4. Medium In this example, the taxable-equivalent yield of a 3.6% municipal bond for an investor in the 28% bracket is:

   A. 2.59%

   B. 3.6%

   C. 4.6%

   D. 5.0%

   Show answer

   D. $3.6\% \div (1 - 0.28) = 3.6\% \div 0.72 = 5.0\%$ — a taxable bond must pay 5% to tie. A multiplies by 0.72 instead of dividing, the mirror-image error.

5. **Medium** A toll-road authority issues bonds repayable only from tolls. If traffic never materializes, bondholders may look to:

   A. The state's general tax revenues

   B. The authority's right to raise property taxes

   C. Only the project's revenues and any reserve funds

   D. The FDIC

   Show answer

   C. A revenue bond has no claim on taxes — that is the whole distinction from a GO. A and B smuggle the taxing power back in; D insures bank deposits, not bonds.

6. **Medium** Why can a convertible debenture carry a LOWER coupon than the same company's straight debenture?

   A. It is secured by equipment

   B. The conversion privilege into common stock has value the investor pays for by accepting less interest

   C. It matures sooner

   D. It is insured

   Show answer

   B. The holder owns a bond plus a ticket to the stock's upside, and that ticket is worth something. A, C and D invent features a convertible does not, by itself, have.

7. **Medium** An adviser suggests filling a client's traditional IRA with municipal bonds. What is wrong with this advice?

   Show answer

   The IRA already shelters income from current tax, so the muni's exemption — its main attraction, paid for with a lower yield — is wasted. Worse, IRA withdrawals are taxed as ordinary income, converting the tax-free interest into taxable money. Munis belong in taxable accounts of high-bracket investors.

8. Hard An investor in the 37% bracket compares a 6.5% corporate debenture and a 4.0% in-state muni (in this example, ignore state tax). Which is better, and by how much, in taxable-equivalent terms?

Show answer

Muni TEY: $4.0\% \div 0.63 = 6.35\%$. The corporate at 6.5% wins by about 15 basis points — the arithmetic must be run, not assumed; high bracket alone does not decide it.

9. Hard A U.S. investor buys a sovereign bond of a stable foreign country, denominated in its own currency, and every payment arrives in full and on time — yet she loses money in dollars. What happened, and what single word names this risk?

Show answer

The foreign currency weakened against the dollar between purchase and payment, so the same foreign-currency coupons bought fewer dollars. Currency (exchange-rate) risk — the risk foreign bonds add even when credit is perfect.

10. Hard New York's Erie Canal bonds of 1817 were repaid from tolls within about a decade; several states that copied the idea defaulted in the 1840s on canals that earned nothing. Which bond-analysis lesson does the exam draw from this pair of outcomes?

A. Government projects cannot fail
B. A revenue pledge is only as strong as the project's actual earnings, so feasibility must be analyzed before lending
C. GO bonds are always safer than revenue bonds
D. Foreign investors should avoid American bonds

Show answer

B. The pledge is a claim on earnings that must really arrive; feasibility and coverage are the revenue analyst's whole craft. A is refuted by the 1840s; C overreaches — a rich project can outrank a poor tax base; D is not the lesson.

11. **Challenge** A Eurodollar bond pays U.S. dollars but is issued in London by a French company. For a U.S. buyer, which risk is REMOVED and which remains?

    A. Credit risk removed; currency risk remains

    B. Currency risk removed; credit risk remains

    C. Both removed

    D. Both remain

    Show answer

    B. Dollar denomination means no exchange-rate exposure for the American holder, but the French issuer can still fail — credit risk never leaves. A reverses the two; C is too good to be true, which on this exam is itself a warning.

12. **Challenge** In this example, a 4.5% insured revenue bond is rated AA because of its insurer, though the project alone would merit BBB. Name one comfort and one caution for the buyer.

    Show answer

    Comfort: the insurer's promise of timely interest and principal lifts the bond's rating and smooths payment if the project stumbles. Caution: the bond is now only as strong as project AND insurer together — if the insurer itself is downgraded, the bond's rating and price can fall with it, as buyers of insured bonds discovered when bond insurers weakened in 2008.

COMMON MISTAKES

- Calling a debenture "secured" — the word means exactly the opposite: unsecured.
- Backing a revenue bond with taxes; only the project's earnings (and reserves) stand behind it.
- Extending the municipal tax exemption to capital gains — only the interest is exempt.
- Dividing by the tax bracket instead of (1 − bracket) in the TEY formula.
- Recommending municipal bonds inside an IRA — the shelter makes the exemption worthless.

Make it a game · What's Pledged?. Make ten cards naming borrowings: school GO, turnpike revenue, first mortgage bond, equipment trust, debenture, subordinated debenture, convertible, insured muni, sovereign bond, Eurodollar bond. A parent draws one; you have ten seconds to say what stands behind it ("taxes," "tolls," "aircraft," "just the promise"…) and one extra fact for a bonus point. Miss, and the parent steals the point by answering. First to twelve points wins; play twice weekly until the deck is automatic.

Scripture. "For which of you, intending to build a tower, sitteth not down first, and counteth the cost, whether he have sufficient to finish it?" (Luke 14:28, KJV)

Christ's picture of the unfinished tower is the feasibility study in one sentence. New York counted the Erie's cost and finished it; the states that defaulted in the 1840s began towers their tolls could never pay for.

4.4 Bond Features: Coupons, Calls and Credit Ratings

OBJECTIVES

- Read a bond's basic terms: $1,000 par, coupon rate, maturity, and quotes as a percent of par.
- Explain zero-coupon bonds, their deep-discount pricing and the phantom-income tax on corporate and Treasury zeros.
- Describe call features, call protection and call premiums, and state when issuers call — when rates FALL.
- Place ratings on the Moody's and S&P scales and draw the investment-grade line at Baa3/BBB−.
- Recap liquidity and the liquidation ladder from secured creditors down to common stock.

> **Warm-up.** Take a pretend loan: a friend borrows $1,000 at 8% for ten years. Two years later, rates everywhere drop to 5%. In five minutes, write what your friend wishes the contract allowed him to do, and what clause you — the lender — wish you had demanded in exchange. You have just discovered the call feature and call protection.

WATCH

SIE Corporate Bonds: Secured, Debenture, Callable, Convertible and the Ratings Line

SIE Exam Prep · 9:41

https://www.youtube.com/watch?v=0xpPN4K78CA

> **WHEN TO WATCH**
> After the big idea: calls, convertibles and the ratings line in exam form. Each time a feature is named, write who it favors — issuer or investor — in your exam notebook.

BACKUP VIDEO

How Are Bonds Rated?

Zions TV · 2:43

https://www.youtube.com/watch?v=OO9ou8Ye8TQ

A three-minute recap of the scales after you build your ladder — check every grade it names against your chart.

KEY TERMS

par value

A bond's face amount, normally $1,000, repaid at maturity and used to compute the coupon.

coupon rate (nominal yield)

The fixed annual interest stated on the bond, as a percent of par — an 8% coupon pays $80 a year, usually in two $40 installments.

zero-coupon bond

A bond sold at a deep discount that pays no interest along the way, only face value at maturity; the yearly accretion on corporate and Treasury zeros is taxable phantom income.

call feature

The issuer's right to repay the bond early at a stated price; exercised when interest rates fall, so the issuer can refinance cheaply.

call protection

The initial period, often five or ten years, during which the bond may not be called.

put feature

The holder's right to sell the bond back to the issuer at a stated price — valuable when rates rise.

investment grade

Ratings of Baa3/BBB– or higher on the Moody's and S&P scales; below that line a bond is high-yield (junk).

liquidity

How quickly and cheaply a security can be sold at close to its true value; Treasuries are the most liquid bonds, small issues the least.

liquidation priority

The order of claims when an issuer fails: secured creditors, then unsecured (debentures), then subordinated debentures, then preferred stock, then common stock last.

CORE IDEAS

The story. In October 1907 a failed attempt to corner a copper stock set off runs on the trust companies of New York. Crowds stood in lines down Wall Street to pull their deposits; the Knickerbocker Trust failed; and for two weeks the elderly J. P. Morgan, locking bankers in his library overnight, organized the rescues a central bank would later exist to provide. Among the ruined was a financial publisher named **John Moody**, who had sold his manual business in the crash. Watching investors dump sound railroad bonds and cling to shaky ones because nobody could tell the difference, Moody saw his second chance: in 1909 he published *Moody's Analyses of Railroad Investments*, grading each railroad's bonds with letters — Aaa down to C — borrowed from the mercantile credit reports of the day. For the first time, an ordinary investor could read a bond's standing at a glance. Investors paid for the book, the letters stuck, and Standard Statistics, Poor's and Fitch soon offered grades of their own.

How they figured it out. Moody's insight was that a bond is a promise, and promises can be compared. His analysts read what this unit has taught you to read: what is

pledged, how large the earnings are beside the interest bill, how the issue ranks against the company's other debts. The letter compressed that labor into one symbol a widow or a country banker could use. The system's honest limit appeared early and never left: a rating is an opinion, paid for and sometimes wrong, revised after the facts as often as before them. The exam treats ratings as the standard measure of **credit risk** — and expects you to know they measure nothing else: not interest-rate risk, not liquidity, not whether the price is fair.

The big idea. A standard bond is a loan of $1,000 **par** per bond. The **coupon** (nominal yield) is fixed at issue: a 6% bond pays $60 a year, normally as two semiannual $30 payments, until maturity returns the $1,000. Prices are quoted as a percent of par: a corporate quoted at $98\frac{1}{2}$ costs $985; at 102 it costs $1,020. A **zero-coupon** bond strips the story to two dates: buy at a deep discount, collect par at maturity. Corporate and Treasury zeros generate taxable **phantom income** each year as they accrete toward par (municipal zeros accrete tax-free — the exemption follows the issuer).

The **call feature** is the issuer's escape hatch, and the exam hammers one sentence: issuers call when rates **FALL**. A company paying 8% in a 5% world refinances exactly as a homeowner does, repaying the old bonds at the call price (often par plus a small **call premium**) and borrowing anew at 5%. The investor loses the fat coupon at the worst moment — reinvestment at lower rates — which is why callable bonds pay more to begin with and why buyers demand **call protection**, a no-call period of five or ten years. The **put feature** is the mirror: the holder may hand the bond back at a set price, a right worth using when rates **rise** and the bond's market price sinks. Remember who owns each option: calls favor issuers, puts favor holders.

Moody's scale runs **Aaa, Aa, A, Baa**, then **Ba, B, Caa, Ca, C**; S&P's runs **AAA, AA, A, BBB**, then **BB, B, CCC, CC, C, D** (D is in default). Each broad grade subdivides — Moody's with 1, 2, 3; S&P with plus and minus. The line the exam draws is **investment grade**: **Baa3/BBB−** and above. Below it live high-yield bonds, and the line has teeth: many institutions may hold only investment-grade paper, so a downgrade across the line ("fallen angel") forces selling and drops prices. Two recap ideas complete the toolkit. **Liquidity**: Treasuries trade in seconds at tight spreads; a small, unrated issue may take days and a price concession — a risk no rating captures. And the **liquidation ladder** from Lesson 4.3, now complete: secured creditors, general creditors including debentures, subordinated debentures, preferred

stockholders, common stockholders last. Bondholders of every rank stand ahead of every stockholder.

On the exam today. Translate quotes instantly: $98\frac{1}{2}$ is \$985. The call question is nearly guaranteed: rates fall → issuer calls → investor faces reinvestment risk; if a choice says bonds are called when rates rise, it is the trap. Zeros: deepest discount, no reinvestment risk if held to maturity, but phantom income unless municipal — and (preview of Lesson 4.5) the largest price swings for a given maturity. Ratings: know both scales in order, the Baa3/BBB− line cold, and that ratings grade default risk only. Liquidation order is asked as a ranking question; put the subordinated debenture holder ahead of all stockholders every time.

PICTURE STUDY

A Central Pacific Railroad Gold Bond, Central Pacific Railroad Company, 1867 · Engraved bond certificate · Scanned from a private collection

Image: Wikimedia Commons, public domain

In 1867 the Central Pacific was blasting its way up the Sierra Nevada toward the meeting of the rails, and it paid for powder, iron and wages by selling promises like this one: one thousand dollars in gold at maturity, with the interest printed right on the sheet as rows of little coupons, one to be clipped and cashed each payment date. Everything this lesson teaches is on this piece of paper — the par value, the coupon, the maturity, the issuer whose strength the whole promise rests on. Forty years later, after the Panic of 1907, John Moody built his ratings to tell such promises apart.

Look closely

- Find the face amount of the bond and the promise to pay in gold.
- Find the rows of coupons. What is each small rectangle actually worth?
- Find the signatures and the engraved locomotive. Why cover a financial document with fine artwork?
- Look for the maturity — when the railroad must finally repay the principal.

Talk about it

1. Why did issuers print the interest as clip-out coupons, and why do we still say “coupon” for a bond’s interest rate?

2. The bond promises gold, not paper dollars. What risk were the lenders protecting themselves against?
3. If John Moody had rated this bond in 1867, what questions about the Central Pacific would he have asked before trusting the engraving?

PROJECT

Build the Ratings Ladder

You will build the wall chart every bond desk keeps in its head: the full Moody's and S&P scales side by side, with the investment-grade line drawn in red — then use it to judge five pretend bonds.

You will need

- Poster board or a large sheet, ruler, pencil and one red marker
- Exam notebook
- Internet access with a parent (optional): investor.gov's pages on bond ratings for checking your scale

Steps

1. Rule two tall columns, Moody's and S&P, and write the grades top to bottom: Aaa/AAA, Aa/AA, A/A, Baa/BBB, Ba/BB, B/B, Caa/CCC and below, D for default on the S&P side.
2. Add the modifiers in small script (Moody's 1-2-3; S&P + and −) beside the broad grades.
3. Draw the red line under Baa3/BBB− and label it INVESTMENT GRADE above, HIGH YIELD below.
4. Annotate three rungs with plain-English meanings in your own words (for example: Aaa "gilt-edged," Baa "adequate, lowest investment grade," Caa "poor standing, may be in danger of default").
5. Invent five pretend bonds with ratings (say Aa2, BBB−, Ba1, A+, Caa1) and mark each on the ladder; for each, write one sentence on who might properly buy it — a retiree's core holding, a diversified high-yield sleeve, or no one you advise.
6. Add a footnote in your own hand: "A rating measures default risk only — not interest-rate risk, not liquidity, not price."
7. Hang the chart where you study; you will use it for the rest of the course.

Tips

- Keep the two scales exactly level with each other — the exam tests equivalences like Baa/BBB.
- Say the scales aloud as you letter them; the order must become automatic.

Check your work

- ☐ Both scales are complete, in order, with the red line in the right place.
- ☐ My five pretend bonds sit on the correct rungs with sensible one-sentence verdicts.
- ☐ My footnote states what ratings do NOT measure.

EXAM NOTEBOOK

1. Write the two rating scales from memory, top to bottom, then check against your ladder and correct in red.
2. Make a call-versus-put card: front "Rates FALL →"; back "issuer CALLS (investor reinvests at less — why call protection matters). Rates RISE → holder PUTS."
3. Convert five quotes to dollars — 98½, 102, 87¼, 100, 104⅜ — and one back again ($1,012.50 → 101¼).

KEY FORMULAS

$$\text{Dollar price} = \text{quote} \times \frac{\$1{,}000}{100}$$

$$\text{Annual coupon} = \text{coupon rate} \times \$1{,}000$$

From history. Henry Varnum Poor, whose name survives in Standard & Poor's, had been publishing railroad facts since his 1860 *History of the Railroads and Canals of the United States* — data, but no grades. Moody's 1909 letters added the judgment, Poor's company adopted ratings in 1916, and by the mid-1920s nearly the whole American bond market carried letters from one agency or another.

Example 1. A corporate bond carries a 7% coupon and is quoted at $96\frac{1}{2}$. Find the dollar price, the annual interest in dollars, and each semiannual payment.

Show solution

1. Price: $96.5\% \times \$1{,}000 = \$965$.
2. Annual interest: $7\% \times \$1{,}000 = \$70$ — the coupon is always figured on par, never on the price paid.
3. Semiannual payment: $\$35$.

Answer: $965, $70 a year, paid as two $35 installments.

Example 2. Exam style — reason through every choice. An issuer is MOST likely to call its outstanding 8% bonds when:
A. Interest rates rise to 10%
B. Interest rates fall to 5%
C. The bonds are trading at a deep discount
D. The company's rating is lowered

Show solution

1. A: at 10%, the issuer's old 8% debt is cheap money — calling it to reborrow at 10% would be folly. Wrong.
2. B: at 5%, refinancing saves 3% a year on every bond; this is exactly when the call is exercised. Correct.
3. C: a deep discount means rates rose; the issuer could buy bonds back cheaply in the market, but a call at par or above would overpay. Wrong.
4. D: a downgrade raises the issuer's new-borrowing cost, making refinancing harder, not easier. Wrong.

Answer: B. Calls come when rates fall — the issuer refinances like a homeowner, and the investor inherits reinvestment risk.

Example 3. Rank the payout order in liquidation: common stock, subordinated debentures, first mortgage bonds, preferred stock, straight debentures.

Show solution

1. Secured claims first: first mortgage bonds, paid from their pledged property.
2. Unsecured creditors next: straight debentures.
3. Then the debt that agreed to wait: subordinated debentures.
4. Equity last, preferred before common: preferred stock, then common stock.

Answer: First mortgage bonds → debentures → subordinated debentures → preferred stock → common stock. Every lender outranks every owner.

PRACTICE

1. Easy A corporate bond is quoted at $102\frac{1}{4}$. Its dollar price is:
   A. $102.25
   B. $1,002.25
   C. $1,022.50
   D. $1,025.00

   Show answer

   C. Quotes are percent of $1,000 par: $102.25\% \times \$1{,}000 = \$1{,}022.50$. B misreads the quarter point as 25 cents instead of $2.50.

2. Easy The lowest INVESTMENT-GRADE rating is:
   A. Ba1/BB+
   B. Baa3/BBB−
   C. A3/A−
   D. B1/B+

   Show answer

   B. Baa3/BBB− is the last rung of investment grade; A is the first rung of high yield — the classic near-miss.

3. Easy A 5% bond bought at $900 pays how much interest per year, in dollars?

   Show answer

   $50 — 5% of the $1,000 par, regardless of the price paid. (That the $50 is a better return on $900 is Lesson 4.5's current yield.)

4. **Medium** Which feature protects the INVESTOR when interest rates rise?

   A. Call feature

   B. Put feature

   C. Conversion feature

   D. Call protection

   Show answer

   B. A put lets the holder sell the bond back at a set price when rising rates sink its market value. The call (A) is the issuer's right; call protection (D) matters when rates fall; conversion (C) tracks the stock, not rates.

5. **Medium** A company's 8% bonds were issued at par with five years of call protection, now expired. Rates on comparable new debt are 5.5%. Bondholders should expect:

   A. The coupon to be reduced to 5.5%

   B. A call at the stated call price, forcing reinvestment at lower rates

   C. A default

   D. The bonds to be put back to the company

   Show answer

   B. The issuer refinances at 5.5%, repaying holders at the call price — typically par plus any premium. A is impossible (coupons are fixed by contract); D confuses the holder's put with the issuer's call.

6. **Medium** A municipal zero-coupon bond and a corporate zero-coupon bond both accrete $45 toward par this year. How is each holder taxed federally?

   Show answer

   The corporate zero's $45 accretion is taxable phantom income this year. The municipal zero's accretion is federally tax-free, because the exemption follows the issuer — interest on municipals, including accreted interest, is exempt.

7. Medium Which does a bond rating NOT measure?

A. Likelihood of default

B. Capacity of the issuer to pay interest and principal

C. The bond's sensitivity to interest-rate changes

D. The issuer's credit standing

Show answer

C. Ratings grade credit (default) risk only; a Aaa bond with 30 years to run can still fall hard when rates rise. A, B and D are all restatements of credit quality.

8. Hard A pension rule limits a fund to investment-grade bonds. A holding rated Baa3 is downgraded one notch. What happens, and what is such a bond called?

Show answer

The bond falls to Ba1 — below the line — and the fund (like many institutions with the same rule) must sell. Forced selling drops the price. The bond is a "fallen angel," and the cliff at the line is why that single notch matters more than most.

9. Hard Rank these claims in a liquidation, first to last: subordinated debenture, common stock, equipment trust certificate, preferred stock, straight debenture.

A. Equipment trust, debenture, subordinated debenture, preferred, common

B. Debenture, equipment trust, preferred, subordinated debenture, common

C. Equipment trust, subordinated debenture, debenture, common, preferred

D. Preferred, equipment trust, debenture, subordinated debenture, common

Show answer

A. Secured first (equipment trust), then unsecured (debenture), then subordinated, then equity with preferred ahead of common. B elevates unsecured over secured; C scrambles the debt ranks; D puts an owner ahead of lenders — never.

10. Hard In 1909 John Moody began rating railroad bonds. Which statement best captures why the Panic of 1907 created the demand for his letters?
A. The government required ratings after 1907
B. Investors had just learned they could not distinguish sound bonds from weak ones, and paid for an independent grading of each promise
C. Railroads demanded ratings to raise their coupons
D. Ratings eliminated default risk
Show answer

B. Panic had punished the ignorant and the informed alike; Moody sold the ability to tell the difference. A is false — the letters were a market product, not a mandate; C reverses the buyer; D confuses measuring risk with removing it.

11. Challenge An investor compares two 20-year bonds from the same issuer: one callable in 5 years at 102, one non-callable, otherwise identical. Which should carry the higher coupon, and why must it?
Show answer

The callable bond. The investor has sold the issuer an option — the right to take the bond away just when falling rates make it most precious — and rational buyers demand extra coupon as the option's price. If the two paid the same, everyone would buy the non-callable; the market prices the difference.

COMMON MISTAKES

- Saying issuers call bonds when rates rise — calls come when rates FALL, so the issuer can refinance.
- Computing coupon dollars on the purchase price instead of on the $1,000 par.
- Placing the investment-grade line at Ba/BB instead of Baa3/BBB−.
- Letting any stockholder collect before a subordinated debenture holder in liquidation.
- Treating a high rating as a promise about price or liquidity — it grades default risk only.

Make it a game · Ratings War. Write the sixteen main grades (Aaa through C, AAA through D) on separate cards, shuffle both scales together, and race a sibling or parent: deal the deck face down, flip two at a time, and claim a pair when the two cards are equivalents (Baa/BBB, Ba/BB…). A claimed pair scores one point; a false claim loses one; the Baa3/BBB− pair scores three if the claimer shouts "investment grade line!" Most points when the deck is gone wins.

Scripture. "A good name is rather to be chosen than great riches, and loving favour rather than silver and gold." (Proverbs 22:1, KJV)

A rating is a company's "good name" written down, and the market prices it exactly as Proverbs does: the issuer with the trusted name borrows for less. For the adviser, too, a clean record is capital no fee income can replace.

4.5 Bond Mathematics: Prices, Yields and Duration

OBJECTIVES

- State and use the price–yield seesaw: when rates rise, bond prices fall, and vice versa.
- Compute current yield as annual interest divided by market price.
- Order nominal yield, current yield, YTM and YTC for premium and discount bonds — the exam's favorite ordering question.
- Explain duration: why longer maturities and lower coupons mean bigger price swings, and why a zero's duration equals its maturity.
- Explain a bond's value as discounted cash flow in plain words, and recap the credit spread.

> **Warm-up.** Draw a seesaw on paper. Label one seat PRICE and the other YIELD. Now test it: a bond pays $60 a year forever. If you pay $1,000, what percent do you earn? If you could buy the same $60 stream for $800? For $1,200? Compute the three percents (7.5%, 6%, 5%) and watch the seesaw tilt as the price moves.

WATCH

Relationship between bond prices and interest rates | Finance & Capital Markets | Khan Academy

Khan Academy · 13:15

https://www.youtube.com/watch?v=I7FDx4DPapw

> **WHEN TO WATCH**
> After the story, before the worked examples: Sal Khan derives the seesaw with simple numbers. Pause and recompute each of his prices yourself before he does.

BACKUP VIDEO

Relationship of Nominal Yield, Current Yield, Yield to Maturity and Yield to Call. Series 7 Exam

Series 7 Guru · 4:34

https://www.youtube.com/watch?v=xmCAr8zg0zs

After the yield orderings: an exam tutor draws the premium and discount ladders exactly as the test asks them. Sketch both orderings before he reveals each.

KEY TERMS

price–yield relationship

Bond prices and interest rates move inversely: when prevailing rates rise, existing bond prices fall, and when rates fall, prices rise.

premium and discount

A bond priced above par trades at a premium; below par, at a discount; the price adjusts until the bond's fixed coupon matches the market's required yield.

current yield

Annual interest in dollars divided by the bond's current market price.

yield to maturity (YTM)

The total annual return of a bond held to maturity, counting coupons plus the gain to par on a discount bond or minus the loss to par on a premium bond.

yield to call (YTC)

The same computation run to the call date and call price; on a premium callable bond it is the lowest yield of all.

duration

A measure of a bond's price sensitivity to rate changes, in years: the longer the duration, the harder the price swings; longer maturities and lower coupons both lengthen it.

discounted cash flow (DCF)

Valuing a bond as the present value of everything it will ever pay — each coupon and the final principal, each discounted back to today.

credit spread

The extra yield a riskier bond pays over a Treasury of the same maturity; spreads widen when the economy frightens lenders.

CORE IDEAS

The story. In 1751 the British government gathered its tangle of old borrowings into one instrument: the consolidated annuities, or **consols** — bonds that paid their modest coupon forever and never matured at all. For more than two and a half centuries consols financed Britain's wars and public works and traded daily in the City of London; a family could live on "the three per cents," and novels measured fortunes in them. (The last consols were finally redeemed in 2015.) A bond with no maturity is the price–yield seesaw with nothing to damp it: its price is simply the coupon divided by the market rate. When British yields were 2.5%, a £100 consol paying £3 was worth £120; let the market demand 6%, and the same perpetual £3 is worth £50. Every long bond since has told the same story in smaller print — never more brutally than in America in 1979–81, when yields on long Treasuries climbed toward 15% and the prices of old low-coupon long bonds fell by roughly half. Nobody had defaulted on them. The seesaw alone did it.

How they figured it out. The consol made the mathematics unmissable because it stripped a bond to one question: what is a fixed stream of payments worth today? The answer — divide, or more generally discount — is the oldest tool in this course. A perpetual £3 at a 6% required yield is worth $£3 \div 0.06 = £50$; a bond that does mature is the same idea with an ending: each coupon, and the final principal, discounted back to the present at today's rate, then summed. That is **discounted cash flow**, and it explains the seesaw without mystery: raise the discount rate and every future payment shrinks in present value, so the price falls; lower the rate and the

price rises. The payments never change. What changes is what the world will pay today for the right to receive them.

The big idea. From one bond, four yields. The **nominal yield** is the coupon rate — fixed at birth, 6% on par means $60 forever. The **current yield** re-asks the question at today's price: $\text{current yield} = \dfrac{\text{annual interest}}{\text{market price}}$, so the $60 coupon is 6.67% on a $900 bond and 5.45% on a $1,100 bond. **Yield to maturity** tells the whole truth for a buy-and-hold investor: coupons plus the built-in gain of a discount bond pulling up to par at maturity, or minus the built-in loss of a premium bond sinking to par. **Yield to call** runs the same arithmetic only to the call date. Hence the ordering the exam asks constantly. **Premium bond: nominal > current > YTM > YTC. Discount bond: the exact reverse — nominal < current < YTM** (and YTC higher still, though issuers rarely call discounts). At par, all the yields meet at the coupon rate.

Why is YTC lowest on a premium callable? Because the call amputates the good years: the buyer pays, say, $1,080 for high coupons and must swallow the fall to the call price over a few short years instead of many — a bigger annual loss against the same coupons. That is why a quote to a customer on a premium callable bond is conventionally the yield to call: the **worst case** is the honest quote.

Duration measures how hard the seesaw swings a particular bond. Formally it is the weighted average time until the bond's money comes back; practically, memorize its two levers. **Longer maturity → longer duration → bigger price swings. Lower coupon → longer duration**, because less of the bond's value arrives early. The extreme case makes both rules vivid: a **zero-coupon bond's duration equals its maturity** — nothing arrives until the end, so nothing cushions the wait — which makes long zeros the most rate-sensitive bonds of all, and the consol their only rival. A portfolio manager expecting rates to fall reaches for long durations to catch the price rise; one fearing a rise shortens up. Duration is the single number that carries that whole conversation.

One recap closes the unit: the **credit spread**. A 10-year BBB corporate yielding 6.1% against a 10-year Treasury at 4.3% shows a spread of 180 basis points — the market's price for the extra default risk, over and above every rate effect in this lesson. Spreads widen when recession threatens (lenders flee toward Treasuries, the "flight to quality") and narrow in confident times; a bond can thus lose price from rising

rates, widening spreads, or both at once. Rate risk and credit risk are two different storms, and the careful steward watches both skies.

On the exam today. The seesaw question appears in many costumes — rates up, prices…? — and the answer is always inverse. Compute current yield in one line and expect the ordering question in both directions: premium means nominal > current > YTM > YTC; discount reverses it; recite “premium bonds yield down the list” until it is reflex. Duration questions reward two sentences of reasoning: longest maturity plus lowest coupon equals most volatile, so among any choices the long zero swings hardest and the short high-coupon bond least. If asked which bond to buy when rates are expected to fall: the longest duration. And if a question offers “the bond’s payments changed” as the reason prices fell, reject it — the payments are fixed; it is the discounting world around them that moved.

PICTURE STUDY

The Royal Exchange, Thomas Rowlandson and Augustus Charles Pugin, 1810 · Hand-colored aquatint, from Ackermann's Microcosm of London · From The Microcosm of London, published by Rudolph Ackermann, London

Image: Wikimedia Commons, public domain

Pugin drew the architecture and Rowlandson the merchants for Ackermann's great survey of London, catching the Royal Exchange courtyard where the City's traders met daily by nation and trade. In the surrounding streets and at the nearby Stock Exchange, Britain's consols — the perpetual bonds of this lesson's story — changed hands on exactly such conversations: a murmur of war or peace moved the three per cents, and fortunes with them. The print sits here because bond mathematics was lived in places like this courtyard long before it was written as formulas.

Look closely

- Watch the knots of men. Each group is a market in one kind of news; what would a rumor of peace do as it crossed the courtyard?
- Find the arcade bays marked for different trading nations. Why would merchants organize themselves by country?
- Notice there are no tickers, screens or clocks facing the yard. Where is the price of a consol kept, in a market like this?
- Compare the permanence of the stone arcades with the quickness of the conversations. Which is the real exchange?

Talk about it

1. A consol never matured, so its price was pure seesaw: coupon divided by the market's rate. Why does a long bond behave almost like a perpetual one?
2. News moved these prices within minutes, two centuries before electronics. What does that say about what a market price actually is?
3. Families lived for generations on "the three per cents." What were the quiet risks of a fortune that never matured — and who in this unit would you say bore them in 1979–81?

PROJECT

The Seesaw Lab: Ten Bonds Under Moving Rates

You will build a small bond laboratory in a spreadsheet: ten pretend bonds of varied coupons and maturities, their current yields computed, and an experiment showing which prices swing hardest when rates move — duration made visible.

You will need

- Free spreadsheet (Google Sheets or LibreOffice Calc)
- Exam notebook, calculator, graph paper
- Your ratings ladder from Lesson 4.4

Steps

1. Create ten pretend bonds in rows: vary coupons (0% to 8%), maturities (2 to 30 years) and prices (deep discount to premium); give each a rating from your ladder.
2. Add columns: annual interest (coupon × $1,000), current yield (interest ÷ price), premium/discount/par, and the yield ordering each implies (write "N>C>YTM" or the reverse).
3. For the two zeros you included, compute price from $\$1{,}000/(1+r)^n$ at a rate you choose, and set duration equal to maturity.
4. Experiment: approximate each bond's duration (long/low-coupon = high; short/high-coupon = low; zeros = maturity), then compute each price's approximate percent change if rates rise 1% and fall 1%.
5. Sort the table by that sensitivity and graph price-change against maturity on graph paper. Mark where the zeros land.
6. Write one paragraph: which client each kind of bond suits — the retiree needing income soon, the saver with a date 20 years off, the investor betting rates will fall — and why, in terms of duration and credit.
7. File the printed table, graph and paragraph in your exam notebook; the unit test will borrow from this lab.

Tips

- Keep one bond exactly at par as your control — all its yields should equal its coupon.
- If a result surprises you, check it against the seesaw drawing before trusting the spreadsheet.

Check your work

- ☐ All ten current yields are correct (spot-check three by hand).
- ☐ My sensitivity ranking puts the long zero first and the short high-coupon bond last.
- ☐ My paragraph matches bonds to clients with reasons, not slogans.

EXAM NOTEBOOK

1. Draw the master seesaw page: PRICE and YIELD on the plank, and beneath it the two yield orderings — premium (N > C > YTM > YTC) and discount (reversed) — boxed for the exam.
2. Make a duration card: front "What lengthens duration?"; back "Longer maturity, lower coupon; zero's duration = its maturity; longest duration = biggest swings."
3. Compute and tabulate current yield for a $70 coupon at prices $875, $1,000 and $1,120, and label each row premium, par or discount with its ordering.

KEY FORMULAS

$$\text{Current yield} = \frac{\text{annual interest}}{\text{market price}}$$

$$\text{Premium bond: nominal} > \text{current} > \text{YTM} > \text{YTC}; \quad \text{discount reverses the order}$$

$$\text{Price of a zero} = \frac{\$1{,}000}{(1+r)^{n}}$$

$$\text{Credit spread} = \text{corporate yield} - \text{Treasury yield (same maturity)}$$

From history. The consols' long life ended quietly: in 2014–15 His Majesty's Treasury redeemed the remaining consolidated stock, including the famous 2½% issues, closing accounts some families had held since the Napoleonic Wars. By then America had lived the other end of the lesson — the long-bond holders of 1979–81, who learned that a government can pay every coupon in full and its bondholders can still lose half their principal to the mathematics of the seesaw.

WORKED EXAMPLES

Example 1. A 6% bond trades at $1,200. Find the current yield and state, without computing it, whether YTM is higher or lower — and why.

Show solution

1. Annual interest: $6\% \times \$1{,}000 = \$60$.
2. Current yield: $\$60 \div \$1{,}200 = 5\%$.
3. The buyer pays $1,200 but will collect only $1,000 at maturity — a built-in $200 loss that YTM must subtract. So YTM < 5% < 6%: nominal > current > YTM, the premium ordering.

Answer: Current yield 5%; YTM is lower still, because a premium bond's price must sink to par. Nominal 6% > current 5% > YTM.

Example 2. Exam style — reason through every choice. A bond is trading at a DISCOUNT. Which ordering of its yields is correct?

A. Nominal > current > YTM

B. Current > nominal > YTM

C. YTM > current > nominal

D. All three are equal

Show solution

1. Anchor the two ends. The nominal yield is fixed on par; paying LESS than par makes every other yield better than nominal, so nominal is the smallest — A and B, which rank nominal above YTM, are out.
2. Current yield beats nominal (same $ coupon on a smaller price) but ignores the bonus still coming: the rise from the discount price to par at maturity.
3. YTM counts coupons AND that built-in gain, so it tops current yield. That is choice C.
4. D is true only for a bond trading exactly at par — the examiners' favorite consolation answer.

Answer: C. Discount bonds yield UP the list (nominal < current < YTM); premium bonds yield down it. One picture of the seesaw settles every version of this question.

Example 3. In this example, rates rise one percentage point. Estimate the price change of (a) a bond with duration 4 and (b) a bond with duration 12, and name which investor sleeps better.

Show solution

1. Duration approximates the percent price change for a 1-point rate move.
2. (a) Duration 4: price falls about 4%, to roughly $960 per $1,000 of value.
3. (b) Duration 12: price falls about 12%, to roughly $880.
4. The short-duration holder sleeps better in rising rates — but would earn far less price gain if rates had fallen instead. Duration is exposure, not error.

Answer: About −4% versus −12%. Duration converts “rates moved” into “my bond moved this much” — the number every bond desk quotes first.

Example 4. A 10-year zero-coupon bond is priced to yield 7%. Using $(1.07)^{10} \approx 1.967$, find the price per $1,000 and state the bond’s duration.

Show solution

1. Price: $\$1{,}000 \div 1.967 \approx \$508.35$.
2. Duration: a zero pays nothing until maturity, so its duration equals its maturity — 10 years.
3. Consequence: among 10-year bonds this one swings hardest when rates move, since no early coupons soften the ride.

Answer: About $508; duration 10 years exactly. Zeros are the purest bet on the seesaw.

PRACTICE

1. Easy Interest rates rise sharply. The prices of outstanding bonds will:

   A. Rise

   B. Fall

   C. Stay unchanged, since the coupons are fixed

   D. Fall for corporates only, not Treasuries

   Show answer

   B. New bonds pay the higher coupons, so old fixed coupons must sell cheaper until their yields match the market. C is the planted confusion — fixed payments do not mean a fixed price; D forgets that the seesaw spares no issuer, Treasuries included.

2. Easy The current yield of an 8% bond trading at $1,100 is:

   A. 7.27%

   B. 8.0%

   C. 8.8%

   D. 6.9%

   Show answer

   A. $\$80 \div \$1{,}100 = 7.27\%$. B quotes the nominal yield; C divides by par and multiplies by the premium — a made-up step; always divide the $80 coupon by the market price.

3. Easy A bond trades exactly at par. What is the relationship among its nominal yield, current yield and YTM?

   Show answer

   All equal — at par the coupon rate, current yield and YTM are the same number. The orderings only separate at a premium or discount.

4. **Medium** Which bond's yields are ranked correctly?

A. Premium bond: YTM > current > nominal

B. Premium bond: nominal > current > YTM

C. Discount bond: nominal > YTM > current

D. Discount bond: current > YTM > nominal

Show answer

B. Premium bonds yield down the list — the price paid above par drags every total-return measure below the coupon. A reverses it; C and D both misplace YTM, which tops the list on a discount bond.

5. **Medium** A 7% bond trades at $940 with eight years to run. Is its YTM above or below 7.45% (its current yield), and what does YTM count that current yield ignores?

Show answer

Above. YTM adds the built-in gain from $940 up to $1,000 at maturity, spread over the eight years, which current yield ignores entirely. Discount ordering: nominal 7% < current 7.45% < YTM.

6. **Medium** Which bond has the LONGEST duration?

A. 2-year, 8% coupon

B. 10-year, 8% coupon

C. 10-year, 2% coupon

D. 10-year zero coupon

Show answer

D. The zero pays everything at year 10, so its duration IS 10 — longer than any coupon bond of the same maturity. C beats B (lower coupon), B beats A (longer maturity), and D beats them all.

7. Medium An investor is convinced rates will FALL over the next two years and wants the biggest price gain if right. Which fits?

A. 13-week T-bills, rolled

B. A 2-year high-coupon note

C. A 25-year zero-coupon Treasury

D. A money market fund

Show answer

C. Falling rates lift long-duration bonds most, and a 25-year zero has the longest duration on the menu. A, B and D barely move — safety when rates rise, dead weight for this bet. (The same choice loses most if rates rise; conviction is not certainty.)

8. Hard A client is quoted a premium bond, callable in 4 years, maturing in 15. The honest yield to quote is the LOWEST one. Which is it, and why is it lowest?

A. Nominal yield

B. Current yield

C. Yield to maturity

D. Yield to call

Show answer

D. On a premium bond the drop from price to call value is squeezed into few years, cutting the annual return hardest: nominal > current > YTM > YTC. Quoting anything but the worst case flatters the bond — which is why the convention exists.

9. Hard Using $(1.06)^{15} \approx 2.397$, price a 15-year zero to yield 6%, and estimate its new price if yields jump to 7% ($(1.07)^{15} \approx 2.759$). What percent was lost?

Show answer

At 6%: $\$1{,}000 \div 2.397 \approx \$417$. At 7%: $\$1{,}000 \div 2.759 \approx \$362$. Loss about 13% on a one-point move — duration ≈ 15 in action.

10. Hard A 10-year Treasury yields 4.2% while a 10-year BBB corporate yields 6.0%. A recession scare arrives and the corporate's yield rises to 6.8% while the Treasury's FALLS to 3.9%. What happened to the credit spread, and what is the pattern called?

Show answer

The spread widened from 180 to 290 basis points: frightened money fled to Treasuries (raising their price, lowering their yield) and demanded more for corporate risk. The flight to quality — credit risk repricing independently of the general level of rates.

11. Medium Britain's consols never matured; a consol's price was simply coupon ÷ market rate. A £3-per-year consol when the market required 4%, and then 6%, was worth:

A. £75, then £50

B. £120, then £80

C. £50, then £75

D. £100 at both rates

Show answer

A. $£3 \div 0.04 = £75$ and $£3 \div 0.06 = £50$ — a 2-point rise cost a third of the fortune. C reverses the seesaw; D pretends a perpetual bond has a par to return to.

12. Challenge A question claims: "Long bond prices fell 40% in 1979–81 because the Treasury reduced the coupon payments on outstanding bonds." Correct the sentence and give the true mechanism in two sentences.

Show answer

No coupon was reduced and no payment missed; the Treasury cannot change an outstanding bond's terms. Market yields climbed toward 15%, so fixed old coupons had to be discounted at the new rates, and the present value — the price — of long, low-coupon bonds collapsed. The seesaw needs no default to do its work.

COMMON MISTAKES

- Forgetting the inverse: rates up means prices DOWN, every time, no exceptions.
- Dividing annual interest by par instead of market price when computing current yield.

- Reversing the premium ordering — on a premium bond YTM is BELOW current yield, and YTC lowest of all.
- Giving the high-coupon bond the longer duration; low coupons and long maturities lengthen duration.
- Blaming price declines on changed payments — a bond's payments are fixed; the discount rate moved.

Make it a game · Seesaw Showdown. A parent calls two things: a direction ("rates UP!" or "rates DOWN!") and a bond ("premium callable," "long zero," "short high-coupon note"). In five seconds you must answer two questions: which way its price moves, and — for the bonds named premium or discount — recite the yield ordering. One point per correct pair; the long zero counts double because it swings double. Ten rounds, swap roles, and keep a family scoreboard for the week.

Scripture. "Give a portion to seven, and also to eight; for thou knowest not what evil shall be upon the earth." (Ecclesiastes 11:2, KJV)

The Preacher's counsel is a bond ladder in one verse: divide across seven or eight portions — maturities, issuers, kinds — because no one knows which storm comes. Duration tells you how exposed each portion is; Scripture tells you why you spread them.

UNIT 4

Cash and Fixed Income

This unit opens NASAA's second section — investment vehicle characteristics — with the quiet half of the market: cash and bonds. You will start with the money every portfolio keeps on hand (deposits, CDs, Treasury bills, commercial paper, money market funds) and learn why the collapse of the **Penn Central** railroad in 1970 shocked that sleepy market awake. Then you will lend to the government — bills, notes, bonds, **TIPS** and agency securities — the way millions of Americans first did when movie stars sold **Liberty Loans** from the courthouse steps in 1918, and to corporations, cities and foreign governments, the way New York State borrowed in 1817 to dig the **Erie Canal** and paid it back with tolls.

The last two lessons give you the bond desk's tools: coupons, calls, puts and the letter ratings **John Moody** invented in 1909 after the Panic of 1907; then the mathematics — the price–yield seesaw, current yield, yield to maturity, yield to call and **duration** — told through Britain's consols, the bonds that never matured. Fixed income is roughly a fifth of the real Series 65, and its favorite questions (the yield ordering on a premium bond, the call when rates fall, the phantom income on a zero or a TIPS) are all here. By the end you will price, compare and rank bonds like a steward who must answer for other people's money.

PREREQUISITES

- Can convert between percents, decimals and basis points (100 basis points = 1%)
- Can compute present value and future value with a calculator, as practiced in Unit 3
- Can solve a one-step equation for an unknown (for example, find the price when yield is given)
- Can read a simple balance sheet and income statement from Unit 3

MASTERY CHECKLIST

- ☐ I can name the main money market instruments and say which are insured, which are discounted and which are unsecured.
- ☐ I can tell Treasury bills, notes, bonds, STRIPS and TIPS apart by maturity, coupon and tax treatment, and explain phantom income.
- ☐ I can explain why GNMA is backed by the full faith and credit of the United States and FNMA and FHLMC are not, and what prepayment risk does to a mortgage pass-through.
- ☐ I can classify corporate bonds (secured, debenture, subordinated, convertible, high-yield) and municipal bonds (general obligation versus revenue), and compute a taxable-equivalent yield.
- ☐ I can read a bond quote as a percent of par, explain call and put features, and place any rating on the Moody's and S&P scales with the investment-grade line at Baa3/BBB−.
- ☐ I can compute current yield, order nominal yield, current yield, YTM and YTC for premium and discount bonds, and use the price–yield seesaw.
- ☐ I can explain duration — why longer maturities and lower

coupons swing harder — and why a zero-coupon bond's duration equals its maturity.

- ☐ I can explain a credit spread and price a simple zero-coupon bond with present value.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **TreasuryDirect: Marketable Securities**: Free, from the U.S. Treasury itself. Plain-English pages on bills, notes, bonds, TIPS, FRNs and STRIPS, with current auction schedules. The bills page fits Lesson 4.1 and the rest fit Lesson 4.2. Ages 14 and up.
- **MSRB Education Center**: Free, from the Municipal Securities Rulemaking Board: videos and fact sheets on how municipal bonds work, their risks and their lifecycle. Read alongside Lesson 4.3. Ages 14 and up.
- **EMMA — Electronic Municipal Market Access**: Free. The official public database of municipal bonds: look up a real bond issued by your own town or school district and read its official statement for the Lesson 4.3 project. Ages 14 and up, with a parent.
- **Investor.gov: Bonds**: Free, from the SEC's Office of Investor Education: short guides to bonds, ratings, callable bonds and yield. A good review for Lessons 4.4 and 4.5. Ages 14 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

4.1 Cash and the Money Market: Deposits, CDs and Treasury Bills

3 sessions of 50 minutes

4.2 Lending to the Government: Treasuries, TIPS and Agencies

3 sessions of 50 minutes

4.3 Corporate, Municipal and Foreign Bonds — 3 sessions of 50 minutes

4.4 Bond Features: Coupons, Calls and Credit Ratings — 3 sessions of 50 minutes

4.5 Bond Mathematics: Prices, Yields and Duration — 3 sessions of 50 minutes

Unit 4 test

Closed book. Allow about 83 seconds per question — set a timer for 28 minutes. Answer every question; there is no penalty for guessing, on this test or on the real Series 65. Where a problem says "in this example," use the figures given, not current rates or law. Each question is worth 5 points; the test is worth 100.

1. **5 pts**

   Which money market instrument is an unsecured corporate note exempt from Securities Act registration because it matures in 270 days or less?

   A. Banker's acceptance

   B. Negotiable CD

   C. Commercial paper

   D. Repurchase agreement

2. **5 pts**

   A 26-week T-bill with $10,000 face sells for $9,760. The investor's interest if held to maturity is:

   A. $0 — bills pay no interest

   B. $240

   C. $480

   D. $9,760

3. **5 pts**

   As of 2026, FDIC insurance covers deposits up to $250,000 measured:

   A. Per account

   B. Per depositor, per insured bank, per ownership category

   C. Per family

   D. Per branch office

4. 5 pts

A client parks $1.5 million of corporate cash in a money market mutual fund. Which statement to the client is accurate?

A. “The FDIC insures the fund.”

B. “The $1.00 share price is guaranteed by the government.”

C. “The fund seeks a stable $1.00 price, but it is a security and is not insured or guaranteed.”

D. “The fund cannot lose value.”

5. 5 pts

Interest on a 10-year Treasury note is:

A. Exempt from federal income tax

B. Exempt from state and local income tax

C. Exempt from all taxation

D. Taxable by states but not by the federal government

6. 5 pts

A TIPS with a 2% coupon and $1,000 original principal has experienced 10% cumulative inflation. In this example its annual interest in dollars is now:

A. $20.00

B. $22.00

C. $102.00

D. $120.00

7. 5 pts

An investor holds TIPS in a regular taxable account. Which is TRUE?

A. The yearly principal adjustment is taxed as income even though it is not received in cash

B. All taxation waits until maturity

C. The interest is exempt from federal tax

D. The principal adjustment is never taxed

8. 5 pts

Which is backed by the full faith and credit of the United States?

A. FNMA

B. FHLMC

C. Federal Home Loan Bank

D. GNMA

9. 5 pts

Interest rates fall two points. The holder of a GNMA pass-through should expect:

A. Slower prepayments and a longer average life

B. Faster prepayments, returning principal early for reinvestment at lower rates

C. Default on the certificates

D. The coupon rate to adjust upward

10. 5 pts

A corporate bond secured by a lien on the company's factories is a:

A. Debenture

B. Subordinated debenture

C. Mortgage bond

D. Income bond

11. 5 pts

A municipal bond repaid ONLY from the earnings of the airport it financed is a:

A. General obligation bond

B. Revenue bond

C. Double-barreled Treasury

D. Debenture

12. 5 pts

An investor in the 32% federal bracket holds a 3.4% municipal bond. In this example its taxable-equivalent yield is:

A. 3.4%

B. 4.49%

C. 5.00%

D. 10.63%

13. **5 pts**

Which recommendation is LEAST suitable on its face?

A. Treasury STRIPS inside an IRA for a known future goal

B. Municipal bonds inside a traditional IRA

C. An insured municipal GO for a high-bracket taxable account

D. T-bills for an emergency reserve

14. **5 pts**

A U.S. investor's foreign bond pays every coupon in full, yet her dollar return is negative. The cause is:

A. Credit risk

B. Currency risk

C. Call risk

D. Prepayment risk

15. **5 pts**

A corporate bond quoted at $91\frac{1}{2}$ costs:

A. $91.50

B. $910.50

C. $915.00

D. $950.00

16. **5 pts**

Issuers are MOST likely to exercise a call feature when:

A. Interest rates have risen

B. Interest rates have fallen

C. Their bonds trade at a discount

D. Their credit rating has been cut

17. **5 pts**

In a liquidation, which claimant is paid FIRST?

A. Common stockholders

B. Preferred stockholders

C. Subordinated debenture holders

D. Equipment trust certificate holders

18. **5 pts**

A 6% bond trades at $800. Its current yield is:

A. 4.8%

B. 6.0%

C. 7.5%

D. 8.0%

19. **5 pts**

For a bond trading at a PREMIUM, the correct ordering is:

A. Nominal > current > YTM > YTC

B. YTC > YTM > current > nominal

C. Current > nominal > YTM > YTC

D. All four yields are equal

20. **5 pts**

Which bond's price swings MOST when rates move one point?

A. 2-year, 8% coupon note

B. 10-year, 7% coupon bond

C. 20-year, 6% coupon bond

D. 20-year zero-coupon bond

ANSWER KEY

1. C. Commercial paper is the short unsecured corporate IOU; the 270-day ceiling preserves the registration exemption. A carries a bank guarantee, B is an insured-up-to-the-limit deposit, D is collateralized.
2. B. $\$10{,}000 - \$9{,}760 = \$240$; the discount IS the interest. A confuses "no coupon" with "no interest"; C doubles the half-year figure without cause.
3. B. The limit follows the depositor, the bank and the ownership category — not the number of accounts. Splitting money across two accounts at one bank in one category adds no coverage.
4. C. The $1 price is a goal, not a promise; a money market fund is a security outside FDIC protection. A, B and D each make the guarantee the law forbids claiming.
5. B. Treasuries are federally taxable but state-and-local exempt — the mirror image of municipals. A and D reverse the rule; C belongs to no security.
6. B. Adjusted principal $1,100; coupon $0.02 \times \$1{,}100 = \$22$. A forgets the adjustment; C and D confuse the 10% inflation with the coupon.
7. A. The CPI accretion is phantom income, taxed as it accrues — the classic reason TIPS fit best in sheltered accounts. B describes nothing in the Treasury market; C reverses the federal/state rule; D is wishful.
8. D. Ginnie Mae is a true government agency; its guarantee is the government's own. The other three are government-sponsored enterprises — high quality by reputation, but not full faith and credit.
9. B. Homeowners refinance when rates fall, and their prepayments pass through — principal comes home just when reinvestment pays least. A describes rising rates; C ignores the government guarantee; D invents an adjustable coupon.
10. C. Real property pledged = mortgage bond. A and B are unsecured by definition; an income bond pays interest only if earned — a different animal entirely.
11. B. Project income, not taxes, stands behind a revenue bond; if the airport fails, bondholders cannot reach the tax base. A pledges taxing power; C and D misname the instrument.
12. C. $3.4\% \div (1 - 0.32) = 3.4\% \div 0.68 = 5.0\%$. B divides by (1 + 0.32)'s cousin 0.757 — a made-up step; D divides by the bracket itself, the classic error.
13. B. The IRA already shelters income, wasting the muni's exemption, and withdrawals convert tax-free interest into ordinary taxable income. A, C and D each match the vehicle to its proper home.

14. B. The issuer performed; the exchange rate did not — the foreign currency weakened against the dollar. A requires a missed payment; C and D require features the fact pattern never mentions.
15. C. Quotes are percent of $1,000 par: $91.5\% \times \$1{,}000 = \$915$. B misreads the half point as 50 cents; A forgets the par multiplier.
16. B. Falling rates let the issuer refinance expensive old coupons cheaply — the homeowner's refinance in corporate dress. A and C describe the same rising-rate world where calling would overpay; D makes refinancing harder.
17. D. Secured creditors lead the line; their collateral exists for this day. Then debentures, then subordinated debentures, then preferred, with common stock last — every lender ahead of every owner.
18. C. $\$60 \div \$800 = 7.5\%$. B quotes the nominal yield; A multiplies instead of divides; D divides by a price nobody paid.
19. A. Premium bonds yield down the list: the above-par price drags each fuller measure lower, and the call squeezes the loss into fewer years, making YTC least. B is the discount ordering; D holds only at par.
20. D. Longest maturity plus lowest possible coupon = longest duration; a 20-year zero's duration is 20, beating even the 20-year coupon bond, whose early coupons shorten its duration. A is the calmest of the four.

PORTFOLIO PIECE: MY BOND DESK BOOK

Assemble the desk book a young fixed-income analyst would be proud to open in an interview. Include: your drawn price–yield seesaw with the three-yield ordering written out for premium and for discount bonds (YTC included on the premium side); your ratings ladder from Lesson 4.4 with the investment-grade line in red; your ten-bond pretend portfolio from the Seesaw Lab, with coupons, prices and current yields computed in a spreadsheet and three computations spot-checked by hand; and one closing paragraph matching each bond TYPE — T-bill, Treasury note, TIPS, GNMA, corporate debenture, municipal GO, municipal revenue, high-yield, zero, foreign — to the pretend client it suits and why. Add your money market map, your EMMA memo and your Treasury ladder as supporting exhibits.

LOOK FOR	WHAT IT MEANS
Accuracy	All computations — discounts, TEY, current yields, zero prices — are correct, labeled and shown, with “in this example” or an as-of date on every changeable figure.
The seesaw and orderings	The seesaw drawing is clear, and the premium and discount yield orderings are stated correctly and explained in one sentence each.
The ratings ladder	Both scales are complete and aligned, the Baa3/BBB− line is drawn and labeled, and the footnote states what ratings do not measure.
The ten-bond portfolio	The spreadsheet is complete and tidy; duration reasoning correctly ranks the bonds’ rate sensitivity, with the long zero identified as the most volatile.
Client judgment	The closing paragraph matches each bond type to a sensible pretend client with a reason drawn from this unit — tax, backing, duration or credit — not a slogan.

UNIT 5

Equity Securities

A share of stock is a slice of a real business, and this unit is about everything a slice can be. It begins in Amsterdam in 1602, when the Dutch East India Company sold the first shares the general public could buy and trade, and it ends at Charles Dow's ticker, where technicians still read the tape he first averaged in 1884. Along the way you will learn what a **common stockholder** actually owns — votes, preemptive rights, inspection rights and the last claim in line — and how to work a **cumulative voting** problem that lets a small shareholder seat a director. You will meet **preferred stock**, the bond-like equity the railroads made famous, and master dividends in arrears, conversion parity, the four dividend dates and what a stock split does not change.

Then the unit turns to the shares people earn at work — **restricted stock**, Rule 144, and employee stock options, told through the Sears, Roebuck profit-sharing fund of 1916 that turned loyal clerks into owners — and finishes with the two great schools of stock analysis: **fundamental analysis**, where Graham and Dodd taught a ruined Wall Street to value a business by its earnings and dividends, and **technical analysis**, where you will learn honestly what chartists do and what the exam expects you to know about it. By the end you can price a stock with the dividend discount model, work a parity problem, draw a four-dates timeline and answer the Series 65's equity questions with confidence.

PREREQUISITES

- Can compute ratios from Unit 3 (P/E, earnings per share) and explain the ladder of liquidation from Lesson 3.5
- Can work present-value ideas from Lesson 3.3 (a dollar later is worth less than a dollar now)
- Can convert percents to decimals and solve a one-variable equation like $P = D \div r$
- Can read a bond-style quote from Unit 4 and explain why prices fall when interest rates rise

MASTERY CHECKLIST

- ☐ I can list the rights of a common stockholder: vote, dividends if declared, preemptive rights, inspection rights and the residual claim.
- ☐ I can work a statutory and a cumulative voting problem and explain why cumulative voting helps the small shareholder.
- ☐ I can tell a right from a warrant from an employee option and explain ADRs, including the currency risk that remains.
- ☐ I can calculate dividends in arrears for a cumulative preferred and a conversion ratio and parity price for a convertible.
- ☐ I can put the four dividend dates in order, say who sets each and who gets the dividend, and show what a split leaves unchanged.
- ☐ I can explain restricted stock, control stock and Rule 144 in plain words, and the tax difference between an ISO and a nonqualified option.
- ☐ I can price a stock with the zero-growth and constant-growth (Gordon) dividend discount models and dodge the D1 trap.

- ☐ I can describe what technical analysts do — trendlines, support and resistance, moving averages, breadth, short interest — without promising that charts predict.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **Investor.gov: Stocks**: Free, from the SEC's Office of Investor Education. A plain-English page on what stock is, common versus preferred, and how investors earn (or lose) money. Read it with Lessons 5.1 and 5.2. Ages 14 and up.
- **Investor.gov: American Depositary Receipts**: Free. The SEC's short official explanation of ADRs — what the receipt is, who issues it, and the risks that remain. Two minutes of reading that locks in the ADR paragraph of Lesson 5.1. Ages 14 and up.
- **Investor.gov: Rule 144 — Selling Restricted and Control Securities**: Free. The official plain-words summary of the rule at the heart of Lesson 5.3, including the current holding periods and volume limits if they ever change. Ages 15 and up.
- ***The Stock Exchange from Within*, by W. C. Van Antwerp (1913)**: Free on the Internet Archive. A Wall Street insider defends and explains the Exchange a generation before the SEC existed; chapter I's tour of the floor pairs with Lessons 5.1 and 5.5. Old opinions, told vividly — read it as history. Ages 15 and up.
- ***The ABC of Stock Speculation*, by S. A. Nelson (1902)**: Free on the Internet Archive. The little book that first put Charles Dow's market ideas between covers and coined the phrase "Dow's theory." Skim the chapters built from Dow's own editorials alongside Lesson 5.5. Ages 15 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

5.1	**Common Stock and Shareholder Rights**	3 sessions of 50 minutes
5.2	**Preferred Stock, Convertibles and Dividends**	3 sessions of 50 minutes
5.3	**Restricted Stock and Employee Stock Options**	3 sessions of 50 minutes
5.4	**Fundamental Analysis: Value from Earnings and Dividends**	

5.5 Technical Analysis: Reading the Charts 3 sessions of 50 minutes

Unit 5 test

Closed book. Twenty questions, four choices each, 5 points apiece. Time yourself at about 83 seconds a question — 28 minutes for the set — just as on the real exam, and answer every question; there is no penalty for guessing. Where a problem says "in this example," use the figures given, not current law or prices. Calculators allowed for the computation items; show your setup in the margin so errors can be found and fixed.

1. **5 pts**

   An investor owns 200 shares of a company electing four directors under cumulative voting. The maximum number of votes she may cast for a single candidate is:

   A. 200

   B. 400

   C. 800

   D. 50

2. **5 pts**

   Which set of traits describes a subscription right rather than a warrant?

   A. Long-term; exercise price above market at issue; attached to bonds

   B. Short-term; subscription price below market; issued to existing shareholders

   C. Perpetual; issued to employees; taxed at exercise

   D. Short-term; price above market; issued to bondholders

3. **5 pts**

   The holder of an American depositary receipt on a French company bears which of the following risks?

   A. Currency risk only if the ADR is unsponsored

   B. No currency risk, because the ADR pays dollars

   C. Currency risk, because the underlying shares are valued in euros

   D. Settlement risk on a foreign exchange

4. 5 pts

In a corporate liquidation, common stockholders are paid:

A. Before unsecured creditors but after bondholders

B. Immediately after preferred stockholders and before creditors

C. Last, after all creditors and preferred stockholders

D. Pro rata alongside preferred stockholders

5. 5 pts

A 6% cumulative preferred ($100 par) paid no dividend for two full years. This year, before the common may receive anything, each preferred share must be paid:

A. $6

B. $12

C. $18

D. $20

6. 5 pts

A convertible preferred ($100 par) is convertible at $25. With the common at $27, the parity price of the preferred is:

A. $100

B. $108

C. $112

D. $92.59

7. 5 pts

Which dividend date is NOT set by the board of directors?

A. Declaration date

B. Record date

C. Payable date

D. Ex-dividend date

8. 5 pts

An investor buys a stock in a regular-way trade ON its ex-dividend date. The declared dividend goes to:

A. The buyer

B. The seller

C. Whoever holds on the payable date

D. The issuer

9. 5 pts

A client holds 300 shares at $80. After a 2-for-1 split she holds:

A. 600 shares at $40; total value unchanged

B. 600 shares at $80; total value doubled

C. 150 shares at $160; total value unchanged

D. 600 shares at $40; total value halved

10. 5 pts

Interest rates fall substantially. The price of an outstanding straight preferred stock will most likely:

A. Fall, because its dividend is fixed

B. Rise, because its fixed dividend is now more attractive

C. Stay unchanged, because preferred has no maturity

D. Fall, because the issuer will raise the dividend

11. 5 pts

Shares bought in a private placement from a non-reporting company may be resold publicly under Rule 144 after:

A. Six months

B. One year

C. Ninety days

D. No waiting period if sold to another private investor’s broker

12. 5 pts

In this example, Ridge Corp. has 5,000,000 shares outstanding and average weekly trading volume of 40,000 shares. Under Rule 144, the most an affiliate may sell within 90 days is:

A. 40,000 shares

B. 50,000 shares

C. 90,000 shares

D. 25,000 shares

13. 5 pts

An employee exercises a NONQUALIFIED stock option with a $15 strike when the market is $24. The tax result at exercise is:

A. No tax until the shares are sold

B. $9 per share of ordinary income

C. $9 per share of long-term capital gain

D. $24 per share of ordinary income

14. 5 pts

For an incentive stock option's entire profit to receive capital-gain treatment, the shares must be held at least:

A. One year from grant and two from exercise

B. Two years from grant and one from exercise

C. Six months, like restricted stock

D. Until the option's expiration date

15. 5 pts

A company director acquires shares two different ways: 1,000 granted privately eight months ago (the company files SEC reports) and 1,000 bought on the NYSE last week. Under Rule 144, which may he sell this week, and under what limit?

A. Neither; both need a one-year holding period

B. Both, but each is subject to the affiliate volume limits

C. Only the granted shares, with no limits

D. Only the exchange-bought shares, with no limits

16. 5 pts

A stock pays a constant $3.60 annual dividend with no growth. An investor requiring 9% should value it at:

A. $32.40

B. $36.00

C. $40.00

D. $44.40

17. 5 pts

A stock just paid a $1.00 dividend; dividends grow 5% and the required return is 10%. The Gordon model values the stock at:

A. $20.00

B. $21.00

C. $10.50

D. $22.05

18. 5 pts

An analyst who starts with the economic outlook, then chooses industries, then companies — and favors stocks with low P/E ratios and above-average dividend yields — is best described as:

A. Top-down, value-oriented fundamental analysis

B. Bottom-up growth investing

C. Technical analysis using breadth indicators

D. Passive indexing

19. 5 pts

Short interest in a stock reaches a multi-year high. The technical (contrarian) interpretation tested on the exam is:

A. Bearish — informed money expects a decline

B. Bullish — short sellers represent future buying demand

C. Neutral — short sales do not affect prices

D. Bearish — the company's fundamentals have deteriorated

20. **5 pts**

Which observation belongs to a TECHNICAL analyst?

A. “Earnings per share rose 12% this quarter.”

B. “The stock broke above long-standing resistance on heavy volume.”

C. “The debt-to-equity ratio is the lowest in the industry.”

D. “Management reinvests all earnings rather than paying dividends.”

ANSWER KEY

1. C. $200 \times 4 = 800$ votes, all of which may be concentrated on one candidate. A is the statutory-voting per-seat cap; D divides when it should multiply.
2. B. Rights are brief, below-market and antidilutive for existing holders. A describes warrants; C mixes in employee options; D crosses the traits.
3. C. The dollar wrapper does not change the euro business inside; exchange-rate moves still change dollar values and dividends. B is the standing trap; sponsorship (A) affects listing, not currency.
4. C. Common holds the residual claim — the bottom of the ladder. Every other choice promotes the common holder above someone who legally outranks him.
5. C. Two years of arrears ($12) plus the current year's $6 = $18. B forgets the current year — the most common wrong answer.
6. B. Ratio = $\$100 \div \$25 = 4$; parity = $4 \times \$27 = \$108$. C uses a ratio of 4 on $28, D divides backwards.
7. D. The ex-date is fixed by the exchange or FINRA, working backward from the board's record date so regular-way trades settle in time.
8. B. On and after the ex-date the stock trades without the dividend; the buyer settles too late to be the record holder, so the seller keeps it.
9. A. $600 \times \$40 = \$24{,}000$, the same as $300 \times \$80$. Splits change count and price, never total value — and they are not taxable when received.
10. B. Preferred behaves like a long bond: rates down, price up. C is the trap — no maturity makes the price MORE sensitive to rates, not less.
11. B. As of 2026 the holding period is six months for SEC-reporting issuers and one year for non-reporting ones; the question specifies non-reporting.
12. B. The greater of 1% of outstanding (50,000) or the average weekly volume (40,000) — so 50,000. A picks the smaller figure; C adds them.
13. B. The NQSO spread is ordinary wage income at exercise. A describes an ISO; C mislabels the character; D taxes the whole price instead of the spread.
14. B. Two years from GRANT, one from EXERCISE — the exam reverses the clocks in choice A to catch skimmers.
15. B. The granted (restricted) shares have satisfied the six-month holding period; the open-market shares never needed one. But everything an affiliate holds is control stock, so BOTH sell only within the volume limits.

16. C. Zero-growth DDM: $\$3.60 \div 0.09 = \$40$. B divides by 10%; A multiplies where it should divide.
17. B. $D_1 = \$1.05$; $\$1.05 \div (0.10 - 0.05) = \$21$. A forgets to grow the dividend; C divides by r alone; D grows two years.
18. A. Economy → industry → company is top-down; low P/E with high yield is the value style; studying businesses at all makes it fundamental.
19. B. Every short must eventually be covered by a purchase, so heavy short interest is read as pent-up demand. A is the intuitive trap; D crosses into fundamental territory the question didn't ask about.
20. B. Resistance, breakouts and volume are the market's own data — the technician's domain. A, C and D all examine the business, which is fundamental analysis.

PORTFOLIO PIECE: MY EQUITY HANDBOOK

Assemble the unit's work into a handbook you could study from the week before the real exam. It contains: your one-page chart comparing rights, warrants and employee stock options (term, price at issue, who receives each, tax moment); your hand-worked cumulative-voting example from The Annual Meeting, with the guarantee-a-seat formula; your four-dates dividend timeline drawn large and labeled with who sets each date; and your Two-Stock Study — the pretend comparison using P/E, dividend yield and a Gordon valuation with every example number labeled as invented. Close the handbook with a half-page in your own words: what a share of stock is, who stands where in line, and what an honest analyst may and may not claim to know.

LOOK FOR	WHAT IT MEANS
Calculations	Cumulative voting, arrears, parity, dividend yield and both dividend-discount valuations are computed correctly, with formulas written before numbers and work shown.
The comparison chart	Rights, warrants and employee options are distinguished accurately on term, pricing, recipient and tax treatment, in exam-ready language.
The timeline	All four dividend dates appear in order, correctly attributed (board or exchange), with the buyer's last dividend-earning day marked.
Honest analysis	The Two-Stock Study states its assumptions as assumptions, labels invented numbers, names a risk for each company, and reaches a reasoned recommendation.
Craftsmanship and voice	Pages are dated, legible and organized for review, and the closing half-page explains equity ownership and analytic honesty in the student's own words.

5.1 Common Stock and Shareholder Rights

OBJECTIVES

- Explain what a share of common stock is: proportional ownership with limited liability and the last claim in liquidation.
- Work a statutory and a cumulative voting problem and state which method helps the small shareholder.
- Distinguish preemptive rights and subscription rights from warrants by term, price and purpose.
- Describe inspection rights and the residual claim, and place common stock on the ladder of liquidation.
- Explain what an American depositary receipt is, which risks it removes and which (currency) risk it does not.

> **Warm-up.** A company has 1,000 shares outstanding and you own 100 of them. With pencil and paper: what fraction of the company is yours? If the company is sold for $50,000 and owes $10,000 of debts, how much of what remains belongs to you? Keep your answer; the lesson will give the official name for being paid last.

WATCH

What it means to buy a company's stock | Stocks and bonds | Finance & Capital Markets | Khan Academy

Khan Academy · 13:46

https://www.youtube.com/watch?v=98qfFzqDKR8

> **WHEN TO WATCH**
> After the big idea: Sal Khan draws out what a shareholder actually owns — assets minus liabilities — so sketch his balance-sheet picture in your exam notebook as he talks.

BACKUP VIDEO

How does the stock market work? - Oliver Elfenbaum

TED-Ed · 4:29

https://www.youtube.com/watch?v=p7HKvqRI_Bo

A four-minute animated retelling of the Dutch East India Company story and how exchanges work — watch it right after the story paragraph if the main video is unavailable.

common stock

An equity security representing proportional ownership of a corporation, carrying voting rights, any dividends the board declares, and the last claim on assets.

limited liability

A shareholder can lose the amount invested but no more; creditors of the corporation cannot reach the shareholder's personal property.

statutory voting

A voting method in which a shareholder may cast up to the number of shares owned for each open board seat, seat by seat.

cumulative voting

A voting method in which total votes equal shares times seats and may be concentrated on one candidate; it favors the small shareholder.

preemptive right

The right of an existing shareholder to buy enough of any new issue to maintain his or her proportional ownership — an antidilution protection.

subscription right

A short-term certificate (typically a few weeks) given to existing shareholders letting them buy new shares below the current market price.

warrant

A long-term certificate to buy the issuer's stock at a set price that is above the market price when issued, often attached to a bond as a sweetener.

American depositary receipt (ADR)

A dollar-denominated receipt, issued by a U.S. bank, representing shares of a foreign company held abroad; it trades and pays dividends in dollars but keeps currency risk.

residual claim

The common stockholder's claim to whatever remains in liquidation after wages, taxes, secured and unsecured creditors, bondholders and preferred stockholders are paid.

CORE IDEAS

The story. In March 1602 the States General of the Netherlands chartered the *Vereenigde Oostindische Compagnie* — the Dutch East India Company — to trade for spices in Asia, and something unheard of happened: the company's capital was opened to the public. Merchants, magistrates, housemaids and craftsmen walked into the company's offices and subscribed; the Amsterdam chamber alone enrolled over a thousand investors. Even more remarkable, the subscription book said the shares could be *transferred* — sold to someone else — and almost at once a market in them sprang up. By 1611 Amsterdam had built a handsome colonnaded exchange building, the bourse, where merchants gathered every midday to trade VOC shares, grain, herring and bills from all over the world. A sea voyage to the Indies took years and might end on a reef; no single merchant could bear that risk alone. But a thousand owners, each holding a small transferable slice, could. The modern share of stock — small, equal, saleable — was born there, and the painting in this lesson shows the very courtyard where it traded.

How they figured it out. The genius of the arrangement was threefold. First, **pooling**: many small investments made one great fleet. Second, **limited liability** in practice: a shareholder could lose what she paid in, but the company's creditors could not come for her house. Third — the piece everyone before had missed — **transferability**: an investor who needed her money back did not wind up the company; she simply sold her share to another investor at whatever price the two agreed. That invention, liquidity, is why a stock exchange exists at all. Every right you will learn in this lesson flows from the same logic: if thousands of strangers are to own a business together, the law must spell out exactly what each slice entitles its owner to do.

The big idea. A share of common stock is proportional ownership of a corporation. The owner of 1% of the shares owns 1% of the business — not the desks and trucks personally, but a 1% claim on the whole. With that ownership come rights the Series 65 expects you to list: the right to **vote** for directors and on major questions (mergers, for instance — but not on whether to pay a dividend; the board decides that); the right to receive **dividends if and when declared**; the **preemptive right**, where granted, to maintain your percentage when new shares are issued; the right to **inspect** the corporation's books, minutes and shareholder lists; the right to a **stock certificate** or book entry proving ownership and the freedom to transfer it; and, in liquidation, the **residual claim** — whatever is left after everyone else on the ladder

from Lesson 3.5 has been paid. Common stockholders stand last in that line, which is why their slice is the riskiest and, across history, the one with the greatest room to grow.

Voting comes in two flavors, and the exam loves the arithmetic. Under **statutory voting**, a holder of 100 shares facing an election for three board seats may cast up to 100 votes for a candidate for *each* seat — 100, 100 and 100, never more than 100 on any one race. Under **cumulative voting** the same holder gets $100 \times 3 = 300$ votes and may spread them or pile all 300 on a single candidate. Notice what did not change: the total number of votes. What changed is the freedom to concentrate them. A small shareholder who pools everything on one candidate can sometimes seat one director even though the large holders outvote him everywhere else — which is why the exam says cumulative voting **benefits the minority (small) shareholder**. Work it once by hand and the fact stays with you.

When a company raises new money by selling additional shares, an existing owner's percentage would shrink — dilution — unless she buys her proportional part of the new issue. The **preemptive right** is her legal protection, delivered in practice as **subscription rights**: one right per old share, exercisable for a few weeks (commonly around 30 to 45 days), at a subscription price set *below* the current market so the offer has value. Rights may be exercised, sold or allowed to expire. A **warrant** is the opposite creature: long-term (often five years or more, some perpetual), with an exercise price set *above* the market when issued, created not to protect old shareholders but to sweeten a new bond or preferred issue — "buy our bond and here is a long-shot ticket on our stock." Short term, below market, for existing holders: a right. Long term, above market, attached as a sweetener: a warrant. The exam swaps those traits constantly.

Americans also buy foreign businesses without touching a foreign exchange, through the **American depositary receipt**. A U.S. depositary bank holds the foreign shares abroad and issues dollar-denominated receipts that trade here like any stock; dividends are collected in the foreign currency and paid out in dollars. The convenience is real — English disclosures, dollar prices, U.S. settlement — but understand what is *not* removed: when the foreign currency weakens against the dollar, the dollar value of the shares and their dividends falls, so the ADR holder still bears **currency (exchange-rate) risk**. In one sentence for the exam: a *sponsored* ADR is created with the foreign company's cooperation and may list on the NYSE or

Nasdaq, while an *unsponsored* ADR is created by a bank without the issuer and trades over the counter.

On the exam today. Expect a cumulative-voting calculation: shares times seats gives total votes, castable in any mix — and the follow-up, "which method benefits the minority shareholder?" (cumulative). Expect rights versus warrants with the traits deliberately crossed. Expect "which of these do common shareholders vote on?" — directors and mergers yes; dividends no, the board declares those. Expect the liquidation question: common is paid *last*, after secured creditors, unsecured creditors and debtholders, and after preferred stock. And expect the ADR trap: the answer "ADRs eliminate currency risk" is always wrong — they remove the nuisance of foreign trading, never the exchange rate.

PICTURE STUDY

Courtyard of the Exchange in Amsterdam, Emanuel de Witte, 1653 · Oil on panel · Museum Boijmans Van Beuningen, Rotterdam

Image: Wikimedia Commons, public domain

Emanuel de Witte (1617–1692) painted the insides of Holland's great public buildings — churches, markets and, here, the Amsterdam bourse that Hendrick de Keyser finished in 1611. At midday the gates opened and the city's merchants crowded these arcades to trade shares of the Dutch East India Company, grain, whale oil and bills of exchange. This is the room where the world first learned to buy and sell slices of a company.

Look closely

- Find the clock on the tower. Exchange hours were short — why would strict, posted hours matter to honest trading?
- Notice the knots of two and three men talking. Every knot is a bargain being struck; there were no screens, only voices and handshakes.
- Find the one red cloak among the black. How does the painter use it to pull your eye into the center of the crowd?
- Look at the scale: the figures are small under the tall arches. What does that suggest about the institution compared with any single trader?

Talk about it

1. A VOC share could be sold here to a stranger in minutes. Why does that transferability — liquidity — make people more willing to invest in a risky voyage?
2. The bourse mixed great merchants and small savers in one courtyard. Which shareholder rights from this lesson protect the small ones?
3. De Witte shows commerce under architecture built to dignify it. What would an exchange look like that wanted to hide what it did?

PROJECT

The Annual Meeting

You will charter a pretend family corporation, distribute its shares, and hold a real board election twice — once by statutory voting and once by cumulative voting — to see with your own ballots why the method matters.

Everything is pretend; the arithmetic, the minutes and the lesson are real.

You will need

- Index cards or slips of paper for share certificates and ballots
- A bag of dried beans or coins to serve as votes
- Exam notebook and pencil for the minutes
- At least two other people (parent and siblings) as shareholders

Steps

1. Charter "Maple Street Trading Co." with 1,000 shares. Give one person 600 shares, yourself 250, and split the rest among the others. Write each holder a certificate.
2. Nominate four candidates (real or invented) for three board seats. List them on a ballot sheet.
3. Hold the election by statutory voting: each shareholder may cast up to his or her share count for one candidate per seat, race by race. Count beans and record who wins each seat.
4. Hold it again by cumulative voting: each shareholder gets shares × 3 votes in beans, to pile anywhere. As the 250-share holder, concentrate all 750 of your votes on one candidate.
5. Record both outcomes. Did concentrating your votes seat your candidate when the 600-share holder spread theirs?
6. Compute the minimum shares that would guarantee one seat: shares outstanding ÷ (seats + 1), plus one share — check your election against the formula.
7. Write one page of "minutes": the two results, the arithmetic, and one sentence on which method a small shareholder should hope the charter

contains.

Tips

- Make the large holder spread votes evenly in round two the first time; then replay with the large holder also concentrating, and see what changes.
- Keep the bean counts in a table as you go — the test and portfolio both want a worked example you can copy.

Check your work

- ☐ My total votes under both methods were identical for every shareholder.
- ☐ My cumulative round shows votes concentrated and the resulting seat count.
- ☐ My minutes state clearly which method benefits the minority shareholder and why.
- ☐ My guarantee-a-seat calculation matches the formula.

EXAM NOTEBOOK

1. Rule a two-column table, “Rights vs. Warrants”: term, price at issue, who receives it, purpose. Fill it from memory, then check against the lesson.
2. Write the cumulative voting formula at the top of a fresh page and work three examples (100 shares/3 seats, 400/5, 2,000/4) underneath it.
3. Draw the ladder of liquidation from Lesson 3.5 as a staircase and write COMMON STOCK on the bottom step, with preferred one step above.
4. Make an ADR flashcard: front “ADR removes…”, back “foreign trading hassle — NOT currency risk; sponsored = issuer cooperates, can list; unsponsored = bank-made, OTC.”

KEY FORMULAS

$$\text{Cumulative votes} = \text{shares owned} \times \text{seats to be filled}$$

$$\text{Ownership fraction} = \frac{\text{your shares}}{\text{shares outstanding}}$$

From history. The Amsterdam market also invented market mischief. In 1609 Isaac Le Maire, a disgruntled former VOC director, organized a secret syndicate to sell VOC shares he did not own, hoping to drive the price down and buy back cheap. The company complained, and in 1610 the authorities issued the world's first ban on that kind of naked short selling. Nearly every rule you will study in this course follows the same pattern: first the invention, then the abuse, then the rule.

WORKED EXAMPLES

Example 1. Marta owns 300 shares of Harbor Mills. Five directors will be elected at the annual meeting. How many votes may she cast in total under cumulative voting, and what is the most she could cast for a single candidate under each method?

Show solution

1. Cumulative total: $300 \times 5 = 1{,}500$ votes.
2. Under cumulative voting she may pile all 1,500 on one candidate if she chooses.
3. Under statutory voting she casts at most 300 per seat, seat by seat — never more than 300 for any one candidate.

Answer: 1,500 votes in total; up to 1,500 for one candidate cumulatively, but only 300 under statutory voting. Same total votes — different freedom to concentrate them.

Example 2. Exam style — reason through every choice. Which statement about cumulative voting is TRUE?

A. It gives large shareholders more total votes than statutory voting.

B. It allows a shareholder to concentrate all votes on one candidate.

C. It is required for all corporations under the Uniform Securities Act.

D. It limits each shareholder to one vote per share regardless of seats.

Show solution

1. A is false: both methods give the same total, shares times seats; cumulative changes distribution, not quantity.
2. B is the definition — votes may be pooled on a single candidate, which is exactly why it helps the small holder. True.
3. C is false: voting method is a matter of state corporate law and the company's charter, not the Uniform Securities Act.
4. D describes neither method correctly; it understates the votes available when several seats are open.

Answer: B. Cumulative voting lets votes be concentrated, which benefits the minority shareholder; A fails because the total votes never change.

Example 3. Exam style. An investor buys a sponsored ADR on a Swiss chocolate maker. Which risk does the ADR NOT remove?

A. The inconvenience of trading on a foreign exchange

B. The need to convert dividend checks from Swiss francs

C. The risk that the franc weakens against the dollar

D. The difficulty of settling trades abroad

Show solution

1. A, B and D are precisely the conveniences an ADR provides: it trades here, in dollars, with U.S. settlement, and the depositary bank converts the dividends.
2. C survives: the underlying shares and dividends are valued in francs, so a weaker franc means fewer dollars, receipt or no receipt.
3. Memory hook: the receipt changes the wrapper, not the currency of the business inside.

Answer: C. Currency (exchange-rate) risk remains with every ADR; that is the exam's favorite ADR question.

PRACTICE

1. Easy An investor owns 100 shares and four board seats are up for election. Under cumulative voting, how many total votes does she have?

   A. 100

   B. 400

   C. 1,600

   D. 4

   Show answer

   B. $100 \times 4 = 400$ votes, castable in any combination — all 400 on one candidate if she wishes. A is the statutory per-seat cap, not the cumulative total; C multiplies twice.

2. Easy In what year did the Dutch East India Company first offer shares to the public, and in what city did the famous exchange for trading them stand?

   Show answer

   1602; Amsterdam. The transferability of those shares — you could sell your slice to a stranger — created the first real stock market.

3. Easy Which comes last in a corporate liquidation?

A. Secured bondholders

B. General (unsecured) creditors

C. Preferred stockholders

D. Common stockholders

Show answer

D. Common stock holds the residual claim — whatever remains after everyone above on the ladder is paid. C is the tempting near-miss: preferred is junior to all debt but still senior to common.

4. Medium Which feature belongs to a subscription RIGHT rather than a warrant?

A. A term of five years or longer

B. An exercise price above the market at issuance

C. Issued to existing shareholders at a price below the current market

D. Attached to a bond offering as a sweetener

Show answer

C. Rights are short-term, below-market offers protecting existing holders from dilution. A, B and D all describe warrants — the long-term, above-market sweetener.

5. Medium A shareholder asks to see the corporation's minute books and list of shareholders before a proxy contest. Which shareholder right is she exercising?

Show answer

The inspection right — the right to examine the corporation's books, records and shareholder lists. It exists so owners can watch the stewards of their property.

6. Medium Carver Foods has 1,000,000 shares outstanding and Ruth owns 50,000 (5%). The company will issue 200,000 new shares. Under her preemptive right, how many of the new shares may Ruth buy to avoid dilution?

A. 10,000

B. 50,000

C. 200,000

D. 2,500

Show answer

A. Her right covers 5% of the new issue: $0.05 \times 200{,}000 = 10{,}000$ shares, leaving her at 60,000 of 1,200,000 — still exactly 5%. B tempts by repeating her current holding; the right is proportional to the NEW shares.

7. Medium Common shareholders are entitled to vote on which of the following?

A. Whether a quarterly dividend will be paid

B. The election of the board of directors

C. The hiring of the chief financial officer

D. The timing of a bond issue's call

Show answer

B. Shareholders elect directors (and vote on major matters like mergers); the board they elect declares dividends and oversees officers. A is the classic trap — dividends are never put to shareholder vote.

8. Hard An investor holds an unsponsored ADR on a German firm. Which TWO statements are true?

A. The receipt was created with the German firm's cooperation.

B. It most likely trades over the counter.

C. Dividends reach the investor in dollars.

D. The investor bears no exchange-rate risk.

Show answer

B and C. Unsponsored ADRs are created by a depositary bank without the issuer (so not A) and trade OTC; the bank converts dividends to dollars. D is false always — currency risk remains in every ADR.

9. Hard Hale owns 800 shares of a company electing five directors. Under CUMULATIVE voting, the maximum he may cast for his favorite single candidate is:

   A. 800

   B. 4,000

   C. 160

   D. 5,000

   Show answer

   B. $800 \times 5 = 4{,}000$ votes, all of which may go to one candidate. A is the statutory per-seat maximum — the exam's favorite near-miss; C divides instead of multiplying. Note the totals available are equal either way; only the freedom to concentrate differs.

10. Hard A client says, "I want foreign stock exposure but I refuse to deal with foreign currencies in any way, including in my returns." Is an ADR a complete answer? Explain in two sentences.

    Show answer

    No. An ADR spares her foreign exchanges, settlement and dividend conversion — everything mechanical — but her dollar returns still rise and fall with the foreign currency, because the underlying shares are valued in it.

11. Challenge Quarry Stone Co. has 10,000 shares that will be voted, and four directors will be elected cumulatively. Using the guarantee formula — shares outstanding ÷ (seats + 1), plus 1 — how many shares guarantee electing one director, and why does the formula divide by five rather than four?

    Show answer

    $10{,}000 \div 5 + 1 = 2{,}001$ shares. Dividing by seats + 1 works because 2,001 shares concentrated on one candidate (8,004 votes) cannot be beaten by the remaining 7,999 shares spread to fill four seats — at most four candidates can each outpoll you only if each gets more than your total, which would require more votes than the others possess.

COMMON MISTAKES

- Saying cumulative voting gives a shareholder more total votes — it gives the same total (shares × seats), only the freedom to concentrate them.

- Crossing the traits of rights and warrants: rights are short-term and priced below market; warrants are long-term and priced above market at issue.
- Claiming ADRs eliminate currency risk — they only eliminate the mechanics of foreign trading.
- Treating dividends as a shareholder-voted matter; the board of directors declares dividends.
- Forgetting that common stock is paid last in liquidation — after all creditors AND after preferred stock.

Make it a game · The Board Election. Ten to fifteen minutes, two or more players, a bag of beans. The parent is the 600-share holder; the student holds 250 shares; any sibling holds 150. Announce three open board seats and four candidates (name them after family pets). Round one: statutory voting — count the beans seat by seat. Round two: cumulative — each player gets shares × 3 beans to pile anywhere. The student wins the game by legally seating at least one director in round two; the parent wins if the student can't. Replay switching roles and timing each count: fastest correct vote total earns a bonus point. The loser must recite, from memory: "Same votes, new freedom — cumulative helps the little holder."

Scripture. "Be thou diligent to know the state of thy flocks, and look well to thy herds." (Proverbs 27:23, KJV)

A share makes you a part-owner, not a bystander. Inspection rights, annual reports and shareholder votes exist so owners can know the state of their flocks — and a faithful steward uses them.

5.2 Preferred Stock, Convertibles and Dividends

OBJECTIVES

- Describe preferred stock: stated dividend on a $100 par convention, no maturity, priority over common, and bond-like sensitivity to interest rates.
- Calculate dividends in arrears for a cumulative preferred and explain participating and callable features.
- Compute a conversion ratio and a parity price for a convertible preferred.
- Put the four dividend dates in order, state who sets each, and determine who receives a declared dividend.
- Show with numbers that stock splits and stock dividends change share count and price but not total value.

> **Warm-up.** With pencil and paper: a "6% preferred, $100 par" pays how many dollars per share each year? Now suppose the company skipped that dividend entirely for two years. If the preferred is cumulative, how much must one share collect — the two missed years plus the current year — before the common stockholders can be paid anything?

WATCH

Cumulative Preferred Stock in Arrears - Series 7 Exam Prep, Series 65 and 66 Exam Prep.

Series 7 Guru · 5:37

https://www.youtube.com/watch?v=3r2nlmX28Uo

> **WHEN TO WATCH**
> After the arrears paragraph: an exam tutor works an arrears problem exactly the way the test asks it — pause before his answer and race him in your notebook.

BACKUP VIDEO

Dividend Dates (updated for T+1 rule change) - FINRA SIE + Series 7

Achievable · 12:50

https://www.youtube.com/watch?v=qHnFHXfN4wU

If you want the four dates drilled thoroughly — including how next-day settlement moved the ex-date — watch this after the dividends paragraph and copy its timeline into your notebook.

KEY TERMS

preferred stock

An equity security with a stated dividend and priority over common stock for dividends and liquidation, usually without voting rights or a maturity date.

par value (preferred)

The stated face amount of a preferred share, by convention $100, on which the percentage dividend is figured — a 5% preferred pays $5 a year.

cumulative preferred

Preferred stock whose skipped dividends accumulate as arrears that must be paid in full before any common dividend.

dividends in arrears

The total of missed dividends owed to cumulative preferred holders from prior periods.

participating preferred

Preferred stock entitled to extra dividends beyond its stated rate when the board declares them, sharing in prosperity with the common.

callable preferred

Preferred stock the issuer may buy back at a set price after a set date — a right the issuer uses when rates fall, so investors demand a higher stated dividend for it.

convertible preferred

Preferred stock exchangeable at the holder's option into a fixed number of common shares; the fixed number is the conversion ratio.

conversion parity

The price at which a convertible and the common shares it converts into are worth exactly the same: conversion ratio times the common's market price.

ex-dividend date

The first day a stock trades without its declared dividend; buy on or after it and the dividend belongs to the seller.

stock split

A change in the number of shares outstanding with an offsetting change in price, leaving each holder's total value unchanged.

CORE IDEAS

The story. The railroad was the first business in history that needed more money than its founders, their friends and their banks together could supply. Track, iron,

locomotives and bridges had to be paid for years before the first paying passenger rode. In the 1840s, railway companies in Britain and America — many of them limping out of the Panic of 1837 and Britain's own railway manias with their treasuries empty and their common shares sunk — faced investors who flatly refused to buy more ordinary stock. So the companies invented a new slice: a share that would be paid its dividend *first*, at a stated rate, before the ordinary shareholders saw a penny. The British called them preference shares; Americans, in a word the dictionaries date to the 1840s, called them **preferred stock**. Cautious investors — including the British savers whose capital crossed the Atlantic by the shipload to build American railroads over the next half-century — would buy that. By the time the golden spike joined the Union Pacific and Central Pacific at Promontory Summit in 1869, the preferred share was a fixture of railway finance, and it has never left corporate finance since.

How they figured it out. The preferred share is a deliberate hybrid, and seeing why solves half the exam questions about it. The railroads needed money that behaved like *equity* on the books — no maturity date, no fixed legal debt that could tip the company into bankruptcy in a bad year — but that felt like a *bond* to the buyer: a steady, stated payment with priority. So preferred stock has a bond's heart in equity's body. It pays a stated dividend figured on a $100 par (a "5% preferred" pays $5 a year, usually in quarterly installments); it has no maturity; it generally does not vote; it stands ahead of common — and behind every creditor — for dividends and in liquidation. And because its payment is fixed, its market price behaves like a bond's: **when interest rates rise, preferred prices fall**, and when rates fall they rise. The exam states that point both directions and expects you to recognize it instantly.

The big idea. The features are a menu, and each one shifts value between issuer and investor. **Cumulative** preferred protects the holder: any skipped dividend accrues as *arrears*, and all arrears plus the current year must be paid before common receives anything. Work it: a 6% cumulative preferred ($100 par) is skipped entirely for two years; in year three the board wants to pay a common dividend. It must first hand the preferred holder $\$6 + \$6 + \$6 = \$18$ per share — two years of arrears plus the current year. A *non-cumulative* holder would get only the current $6; the skipped years are simply gone. **Participating** preferred may share in extra dividends beyond its stated rate — rare, generous, and defined on the exam exactly that way. **Callable** preferred favors the issuer, who will call it when rates fall and refinance cheaply;

investors are paid for granting that option with a higher stated rate, and call protection matters just as it did for the bonds of Lesson 4.4.

Convertible preferred adds a ticket into the common stock, and the arithmetic is pure exam material. The **conversion ratio** is set at issue: $\text{ratio} = \dfrac{\text{par}}{\text{conversion price}}$. A $100 par convertible with a $25 conversion price converts into 4 common shares. **Parity** is the break-even: the preferred and its underlying shares are at parity when the preferred's price equals ratio times the common's price. With the common at $28, parity for that preferred is $4 \times \$28 = \$112$. If the preferred can be bought below parity, converting captures the difference; above parity, hold the preferred. Because conversion is valuable, convertibles are issued with a *lower* stated dividend than straight preferred — the holder pays for the ticket in yield.

Dividends themselves may be paid in cash, in additional stock, or occasionally in property (a company once could, and the exam still may, mention shares of a subsidiary or even product). Four dates govern every cash dividend, in order: the **declaration date**, when the board announces it and names the record and payable dates; the **ex-dividend date**, the first day the stock trades *without* the dividend; the **record date**, when the transfer agent checks the ownership books; and the **payable date**, when checks go out. The board sets declaration, record and payable; the **ex-date is set by the exchange or FINRA**, working backward from the record date so that a regular-way trade settles in time. As of 2026, with next-day (T+1) settlement, the ex-date falls on the record date itself; the principle that never changes is the one to master: **buy before the ex-date and the dividend is yours; buy on or after it and the seller keeps it** — and on the ex-date the stock opens reduced by about the dividend amount.

Splits and stock dividends rearrange the pie without baking more. A 2-for-1 split turns 100 shares at $60 into 200 shares at $30: total value $6,000 before and after. An uneven split works the same way — 5-for-4 turns 100 shares at $60 into 125 shares at $48. A 10% stock dividend turns 100 shares into 110 with the price easing proportionally. Nothing of substance changes: same company, same earnings, same total value, and no tax when received — the holder's cost basis per share is simply adjusted downward. Companies split to keep the share price in an inviting range; a reverse split (1-for-10) does the opposite, usually to escape a penny-stock price. The

exam asks what changed and what did not; “total value unchanged” answers most of them.

On the exam today. Four traps recur. First, rate sensitivity: “a client holding preferred stock is most exposed to…” — interest-rate risk, exactly like a long bond, because the payment is fixed and there is no maturity. Second, arrears arithmetic: count every skipped year *plus the current dividend* before common gets paid — the test writes choices that forget one or the other. Third, parity: compute ratio from par and conversion price, multiply by the common’s price, and compare — and remember the issuer’s par convention is $100 unless the question says otherwise. Fourth, the dates: the board does *not* set the ex-date, and the buyer on the ex-date does *not* get the dividend. And whenever a split appears, before touching the choices, write “total value unchanged” in the margin.

PICTURE STUDY

East and West Shaking Hands at the Laying of the Last Rail, Andrew J. Russell, May 10, 1869 · Albumen print photograph · Yale University Library, New Haven

Image: Wikimedia Commons, public domain

Andrew J. Russell, a former Civil War photographer hired by the Union Pacific, hauled his glass plates to Promontory Summit, Utah, to record the moment the rails from Omaha met the rails from Sacramento on May 10, 1869. A continent was crossed, and it was paid for the way nothing had ever been paid for before — with bonds, common shares and the preferred stock that cautious investors, many of them British, demanded before they would trust a railroad with their savings.

Look closely

- Find the two men shaking hands between the locomotives. Each represents a corporation owned by thousands of strangers who never saw this desert.
- Count the kinds of men you can distinguish — laborers, engineers, officials in frock coats. Which of them were paid wages, and which were paid dividends?
- Notice the champagne bottles raised on the engines. What risks had the investors run between the first survey and this photograph?
- Look at the empty land in every direction. Why would no single fortune, and no bank alone, finance track across this?

Talk about it

1. Why would a cautious saver refuse a railroad's common stock yet accept a preferred share paid first at a stated rate?
2. The railroads were equity-hungry for decades before profits came. What does that teach about why preferred stock has no maturity date?
3. Was it good stewardship for ordinary families to put savings into enterprises like this? What protections from this unit would you have wanted?

PROJECT

The Dividend Ledger

You will keep the dividend books of a pretend railroad for three years — through a skipped year and a recovery — computing what its cumulative preferred is owed, drawing a four-dates timeline for one dividend, and proving with arithmetic what a split leaves unchanged.

You will need

- Exam notebook ruled into a three-year ledger
- Calculator
- One sheet of plain paper and a ruler for the timeline
- Index cards for the preferred and common “certificates”

Steps

1. Charter “Promontory & Western RR” with 1,000 common shares and 200 shares of 6% cumulative preferred ($100 par). Write the certificates.
2. Year 1 is prosperous: the board declares the full $6 preferred dividend and $2 per common share. Record the payments in the ledger: totals for each class.
3. Year 2 is a panic: the board skips all dividends. Record zero paid and compute the preferred arrears carried forward.
4. Year 3 recovers: the board wants to pay common $1 per share. Compute what the preferred must receive first (arrears plus current), record it, then record the common payment.
5. For the Year 3 dividend, invent calendar dates and draw the four-dates timeline — declaration, ex-date, record, payable — labeling who sets each date and marking with an arrow the last day a buyer gets the dividend.
6. The railroad now splits its common 2-for-1. Show one shareholder’s 100 shares at $40 before and after the split, and the unchanged total.
7. Close the books with a five-sentence report to shareholders: what cumulative protection cost the common holders in Year 3, and why investors accepted a lower return on the preferred in exchange.

Tips

- Keep preferred and common in separate ledger columns so the priority is visible on the page.
- This timeline drawing goes straight into your portfolio — draw it large and label every date.

Check your work

- ☐ My Year 3 preferred payment equals arrears plus the current dividend, per share and in total.
- ☐ My timeline shows all four dates in order with the ex-date marked as exchange-set.
- ☐ My split arithmetic shows total value unchanged.
- ☐ My report explains priority in plain words a younger sibling could follow.

EXAM NOTEBOOK

1. Make a formula page: conversion ratio, parity price and dividend yield, each with one tiny worked example underneath.
2. Draw the four dividend dates as stations on a railway line, in order, with “board sets” or “exchange sets” written under each station.
3. Rule a features table — cumulative, participating, callable, convertible — with columns “favors issuer or investor?” and “what it does in one phrase.”
4. Write a trap list titled “Preferred acts like a bond”: rates up → price down; no maturity; stated dividend; paid before common, after all debt.

KEY FORMULAS

$$\text{Conversion ratio} = \frac{\text{par value}}{\text{conversion price}}$$

$$\text{Parity price of preferred} = \text{conversion ratio} \times \text{market price of common}$$

$$\text{Dividend yield} = \frac{\text{annual dividend}}{\text{market price}}$$

From history. British money kept flowing into American rails for half a century after Promontory: by some counts investors in Britain held several billion dollars of American railway securities by 1900, much of it in the preferred shares and guaranteed stocks invented to reassure them. When those companies stumbled — as many did in the panics of 1873 and 1893 — the preference meant the difference between a trimmed income and none at all, which is precisely the comfort the instrument was built to sell.

WORKED EXAMPLES

Example 1. Granite Rail 5% cumulative preferred ($100 par) paid nothing last year and only $2 the year before. This year the board wishes to pay a common dividend. How much must each preferred share receive first?

Show solution

1. Stated dividend: 5% of $100 = $5 per year.
2. Arrears: year before last $5 − $2 = $3; last year $5 — total arrears $8.
3. Add the current year's $5 before common can be paid: $8 + $5 = $13.

Answer: $13 per share — all arrears plus the current dividend, before one cent reaches the common.

Example 2. Juniper Mills convertible preferred, $100 par, is convertible at $20. The common trades at $23. Find the conversion ratio and the parity price of the preferred. If the preferred trades at $110, is it above or below parity?

Show solution

1. Ratio: $100 ÷ $20 = 5 common shares per preferred.
2. Parity: 5 × $23 = $115.
3. The preferred at $110 is below parity by $5: buying it and converting yields stock worth $115 for a $110 outlay (before costs).

Answer: Ratio 5; parity $115; the preferred trades below parity.

Example 3. Exam style — reason through every choice. On June 10 the board declares a dividend payable July 15 to holders of record July 1. An investor buys the stock in a regular-way trade on the ex-dividend date. Who receives the dividend?

A. The buyer, because the trade occurred before the payable date

B. The buyer, because dividends follow the trade date

C. The seller, because the buyer's trade settles after the record date

D. Neither; the dividend is forfeited to the issuer

Show solution

1. The ex-date is the first day the stock trades without the dividend; a purchase on or after it settles too late to be on the books by the record date.
2. A confuses the payable date with entitlement — payment timing is irrelevant to who earned it.
3. B is backwards: entitlement follows settled ownership on the record date, which is why the ex-date exists.
4. D is nonsense the exam includes to catch guessers; declared dividends are always paid to the holder of record.

Answer: C. Buy before the ex-date to get the dividend; on or after it, the seller keeps it.

Example 4. Ada owns 200 shares of Linden Works at \$90 per share. The company declares a 3-for-2 split. Show her position before and after, and her total value.

Show solution

1. Before: $200 \times \$90 = \$18{,}000$.
2. New share count: $200 \times \frac{3}{2} = 300$.
3. New price: $\$90 \times \frac{2}{3} = \$60$. After: $300 \times \$60 = \$18{,}000$.

Answer: 300 shares at \$60; total value \$18,000 before and after. Splits change the count and the price, never the total.

PRACTICE

1. Easy How many dollars per year does a 4% preferred stock with the standard $100 par pay, and may the holder usually vote for directors?

Show answer

$4 per year (typically $1 quarterly); no — preferred stock generally carries no voting rights.

2. Easy Put the four dividend dates in chronological order.

Show answer

Declaration date, ex-dividend date, record date, payable date. (With next-day settlement, the ex-date falls on the record date itself, but the order of announcement, trading cutoff, books check and payment is how the exam frames it.)

3. Easy A stock trading at $50 pays $2 per year in dividends. What is its dividend yield?

A. 4%

B. 5%

C. 2.5%

D. 25%

Show answer

A. $\$2 \div \$50 = 4\%$ — annual dividend over market price. D inverts the fraction; C uses only half the annual dividend.

4. Medium Interest rates rise sharply. What happens to the price of an outstanding straight preferred stock, and why?

A. It rises, because dividends grow with rates

B. It falls, because its fixed dividend is now less attractive than new issues

C. It is unchanged, because preferred has no maturity

D. It falls only if the issuer's earnings decline

Show answer

B. A fixed payment competes with newer, higher-paying alternatives, so its price must fall — exactly like a bond. C is the trap: no maturity makes preferred MORE rate-sensitive, not immune.

5. **Medium** Keystone 5% cumulative preferred ($100 par) skipped its dividend entirely for three years. Before common holders may be paid this year, how much must each preferred share receive in total?

   A. $15

   B. $20

   C. $5

   D. $25

   Show answer

   B. Three years of arrears plus the current year: $4 \times \$5 = \$20$ per share. A is the classic trap — it pays the arrears but forgets the current year; C is what a NON-cumulative holder would get.

6. **Medium** Which feature most benefits the ISSUER rather than the investor?

   A. Cumulative dividends

   B. Participation

   C. A call provision

   D. Convertibility

   Show answer

   C. The issuer calls when rates fall and refinances cheaply, capping the investor's upside; investors are compensated with a higher stated rate. A, B and D are all holder-friendly features.

7. **Medium** A convertible preferred ($100 par) has a conversion price of $12.50. What is the conversion ratio?

   A. 8 shares

   B. 12.5 shares

   C. 4 shares

   D. 10 shares

   Show answer

   A. $\$100 \div \$12.50 = 8$ common shares per preferred share. B repeats the conversion price as if it were the ratio; the ratio always comes from dividing par by the conversion price.

8. Hard That same convertible (ratio 8) trades at $104 while the common trades at $13.50. Is the preferred above or below parity, and by how much?

   A. Above parity by $4

   B. Below parity by $4

   C. At parity

   D. Below parity by $8

   Show answer

   B. Parity = $8 \times \$13.50 = \$108$; the preferred at $104 sits $4 below it. A reverses the comparison; D multiplies wrong.

9. Hard The board declares a dividend on March 3, record date March 20, payable April 5. Ignoring weekends and using next-day (T+1) settlement, what is the last day an investor can BUY the stock in a regular-way trade and still receive the dividend?

   Show answer

   March 19 — the business day before the record date, so the trade settles on March 20 and the buyer is on the books. On March 20 (the ex-date under T+1) the stock trades without the dividend.

10. Hard After a 5-for-4 split, an investor holds 250 shares at $44. Before the split he held:

    A. 200 shares at $55

    B. 312 shares at $35.20

    C. 200 shares at $44

    D. 250 shares at $55

    Show answer

    A. Reverse the split: $250 \times \frac{4}{5} = 200$ shares at $\$44 \times \frac{5}{4} = \$55$. Check with the invariant: $200 \times \$55 = \$11{,}000 = 250 \times \$44$ — total value never changes. B applies the split forward instead of backward; C changes the count but forgets the price.

11. Medium In the 1840s, why did railway companies invent the preferred share rather than simply selling more common stock or more bonds? Answer in two sentences.

Show answer

Investors burned by the panics would no longer buy common, and more bonded debt risked bankruptcy in a lean year since interest is a legal obligation. A preferred share split the difference: a stated, first-in-line dividend to comfort cautious savers, with no maturity and no default if a year's dividend had to be skipped.

12. Challenge Alder Mills has 10,000 shares of 7% cumulative preferred ($100 par) with two full years in arrears, and 100,000 common shares. The board has $300,000 available and wishes to distribute the maximum lawful common dividend this year. How much goes to each class, per share?

Show answer

Preferred first: arrears $2 \times \$7 = \$14$ plus current $7 = $21 per share, totaling $210,000. Remaining $90,000 ÷ 100,000 = $0.90 per common share.

COMMON MISTAKES

- Forgetting to add the CURRENT year's preferred dividend on top of the arrears before common can be paid.
- Treating preferred stock as immune to interest rates — its fixed dividend and lack of maturity make it behave like a long-term bond.
- Computing parity with the conversion price instead of the common's market price (ratio uses the conversion price; parity uses the market price).
- Saying the board of directors sets the ex-dividend date — the exchange or FINRA sets it; the board sets declaration, record and payable.
- Claiming a stock split or stock dividend increases a shareholder's total value or triggers tax when received — it changes count and price, adjusts basis, nothing more.

Make it a game · Arrears!. Ten minutes, two players, one die and paper. Each player "issues" a 6% cumulative preferred ($100 par). Take turns rolling for each of five business years: 1–2 means the board skips the whole dividend, 3–4 means it pays half ($3), 5–6 means it pays in full. Keep a running arrears column. After year five, both companies want to pay a common dividend: each player has 60 seconds to compute exactly what one preferred share must collect first (all arrears plus year five if unpaid — check each other's math). Correct in time scores 2 points; catching your opponent's error scores 1. First to 5 points wins. Variant: make one player non-cumulative and see who would rather have owned which share.

Scripture. "Let all things be done decently and in order." (1 Corinthians 14:40, KJV)

A dividend touches thousands of owners, so the law surrounds it with order: a declared amount, four appointed dates, a fixed priority of payment. Orderly dealing is not red tape; it is honesty made routine.

5.3 Restricted Stock and Employee Stock Options

OBJECTIVES

- Define restricted (unregistered) stock and control stock, and explain in plain words what Rule 144 requires for each.
- State the Rule 144 concepts: a holding period for restricted stock and volume limits for affiliates.
- Distinguish incentive stock options from nonqualified options by tax treatment at grant, exercise and sale.
- Read a vesting schedule and compute how many options or shares are exercisable at a given date.
- Explain in one sentence what a restricted stock unit (RSU) is and when it is taxed.

> **Warm-up.** With pencil and paper: an employer grants a new worker 1,000 stock options that vest 25% per year over four years. Make a little table of years 1–4 and write how many options are exercisable after each anniversary. If she quits the day after year two's anniversary, how many does she keep the right to exercise?

WATCH

Restricted Stock and Resale Restrictions - Series 65 Exam Prep

CertFuel · 10:06

https://www.youtube.com/watch?v=YWnzX8CNA1A

> **WHEN TO WATCH**
> After the big idea: an exam instructor walks through restricted versus control stock and Rule 144 at exactly the depth the Series 65 tests — note his restricted/control table as he builds it.

BACKUP VIDEO

Incentive Stock Options Explained

Farhat Lectures. The # 1 CPA & Accounting Courses · 13:46

https://www.youtube.com/watch?v=g9jEgr5n9lc

If the ISO tax clocks feel slippery, watch this accounting professor work grant-exercise-sale examples after the options paragraph, and copy his timeline into your notebook.

restricted stock

Stock acquired in a private, unregistered transaction (such as a private placement or an employee grant) that may not be resold publicly until Rule 144's conditions are met.

control stock

Registered or unregistered stock held by an affiliate — an officer, director or large shareholder who can influence the company — subject to Rule 144 volume limits when sold.

affiliate (control person)

A person in a control relationship with the issuer: officers, directors and, as a working test, holders of 10% or more of the voting stock.

Rule 144

The SEC rule that lets restricted and control stock be resold publicly after a holding period and, for affiliates, within volume limits, without a full registration.

holding period

The time restricted stock must be held fully paid before public resale — as of 2026, six months for companies that file SEC reports, one year for those that do not.

employee stock option

A company-granted right to buy its own stock at a set exercise (strike) price for a set period, usually earned over time through vesting.

incentive stock option (ISO)

A tax-favored employee option: no regular tax at grant or exercise, with capital-gain treatment if the shares are held long enough (though the exercise spread can trigger alternative minimum tax).

nonqualified stock option (NQSO)

An employee option whose spread between market price and exercise price is taxed as ordinary wage income when exercised.

vesting

The schedule by which an employee earns the right to exercise options or keep granted shares, typically over several years of service.

restricted stock unit (RSU)

An employer's promise to deliver shares (or their cash value) when vesting conditions are met, taxed as ordinary income when the shares are delivered.

CORE IDEAS

The story. In July 1916, Sears, Roebuck and Company — the Chicago mail-order house whose catalog reached nearly every farmhouse in America — launched something its president, Julius Rosenwald, believed in deeply: a savings and profit-sharing pension fund for its own employees, reported at its founding to be the largest plan of its kind in the country. The terms were simple and generous. A clerk with three years' service could deposit 5% of her pay; the company added a share of its annual profits; and the fund invested the money largely in Sears, Roebuck stock. Within three years, more than nine in ten eligible employees had joined, and the longest-serving workers were already credited with nearly three dollars for every dollar they had put in. The decades did the rest. Stock splits, dividends and the catalog's golden age compounded quietly in the accounts of stockmen, typists and salesclerks, and by the 1950s the employees' fund — some 140,000 members strong — owned roughly a quarter of one of the largest corporations on earth. Ordinary clerks retired with fortunes their wages alone could never have built. They had been paid partly in ownership, and ownership, patiently held, had outrun pay.

How they figured it out. Rosenwald's plan taught American business two lessons it never forgot. First, workers who own a slice of the enterprise tend the enterprise — the clerk who owns the store sweeps the corner the hired clerk skips. Companies ever since have paid employees partly in stock, options on stock, or promises of stock. Second, shares handed out privately create a legal puzzle. The securities laws you learned in Unit 1 require stock sold to the public to be *registered*, with full disclosure. But stock granted to an employee, or sold quietly to a private investor, was never registered. If those holders could simply turn around and sell freely to the public, private issuance would become a back door around the Securities Act of 1933. The SEC's answer is **Rule 144**: a safe, well-marked gate between private shares and the public market.

The big idea. Learn two labels and what each one drags along. **Restricted stock** is stock acquired in an unregistered transaction — a private placement, an employee grant, founder's shares. Its burden is a **holding period**: the owner must hold it, fully paid, before any public resale — as of 2026, six months if the issuer files SEC reports, a year if it does not (check the SEC's current rule for the figures; the *concept* of a seasoning period is what the exam tests). **Control stock** is anything held by an **affiliate** — an officer, director or large (think 10%) shareholder. Its burden is a

volume limit: however the affiliate got the shares, even buying them on the open market, he may resell in any 90-day window only a modest amount — under the rule, the *greater* of 1% of the shares outstanding or the recent average weekly trading volume — and larger planned sales are reported publicly on Form 144. An affiliate holding restricted shares bears both burdens. The logic is fairness: insiders may not quietly flood the market with stock the public never saw registered, and their selling must happen in daylight, a trickle at a time.

Employee options are the other great way workers become owners. The company grants the right to buy its stock at a set **exercise price** (usually the market price on the grant date), good for up to ten years, earned through **vesting** — commonly a quarter of the grant per year of service. If the stock climbs, the option holder buys at yesterday's price in tomorrow's market; if it never climbs, the options simply expire worthless, which is why an option grant is a hope, not a wage. The exam cares about the tax fork in the road. A **nonqualified option (NQSO)** is the ordinary kind: at grant, no tax; at exercise, the *spread* between market and exercise price is taxed as ordinary wage income (and the employer takes a matching deduction); any gain after exercise is capital gain. An **incentive stock option (ISO)** is the tax-favored kind: no regular tax at grant *or* exercise, and if the employee holds the shares at least two years from grant and one year from exercise, the entire profit is a long-term capital gain — though the spread at exercise counts in the alternative-minimum-tax calculation, a wrinkle the exam names without making you compute. Sell too soon — a *disqualifying disposition* — and the ISO's spread falls back to ordinary income, like an NQSO.

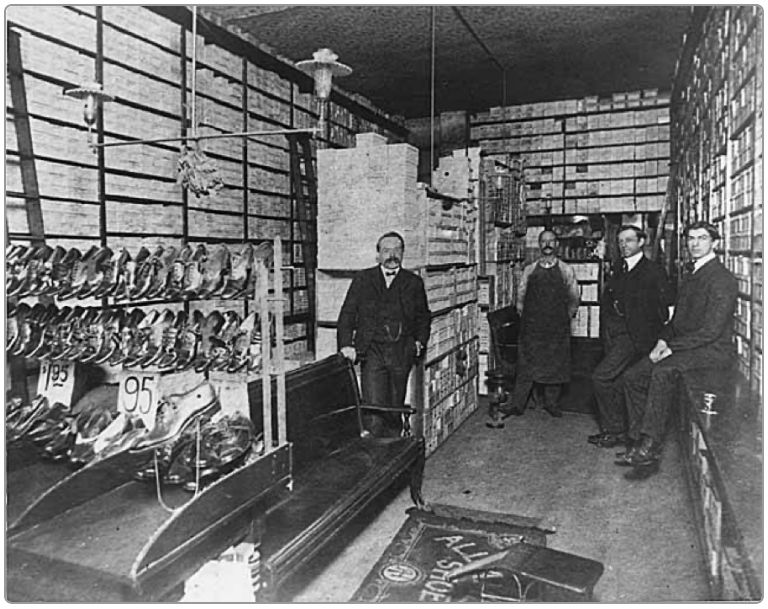
One sentence handles the third instrument: a **restricted stock unit (RSU)** is the employer's promise to hand over actual shares when vesting is complete, and the employee owes ordinary income tax on the shares' value when they are delivered — nothing to exercise, nothing to decide, and (despite the name) RSUs are a creature of the pay package, not of Rule 144.

A word of stewardship the exam will echo in its suitability questions: the Sears clerks prospered, but a worker paid in her employer's stock has her wages *and* her savings riding on one firm. Loyalty is a virtue; concentration is a risk. The faithful course is gratitude for the grant and gradual diversification as vesting allows — a theme Unit 8 will take up with Harry Markowitz's mathematics, and one an investment adviser

representative must raise kindly with every client whose wealth sits in the company that signs her paycheck.

On the exam today. The classic question gives you a character — "the CFO buys 1,000 shares on the NYSE" or "an investor bought shares in a private placement eight months ago" — and asks what Rule 144 requires. Sort by label: restricted stock → holding period; control stock → volume limits; an affiliate with restricted stock → both. Remember that an affiliate's open-market purchase is control stock with *no* holding period but *always* volume limits. On options, the exam swaps the tax moments: NQSO = ordinary income at *exercise* on the spread; ISO = no regular tax until *sale*, capital gain if the two-year/one-year holding is met, AMT wrinkle at exercise. And when a question says "restricted stock units," do not reach for Rule 144 — reach for ordinary income at delivery.

PICTURE STUDY



Clerks of the Wallin and Nordstrom Shoe Store, Seattle, Unknown photographer, circa 1901 · Black-and-white photograph · Museum of History & Industry, Seattle

Image: Wikimedia Commons, public domain

Around 1901 a Swedish immigrant shoemaker, John Nordstrom, fresh from the Klondike gold fields, opened this little Seattle shoe shop with his partner Carl Wallin — four men, a wall of boxes and a bench. Photographs like this one show what American retail looked like when every clerk knew every box, and when the road from clerk to partner ran through diligence. It is the world in which Sears, Roebuck decided, in 1916, that the people who kept the shelves should own a piece of them.

Look closely

- Count the shoeboxes you can see. Someone had to know what was in every one — notice what kind of memory and order a store demanded before computers.
- Find the price cards — $1.95, 95 cents. A clerk might earn a few hundred dollars a year; what would a share of a growing company have meant beside those wages?
- Look at the apron on one man and the suits on the others. Which jobs in the store can you tell apart, owner from clerk?
- Notice how close the quarters are. In a firm this size, every worker's diligence shows; profit sharing simply pays for what the owner can already

see.

Talk about it

1. Why might paying clerks partly in ownership change how a store is swept, stocked and sold?
2. The Sears fund invested employee savings mostly in Sears stock, and it ended gloriously. What could have gone wrong, and what does that teach about concentration?
3. Is it just for an employer to ask workers to wait years (vesting) before stock becomes fully theirs? What does the waiting buy for each side?

PROJECT

The Offer Letter

You will decode a pretend job offer the way an adviser decodes one for a client: salary plus options plus RSUs, a vesting table, values at three pretend stock prices, and an honest paragraph about concentration. Every number is invented for the exercise.

You will need

- Exam notebook and calculator
- One sheet for the vesting table, one for the letter
- A parent to play the hiring manager and answer questions

Steps

1. Copy this pretend offer: salary $52,000; 2,000 NQSOs at a $25 exercise price vesting 25% a year for four years; 400 RSUs vesting 25% a year.
2. Build a four-year vesting table: options exercisable and RSU shares delivered after each anniversary.
3. Compute the pretend pay-off of the options at year four under three futures: stock at $15, at $25, and at $40. (At $15 and $25, what are the options worth? Be honest.)
4. Compute the RSUs' value at delivery under the same three prices, and note that RSUs keep SOME value in every case while options can die worthless.
5. Mark the tax moments on your table: ordinary income when RSUs deliver; ordinary income on the NQSO spread at exercise.
6. Write a one-page letter to the pretend new hire: what the package is worth under each future, when taxes bite, and a kind, firm paragraph on selling some vested stock each year rather than letting the employer become the whole nest egg.
7. Read the letter to your parent "client" and answer two of their questions out loud.

Tips

- Keep a wide margin for the tax notes so the timeline stays readable.

- The $15 column is the most instructive one — write what the employee receives then, and what she still has (salary, skills, RSUs).

Check your work

- ☐ My vesting table is correct year by year for both grants.
- ☐ My option values at $15 and $25 show zero intrinsic value rather than wishful numbers.
- ☐ My letter names the tax moment for each instrument correctly.
- ☐ My concentration paragraph is kind but unmistakably clear.

EXAM NOTEBOOK

1. Rule the master table of the lesson: rows "restricted stock" and "control stock," columns "how acquired," "holding period?" and "volume limits?" Fill it in from memory.
2. Make an ISO vs. NQSO flashcard set: three cards per option type — GRANT, EXERCISE, SALE — with the tax consequence on each back.
3. Write a trap list titled "Rule 144 near-misses": affiliate's open-market shares = control (no holding period); non-affiliate after the holding period = sell freely; RSUs ≠ Rule 144.
4. Draw a four-year vesting staircase for a 1,000-option grant at 25% per year and label each step with the cumulative exercisable total.

> **From history.** The idea the Sears fund pioneered was given a legal home two generations later. A San Francisco lawyer and economist, Louis Kelso, spent the 1950s and 60s arguing that industrial workers should own capital as well as earn wages, and the pension law you met in Unit 1 — ERISA, in 1974 — wrote his employee stock ownership plan (ESOP) into the statute books. Thousands of American companies, from grocery chains to engineering firms, are now wholly owned by trusts for their own employees.

WORKED EXAMPLES

Example 1. Exam style — reason through every choice. A director of Lakeview Corp. buys 2,000 Lakeview shares through her broker on the open market. Under Rule 144, her resale of those shares is subject to:

A. A six-month holding period only

B. Volume limits only

C. Both a holding period and volume limits

D. Neither, because the shares were bought in the open market

Show solution

1. Label the shares. Bought on the open market, they are registered stock — not restricted — so no holding period applies. That eliminates A and C.
2. But the buyer is a director: an affiliate. Anything an affiliate holds is control stock, and control stock always faces the volume limits when resold.
3. D tempts by focusing on how the shares were bought; Rule 144's control-stock rules turn on WHO holds them.

Answer: B. Open-market shares in an affiliate's hands are control stock: no holding period, but volume limits (the greater of 1% of outstanding shares or the average weekly volume) apply.

Example 2. Rosa exercises 1,000 nonqualified stock options with a $20 exercise price when the market price is $32. How much ordinary income does she report, and what is her cost basis in the new shares?

Show solution

1. Spread per share: $\$32 - \$20 = \$12$.
2. Ordinary income: $1{,}000 \times \$12 = \$12{,}000$, taxed as wages in the year of exercise.
3. Her basis becomes the market price at exercise, $32 — the $20 she paid plus the $12 already taxed — so only growth beyond $32 is future capital gain.

Answer: $12,000 of ordinary income now; basis $32 per share. NQSO = taxed at exercise on the spread.

Example 3. Exam style. An employee exercised an incentive stock option fourteen months ago (two and a half years after grant) and sells the shares today at a profit. For regular tax purposes, the result is:

A. Ordinary income on the spread at exercise, capital gain on the rest

B. Long-term capital gain on the entire profit over the exercise price

C. Ordinary income on the entire profit

D. No tax of any kind

Show solution

1. Check the ISO clock: at least 2 years from grant (2½ — yes) and 1 year from exercise (14 months — yes). The disposition qualifies.
2. A qualifying ISO disposition owes no ordinary income at all; everything above the exercise price is long-term capital gain. That is B.
3. A describes an NQSO (or a disqualifying ISO sale); C is harsher than any option treatment; D ignores the capital-gain tax due at sale (the AMT wrinkle at exercise is an adjustment, not an exemption).

Answer: B. Qualifying ISO: no regular tax at grant or exercise, long-term capital gain at sale — the exam's favorite ISO fact pattern.

PRACTICE

1. Easy Stock bought in a private placement from an SEC-reporting company last month is called _____ and, as of 2026, may be resold publicly after _____.

   A. control stock; 90 days

   B. restricted stock; six months

   C. restricted stock; two years

   D. control stock; one year

   Show answer

   B. Unregistered, privately acquired shares are restricted stock, and the Rule 144 holding period for a reporting issuer is six months (one year if non-reporting). "Control" describes WHO holds shares (an affiliate), not how they were acquired.

2. Easy An employee's options vest 25% per year on a 2,000-option grant. How many are exercisable after three anniversaries?

   A. 500

   B. 1,000

   C. 1,500

   D. 2,000

   Show answer

   C. Three years at 25% each means 75% vested: $2{,}000 \times 0.75 = 1{,}500$. A counts one year, D requires the full four.

3. Easy In one sentence: what is a restricted stock unit, and when is it taxed?

   Show answer

   An RSU is the employer's promise to deliver shares when vesting is met, and the employee pays ordinary income tax on the shares' value when they are delivered.

4. Medium Which person's shares are control stock?

   A. A retired teacher's 100 shares of a utility

   B. A company director's 5,000 shares bought on the exchange

   C. A customer's shares bought in last year's public offering

   D. A mutual fund's 0.5% position in a large company

   Show answer

   B. Control stock is anything held by an affiliate — an officer, director or roughly 10%+ owner. The others are ordinary public holders with no Rule 144 burdens.

5. Medium Hargrove Inc. has 20,000,000 shares outstanding, and average weekly trading volume over the measuring period is 150,000 shares. Under Rule 144's volume test, what is the most an affiliate may sell in a 90-day period?

   Show answer

   The greater of 1% of outstanding (200,000) or the average weekly volume (150,000) — so 200,000 shares.

6. Medium An employee exercises an NQSO at $10 when the stock trades at $18. What is taxed, when, and as what kind of income?

A. $8 per share now, as capital gain

B. $8 per share now, as ordinary income

C. $18 per share now, as ordinary income

D. Nothing until the shares are sold

Show answer

B. The NQSO spread (market minus exercise price) is ordinary wage income in the year of exercise. A gets the character wrong; D describes an ISO, not an NQSO.

7. Medium For an ISO's whole profit to be long-term capital gain, the shares must be held at least:

A. Two years from grant and one year from exercise

B. One year from grant and two years from exercise

C. Six months from exercise

D. Until the option expires

Show answer

A. Two years from the GRANT date and one year from the EXERCISE date; miss either and the spread becomes ordinary income (a disqualifying disposition). B is the same numbers on the wrong clocks — the exam's standard reversal.

8. Hard A venture investor bought unregistered shares of a reporting company nine months ago. She is not an affiliate. Under Rule 144, may she now sell, and with what limits?

A. No — the holding period is one year for everyone

B. Yes, but only within the affiliate volume limits

C. Yes, freely — her holding period has run and she is not an affiliate

D. No — restricted stock may never be sold publicly

Show answer

C. For a reporting issuer the holding period is six months, and a NON-affiliate past the holding period sells without volume limits. B wrongly imports the affiliate rules; A uses the non-reporting period.

9. Hard The exam asks: “Which is TRUE of incentive stock options at the moment of exercise?”

   A. The spread is ordinary income for regular tax

   B. There is no regular tax, but the spread may count toward alternative minimum tax

   C. The employer receives a tax deduction

   D. The employee must sell within one year

   Show answer

   B. ISOs trigger no regular tax at exercise, but the spread is an AMT adjustment — the exam names this wrinkle. A and C describe NQSOs; D reverses the holding requirement.

10. Hard By the 1950s, what fraction of Sears, Roebuck did its employees’ profit-sharing fund own, and what two-sided lesson does the story teach an adviser?

    Show answer

    Roughly a quarter of the company. The bright side: ownership patiently compounded can enrich ordinary workers far beyond wages. The caution: those workers held pay AND savings in one firm — a concentration that happened to end well at Sears but need not have.

11. Challenge A company’s CFO received restricted shares in a private grant five months ago (the company files SEC reports). He wants to sell a large block next week. Name BOTH Rule 144 problems with the plan and what would change after another month passes.

    Show answer

    First, the six-month holding period on restricted stock has not run, so no public resale yet. Second, he is an affiliate, so even after six months his sales face the volume limits (greater of 1% of outstanding or average weekly volume per 90 days) and Form 144 filing for a large sale. After one more month, the holding period is satisfied — but the volume limits remain as long as he is a control person.

COMMON MISTAKES

- Giving an affiliate’s open-market purchases a holding period — control stock has volume limits, not a holding period; only restricted stock must season.

- Letting a non-affiliate carry volume limits after the holding period runs — once seasoned, a non-affiliate sells freely.
- Taxing the ISO spread as ordinary income at exercise — that is the NQSO rule; the ISO's exercise spread is only an AMT adjustment.
- Forgetting the ISO's two clocks: two years from grant AND one year from exercise for capital-gain treatment.
- Dragging RSUs into Rule 144 because of the word "restricted" — RSUs are compensation taxed at delivery, not unregistered stock.

Make it a game · Vest or Bust. Ten to fifteen minutes, two players, sixteen index cards. Write a scenario on each card from this lesson's material — "director buys 1,000 shares on the NYSE," "private-placement buyer, reporting company, 7 months," "ISO exercised 10 months ago, sold today," "RSUs delivered," and so on. Shuffle. Players alternate drawing; you have 20 seconds to call the ruling: HOLDING PERIOD, VOLUME LIMITS, BOTH, FREE SALE, ORDINARY INCOME NOW, or CAPITAL GAIN. The parent holds the answer key you wrote when making the cards. Two points for a correct call, minus one for a wrong one, and first to ten points wins. The loser shelves the family's actual shoes, Nordstrom-style, before the next meal.

Scripture. "For the scripture saith, Thou shalt not muzzle the ox that treadeth out the corn. And, The labourer is worthy of his reward." (1 Timothy 5:18, KJV)

Profit sharing and stock grants are one way a business says the laborer is worthy of his reward — letting those who tread out the corn eat some of it. The law's part, in Rule 144, is making sure the reward is given honestly, in daylight.

5.4 Fundamental Analysis: Value from Earnings and Dividends

OBJECTIVES

- Define fundamental analysis as the study of the business itself — statements, management, industry — and connect it to the ratios of Lesson 3.2.
- Price a stock with the zero-growth dividend discount model, P = D ÷ r.
- Price a stock with the constant-growth (Gordon) model, P = D1 ÷ (r − g), including computing D1 from D0.
- Explain the discounted cash flow idea in one paragraph and the limits of these models.
- Distinguish growth from value stocks, and top-down from bottom-up analysis, in exam language.

> **Warm-up.** Two pretend companies, pencil and paper: Alpha earns $2.50 per share and trades at $40; Beta earns $1.25 per share and trades at $30. Compute each P/E ratio (price ÷ earnings per share). Which stock costs more per dollar of earnings? Keep the numbers — this lesson will ask what else you would want to know before calling either one “cheap.”

WATCH

Dividend Discount Model (DDM)

Edspira · 7:23

https://www.youtube.com/watch?v=TlH3_iOHX3s

> **WHEN TO WATCH**
> After the big idea: a clear walkthrough of valuing a stock as the present value of its dividends — work his examples alongside him before you meet the Gordon model’s traps.

BACKUP VIDEO

Dividend Discount Model Explained in 5 Minutes

Ryan O'Connell, CFA, FRM · 5:08

https://www.youtube.com/watch?v=b24NXdOBoL8

A compact second pass at the DDM and Gordon formulas — watch it the day before the unit test and work its example at the pause.

KEY TERMS

fundamental analysis

Valuing a stock by studying the business itself — financial statements, earnings, dividends, management and industry — to estimate what a share is truly worth.

intrinsic value

The analyst's estimate of what a share is really worth based on the cash it can produce, as distinct from its current market price.

dividend discount model (DDM)

A valuation method that prices a stock as the present value of all its expected future dividends.

required rate of return (r)

The annual return an investor demands for holding a stock's risk; the discount rate in the dividend models.

Gordon (constant-growth) model

The DDM for a dividend growing at a steady rate forever: price = next year's dividend ÷ (required return − growth rate), valid only when r exceeds g.

discounted cash flow (DCF)

The general method of valuing any asset as the present value of the cash it is expected to produce.

growth stock

Stock of a fast-expanding company, typically with a high P/E ratio and little or no dividend because earnings are reinvested.

value stock

Stock priced low relative to its earnings, book value or dividends — the kind a bargain-hunting fundamentalist seeks.

top-down analysis

Starting from the economy, then picking promising industries, then companies; bottom-up reverses the order, starting with the individual business.

CORE IDEAS

The story. In 1934, with the Dow still crawling along the floor it had hit in 1932 — down almost ninety percent from its 1929 peak — two men at Columbia University published a textbook that taught Wall Street how to think again. Benjamin Graham

had been a brilliant young money manager; the Crash had humbled him personally, and the humbling went into the book. With David Dodd, a young colleague who had taken down Graham's lectures, he wrote *Security Analysis*: six hundred pages arguing that a stock is not a ticker symbol wiggling on a tape but a fractional ownership of a real business, to be appraised as soberly as a farm or an apartment building. Their definition became the profession's creed: "An investment operation is one which, upon thorough analysis, promises safety of principal and a satisfactory return. Operations not meeting these requirements are speculative." In the rubble of 1934 — exchanges distrusted, brokers disgraced, the new SEC barely a year old — Graham and Dodd gave analysis its charter, and every valuation formula in this lesson descends from their book.

How they figured it out. Graham's method starts with a question a farmer would ask: what does the thing *yield*? A farm is worth its crops, an apartment building its rents, and a share of stock the cash it will return to its owner — dividends now, or dividends later funded by today's reinvested earnings. So the fundamental analyst studies the business: the income statement, balance sheet and cash flow statement you read in Lesson 3.1; the ratios of Lesson 3.2 (P/E, earnings per share, debt ratios, margins); the quality and honesty of management; the health of the industry and the economy around it. From all that comes an estimate of **intrinsic value**, to be compared with the market price. Price far below value, with room for error — Graham called that room the margin of safety — and the fundamentalist buys; price far above, and she declines, however exciting the story.

The big idea. The simplest machine for turning dividends into value is the **dividend discount model**. If a stock pays a steady dividend D forever, with no growth — think of the straight preferred from Lesson 5.2 — its value is the perpetuity formula from your time-value lessons: $P = \frac{D}{r}$. A share paying $3 a year, when investors require a 6% return on stocks of its risk, is worth $\$3 \div 0.06 = \$50$. Check it in reverse: $3 on a $50 price is exactly a 6% yield. If the price on the screen is $42, the model says the market is offering more than 6% — attractive; at $60, less — pass.

Most companies hope to grow, and Myron Gordon's **constant-growth model** handles the hopeful case: if the dividend will grow at a steady rate g forever, then $P = \frac{D_1}{r - g}$, where D_1 is *next* year's dividend. Two traps live in that little formula, and the exam sets both. First, D_1: if the question gives the dividend *just paid* (D_0), you must grow it

one year first — $D_1 = D_0(1+g)$. A stock that just paid $2.00 with 4% growth and a 9% required return is worth $\frac{\$2.08}{0.09-0.04} = \$41.60$ — not $\$2.00 \div 0.05 = \$40$. Second, the model only means anything when **r is greater than g**: feed it growth faster than the required return and the denominator goes to zero or negative — the formula fails, which is itself a tested fact. Notice also the model's levers: faster growth or a lower required return raises the price; higher interest rates (which raise r) lower it — the same seesaw you learned with bonds.

The dividend models are one room in a larger house called **discounted cash flow**: value anything by forecasting the cash it will produce and discounting each year's cash back to the present at a rate that matches its risk. Analysts value whole companies this way, using free cash flow where dividends are small or absent. The arithmetic is Lesson 3.3's present value, applied with judgment — and judgment is the honest limit of all of it. The models are exact; the inputs are guesses. Change g from 4% to 5% in the example above and the "value" jumps from $41.60 to $52.50. Graham's margin of safety exists precisely because forecasts err; a steward presents DDM outputs as estimates with stated assumptions, never as facts.

Fundamentalists sort stocks and methods into families the exam names. A **growth stock** reinvests its earnings — high P/E, little or no dividend, prized for expansion; a **value stock** trades cheap against earnings, book value or dividends — lower P/E, often a meaningful yield. Neither label is a verdict; they are hunting styles. And analysts work in two directions: **top-down**, from the economy (Unit 2) to the strongest industries to the best companies within them; or **bottom-up**, beginning with a particular business and its statements, trusting that a fine company can be found in any weather. The exam asks you to classify a described analyst, not to crown a winner.

On the exam today. You will almost surely compute a Gordon price. Write the formula, check whether the dividend given is D_0 or D_1, grow it if needed, subtract g from r in the denominator, and divide. Distractors are built from the errors: using D_0, adding g to r, or dividing by r alone. Expect a zero-growth question dressed as preferred stock (P = D ÷ r), the "model fails when g ≥ r" fact, and classification items: "an analyst who studies financial statements and management is a…" (fundamentalist), "an analyst who begins with GDP forecasts is…" (top-down), "a stock with a high P/E and no dividend is a…" (growth stock). Keep dividend yield at

hand too — annual dividend over market price — because the exam mixes it into the same questions.

PICTURE STUDY

A Cotton Office in New Orleans, Edgar Degas, 1873 · Oil on canvas · Musée des Beaux-Arts, Pau, France

Image: Wikimedia Commons, public domain

Edgar Degas (1834–1917), visiting his Creole relatives in New Orleans, painted his uncle's cotton brokerage at work in 1873 — the year a great financial panic struck both continents. His uncle tests the staple of a cotton sample between his fingers; clerks grade the heaps on the table; his brother reads the market news; the bookkeeper posts the ledger. It is fundamental analysis before the name existed: value judged by handling the actual goods and keeping honest books. The museum at Pau bought the canvas in 1878, making it the first Degas ever purchased by a museum.

Look closely

- Watch the hands. The man in the top hat is pulling cotton fibers apart to judge their length and strength — examining the business's actual product, not its rumor.
- Find the bookkeeper at his ledger on the right. Which documents from Lesson 3.1 is he the ancestor of?
- Find the man reading the newspaper. Market prices and news belong in the analysis too — but notice how many more figures are busy with the goods and the books.

- Count how many separate judgments are happening in one room: grading, pricing, recording, negotiating. An analyst's report compresses all of these.

Talk about it

1. What is the cotton-office equivalent of intrinsic value, and how did these men estimate it?
2. Degas painted this in a panic year, 1873. How would a falling market change the work in this room — and how should it not?
3. Graham said to analyze a stock the way you would appraise a business you might buy whole. How does this painting illustrate that discipline?

PROJECT

The Two-Stock Study

You will write a one-page analyst's note comparing two invented companies with complete (pretend) numbers — P/E, dividend yield and a Gordon valuation for each — and recommend one, with your assumptions labeled like a professional. This study goes directly into your unit portfolio.

You will need

- Exam notebook and calculator
- One clean sheet for the final note
- The ratio pages from Lessons 3.2 and this lesson's formula page

Steps

1. Copy the two pretend companies. Birch Creamery: price $48, earnings per share $3.20, dividend just paid $1.60, expected growth 5%, required return 9%. Stonebridge Software: price $90, earnings per share $2.00, no dividend, growth hoped for 15%.
2. Compute Birch's P/E and dividend yield, and Stonebridge's P/E. Note why Stonebridge has no dividend yield to compute.
3. Run the Gordon model on Birch: grow the $1.60 to D1, subtract g from r, and price the stock. Compare your answer with the $48 market price.
4. Explain in two sentences why the Gordon model cannot be run on Stonebridge as given (no dividend — and test what happens to the denominator if someone claims g of 15% against r of 9%).
5. Classify each stock, growth or value, using the exam's markers (P/E, dividend, reinvestment).
6. Write the one-page note: the numbers in a small table, your Gordon result with its assumptions stated ("IF dividends grow at 5% and IF 9% is the right required return…"), one risk for each company, and a recommendation for a patient pretend investor.
7. Read it aloud to a parent and let them ask the client's question: "What if the growth never comes?" Answer honestly.

Tips

- Label every number invented — the habit of saying “in this example” is exam preparation and professional honesty at once.
- If your Gordon price differs wildly from the market price, say which assumption would have to change to close the gap — that is real analyst thinking.

Check your work

- ☐ My P/E and yield calculations are correct and shown.
- ☐ My Gordon valuation grows D0 to D1 and uses r − g in the denominator.
- ☐ My note states assumptions as assumptions, with “in this example” language.
- ☐ My recommendation gives a reason tied to the numbers AND a named risk.

EXAM NOTEBOOK

1. Make the formula page of the unit: zero-growth DDM, Gordon model with the r > g condition circled in red, D1 = D0(1+g), and dividend yield — each with a two-line example.
2. Write a trap list titled “Gordon traps”: using D0 instead of D1; adding g to r; using it when g ≥ r; forgetting the answer is an estimate built on guesses.
3. Rule a growth vs. value table: P/E, dividend, where earnings go, one-sentence description of the investor who hunts each.
4. Copy Graham’s definition of an investment operation at the top of a page and write beneath it, in your own words, what separates investing from speculating.

KEY FORMULAS

Zero growth: $P = \dfrac{D}{r}$

Constant growth (Gordon): $P = \dfrac{D_1}{r - g}, \quad r > g$

$D_1 = D_0(1 + g)$

From history. Graham taught his method at Columbia for decades, and in 1951 a young Nebraskan named Warren Buffett took the class, earning the only A+ Graham ever awarded in it, by Buffett's own telling. Graham's shorter book for laymen, *The Intelligent Investor* (1949), added the parable of "Mr. Market," the obliging partner who offers you a different price every day — take advantage of his moods, Graham said, or ignore him, but never let him tell you what the business is worth.

WORKED EXAMPLES

Example 1. Lantern Utilities pays a fixed $4.20 annual dividend with no expected growth. Investors require 7% on stocks of its risk. What is the stock worth, and is it attractive at a market price of $56?

Show solution

1. Zero-growth model: $P = \$4.20 \div 0.07 = \$60$.
2. Market price $56 is below the $60 estimate of intrinsic value.
3. Check by yield: $\$4.20 \div \$56 = 7.5\%$ — more than the 7% required, which says the same thing.

Answer: Intrinsic value $60; at $56 the stock offers more than the required return, so the model calls it attractive (as an estimate, not a promise).

Example 2. Orchard Foods JUST PAID a $2.00 dividend. Dividends are expected to grow 4% a year; the required return is 9%. Price the stock with the Gordon model.

Show solution

1. The $2.00 is D_0 — grow it first: $D_1 = \$2.00 \times 1.04 = \$2.08$.
2. Denominator: $r - g = 0.09 - 0.04 = 0.05$.
3. Price: $\$2.08 \div 0.05 = \$41.60$. (The trap answer $40.00 comes from forgetting to grow the dividend.)

Answer: $41.60. Always ask: is the dividend given the one just paid (grow it) or the one coming next (use as is)?

Example 3. Exam style — reason through every choice. The constant-growth dividend discount model CANNOT be used when:

A. The dividend is large

B. The growth rate equals or exceeds the required return

C. The stock pays quarterly rather than annual dividends

D. The required return exceeds the growth rate

Show solution

1. The denominator is r − g. If g equals r it is zero (division impossible); if g exceeds r it turns negative (a meaningless negative price). That is B.
2. A is irrelevant — any size dividend works. C is a bookkeeping detail; annualize and proceed.
3. D describes the condition under which the model DOES work — the exam loves to offer the correct condition as a wrong answer to the 'cannot' question.

Answer: B. Gordon requires r > g; at g ≥ r the formula fails — a frequently tested fact all by itself.

Example 4. Exam style. An analyst begins with a forecast for the national economy, selects the industries she expects to lead the recovery, and only then examines companies. A second analyst screens for stocks trading below 12 times earnings with dividend yields above 3%. Identify each.

Show solution

1. The first works from the economy downward to industries, then companies: top-down analysis.
2. The second starts from individual companies' numbers and hunts bargains by P/E and yield: a bottom-up approach with a value style.
3. Both are fundamentalists — each is studying businesses and their earnings, not charts; keep that larger label ready too.

Answer: First: top-down (fundamental). Second: bottom-up value investing (fundamental). The exam asks for exactly these labels from exactly such descriptions.

PRACTICE

1. Easy A stock pays a steady $2.40 dividend with no growth expected. If investors require 8%, what is it worth under the dividend discount model?

   A. $30.00

   B. $19.20

   C. $36.00

   D. $24.00

   Show answer

   A. Zero growth: $P = \$2.40 \div 0.08 = \$30$. B multiplies by 8 instead of dividing by 8%; check any answer by confirming the dividend yield it implies ($2.40 ÷ $30 = 8%).

2. Easy Fundamental analysis studies which of the following?

   A. Price charts and trading volume

   B. Financial statements, management and the industry

   C. The advance-decline line

   D. Short interest

   Show answer

   B. The fundamentalist studies the business itself. A, C and D are the technician's tools — next lesson's subject.

3. Easy Next year's dividend (D1) is expected to be $1.50; the required return is 10% and growth 4%. The Gordon model prices the stock at:

   A. $25.00

   B. $15.00

   C. $10.71

   D. $37.50

   Show answer

   A. $\$1.50 \div (0.10 - 0.04) = \$25$. B divides by r alone and ignores growth; C ADDS g to r — the standard denominator traps. (D1 is already given, so no growing is needed here.)

4. **Medium** A stock JUST PAID a $3.00 dividend. Growth is expected at 2% and the required return is 8%. What is the Gordon price?

   A. $37.50

   B. $38.25

   C. $51.00

   D. $30.60

   Show answer

   C. Grow the dividend first: $D_1 = \$3.00 \times 1.02 = \$3.06$; then $\$3.06 \div (0.08 - 0.02) = \$51.00$. A is the double trap (D0 and no subtraction: $\$3.00 \div 0.08$); B grows the dividend but divides by r alone; D uses the wrong denominator entirely. Every distractor is a near-miss arithmetic path — which is exactly how the real exam builds them.

5. **Medium** Why does the Gordon model break when the growth rate is greater than or equal to the required return?

   Show answer

   The denominator r − g becomes zero or negative, giving an infinite or negative price — meaningless. No company grows faster than the market's required return forever, and the model refuses the assumption.

6. **Medium** Which stock best fits the label "value stock"?

   A. P/E of 45, no dividend, revenue doubling yearly

   B. P/E of 9, dividend yield 4%, slow steady sales

   C. A money-market fund

   D. A convertible preferred

   Show answer

   B. Low price relative to earnings with a meaningful dividend is the value profile. A is the growth profile; C and D are not common-stock styles at all.

7. Medium In 1934, in what condition was the American market when Graham and Dodd published *Security Analysis*, and what was the book's central claim?

Show answer

The Dow had lost almost ninety percent from its 1929 peak and trust in Wall Street was destroyed. The book claimed a stock is fractional ownership of a real business, to be valued by thorough analysis of its earnings, assets and management — with a margin of safety.

8. Hard A utility stock sells at $44 and will pay $2.20 next year, growing 3% thereafter. What required return does the market price imply?

A. 5%

B. 8%

C. 3%

D. 10%

Show answer

B. Solve Gordon for r: $r = \frac{D_1}{P} + g = \frac{\$2.20}{\$44} + 0.03 = 0.05 + 0.03 = 8\%$. A is the dividend yield alone, forgetting growth — the tempting near-miss in this rearrangement the exam occasionally tests.

9. Hard An analyst raises her growth estimate for a stock from 4% to 5% (required return 9%, D1 $2.00 either way). The Gordon value changes from:

A. $40.00 to $50.00

B. $50.00 to $40.00

C. $40.00 to $44.00

D. It does not change

Show answer

A. At 4%: $\$2.00 \div 0.05 = \$40$; at 5%: $\$2.00 \div 0.04 = \$50$. One percentage point of assumed growth moved the "value" 25% — DDM outputs swing hard on small inputs, which is why assumptions must be stated and a margin of safety kept. C underestimates the leverage in the shrinking denominator.

10. Hard Classify each: (a) an adviser who starts from Federal Reserve policy and GDP, then picks sectors; (b) one who reads 10-K filings of small companies no one follows; (c) a stock with P/E 50 reinvesting all earnings.

Show answer

(a) Top-down fundamental analysis. (b) Bottom-up fundamental analysis. (c) A growth stock. All three are fundamental-analysis labels — none involves charts.

11. Challenge A client says: "The Gordon model gave your firm $62 for this stock, so $62 is what it's worth — guaranteed by mathematics." Write the three-sentence correction a faithful adviser owes this client.

Show answer

The arithmetic is exact, but the inputs — next year's dividend, a growth rate forever, and the right required return — are estimates, and small changes in them move the answer a great deal. The $62 is therefore an informed opinion of value, not a guarantee, and we state the assumptions precisely so you can judge them. That honesty is not a weakness of the method; it is the fiduciary's duty when using it.

COMMON MISTAKES

- Using the dividend just paid (D0) in the Gordon numerator instead of growing it one year to D1.
- Adding the growth rate to the required return instead of subtracting it in the denominator.
- Applying the constant-growth model when g equals or exceeds r — the model fails there, and the exam tests that fact directly.
- Confusing dividend yield (dividend ÷ price) with the required return r — related, but r also includes growth.
- Treating a DDM output as a guaranteed value rather than an estimate resting on stated assumptions.

Make it a game · The Appraiser. Ten to fifteen minutes, two players, index cards and a timer. Each player secretly writes four valuation cards: a D1 (between $1 and $4), a growth rate (0% to 6%), and a required return HIGHER than the growth rate (to keep the model legal). Swap stacks. On "go," both players price all four of the opponent's stocks with the Gordon model (or P = D ÷ r when growth is zero); first finished calls time, and the parent checks both sheets. Scoring: one point per correct price, minus one for using a card where someone wrote g ≥ r without declaring "MODEL FAILS" (write one such trick card into your stack on purpose). Best of three rounds; the champion gets to assign one Gordon problem for the loser's sketchbook.

Scripture. "For which of you, intending to build a tower, sitteth not down first, and counteth the cost, whether he have sufficient to finish it?" (Luke 14:28, KJV)

Counting the cost before committing is the Lord's own picture of prudence. Fundamental analysis is that sitting-down-first applied to shares: thorough counting before a dollar is risked, which is also the dividing line Graham drew between investment and speculation.

5.5 Technical Analysis: Reading the Charts

OBJECTIVES

- Define technical analysis as the study of market data — price and volume — rather than the underlying business.
- Identify the technician's tools: trendlines, support and resistance, breakouts, moving averages and named patterns like head-and-shoulders.
- Explain market breadth and the advance-decline line.
- State the contrarian reading of short interest and the odd-lot theory as the exam tests them.
- Describe what technicians do accurately and honestly, without asserting that charts predict the future.

> **Warm-up.** Flip a coin twenty times. Start at 50 on a piece of graph paper; move your "price" up one square for heads, down one for tails, and connect the dots. Look at your chart: does pure chance seem to show trends, floors and ceilings? Save this chart — the lesson and the game will both come back to it.

WATCH

Differences between Technical Analysis and Fundamental Analysis on FINRA and NASAA Exams

Series 7 Guru · 3:41

https://www.youtube.com/watch?v=REmlwMK_JlA

> **WHEN TO WATCH**
> Right after the big idea: four minutes that draw the exam's exact line between the chartist and the fundamentalist — list each tool he names under the correct heading in your notebook.

BACKUP VIDEO

Technical versus Fundamental Analysis

Series 7 Guru · 3:03

https://www.youtube.com/watch?v=VAagMve8lig

A three-minute second pass on the fundamental/technical boundary — watch it before the practice set if any classification question in the worked examples slowed you down.

KEY TERMS

technical analysis

The attempt to forecast price movements by studying the market's own data — prices, volume and patterns — rather than the issuing company's business.

trendline

A straight line drawn along a chart's successive lows (uptrend) or highs (downtrend) to show the market's prevailing direction.

support

A price floor where a falling stock has repeatedly attracted enough buying to stop declining.

resistance

A price ceiling where a rising stock has repeatedly met enough selling to stop advancing.

breakout

A move through an established support or resistance level, which technicians read as the start of a new trend.

moving average

The average of a stock's closing prices over a rolling window (such as 50 or 200 days), smoothing daily noise; crossings above or below it are watched as signals.

head and shoulders

A chart pattern of three peaks with the middle one highest; a head-and-shoulders top is read by technicians as a sign a rise is reversing into a decline.

market breadth

The breadth of participation in a move, measured by counting advancing versus declining stocks — the advance-decline line is its running total.

short interest

The total shares sold short and not yet covered; technicians read a HIGH short interest as bullish, since every short must eventually buy back.

odd-lot theory

The old contrarian theory that small investors (odd-lot traders, under 100 shares) tend to be wrong at market turning points, so one should do the opposite at extremes.

CORE IDEAS

The story. Charles Henry Dow was a quiet, bearded Connecticut farmer's son who became the best financial reporter of his age. In 1882 he and fellow reporter Edward

Jones set up Dow, Jones & Company in a basement office near the New York Stock Exchange, delivering handwritten news bulletins to brokers. Dow's problem was the one every investor still has: each day some stocks rose and some fell — how could anyone say what *the market* had done? His answer, in 1884, was beautifully simple: pick a basket of important stocks — his first list of eleven was mostly railroads, the blue chips of the day — add up their prices, divide, and publish the average every day in his *Customer's Afternoon Letter*. In 1889 the letter grew into *The Wall Street Journal*; in 1896 Dow built a second average from twelve industrial companies, and the Dow Jones Industrial Average was born. Watching his averages rise and fall together and apart, Dow wrote editorials on the market's tides, waves and ripples — observations his successors assembled, after his death in 1902, into "Dow theory," the ancestor of every chart on every trading screen in the world.

How they figured it out. Dow's heirs reasoned like this: the market's price already contains everyone's knowledge, fear and hope, so instead of studying the company — the fundamentalist's work of Lesson 5.4 — study the market itself. Prices, they observed, seem to move in trends; volume tells how much conviction stands behind a move; and crowds, being human, repeat themselves, so the shapes prices traced before great rises and falls might recur. From those premises come all the technician's tools. Whether the premises are sound is a fair and open question — careful studies have found it genuinely hard to beat the market with charts alone, and this course will not pretend otherwise. But the Series 65 does not ask whether charting works; it asks whether you know *what technicians do*. You can learn a craft's vocabulary honestly without vouching for its prophecies, the way you can describe what a weather-glass claims without staking the harvest on it.

The big idea. The technician's raw material is the **chart**: price history, usually with volume beneath. On it she draws **trendlines** connecting the rising lows of an advance or the falling highs of a decline, saying the trend is a friend until the line breaks. Levels where decline after decline has stopped — where buyers reliably appear — she calls **support**; ceilings where advances stall she calls **resistance**. A stock that has bounced between $20 and $25 for months is "trading in a channel," and a decisive move through either wall — a **breakout** — is read as the start of something new, with technicians often buying strength above resistance, selling weakness below support. The **moving average** — say, the mean of the last 200 closing prices, recomputed daily — smooths the jitters into a single curving line; prices

crossing above it are read as strength, below as weakness. And the patterns have names: the **head and shoulders**, three peaks with the tallest in the middle, is the most famous, read at a market top as a sign the advance is reversing. The exam expects the names and the readings, nothing deeper.

Beyond single stocks, technicians measure the whole market's health with **breadth.** Each day, count the stocks that advanced and the stocks that declined; the running total of advances minus declines is the **advance-decline line.** When the averages make new highs while the A-D line sags — fewer and fewer soldiers following the generals — technicians call the rally narrow and suspect; when breadth confirms the averages, they trust the move. It is Dow's original instinct — look at the whole army, not one flag — carried one step further.

Two sentiment indicators carry a twist the exam loves: they are read **backwards.** **Short interest** is the count of shares sold short and not yet bought back. You might think heavy shorting is simply bad news; the technician's contrarian reading is that a HIGH short interest is **bullish**, because every short seller is a guaranteed future buyer — fuel waiting above the fire — and if the stock rises, their scramble to cover pushes it higher still. The **odd-lot theory** is franker still: it held that the small investor, trading odd lots of fewer than 100 shares, tended to be most wrong exactly at the turning points — buying heavily at tops, selling out in despair at bottoms — so the theorist watched the odd-lot figures and did the opposite at extremes. (Whatever its manners, the theory is part of the exam's vocabulary; answer with its logic, not your sympathy for the small trader — who today, it should be said, has index funds Dow never dreamed of.)

Now the honest paragraph, which is also exam-relevant: the Series 65 is written for advisers under a fiduciary duty, and nothing in it requires you to believe charts foretell prices — only to know the tools, the terms and the readings. Decades of academic work (you will meet the efficient market hypothesis in a later unit) suggest that past prices alone are a thin reed, which is why the technician's claims should be described to clients as what technicians believe, not what is known. There is no shame in this: an adviser must understand vocabularies she does not bet on, because clients will ask, markets will chatter, and test questions will come dressed in chartist clothes. Describe accurately; promise nothing; keep the client's plan anchored to things that endure — saving, diversification, time.

On the exam today. First, classification: statements about earnings, management, P/E or the economy belong to the fundamentalist; statements about price patterns, volume, support, moving averages or breadth belong to the technician — the exam will mix a list and ask which speaker is which. Second, definitions used precisely: support is below (a floor of buying), resistance above (a ceiling of selling); a breakout pierces one of them; a head-and-shoulders TOP signals a reversal downward to a chartist. Third, the backwards indicators: high short interest = bullish (future buying), and the odd-lot theory bets against the small trader at extremes. Fourth, breadth: the advance-decline line measures how widely the army marches. If a question asks whether technical analysis WORKS — it will not; it will only ask what its practitioners do and say.

PICTURE STUDY

Operating the Stock Tickers at the Waldorf-Astoria, Unknown photographer, 1918 · Black-and-white photograph (U.S. National Archives) · National Archives and Records Administration, Washington

Image: Wikimedia Commons, public domain

In 1918, with the young men at war, the Waldorf-Astoria Hotel in New York hired women to run its stock tickers and quotation boards — among the first it had employed in such posts, as the government photographer who took this picture noted. One reads the tape as it spools from the glass-domed ticker, Edison's improved machine that printed prices by telegraph within minutes of each trade; the other posts the numbers for the brokers and guests. Every chart in this lesson begins exactly here: someone recording price after price after price.

Look closely

- Follow the ribbon of tape from the machine through her fingers. Each inch holds a ticker symbol, a price and a volume — the technician's entire raw material.
- Look at the wall of quotation cards behind them. A chart is just this board remembered over time; find how the cards are grouped under letter headings.
- Notice the full wastebasket of spent tape. Thousands of prices a day, every day — what discipline would it take to find a pattern in that river?

- Observe who is doing this skilled work in 1918, and why that year — the home front gave many women their first post at the machines of finance.

Talk about it

1. Dow built his averages from prices like the ones on this tape. What does an average tell you that one stock's price cannot?
2. A technician says everything worth knowing is on the tape; a fundamentalist says the tape only tells you what people paid, not what a business is worth. Where do you stand after Lessons 5.4 and 5.5 — and why?
3. These women recorded prices without betting on them. What does that distinction — knowing the tools without trusting their prophecies — look like for a fiduciary today?

PROJECT

Chart It Yourself

You will build a technician's chart by hand from twenty days of prices, draw its trendline, mark support and resistance, compute a moving average, and then write the two rival readings of it — the technician's and the fundamentalist's — side by side. The prices are invented for the exercise; the skills are the exam's.

You will need

- Graph paper, ruler and pencil
- Calculator for the moving averages
- Your coin-flip chart from the warm-up
- Exam notebook

Steps

1. Copy this 20-day closing-price series for pretend "Meridian Mills": 40, 41, 39, 40, 42, 41, 43, 44, 42, 43, 45, 44, 46, 45, 44, 45, 47, 46, 48, 49.
2. Plot the twenty closes on graph paper, days across the bottom, price up the side, and connect the dots.
3. Draw the trendline along the rising lows with your ruler. Is this an uptrend by the technician's definition?
4. Identify the approximate support (where dips kept stopping) and the resistance the stock finally pierced near the end. Mark both as horizontal lines and circle the breakout day.
5. Compute the 5-day moving average for days 5 through 20 (average each day's close with the four before it) and plot it as a smooth second line. Note where price rides above it.
6. Write the technician's paragraph: trend, support, resistance, breakout, moving average — the full vocabulary applied to your chart.
7. Write the fundamentalist's paragraph beside it: list four things this chart cannot tell you (earnings, debt, dividends, management — the Lesson 5.4 list), ending with one honest sentence about what each school can and cannot claim.

8. Lay your coin-flip warm-up chart next to Meridian Mills and write two sentences: could a stranger tell at a glance which one chance drew? What does that teach about reading patterns humbly?

Tips

- Use a sharp pencil and a real ruler; sloppy charts hide the very levels you are supposed to see.
- The 5-day average only needs five additions and one division per day — keep a running column and it goes quickly.

Check your work

- ☐ My chart is neatly plotted with labeled axes and all twenty closes.
- ☐ My trendline, support, resistance and breakout are drawn and labeled with the correct terms.
- ☐ My moving average is computed correctly for all sixteen values.
- ☐ My two paragraphs use each school's vocabulary accurately, and my coin-flip comparison draws an honest conclusion.

EXAM NOTEBOOK

1. Make the two-column master list "Fundamental vs. Technical": sort these under the right head — P/E, support, management, volume, GDP, moving average, dividend yield, breadth, head-and-shoulders, balance sheet.
2. Draw and label a small head-and-shoulders top: left shoulder, head, right shoulder, neckline — and write the technician's reading (reversal) underneath.
3. Write a "read it backwards" card: HIGH short interest → bullish (shorts must buy back); odd-lot theory → do the opposite of the small trader at extremes.
4. Copy a one-line timeline of Charles Dow: 1882 Dow, Jones & Co. · 1884 first average (11 stocks) · 1889 The Wall Street Journal · 1896 the Industrial Average · 1902 death, then "Dow theory" named by his successors.

From history. Dow never called his ideas a theory and never traded on them systematically; he was a journalist to the end, and died in 1902 at only 51. It was S. A. Nelson — a young Wall Street writer who had begged Dow to write a book and, failing, wove Dow's Journal editorials into his own little volume, The ABC of Stock Speculation (1902) — who coined the phrase "Dow's theory." The averages outgrew everyone: the twelve industrials of 1896 became thirty in 1928, and the index conceived to answer "what did the market do today?" still answers it every evening.

WORKED EXAMPLES

Example 1. Exam style — reason through every choice. Which statement would come from a TECHNICAL analyst rather than a fundamental one?

A. "The company's debt-to-equity ratio has doubled since 2024."

B. "The stock has strong support at $38 and heavy volume on every rally."

C. "Management's new plant should raise margins next year."

D. "At 22 times earnings the shares are rich for this industry."

Show solution

1. A studies the balance sheet — fundamental. C studies management and operations — fundamental. D uses the P/E ratio — fundamental valuation.
2. B speaks of price levels and volume: the market's own data. That is the technician, full stop.
3. The exam's sorting rule: business facts → fundamentalist; price-and-volume facts → technician.

Answer: B. Support levels and volume are chart talk; ratios, margins and management are business talk.

Example 2. Exam style. A stock has traded between support at $20 and resistance at $25 for eight months. It closes at $26.40 on triple its average volume. A technician would most likely say:

A. The stock is now overpriced and should be sold short

B. A breakout has occurred and the advance may continue

C. The P/E ratio no longer supports the price

D. Support has moved to $26.40

Show solution

1. Piercing resistance on heavy volume is the textbook breakout; technicians read it as the start of a new up-leg — B.
2. A reverses the technician's playbook (they buy breakouts, not fade them); C is a fundamentalist's sentence planted as a distractor.
3. D garbles the vocabulary: old resistance near $25 would now be watched as new support, but the breakout close itself doesn't become support.

Answer: B. Breakout above resistance on heavy volume = bullish to a technician; also note how choice C tries to lure you across the fundamental/technical line.

Example 3. Exam style. Short interest in a listed stock has risen to its highest level in years. Under the technical (contrarian) reading tested on the exam, this is:

A. Bearish, because informed investors are betting against the stock

B. Bullish, because short sellers must eventually buy to cover

C. Neutral, because shorts and longs always balance

D. A signal the company's earnings will fall

Show solution

1. The tested reading is mechanical: every short position is a future purchase, so a mountain of short interest is latent demand — bullish. B.
2. A is the intuitive answer and the deliberate trap; the exam wants the contrarian doctrine, not the intuition.
3. C invents a balance that doesn't exist; D confuses market data with a business forecast — a category error between the two schools.

Answer: B. High short interest is read as BULLISH — the exam point — because covering shorts means future buying.

PRACTICE

1. Easy Technical analysts study _____ and _____; fundamental analysts study the _____ itself. Fill in the blanks.

   Show answer

   Price and volume (the market's data); the business (statements, management, industry).

2. Easy A stock has stopped falling at about $30 four times in a year. A technician calls $30 the stock's level of:

   A. Resistance

   B. Parity

   C. Support

   D. Breakout

   Show answer

   C. Support is the floor where buying has repeatedly appeared; resistance is the ceiling above. (Parity belongs to Lesson 5.2's convertibles — a different world.)

3. **Easy** Charles Dow published his FIRST stock average — eleven stocks, mostly railroads — in what year?

   A. 1884

   B. 1896

   C. 1902

   D. 1929

   Show answer

   A. The first average appeared in his Customer's Afternoon Letter in 1884. B is the tempting near-miss: 1896 is when the twelve-stock INDUSTRIAL average (the DJIA) began; 1902 is the year Dow died.

4. **Medium** The Dow index rises to a record high while the advance-decline line falls for three straight weeks. How does a technician read this?

   A. Breadth confirms the advance

   B. The rally is narrow and suspect

   C. Short interest must be rising

   D. Support has become resistance

   Show answer

   B. New highs with shrinking breadth mean fewer stocks are carrying the move — a divergence technicians distrust. A states the opposite; C and D are unrelated vocabulary.

5. **Medium** The last five closes are 22, 23, 21, 24 and 25. The 5-day moving average is:

   A. 23

   B. 115

   C. 22.5

   D. 24

   Show answer

   A. $(22 + 23 + 21 + 24 + 25) \div 5 = 115 \div 5 = 23$. B is the sum before dividing. Technicians watch whether price holds above the average (read as strength) or breaks below it (read as weakness).

6. Medium A head-and-shoulders TOP forming after a long advance is read by technicians as:

A. A signal the advance will accelerate

B. A reversal pattern — the advance may be ending

C. Proof the company's earnings fell

D. A rise in book value

Show answer

B. The three-peak top is the classic reversal pattern in chart lore. C and D confuse market patterns with business facts — exactly the boundary the exam tests.

7. Medium Why does the odd-lot theory watch trades of fewer than 100 shares, and what does it advise at market extremes?

Show answer

Odd lots marked the smallest investors, whom the theory held to be most wrong at turning points; it advised doing the opposite of heavy odd-lot buying at tops and heavy odd-lot selling at bottoms. Know its logic for the exam, whatever you think of its manners.

8. Hard Which pair correctly matches indicator and tested reading?

A. High short interest — bearish; odd-lot buying surge at a top — bullish

B. High short interest — bullish; odd-lot buying surge at a top — bearish

C. Rising A-D line — bearish; breakout above resistance — bearish

D. Price above its moving average — bearish; support — a ceiling

Show answer

B. Both are contrarian: shorts are future buyers (bullish), and the small trader piling in at a top is the odd-lot theory's sell signal (bearish). The other pairs each reverse at least one standard reading.

9. Hard An adviser who personally doubts charting is asked by a client what "support at $45" means. Write the two-sentence answer that is both accurate and honest.

Show answer

"Support is a price level where this stock has repeatedly stopped falling because buyers have stepped in — technicians treat $45 as a floor that may hold again. That is a description of past trading and of what chartists expect, not a guarantee of where the price can go."

10. Hard Which list contains ONLY a technician's tools?

A. Volume, moving averages, the advance-decline line
B. P/E ratios, volume, GDP forecasts
C. Moving averages, dividend yield, support levels
D. Balance sheets, breadth, trendlines

Show answer

A. All three are market data. B and D each smuggle in business analysis (P/E, GDP, balance sheets), and C hides dividend yield — a fundamental measure — between two chart tools. The exam's sorting questions look exactly like this.

11. Challenge Your coin-flip chart from the warm-up shows what looks like a trend, a support floor and even a breakout — yet it was produced by pure chance. Write three sentences on what this does and does not prove about technical analysis, in the spirit of this lesson.

Show answer

It proves that the human eye finds patterns even in randomness, so a pattern on a chart is not by itself evidence of anything. It does not prove that all market patterns are meaningless — markets are made of people, not coins, and the exam's vocabulary describes real practices advisers must know. The faithful conclusion is humility: describe the tools accurately, promise nothing from them, and anchor clients to saving, diversification and time.

COMMON MISTAKES

- Reading high short interest as bearish — the exam wants the contrarian reading: shorts must buy back, so high short interest is bullish.
- Swapping support and resistance — support is the floor below the price; resistance is the ceiling above it.

- Calling a head-and-shoulders top a continuation pattern — technicians read it as a reversal.
- Answering a classification question with a fundamental tool (P/E, earnings) when the question asks what a TECHNICIAN watches, or vice versa.
- Telling a client (or an exam) that charts predict prices — the exam tests what technicians do; the fiduciary describes, and does not promise.

Make it a game · Real or Random?. Ten to fifteen minutes, two players, graph paper and a coin. Round one: out of sight, the parent draws two 20-step "price charts" — one by flipping a coin (up a square for heads, down for tails), one invented freehand to look like a dramatic stock with a trend and a breakout. The student examines both for 30 seconds and must call which is the coin. Then swap roles. Two points for a correct call. Round two, speed vocabulary: one player sketches any chart and marks a feature — floor, ceiling, piercing move, three-peak top, smooth average line — and the other has ten seconds to name it in exam language (support, resistance, breakout, head-and-shoulders, moving average); one point each, six features per player. Highest total wins; the loser must state the short-interest rule from memory, backwards reading and all.

Scripture. "Boast not thyself of to morrow; for thou knowest not what a day may bring forth." (Proverbs 27:1, KJV)

The chartist's temptation — and every forecaster's — is boasting of tomorrow. A steward may study patterns diligently and still hold this proverb: describe what you see, claim nothing you cannot know, and build on what does not depend on predicting a single day.

UNIT 5

Equity Securities

A share of stock is a slice of a real business, and this unit is about everything a slice can be. It begins in Amsterdam in 1602, when the Dutch East India Company sold the first shares the general public could buy and trade, and it ends at Charles Dow's ticker, where technicians still read the tape he first averaged in 1884. Along the way you will learn what a **common stockholder** actually owns — votes, preemptive rights, inspection rights and the last claim in line — and how to work a **cumulative voting** problem that lets a small shareholder seat a director. You will meet **preferred stock**, the bond-like equity the railroads made famous, and master dividends in arrears, conversion parity, the four dividend dates and what a stock split does not change.

Then the unit turns to the shares people earn at work — **restricted stock**, Rule 144, and employee stock options, told through the Sears, Roebuck profit-sharing fund of 1916 that turned loyal clerks into owners — and finishes with the two great schools of stock analysis: **fundamental analysis**, where Graham and Dodd taught a ruined Wall Street to value a business by its earnings and dividends, and **technical analysis**, where you will learn honestly what chartists do and what the exam expects you to know about it. By the end you can price a stock with the dividend discount model, work a parity problem, draw a four-dates timeline and answer the Series 65's equity questions with confidence.

PREREQUISITES

- Can compute ratios from Unit 3 (P/E, earnings per share) and explain the ladder of liquidation from Lesson 3.5
- Can work present-value ideas from Lesson 3.3 (a dollar later is worth less than a dollar now)
- Can convert percents to decimals and solve a one-variable equation like $P = D \div r$
- Can read a bond-style quote from Unit 4 and explain why prices fall when interest rates rise

MASTERY CHECKLIST

- ☐ I can list the rights of a common stockholder: vote, dividends if declared, preemptive rights, inspection rights and the residual claim.
- ☐ I can work a statutory and a cumulative voting problem and explain why cumulative voting helps the small shareholder.
- ☐ I can tell a right from a warrant from an employee option and explain ADRs, including the currency risk that remains.
- ☐ I can calculate dividends in arrears for a cumulative preferred and a conversion ratio and parity price for a convertible.
- ☐ I can put the four dividend dates in order, say who sets each and who gets the dividend, and show what a split leaves unchanged.
- ☐ I can explain restricted stock, control stock and Rule 144 in plain words, and the tax difference between an ISO and a nonqualified option.
- ☐ I can price a stock with the zero-growth and constant-growth (Gordon) dividend discount models and dodge the D1 trap.

- ☐ I can describe what technical analysts do — trendlines, support and resistance, moving averages, breadth, short interest — without promising that charts predict.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **Investor.gov: Stocks**: Free, from the SEC's Office of Investor Education. A plain-English page on what stock is, common versus preferred, and how investors earn (or lose) money. Read it with Lessons 5.1 and 5.2. Ages 14 and up.
- **Investor.gov: American Depositary Receipts**: Free. The SEC's short official explanation of ADRs — what the receipt is, who issues it, and the risks that remain. Two minutes of reading that locks in the ADR paragraph of Lesson 5.1. Ages 14 and up.
- **Investor.gov: Rule 144 — Selling Restricted and Control Securities**: Free. The official plain-words summary of the rule at the heart of Lesson 5.3, including the current holding periods and volume limits if they ever change. Ages 15 and up.
- ***The Stock Exchange from Within*, by W. C. Van Antwerp (1913)**: Free on the Internet Archive. A Wall Street insider defends and explains the Exchange a generation before the SEC existed; chapter I's tour of the floor pairs with Lessons 5.1 and 5.5. Old opinions, told vividly — read it as history. Ages 15 and up.
- ***The ABC of Stock Speculation*, by S. A. Nelson (1902)**: Free on the Internet Archive. The little book that first put Charles Dow's market ideas between covers and coined the phrase "Dow's theory." Skim the chapters built from Dow's own editorials alongside Lesson 5.5. Ages 15 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

5.1	**Common Stock and Shareholder Rights**	3 sessions of 50 minutes
5.2	**Preferred Stock, Convertibles and Dividends**	3 sessions of 50 minutes
5.3	**Restricted Stock and Employee Stock Options**	3 sessions of 50 minutes
5.4	**Fundamental Analysis: Value from Earnings and Dividends**	

5.5 Technical Analysis: Reading the Charts 3 sessions of 50 minutes

Unit 5 test

Closed book. Twenty questions, four choices each, 5 points apiece. Time yourself at about 83 seconds a question — 28 minutes for the set — just as on the real exam, and answer every question; there is no penalty for guessing. Where a problem says "in this example," use the figures given, not current law or prices. Calculators allowed for the computation items; show your setup in the margin so errors can be found and fixed.

1. **5 pts**

   An investor owns 200 shares of a company electing four directors under cumulative voting. The maximum number of votes she may cast for a single candidate is:

   A. 200

   B. 400

   C. 800

   D. 50

2. **5 pts**

   Which set of traits describes a subscription right rather than a warrant?

   A. Long-term; exercise price above market at issue; attached to bonds

   B. Short-term; subscription price below market; issued to existing shareholders

   C. Perpetual; issued to employees; taxed at exercise

   D. Short-term; price above market; issued to bondholders

3. **5 pts**

   The holder of an American depositary receipt on a French company bears which of the following risks?

   A. Currency risk only if the ADR is unsponsored

   B. No currency risk, because the ADR pays dollars

   C. Currency risk, because the underlying shares are valued in euros

   D. Settlement risk on a foreign exchange

4. 5 pts

In a corporate liquidation, common stockholders are paid:

A. Before unsecured creditors but after bondholders

B. Immediately after preferred stockholders and before creditors

C. Last, after all creditors and preferred stockholders

D. Pro rata alongside preferred stockholders

5. 5 pts

A 6% cumulative preferred ($100 par) paid no dividend for two full years. This year, before the common may receive anything, each preferred share must be paid:

A. $6

B. $12

C. $18

D. $20

6. 5 pts

A convertible preferred ($100 par) is convertible at $25. With the common at $27, the parity price of the preferred is:

A. $100

B. $108

C. $112

D. $92.59

7. 5 pts

Which dividend date is NOT set by the board of directors?

A. Declaration date

B. Record date

C. Payable date

D. Ex-dividend date

8. 5 pts

An investor buys a stock in a regular-way trade ON its ex-dividend date. The declared dividend goes to:

A. The buyer

B. The seller

C. Whoever holds on the payable date

D. The issuer

9. 5 pts

A client holds 300 shares at $80. After a 2-for-1 split she holds:

A. 600 shares at $40; total value unchanged

B. 600 shares at $80; total value doubled

C. 150 shares at $160; total value unchanged

D. 600 shares at $40; total value halved

10. 5 pts

Interest rates fall substantially. The price of an outstanding straight preferred stock will most likely:

A. Fall, because its dividend is fixed

B. Rise, because its fixed dividend is now more attractive

C. Stay unchanged, because preferred has no maturity

D. Fall, because the issuer will raise the dividend

11. 5 pts

Shares bought in a private placement from a non-reporting company may be resold publicly under Rule 144 after:

A. Six months

B. One year

C. Ninety days

D. No waiting period if sold to another private investor’s broker

12. 5 pts

In this example, Ridge Corp. has 5,000,000 shares outstanding and average weekly trading volume of 40,000 shares. Under Rule 144, the most an affiliate may sell within 90 days is:

A. 40,000 shares

B. 50,000 shares

C. 90,000 shares

D. 25,000 shares

13. 5 pts

An employee exercises a NONQUALIFIED stock option with a $15 strike when the market is $24. The tax result at exercise is:

A. No tax until the shares are sold

B. $9 per share of ordinary income

C. $9 per share of long-term capital gain

D. $24 per share of ordinary income

14. 5 pts

For an incentive stock option's entire profit to receive capital-gain treatment, the shares must be held at least:

A. One year from grant and two from exercise

B. Two years from grant and one from exercise

C. Six months, like restricted stock

D. Until the option's expiration date

15. 5 pts

A company director acquires shares two different ways: 1,000 granted privately eight months ago (the company files SEC reports) and 1,000 bought on the NYSE last week. Under Rule 144, which may he sell this week, and under what limit?

A. Neither; both need a one-year holding period

B. Both, but each is subject to the affiliate volume limits

C. Only the granted shares, with no limits

D. Only the exchange-bought shares, with no limits

16. 5 pts

A stock pays a constant $3.60 annual dividend with no growth. An investor requiring 9% should value it at:

A. $32.40

B. $36.00

C. $40.00

D. $44.40

17. 5 pts

A stock just paid a $1.00 dividend; dividends grow 5% and the required return is 10%. The Gordon model values the stock at:

A. $20.00

B. $21.00

C. $10.50

D. $22.05

18. 5 pts

An analyst who starts with the economic outlook, then chooses industries, then companies — and favors stocks with low P/E ratios and above-average dividend yields — is best described as:

A. Top-down, value-oriented fundamental analysis

B. Bottom-up growth investing

C. Technical analysis using breadth indicators

D. Passive indexing

19. 5 pts

Short interest in a stock reaches a multi-year high. The technical (contrarian) interpretation tested on the exam is:

A. Bearish — informed money expects a decline

B. Bullish — short sellers represent future buying demand

C. Neutral — short sales do not affect prices

D. Bearish — the company's fundamentals have deteriorated

20. **5 pts**

Which observation belongs to a TECHNICAL analyst?

A. “Earnings per share rose 12% this quarter.”

B. “The stock broke above long-standing resistance on heavy volume.”

C. “The debt-to-equity ratio is the lowest in the industry.”

D. “Management reinvests all earnings rather than paying dividends.”

ANSWER KEY

1. C. $200 \times 4 = 800$ votes, all of which may be concentrated on one candidate. A is the statutory-voting per-seat cap; D divides when it should multiply.
2. B. Rights are brief, below-market and antidilutive for existing holders. A describes warrants; C mixes in employee options; D crosses the traits.
3. C. The dollar wrapper does not change the euro business inside; exchange-rate moves still change dollar values and dividends. B is the standing trap; sponsorship (A) affects listing, not currency.
4. C. Common holds the residual claim — the bottom of the ladder. Every other choice promotes the common holder above someone who legally outranks him.
5. C. Two years of arrears ($12) plus the current year's $6 = $18. B forgets the current year — the most common wrong answer.
6. B. Ratio = $\$100 \div \$25 = 4$; parity = $4 \times \$27 = \$108$. C uses a ratio of 4 on $28, D divides backwards.
7. D. The ex-date is fixed by the exchange or FINRA, working backward from the board's record date so regular-way trades settle in time.
8. B. On and after the ex-date the stock trades without the dividend; the buyer settles too late to be the record holder, so the seller keeps it.
9. A. $600 \times \$40 = \$24{,}000$, the same as $300 \times \$80$. Splits change count and price, never total value — and they are not taxable when received.
10. B. Preferred behaves like a long bond: rates down, price up. C is the trap — no maturity makes the price MORE sensitive to rates, not less.
11. B. As of 2026 the holding period is six months for SEC-reporting issuers and one year for non-reporting ones; the question specifies non-reporting.
12. B. The greater of 1% of outstanding (50,000) or the average weekly volume (40,000) — so 50,000. A picks the smaller figure; C adds them.
13. B. The NQSO spread is ordinary wage income at exercise. A describes an ISO; C mislabels the character; D taxes the whole price instead of the spread.
14. B. Two years from GRANT, one from EXERCISE — the exam reverses the clocks in choice A to catch skimmers.
15. B. The granted (restricted) shares have satisfied the six-month holding period; the open-market shares never needed one. But everything an affiliate holds is control stock, so BOTH sell only within the volume limits.

16. C. Zero-growth DDM: $\$3.60 \div 0.09 = \$40$. B divides by 10%; A multiplies where it should divide.
17. B. $D_1 = \$1.05$; $\$1.05 \div (0.10 - 0.05) = \$21$. A forgets to grow the dividend; C divides by r alone; D grows two years.
18. A. Economy → industry → company is top-down; low P/E with high yield is the value style; studying businesses at all makes it fundamental.
19. B. Every short must eventually be covered by a purchase, so heavy short interest is read as pent-up demand. A is the intuitive trap; D crosses into fundamental territory the question didn't ask about.
20. B. Resistance, breakouts and volume are the market's own data — the technician's domain. A, C and D all examine the business, which is fundamental analysis.

PORTFOLIO PIECE: MY EQUITY HANDBOOK

Assemble the unit's work into a handbook you could study from the week before the real exam. It contains: your one-page chart comparing rights, warrants and employee stock options (term, price at issue, who receives each, tax moment); your hand-worked cumulative-voting example from The Annual Meeting, with the guarantee-a-seat formula; your four-dates dividend timeline drawn large and labeled with who sets each date; and your Two-Stock Study — the pretend comparison using P/E, dividend yield and a Gordon valuation with every example number labeled as invented. Close the handbook with a half-page in your own words: what a share of stock is, who stands where in line, and what an honest analyst may and may not claim to know.

LOOK FOR	WHAT IT MEANS
Calculations	Cumulative voting, arrears, parity, dividend yield and both dividend-discount valuations are computed correctly, with formulas written before numbers and work shown.
The comparison chart	Rights, warrants and employee options are distinguished accurately on term, pricing, recipient and tax treatment, in exam-ready language.
The timeline	All four dividend dates appear in order, correctly attributed (board or exchange), with the buyer's last dividend-earning day marked.
Honest analysis	The Two-Stock Study states its assumptions as assumptions, labels invented numbers, names a risk for each company, and reaches a reasoned recommendation.
Craftsmanship and voice	Pages are dated, legible and organized for review, and the closing half-page explains equity ownership and analytic honesty in the student's own words.

UNIT 6

Funds, Derivatives and Insurance Products

So far you have studied securities one at a time — a bond, a share of stock. This unit is about **packages**: the pooled vehicles that let a family with fifty dollars a month own a slice of hundreds of companies at once. You will meet the Massachusetts Investors Trust of 1924, the Boston fund that made a startling promise — it would buy back its own shares any day the owner asked — and from it learn the whole machinery of **mutual funds**: net asset value, sales loads, breakpoints and share classes. Then come the cousins: closed-end funds that trade at premiums and discounts, unit investment trusts, the **ETFs** that began with the SPDR of 1993, and the **REITs** that let ordinary investors own office towers by the share.

The second half walks the wilder country. Alfred Winslow Jones, a sociologist moonlighting as a magazine writer, quietly built the first **hedged fund** in 1949; you will learn what hedge funds, private equity, limited partnerships and exchange-traded notes really are, and where their risks hide. You will learn **options and futures** at exam depth — calls, puts, intrinsic value, covered and naked writing — beginning with Thales of Miletus and his olive presses, the first option in recorded history. The unit closes with **annuities and life insurance**, told through America's first life insurer, a 1759 fund for ministers' widows and orphans — products that can bless a family or bury it in charges, which is why a fiduciary discloses every commission. Nearly a quarter of the Series 65 lives in this territory.

PREREQUISITES

- Can compute percents, decimals and simple averages quickly with a calculator
- Can explain what a share of common stock and a bond are, and how each is priced (Units 4 and 5)
- Can read a simple price quote and compute a gain or loss on a purchase and sale
- Can define a security and an issuer in plain words (Unit 1)

MASTERY CHECKLIST

- ☐ I can compute a fund's net asset value, its public offering price with a sales load, and the sales charge as a percent of the offering price.
- ☐ I can tell Class A, Class B and Class C shares apart and apply a breakpoint schedule, a letter of intent and rights of accumulation.
- ☐ I can compare open-end funds, closed-end funds, UITs, ETFs and REITs by how each is priced, traded and redeemed.
- ☐ I can describe hedge funds, private equity, limited partnerships, ETNs and leveraged funds, and name the chief risk of each.
- ☐ I can find an option's intrinsic value and time value, and give the maximum gain, maximum loss and breakeven for the four basic positions.
- ☐ I can explain covered versus naked call writing and why a protective put works like insurance.
- ☐ I can compare fixed, variable and equity-indexed annuities, and explain how annuity withdrawals are taxed.
- ☐ I can explain why a variable annuity and variable life insurance are securities, and what a fiduciary must disclose about commissions and surrender charges.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **Investor.gov: Mutual Funds and Exchange-Traded Funds**: Free, from the SEC's Office of Investor Education. Plain-English pages on loads, expense ratios and how ETFs differ from mutual funds. Read alongside Lessons 6.1 and 6.2. Ages 14 and up.
- **FINRA Fund Analyzer**: Free official tool that shows what loads and expenses cost over time for real funds' share classes. Use it to check your Class A versus Class C arithmetic in the Lesson 6.1 project — for study only, never as a shopping list. Ages 14 and up.
- **Investor.gov: Real Estate Investment Trusts (REITs)**: Free SEC page on equity and mortgage REITs, publicly traded and non-traded. Fits Lesson 6.2. Ages 14 and up.
- **Investor.gov: Annuities**: Free SEC pages on fixed, variable and indexed annuities, with the questions to ask before buying one. Read with Lesson 6.5. Ages 14 and up.
- ***Politics*, by Aristotle (Book I)**: Free on Project Gutenberg. Book I, chapter 11 contains the story of Thales and the olive presses — the first recorded option, told by a philosopher 2,300 years ago. Ten minutes with Lesson 6.4. Ages 14 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

6.1	**Mutual Funds: Shares of a Great Pool**	3 sessions of 50 minutes
6.2	**Closed-End Funds, UITs, ETFs and REITs**	3 sessions of 50 minutes
6.3	**Private Funds and Alternative Investments**	3 sessions of 50 minutes
6.4	**Options, Futures and Other Derivatives**	3 sessions of 50 minutes
6.5	**Annuities and Life Insurance**	3 sessions of 50 minutes

Unit 6 test

Closed book. Twenty questions, four choices each, 5 points apiece. Time yourself at about 83 seconds per question — set a timer for 28 minutes and answer every

question; on the real Series 65 an unanswered question is simply a wrong one. Calculators are allowed. Where a problem says “in this example,” use the figures given, not current law. Choose the BEST answer; several choices may be partly true.

1. 5 pts

   A mutual fund holds $84,000,000 of assets, owes $4,000,000, and has 5,000,000 shares outstanding. Its NAV per share is:

   A. $16.00

   B. $16.80

   C. $17.60

   D. $20.00

2. 5 pts

   A fund’s NAV is $18.60 and its sales charge is 7%. The public offering price is:

   A. $19.90

   B. $20.00

   C. $19.30

   D. $17.30

3. 5 pts

   An adviser recommends a $97,000 Class A purchase when the fund’s sales charge drops at $100,000. He says nothing about the schedule. This is:

   A. Acceptable, because the client chose the amount

   B. A breakpoint sale, a prohibited practice

   C. Permitted if the fund family approves

   D. Dollar-cost averaging

4. 5 pts

   An open-end fund order entered at 1:00 p.m. Eastern is filled at:

   A. The prior night’s NAV plus any load

   B. A price negotiated with the fund’s market maker

   C. The NAV next computed after the market close, plus any load

   D. The day’s average NAV

5. 5 pts

A closed-end fund with NAV of $16.00 trades at $14.00. The shares stand at:

A. A 12.5% discount to NAV

B. A 12.5% premium to NAV

C. A 14.3% discount to NAV

D. Exactly NAV, since closed-end funds must redeem at NAV

6. 5 pts

Which may be purchased on margin and sold short?

A. Open-end fund shares

B. Unit investment trust units

C. Exchange-traded fund shares

D. Variable annuity accumulation units

7. 5 pts

To maintain its tax treatment, a REIT must:

A. Hold 90% of assets in real estate and distribute 75% of income

B. Hold at least 75% of assets in real estate and distribute at least 90% of taxable income

C. Redeem its shares at NAV on demand

D. Register as an open-end investment company

8. 5 pts

An investment company with no investment adviser, a fixed portfolio of bonds, redeemable units and a stated termination date is a:

A. Closed-end fund

B. Hedge fund

C. Unit investment trust

D. Face-amount certificate company

9. **5 pts**

An exchange-traded note differs from an exchange-traded fund chiefly because the ETN:

A. Cannot be traded during market hours

B. Is an unsecured debt of its issuer and carries that issuer's credit risk

C. Must hold the securities of its index in a trust

D. Is guaranteed by SIPC against market loss

10. **5 pts**

In this example, a hedge fund charging 2-and-20 manages $20,000,000 and produces a $3,000,000 gain. The total fee is:

A. $400,000

B. $600,000

C. $1,000,000

D. $4,600,000

11. **5 pts**

Which individual qualifies as an accredited investor under Regulation D?

A. Income of $150,000 for each of the last two years

B. Net worth of $1,100,000 excluding her primary residence

C. Net worth of $1,100,000 of which $600,000 is home equity

D. Anyone employed by a bank

12. **5 pts**

A client plans to buy and hold "for several years." The LEAST suitable of these is a:

A. Diversified open-end index fund

B. 2× daily leveraged fund tracking the same index

C. Listed equity REIT

D. Investment-grade corporate bond

13. 5 pts

With a stock at $72, a 65 call trading at $9 has intrinsic value and time value of:

A. $9 and $0

B. $7 and $2

C. $2 and $7

D. $0 and $9

14. 5 pts

The writer of a naked call has a maximum potential loss that is:

A. The premium received

B. The strike price times 100

C. Unlimited

D. The difference between strike and premium

15. 5 pts

An investor buys a 40 put at a premium of $3. Maximum gain and breakeven are:

A. Unlimited; $43

B. $3,700; $37

C. $4,000; $40

D. $300; $43

16. 5 pts

“Conservative income from stock already owned” best describes:

A. Writing covered calls

B. Writing naked calls

C. Buying protective puts

D. Buying warrants

17. 5 pts

In this example, a 52-year-old’s nonqualified annuity contains $70,000 of contributions and $15,000 of earnings. He withdraws $15,000; his rate is 20%. Tax plus penalty equals:

A. $3,000

B. $1,500

C. $4,500

D. $0, because he withdrew only principal

18. 5 pts

A variable annuity is a security because:

A. It is issued by an insurance company

B. The owner bears the investment risk in a separate account

C. Its payments are guaranteed for life

D. Congress listed it in the Securities Act of 1933

19. 5 pts

An equity-indexed annuity has a 90% participation rate and an 8% cap. The index rises 15%. The credited rate is:

A. 15%

B. 13.5%

C. 8%

D. 0%

20. 5 pts

For the same account value and age, which annuitization option pays the SMALLEST monthly check?

A. Straight life

B. Life with 10-year period certain

C. Joint and last survivor

D. All pay equally by law

ANSWER KEY

1. A. $(\$84{,}000{,}000 - \$4{,}000{,}000) \div 5{,}000{,}000 = \$16.00$. B forgets the liabilities; C and D rearrange the arithmetic.
2. B. POP = NAV ÷ (1 − 0.07) = $\$18.60 \div 0.93 = \$20.00$. A is the trap: NAV × 1.07, wrong because the load is a percent of the offering price. D subtracts instead of adding a load.
3. B. Failing to disclose a reachable breakpoint — or placing orders just beneath one — is the named violation. Client choice (A) and fund approval (C) cure nothing; D is an unrelated term.
4. C. Forward pricing: every order waits for the next computed NAV. Open-end shares have no market makers (B) and no intraday or average prices (D); yesterday's NAV (A) is the stale-price decoy.
5. A. $(\$14 - \$16) \div \$16 = -12.5\%$ — a discount. C divides by the price instead of NAV; D is false — closed-end funds never redeem.
6. C. Only exchange-traded shares trade in a secondary market where borrowing and shorting are possible. A and B are redeemed with the issuer; D is a contract value, not a tradable share.
7. B. 75% of assets (and 75% of gross income) from real estate; 90% of taxable income distributed. A swaps the numbers — the exam's favorite move. REITs never redeem (C) and are not investment companies (D).
8. C. Fixed, supervised-not-managed, terminating, redeemable: the UIT's four fingerprints. Closed-end funds are managed and never redeem; hedge funds are private and managed; D is a different creature that promises a fixed sum at maturity.
9. B. The ETN owns nothing; it is a bank's promise, good only while the bank is. C describes the ETF; A is false; D misstates SIPC, which never covers market loss and does not guarantee an issuer's debt.
10. C. Asset fee $0.02 \times \$20{,}000{,}000 = \$400{,}000$ plus performance fee $0.20 \times \$3{,}000{,}000 = \$600{,}000$ totals $1,000,000. A and B are each half the answer; D taxes the whole fund as if it were profit.
11. B. The test is net worth over $1 million excluding the home, or income over $200,000 ($300,000 joint). C falls to $500,000 once the home is removed; A misses the income line; D is not a category.
12. B. The daily reset makes long-period results drift from twice the index — volatility alone erodes it — so regulators and the exam brand leveraged and

inverse funds unsuitable for buy-and-hold. A, C and D are ordinary long-term holdings.

13. B. Intrinsic = market − strike = $\$72 - \$65 = \$7$; the rest of the $9 premium, $2, is time value. C reverses them; D describes an at- or out-of-the-money call.
14. C. He may be forced to buy stock at any height to deliver at the strike; no ceiling exists. A is his maximum GAIN; D is the put writer's maximum loss; B invents a formula.
15. B. The stock can fall only to zero: $(\$40 - \$3) \times 100 = \$3{,}700$, with breakeven at $\$40 - \$3 = \$37$. "Unlimited" (A) is never true of puts; C ignores the premium; D states the maximum LOSS and a call-style breakeven.
16. A. The covered writer collects premiums and risks only the upside above the strike on shares he owns. B is the unlimited-risk position; C costs premium (insurance, not income); D is a speculation on the issuer's stock.
17. C. LIFO makes the entire $15,000 earnings, so tax $0.20 \times \$15{,}000 = \$3{,}000$ plus the 10% pre-59½ penalty $1,500 totals $4,500. D is the FIFO wish the tax code denies; A and B are each one piece.
18. B. The 1959 VALIC decision turned on who bears the risk: separate account plus customer risk equals security, sold by prospectus. A would make fixed annuities securities too; C describes the insurance feature, not the securities test; D never happened.
19. C. Participation yields $0.90 \times 15\% = 13.5\%$, but the cap cuts the credit to 8%. B stops before the cap; A ignores both limits; D is the floor, applied only in losing years.
20. C. Paying until the second of two deaths is the longest expected obligation, so each check is smallest. Straight life (A) pays the most; the period-certain guarantee (B) sits between; D confuses pricing with regulation.

PORTFOLIO PIECE: MY PRODUCTS ATLAS

Assemble the atlas an adviser-in-training should own: your one-page map of every pooled vehicle in this unit — open-end fund, closed-end fund, UIT, ETF, REIT, hedge fund, DPP, ETN — each marked with how it is priced, where it trades and whether it can be redeemed; your hand-drawn payoff tables and diagrams for one call and one put, buyer and writer, with breakevens circled; your annuity comparison grid (fixed, variable, indexed) with the tax-chain flashcard and your performed disclosure script; the share-class ledger and alternatives dossier from the projects; and, as the cover leaf, one honest paragraph on where commissions hide in this unit's products — loads, 12b-1 fees, M&E charges, surrender schedules, performance fees — and why a fiduciary names every one of them before the client signs.

LOOK FOR	WHAT IT MEANS
The map	Every pooled vehicle appears once, with pricing, trading venue and redeemability correct — including the three that trip candidates: closed-end (never redeemed), ETF (redeemed only in creation units), REIT (75/75/90, never redeemed).
Options arithmetic	Payoff tables are computed by hand without errors; breakevens, maximum gains and maximum losses match the formulas, and buyer and writer columns mirror to zero.
Annuity grid	Risk-bearer, account type and security status are right for all three annuity types, and the tax chain (deferral, LIFO, ordinary income, 59½ penalty, exclusion ratio) is stated and applied in one worked example.
The commissions paragraph	Names at least five places compensation hides, in plain words with a dollar illustration, and states the fiduciary's disclosure duty as an obligation, not a courtesy.
Craftsmanship	Pages are dated, legible and organized for fast exam review; a stranger could study from this atlas.

6.1 Mutual Funds: Shares of a Great Pool

OBJECTIVES

- Compute a mutual fund's net asset value per share and explain forward pricing.
- Compute the public offering price from NAV and a sales load, and the sales charge as a percent of the offering price.
- Distinguish Class A, Class B and Class C shares and apply breakpoints, a letter of intent and rights of accumulation.
- Explain 12b-1 fees, expense ratios and what makes a fund "no-load."
- State the 75-5-10 test for a diversified investment company in plain words.

> **Warm-up.** A pool holds $10,200,000 of securities and cash and owes $200,000 in bills. It is divided into 500,000 equal shares. With pencil and paper, figure what one share is worth. Keep your answer; it is the first NAV you have ever computed.

WATCH

Open-ended mutual fund (part 1) | Finance & Capital Markets | Khan Academy

Khan Academy · 4:00

https://www.youtube.com/watch?v=DzYwB3uSU-c

> **WHEN TO WATCH**
> After the story, before the big idea; watch how new money creates new shares at NAV, and redraw his diagram in your notebook as he talks.

BACKUP VIDEO

Share Classes - Series 65 Exam Prep

CertFuel · 9:49

https://www.youtube.com/watch?v=z097hpvxL_o

Before the practice set, as a second pass at A, B and C shares and breakpoints from an exam tutor; list each class's charges as he names them and compare with your three-doors sketch.

open-end fund

An investment company that continuously issues new shares and stands ready to redeem them at net asset value; the legal shape of the ordinary mutual fund.

public offering price (POP)

What a buyer pays for a fund share: NAV plus any sales charge; for a no-load fund, POP equals NAV.

breakpoint

A dollar level of purchase — such as $50,000 or $100,000 in a fund's schedule — at which the front-end sales charge percentage drops.

12b-1 fee

An annual fee taken from fund assets to pay for distribution and marketing, named for the SEC rule that permits it.

forward pricing

The rule that every purchase or redemption order is filled at the next NAV to be computed, not the last one printed.

net asset value (NAV)

The per-share value of a fund: total assets minus liabilities, divided by shares outstanding, computed once each business day after the market closes.

sales load

A commission built into a fund purchase or redemption that compensates the selling firm, legally expressed as a percent of the offering price.

contingent deferred sales charge (CDSC)

A back-end load on Class B shares that is charged when shares are sold and declines each year until it reaches zero.

expense ratio

A fund's yearly operating expenses — management, administration and any 12b-1 fee, but not sales loads — as a percent of its average net assets.

letter of intent (LOI)

A pledge to invest enough within 13 months to reach a breakpoint, earning the lower sales charge from the first dollar; it may be backdated up to 90 days.

The story. In March 1924, in an office near State Street in Boston, a former pots-and-pans salesman named Edward Leffler helped launch something no American investor had seen: the **Massachusetts Investors Trust**, a pool of common stocks whose managers made one startling promise — the trust itself would buy back any investor's shares, any business day, at their fair per-share value. Leffler had sold securities door to door and had watched ordinary families get locked into pools they could not exit; he insisted that an honest fund must let the small investor out as easily as it let him in. The trust opened with about $50,000 and a list of blue-chip stocks, published its holdings, and grew steadily. When the Crash of 1929 ruined the fashionable leveraged investment trusts of the decade — closed pools, often stuffed with borrowed money and each other's shares — the plain, redeemable Boston fund survived, and its design became the pattern for the modern mutual fund industry.

How they figured it out. The promise to redeem forced every other honest feature. If the trust must buy back shares at fair value, it must *know* the fair value — so it computed **net asset value**: everything the fund owns, minus everything it owes, divided by the number of shares. If investors can leave daily, the fund must hold securities it can actually sell — so it favored marketable stocks and shunned heavy borrowing. And if new money arrives daily, the fund simply creates new shares at the same NAV, so no newcomer dilutes the old owners. Congress wrote these practices into the **Investment Company Act of 1940**, which defines the open-end company, requires redemption within seven days, and polices fund governance to this day.

The big idea. A mutual fund (open-end investment company) continuously issues and redeems its own shares. $\text{NAV} = \dfrac{\text{assets} - \text{liabilities}}{\text{shares outstanding}}$, computed once each business day after the New York close. You **buy at the public offering price** — NAV plus any sales charge — and **redeem at NAV** (less any back-end charge). Under **forward pricing**, an order placed at 11 a.m. is filled at that evening's NAV, and an order placed after the close gets the next day's; nobody trades a mutual fund "during the day." The shares never trade in a secondary market: the fund itself is always the counterparty. A fund calling itself **diversified** must pass the **75-5-10 test**: at least 75% of its assets invested in other issuers' securities, and, within that 75%, no more

than 5% of the fund's assets in any one issuer and no more than 10% of any issuer's voting shares.

The costs come in layers, and the exam expects you to know each layer by name. A **Class A** share charges a **front-end load**: part of your purchase never gets invested. By FINRA rule the maximum is 8.5% of the offering price, though most funds charge far less — and the schedule steps down at **breakpoints** as the purchase grows. A **letter of intent** lets an investor promise to reach a breakpoint within 13 months and get the discount from the start; **rights of accumulation** let all his prior holdings in the fund family count toward the next breakpoint on new purchases. A **Class B** share charges nothing up front but imposes a **contingent deferred sales charge** on the way out, declining year by year, and typically converts to Class A after six to eight years; B shares carry a higher 12b-1 fee meanwhile and offer no breakpoints. A **Class C** share is the **level-load** class: little or nothing in or out, but a steady 12b-1 fee (often about 1% a year) forever — cheap for a short holding, expensive for a long one.

Two more numbers live on every fund's fee table. The **12b-1 fee** pays distribution costs out of fund assets each year; a fund may call itself **no-load** only if it charges no front or back load and its 12b-1 fee is no more than 0.25% a year. The **expense ratio** sums the yearly operating costs — the adviser's management fee, administration, and any 12b-1 fee — as a percent of assets; sales loads are *not* in it, because they are paid once at purchase or sale, not yearly. What does the investor get for all this? Three honest benefits the exam also tests: **diversification** even for fifty dollars a month, **professional management** under the 1940 Act's watch, and conveniences — automatic reinvestment of dividends and capital-gains distributions, exchanges within the fund family, record-keeping. The steward's question is never whether funds are good, but whether *these costs* suit *this client's* amount and time.

One habit of thought will save you on half the fund questions: the sales charge is legally a percent of the *offering price*, not of NAV. So $\text{POP} = \dfrac{\text{NAV}}{1 - \text{sales charge}}$, and the charge percent is $(\text{POP} - \text{NAV}) \div \text{POP}$. If NAV is \$18.30 and the load is 8.5%, the POP is not $\$18.30 \times 1.085$; it is $\$18.30 \div 0.915 = \$20.00$. Work that division until it is reflex.

On the exam today. The Series 65 loves breakpoints. It will describe a client investing \$48,000 when the breakpoint sits at \$50,000 and ask what the adviser should do: the answer is always to *disclose the breakpoint* — and recommending a purchase just

below one to earn a bigger commission is the violation called a **breakpoint sale**. It will ask which class suits a large, long-term purchase (Class A — breakpoints make big money cheap) and whether large Class B purchases are ever suitable (essentially never — no breakpoints). It will test forward pricing with an order placed at 2 p.m., the 75-5-10 numbers, what "no-load" permits (a 0.25% 12b-1 fee), and whether the expense ratio includes the sales load (it does not). And remember the redemption rule: payment within seven days of the request, at the next computed NAV.

PICTURE STUDY

Looking up State Street toward the Old State House, Unknown artist, Nineteenth century · Hand-colored print · Boston Public Library (via Digital Commonwealth)

Image: Wikimedia Commons, public domain

This hand-colored view from the Boston Public Library looks up State Street — Boston's money street — toward the Old State House, where the Declaration of Independence was first read to the city in 1776. For two centuries the counting-houses, insurance offices and banks along this half-mile financed New England's ships and mills; read the signboards and you can see it. In 1924, in offices a short walk from this view, the Massachusetts Investors Trust opened its books and invented the redeemable mutual fund.

Look closely

- Find the Old State House at the end of the street, small against the sky. Why would banks crowd the street that leads to it?
- Find the painted signs — Marine Insurance, Paper Warehouse, Stationers' Hall. How many different trades share this one street?
- Notice the barrels and carts in the roadway. What does the mixing of cargo and clerks say about how close trade and finance once stood?
- Count the people. Is anyone idle? What impression of Boston commerce did the printmaker want to give?

Talk about it

1. The Massachusetts Investors Trust promised to buy back its shares any day. Why would that promise matter to a clerk on this street with only a few hundred dollars saved?
2. Marine insurance spread the risk of one ship among many merchants. How is a mutual fund the same idea applied to stocks?
3. Boston trustees had managed rich families' money for generations. What changes when the same care is packaged into shares anyone can buy?

PROJECT

The Share-Class Ledger: A, B and C Over Ten Years

Advisers are disciplined every year for putting clients in the wrong share class. You will build the ledger that proves which class suits which investor, using one pretend fund with three classes and two very different clients.

You will need

- Ledger notebook or a spreadsheet
- Calculator
- The pretend fee table in the steps below (write it at the top of your page)

Steps

1. Write the fee table for the pretend Steward Growth Fund: Class A — 5% front load, breakpoints 4% at $50,000 and 3% at $100,000, 0.25% 12b-1; Class B — no front load, CDSC 5-4-3-2-1-0% by year sold, 1% 12b-1, converts to A after year 6; Class C — 1% 12b-1 level, 1% CDSC in year one only.
2. Client One invests $100,000 for 10 years. For each class, compute the dollars actually invested on day one and the yearly 12b-1 drag; assume the portfolio itself grows 6% a year before these charges.
3. Client Two invests $10,000 for 2 years. Repeat the arithmetic, including the CDSC if B or C shares are sold in year two.
4. Build a table: class, money working on day one, total charges over the holding period, rough ending value.
5. Write one sentence per client naming the best class and why — Client One should discover the Class A breakpoint; Client Two should discover Class C.
6. Check your intuition against FINRA's free Fund Analyzer with any real fund family's A and C shares (study only, not a recommendation).
7. Finish with a three-line disclosure you would read aloud to Client One, naming the load, the breakpoint and the 12b-1 fee in plain words.

Tips

- Keep the growth assumption identical across classes; only the charges differ. The point is the charges.

- Round to whole dollars; the exam cares about the reasoning, not the pennies.

Check your work

- ☐ My day-one invested amounts are right: $97,000 for A at the 3% breakpoint, $100,000 for B and C.
- ☐ My table shows Class A winning for the large long investment and Class C for the small short one.
- ☐ My disclosure names every charge without jargon.
- ☐ I can say in one sentence why a $100,000 Class B purchase would be a violation waiting to happen.

EXAM NOTEBOOK

1. Make a formula page: NAV, POP from NAV and load, and sales charge as a percent of POP, each with one worked number.
2. Draw the three share classes as three doors: Door A (toll at entry, cheaper for big/long), Door B (toll at exit, shrinking yearly, converts to A), Door C (small yearly toll forever). Label each with its 12b-1 fee.
3. Start a trap list for Unit 6 and enter the first three: “load is % of POP, not NAV,” “breakpoint sale = selling just below the discount,” “no-load still allows 0.25% 12b-1.”

KEY FORMULAS

$$\text{NAV per share} = \frac{\text{total assets} - \text{total liabilities}}{\text{shares outstanding}}$$

$$\text{POP} = \frac{\text{NAV}}{1 - \text{sales charge \%}}$$

$$\text{Sales charge \%} = \frac{\text{POP} - \text{NAV}}{\text{POP}}$$

From history. Edward Leffler was not finished in 1924; the next year he helped launch Incorporated Investors, a second open-end fund, and spent his career arguing that the redeemable share was the small investor’s best protection. The Massachusetts Investors Trust itself still exists today within the MFS fund family — a living fossil from the year the mutual fund was born, and proof that a structure built to be fair in a panic can outlast a century of them.

WORKED EXAMPLES

Example 1. A fund holds \$61,500,000 of securities and \$1,500,000 of cash, and owes \$3,000,000 of accrued expenses. There are 4,000,000 shares outstanding. Find the NAV per share.

Show solution

1. Total assets: $\$61{,}500{,}000 + \$1{,}500{,}000 = \$63{,}000{,}000$.
2. Net assets: $\$63{,}000{,}000 - \$3{,}000{,}000 = \$60{,}000{,}000$.
3. Per share: $\$60{,}000{,}000 \div 4{,}000{,}000 = \$15.00$.

Answer: NAV is \$15.00. An investor redeems at this price; a buyer pays this price plus any load.

Example 2. The same fund's Class A shares carry a 5% sales charge. Find the public offering price, and show that 5% of the POP — not 5% of NAV — is the load.

Show solution

1. POP: $\$15.00 \div (1 - 0.05) = \$15.00 \div 0.95 = \$15.79$.
2. Load per share: $\$15.79 - \$15.00 = \$0.79$.
3. Check: $\$0.79 \div \$15.79 = 5.0\%$. Multiplying NAV by 1.05 would have given \$15.75 — close, wrong, and offered as a distractor.

Answer: POP is \$15.79; the \$0.79 difference is 5% of the offering price.

Example 3. Exam style. A client has $95,000 to invest for 20 years in a fund family whose Class A breakpoint at $100,000 cuts the load from 5% to 3%. The adviser should:

A. Place $95,000 in Class B shares to avoid any front-end load

B. Split the money among three fund families to diversify managers

C. Disclose the breakpoint and discuss a letter of intent or adding $5,000 to reach $100,000

D. Place the order at $95,000 in Class A immediately, since the client never asked about charges

Show solution

1. Choice A: large B-share purchases are a classic abuse — no breakpoints, higher 12b-1; eliminate.
2. Choice B: splitting across families destroys the breakpoint and raises total loads; this is the "breakpoint sale" pattern in disguise; eliminate.
3. Choice D: silence about an available discount violates the adviser's duty of disclosure; eliminate.
4. Choice C: disclosure plus an LOI (13 months to add $5,000) or rights of accumulation serves the client — the fiduciary answer.

Answer: C. The exam rewards whichever choice gets the client the breakpoint; it punishes whichever choice preserves the adviser's commission.

PRACTICE

1. Easy A fund has assets of $42,000,000, liabilities of $2,000,000 and 2,500,000 shares. Find the NAV per share.

   Show answer

   $(\$42{,}000{,}000 - \$2{,}000{,}000) \div 2{,}500{,}000 = \$16.00$

2. Easy An investor redeems 300 shares of an open-end fund when NAV is $16.00 and POP is $16.84. Ignoring any CDSC, what does she receive?

   Show answer

   Redemption is at NAV: $300 \times \$16.00 = \$4{,}800$. The POP matters only when buying.

3. **Easy** An open-end fund investor places a redemption order at 2:00 p.m. Eastern. At what price is it filled?

   A. The NAV computed the previous evening

   B. The NAV next computed after the order, at that day's close

   C. The midpoint of the day's high and low NAV

   D. The price another investor bids for the shares

   Show answer

   B. Forward pricing fills every order at the next computed NAV. A is the stale price the exam dangles; C invents an intraday NAV that does not exist; D describes a closed-end fund or stock, not a redeemable fund.

4. **Medium** A fund's NAV is $22.80 and its maximum sales charge is 5%. The public offering price is:

   A. $23.94

   B. $24.00

   C. $21.66

   D. $22.80

   Show answer

   B. $\$22.80 \div 0.95 = \$24.00$. A is the classic wrong answer — NAV × 1.05 — tempting because it looks like "adding 5%," but the load is a percent of the offering price. C subtracts a load; D ignores it.

5. **Medium** A fund quote shows NAV $13.50 and POP $14.50. The sales charge is:

   A. 6.9% of the offering price

   B. 7.4% of the offering price

   C. $1.00, which is 6.9% of NAV

   D. Zero; the difference is the 12b-1 fee

   Show answer

   A. $(\$14.50 - \$13.50) \div \$14.50 = 6.9\%$. B divides by NAV (that quotient, 7.4%, is the right arithmetic for the wrong base); C mislabels the base; D confuses a one-time load with the yearly 12b-1 fee.

6. **Medium** Which fund may call itself “no-load”?

A. Front load 1%, no 12b-1 fee

B. No loads, 12b-1 fee of 0.75%

C. No loads, 12b-1 fee of 0.25%

D. No front load, CDSC of 2% in the first year

Show answer

C. “No-load” permits a 12b-1 fee of no more than 0.25%. A has a front load, D a back-end load, and B’s 0.75% 12b-1 is too high to use the name.

7. **Medium** To be a diversified investment company under the Act of 1940, a fund must meet the 75-5-10 test. Which statement is correct?

A. 75% of shareholders must vote; 5% quorum; 10-day notice

B. Within at least 75% of assets, no more than 5% of assets in one issuer and no more than 10% of any issuer’s voting shares

C. No more than 75% in stocks, 5% in cash, 10% in bonds

D. At least 75% of assets in U.S. government securities

Show answer

B. The 5% and 10% limits apply inside the 75% basket; the other 25% is unrestricted. A, C and D rearrange the numbers into plausible nonsense — read every clause.

8. **Medium** From the story: the Massachusetts Investors Trust of 1924 survived the Crash of 1929 while many fashionable investment trusts of the twenties were wiped out. Name the design promise that made the difference and one discipline it forced on the managers.

Show answer

It promised to redeem its own shares any business day at fair value. That forced daily NAV computation, marketable holdings and little leverage — the pattern later written into the Investment Company Act of 1940.

9. Hard A client invests $10,000 in Class A shares at NAV $20.00 with a 5% load. How many shares does he buy, and what must the shares grow to (per share) before he breaks even?

Show answer

POP $= \$20.00 \div 0.95 = \$21.05$; he buys $\$10{,}000 \div \$21.05 \approx 475$ shares. He breaks even when NAV climbs back to about $21.05 — the load must be earned back before the first dollar of gain.

10. Hard An adviser recommends a client buy $49,500 of Class A shares of one fund, with the 4% breakpoint at $50,000. This is best described as:
A. Prudent diversification
B. A breakpoint sale, a prohibited practice
C. Permissible if the client signs a waiver
D. Dollar-cost averaging

Show answer

B. Selling just below a breakpoint to preserve the higher commission is the named violation "breakpoint sale." No waiver cures it (C); it has nothing to do with diversification (A) or averaging (D).

11. Hard A client signs a letter of intent for the $50,000 breakpoint, invests $30,000 today and $15,000 eleven months later, and the 13 months expire at $45,000. What happens?
A. The fund sues the client for the remaining $5,000
B. The discount is kept, since she came within 10%
C. The fund retroactively collects the higher sales charge, typically from escrowed shares
D. The letter automatically extends for another 13 months

Show answer

C. An LOI earns the lower load only if completed; fail, and the difference is collected from shares held in escrow. It never obligates the client to buy (A), has no near-miss grace (B), and does not renew itself (D) — though it may look back 90 days at signing.

12. **Challenge** A 68-year-old client with $150,000 from a maturing CD wants income for the long term. The adviser proposes Class B shares to "avoid the sales charge." Attack this recommendation with three exam-grade objections.

Show answer

First, $150,000 in Class A would pass the $100,000 breakpoint, making the front load small — B shares forfeit breakpoints entirely. Second, B shares carry the higher 12b-1 fee until conversion, a steady drag on income. Third, the CDSC penalizes the early access an elderly client may need. "Avoiding the sales charge" is misdescription: the charge is moved and enlarged, not avoided.

COMMON MISTAKES

- Computing POP as NAV × (1 + load). The load is a percent of the offering price: divide NAV by (1 − load).
- Thinking Class B shares have "no sales charge." They have a deferred one, plus higher 12b-1 fees and no breakpoints.
- Including the sales load in the expense ratio. The ratio holds yearly operating costs only.
- Believing a fund trades during the day at a moving price. Open-end orders wait for the next computed NAV.
- Forgetting that rights of accumulation count existing holdings toward breakpoints on new purchases, while a letter of intent is a 13-month promise that can be backdated 90 days.

> **Make it a game · Breakpoint Bell.** Copy this schedule onto a card: under $50,000 — 5%; $50,000 to $99,999 — 4%; $100,000 and up — 3%. A parent calls out purchase amounts one at a time ($20,000, $95,000, $160,000...). Players race to shout the sales charge percent and the dollars of load; first correct answer scores a point. Twist: whenever an amount lands within $5,000 below a breakpoint, the right answer is "Disclose the breakpoint!" — shouting the load percent instead loses a point. First to ten wins. Ten rounds takes about ten minutes.

> **Scripture.** “Give a portion to seven, and also to eight; for thou knowest not what evil shall be upon the earth.” (Ecclesiastes 11:2, KJV)
>
> Solomon’s counsel is diversification spoken three thousand years early: divide what you have, because no one knows where loss will strike. A mutual fund is one practical way a family of modest means obeys it — a single share holding portions of hundreds of enterprises.

6.2 Closed-End Funds, UITs, ETFs and REITs

OBJECTIVES

- Explain how a closed-end fund raises capital once and why its shares trade at premiums or discounts to NAV.
- Describe a unit investment trust: fixed portfolio, supervised but unmanaged, redeemable units, a stated end date.
- Explain how an ETF trades all day near NAV and why it can be bought on margin or sold short.
- State the REIT rules — 75% real estate assets, 90% income distribution — and distinguish equity from mortgage REITs.
- Compare all four vehicles with an open-end fund by how each is priced, traded and redeemed.

> **Warm-up.** A closed-end fund's portfolio is worth $10.00 per share, but the shares last traded at $8.70. With pencil and paper: is that a premium or a discount, and by what percent of NAV? Write a one-line guess about why anyone would sell a dollar of assets for 87 cents.

WATCH

Exchange traded funds (ETFs) | Finance & Capital Markets | Khan Academy

Khan Academy · 5:00

https://www.youtube.com/watch?v=SFdsY9Rdh6w

> **WHEN TO WATCH**
> After the Bogle story, before the big idea; as he compares ETFs with mutual funds, keep a two-column list of every difference he names — you will need all of them.

BACKUP VIDEO

Closed-end mutual funds | Finance & Capital Markets | Khan Academy

Khan Academy · 4:50

https://www.youtube.com/watch?v=VpVu25KhozQ

After the big idea if premiums and discounts still feel slippery; sketch his supply-and-demand picture of why a fixed share count lets price leave NAV behind.

KEY TERMS

closed-end fund

An investment company that sells a fixed number of shares once, in an offering, after which the shares trade in the market at whatever price buyers and sellers agree on.

premium / discount

The amount by which a closed-end fund's market price stands above (premium) or below (discount) its net asset value.

unit investment trust (UIT)

An investment company holding a fixed, unmanaged portfolio for a stated life; it sells redeemable units and has a trustee but no board, adviser or portfolio manager.

exchange-traded fund (ETF)

A fund, typically tracking an index, whose shares trade on an exchange all day like a stock yet stay near NAV through creation and redemption of large share blocks.

creation unit

The large block of ETF shares — often 50,000 — that institutions create or redeem in kind with the fund, the mechanism that anchors market price to NAV.

index fund

A fund that aims to match a market index rather than beat it, keeping costs low because it needs no stock-picking staff.

real estate investment trust (REIT)

A company that owns or finances income-producing real estate and escapes corporate tax by holding at least 75% of assets in real estate and distributing at least 90% of taxable income to shareholders.

equity REIT

A REIT that owns and operates properties — offices, apartments, warehouses — earning rents for its shareholders.

mortgage REIT

A REIT that lends against real estate or buys mortgages, earning interest rather than rent; it is more sensitive to interest rates.

selling short

Selling borrowed shares in hope of buying them back cheaper; possible for exchange-traded shares such as ETFs and closed-end funds, impossible for open-end fund shares.

CORE IDEAS

The story. In August 1976, John Bogle of the brand-new Vanguard group launched the First Index Investment Trust — a fund that would not even try to beat the stock market, only to *match* the S&P 500 at the lowest possible cost. Wall Street hooted. Rivals called it "Bogle's Folly" and asked who would settle for average; the underwriters had hoped to raise $150 million and gathered barely $11 million. But the arithmetic was on the fool's side: a fund that matches the market before costs beats most funds after costs, year upon year. The idea grew slowly, then enormously. Seventeen years later, in January 1993, the American Stock Exchange and State Street launched the Standard & Poor's Depositary Receipt — the **SPDR**, first exchange-traded fund in the United States — an index portfolio you could trade at ten in the morning like a share of stock. Bogle's folly and the "Spider" between them changed how ordinary Americans own the market.

How they figured it out. The ETF's designers had a puzzle: a fund that trades all day has a market price, and market prices wander away from portfolio values — closed-end funds had proved that for a century. Their answer was **creation and redemption.** Large institutions may at any time hand the ETF a basket of the underlying stocks and receive a **creation unit** — a big block of new ETF shares — or hand back a block and receive the stocks. So if the ETF's market price drifts above the value of its basket, institutions create new shares and sell them, pushing the price down; if it drifts below, they buy shares cheap and redeem them for the dearer stocks. Arbitrage, not regulation, holds the price to NAV. One gentle paragraph is all the exam needs: know that the mechanism exists and what it accomplishes.

The big idea. Four vehicles, one table in your mind. A **closed-end fund** raises capital once in an offering, lists its fixed shares on an exchange, and never redeems them; investors buy and sell at the **market price** — NAV plus a premium or minus a discount — paying a commission, not a load. A **UIT** assembles a fixed portfolio (classically bonds), sells **units**, and simply holds: supervised, not managed, with a trustee instead of a board or adviser, redeemable with the trust, and a stated termination date. An **ETF** trades on an exchange all day like the closed-end fund but, thanks to creation and redemption, stays near NAV; it is typically an index tracker with a low expense ratio, and because it is exchange-traded it **can be bought on margin and sold short** — things an open-end fund share can never do. A **REIT** is not an investment company at all but a real-estate operating pool: at least 75% of assets in real estate, at least 75% of gross income from real estate, and at least 90% of taxable income distributed to shareholders, in exchange for which it pays no corporate tax on what it distributes.

Price behavior is where the exam separates the prepared. The open-end fund has exactly one price a day — forward-priced NAV (plus load). The closed-end fund has whatever price the crowd sets: a fund of $10.00 NAV can trade at $11.00 (a 10% premium) when its strategy is beloved or $8.50 (a 15% discount) when it is not, and the exam will ask you to compute both. Note the humbling fact: a discount is not automatically a bargain, because it can persist or deepen. The ETF's price flutters around NAV all session, the gap usually pennies. The UIT's units are redeemed by the trust at net asset value, like an open-end fund but without ongoing management.

REITs deserve their own paragraph because the exam gives them one. **Equity REITs** own buildings and collect rents; **mortgage REITs** hold real-estate loans and collect

interest, rising and falling with interest rates like the bond-flavored creatures they are; hybrids do both. Listed REITs trade on exchanges, which gives an investor something real estate itself never offers — **liquidity** — plus diversification and professional property management. But REIT shares are **not redeemable**; you sell them to another investor, never back to the REIT. Their dividends are mostly taxed as ordinary income, not at the lower qualified-dividend rates, because the REIT itself paid no corporate tax. And the exam distinguishes listed REITs from *non-traded* REITs, which are sold without an exchange listing and can trap investors for years — a suitability flag whenever liquidity matters.

A worked comparison makes it stick. Suppose $10,000 goes into each vehicle on Monday morning. In the open-end fund you get Monday evening's NAV plus any load, and your exit is a redemption to the fund within seven days' payment. In the closed-end fund you pay 10:04 a.m.'s market price plus commission — perhaps 92 cents on each NAV dollar — and your exit is a sale to someone else. In the ETF you pay 10:04 a.m.'s price, within pennies of NAV, commission applies, and you could instead have sold it short. In the listed REIT you pay the market price for a share of rents and buildings, and your exit is likewise a sale on the exchange. Same ten thousand dollars; four different machines.

On the exam today. The Series 65 asks "which of these can be purchased on margin or sold short?" — answer: the exchange-traded ones, ETFs and closed-end funds, never open-end mutual fund shares. It asks which vehicle may trade below its NAV: the closed-end fund (and it expects you to compute the discount percent). It describes "a fixed portfolio of municipal bonds, supervised but not managed, with a termination date" and expects **UIT**. It gives REIT thresholds with the numbers swapped — 90% of assets, 75% of income — so memorize them in order: **75% assets, 75% income, 90% distribution**. It calls ETFs tax-efficient and low-cost index trackers, true as stated, and it flags leveraged ETFs (coming in Lesson 6.3) as a different animal. And it loves the quiet fact that a REIT is *not* redeemable and a mutual fund is nothing *but* redeemable.

PICTURE STUDY

The Fuller Building, Called the Flatiron, Irving Underhill, 1903 · Photograph · Library of Congress, Washington

Image: Wikimedia Commons, public domain

Irving Underhill, one of New York's leading commercial photographers, made this portrait of the brand-new Fuller Building in 1903, the year after it opened. The public, seeing a building shaped like a clothes iron, refused to call it anything but the Flatiron. It was the headquarters of the George A. Fuller Company, the great construction firm of the skyscraper age — an age when city land and the towers on it became some of the most valuable property on earth. A REIT exists so that an ordinary family can own a sliver of buildings like this one and collect its rents by the share.

Look closely

- Find the building's narrow prow. How many windows wide is the front edge?
- Find the horse cabs and the streetcar below. What two eras of the city are meeting in this one photograph?
- Notice the awnings and shopfronts at street level. Who is paying rent in this building besides the offices upstairs?
- Look at the camera's viewpoint, raised above the street. Why photograph a tower from halfway up another building?

Talk about it

1. A building like this cost millions when millions were rare. Before REITs, who alone could own such property, and who was left out?
2. An equity REIT collects rents from hundreds of tenants and must pay out at least 90% of its taxable income. Why does that rule make REITs attractive to income investors?
3. Real estate itself sells slowly — months, sometimes years. What does an exchange listing add to owning buildings, and what new risk (daily price swings) comes with it?

PROJECT

Four Machines, One Page

Build the single comparison page that answers every "which vehicle am I?" question the exam can throw: open-end fund, closed-end fund, UIT, ETF and REIT, side by side, with the arithmetic to prove you can price each one.

You will need

- One sheet turned sideways, ruled into a 5-column grid, or a spreadsheet
- Calculator
- Colored pencils for the "traded where?" row

Steps

1. Rule columns for open-end fund, closed-end fund, UIT, ETF and REIT, and rows for: how created, how priced, where traded, redeemable?, managed?, margin/short possible?, special rules.
2. Fill every cell in your own short words — "next NAV + load," "market price, premium/discount," "fixed portfolio, trustee, end date," "all day near NAV," "75/75/90."
3. Now price them. Given NAV $25.00: compute the open-end POP with a 4% load; the closed-end price at an 8% discount; and the ETF price if it tracks NAV within 0.1%.
4. Write the REIT row's numbers from memory, then check them against the Investor.gov REITs page.
5. Add a one-line "best for" note at the foot of each column — e.g., UIT for a fixed bond ladder with a known end date.
6. Test yourself: have a parent read any five cells aloud with the column name hidden while you name the vehicle.
7. File the page in your exam notebook; you will reuse it in the unit portfolio.

Tips

- Keep each cell under eight words; the page is for recall, not rereading.
- The "redeemable?" row is the great divider — open-end and UIT yes, closed-end and REIT no, ETF only in creation units by institutions.

Check your work

- ☐ My grid has all five vehicles and at least seven comparison rows, every cell filled.
- ☐ My three computed prices are right: POP

$26.04, closed-end

$23.00, ETF within

$0.03 of

$25.00.

- ☐ I can answer five hidden-column cells correctly from a parent's reading.
- ☐ My REIT numbers match the official page: 75% assets, 75% income, 90% distribution.

EXAM NOTEBOOK

1. Draw the ETF arbitrage loop: ETF price drifts above NAV → institution delivers stock basket, receives creation unit, sells shares → price falls back. Then draw the loop in reverse for a drift below NAV.
2. Make a flashcard pair for every vehicle: front "fixed shares, trades at premium or discount," back "closed-end fund" — and so on through UIT, ETF, REIT, open-end.
3. Add to your trap list: "REIT = 75/75/90, never redeemable," "only exchange-traded shares can be shorted," "a discount is not a guarantee of profit."

KEY FORMULAS

$$\text{Premium or discount } \% = \frac{\text{market price} - \text{NAV}}{\text{NAV}}$$

From history. The SPDR's designers borrowed their key idea from a homely source: Nathan Most, the AMEX product developer who championed it, had spent years in the commodities trade, where warehouse receipts let merchants trade claims on goods without moving the goods. An ETF share is a warehouse receipt for a basket of stocks — the basket sits still while the claims change hands all day. The "Spider" went on to become one of the most heavily traded securities on earth.

WORKED EXAMPLES

Example 1. A closed-end fund has NAV \$12.50 and trades at \$11.25. Find the premium or discount as a percent of NAV.

Show solution

1. Difference: $\$11.25 - \$12.50 = -\$1.25$.
2. Divide by NAV: $-\$1.25 \div \$12.50 = -10\%$.
3. Negative means below NAV: a discount.

Answer: A 10% discount. Each share buys \$12.50 of portfolio for \$11.25, with no promise the gap ever closes.

Example 2. The same fund later trades at \$13.00 while NAV is still \$12.50. Find the premium, and explain why an open-end fund could never show this quote.

Show solution

1. Premium: $(\$13.00 - \$12.50) \div \$12.50 = 4\%$.
2. An open-end fund has no market price at all: buyers pay NAV plus any load, redeemers receive NAV, and supply of shares expands or contracts to meet them.
3. Only a fixed supply of exchange-traded shares can be bid above or below portfolio value.

Answer: A 4% premium — possible only because the closed-end fund's share count is fixed and its price is set by the crowd.

Example 3. Exam style. Which investment may an investor sell short?

A. Class A shares of an open-end growth fund

B. Units of a unit investment trust

C. Shares of an exchange-traded index fund

D. A variable annuity's accumulation units

Show solution

1. Short selling requires borrowable shares trading in a secondary market.
2. Choice A: open-end shares are issued and redeemed by the fund; there is no secondary market to short into. Eliminate.
3. Choice B: UIT units are redeemed with the trust; same defect. Eliminate.
4. Choice D: annuity units are insurance-contract accounting, not tradable shares. Eliminate.
5. Choice C: ETF shares trade on an exchange all day and may be margined or shorted like any listed stock.

Answer: C. The exchange-traded wrapper, not the portfolio inside, is what makes shorting possible.

PRACTICE

1. Easy A closed-end fund has NAV \$20.00 and a market price of \$21.50. Premium or discount, and by what percent?

   Show answer

   Premium of $\$1.50 \div \$20.00 = 7.5\%$ above NAV.

2. Easy Which investment company has no board of directors, no investment adviser and no portfolio manager?

   A. Open-end fund

   B. Closed-end fund

   C. Unit investment trust

   D. Exchange-traded fund

   Show answer

   C. A UIT's portfolio is fixed at creation and merely supervised by a trustee, so it needs no manager. The funds in A, B and D all employ advisers.

3. Easy From the story: why did Wall Street call Bogle's 1976 index fund a "folly," and what arithmetic answered the mockery?

Show answer

It promised only to match the market, and raised about $11 million against a hoped-for $150 million. But a fund matching the market before costs beats most managed funds after costs — low expenses compound into victory.

4. Medium An investor wants to buy fund shares at 10:30 a.m. and sell them at 2:00 p.m. the same day if they rise. Which vehicle allows this?

A. An open-end index fund

B. An exchange-traded fund

C. A unit investment trust

D. A no-load open-end bond fund

Show answer

B. Only exchange-traded shares have intraday prices. Both open-end funds (A, D) fill all orders at the single forward-priced NAV, and UIT units (C) are redeemed at net asset value, not day-traded.

5. Medium What keeps an ETF's market price close to its NAV?

A. An SEC rule requiring the fund to redeem any investor at NAV

B. Daily price limits set by the exchange

C. Institutions creating and redeeming large share blocks in kind whenever price and NAV diverge

D. The fund manager buying shares in the open market

Show answer

C. Creation-unit arbitrage: a price above NAV invites institutions to create and sell shares; below NAV, to buy and redeem. A describes open-end funds; B and D are inventions.

6. Medium To keep its tax status, a REIT must distribute at least ____ of taxable income and hold at least ____ of assets in real estate:

A. 90%; 75%

B. 75%; 90%

C. 50%; 100%

D. 100%; 50%

Show answer

A. Distribute at least 90% of taxable income; hold at least 75% of assets (and earn at least 75% of gross income) in real estate. B is the swap the exam loves to offer; say it in order — 75 assets, 75 income, 90 payout — and you cannot be fooled.

7. Medium Rising interest rates would bear hardest and most directly on:

A. An equity REIT owning apartment buildings

B. A mortgage REIT holding long-term real-estate loans

C. A hybrid REIT, equally with the others

D. No REIT, since real estate is immune to rates

Show answer

B. A mortgage REIT's assets are loans — they behave like bonds, falling in value as rates rise while the REIT's own borrowing costs climb. Equity REITs (A) feel rates more slowly, through property values and financing; D is false for every REIT.

8. Medium An investor in a closed-end fund wishes to sell her shares. She will receive:

A. The next computed NAV, within seven days

B. The current market price, less commission

C. NAV minus the contingent deferred sales charge

D. The original offering price

Show answer

B. Closed-end shares are sold on the exchange to another investor at the market price. A describes open-end redemption, C describes Class B mutual fund shares, D describes nothing that exists.

9. Hard A client, told that a closed-end fund at a 12% discount is "free money," asks you to confirm. Give the two-sentence fiduciary answer, with the price if NAV is $18.00.

Show answer

The price is $\$18.00 \times 0.88 = \$15.84$, and the dollar of assets bought for 88 cents is real — but the discount closes only if other buyers someday pay more, and discounts can persist or widen for years. You may earn the portfolio's return while the discount stays exactly where it is.

10. Hard Which TWO features do a closed-end fund and an ETF share?

A. Shares trade on an exchange and may be sold short

B. Shares are redeemable by any investor at NAV

C. Market price can differ from NAV, though by much more in one than the other

D. Both must distribute 90% of taxable income to avoid corporate tax

Show answer

A and C. Both trade on exchanges, so both can be margined and shorted, and both have market prices — the closed-end fund's wanders freely while arbitrage pins the ETF's near NAV. B is false for both (ETF redemption is in creation units, institutions only), and D is the REIT rule.

11. Hard A retiree needs money she can reach within days, wants real-estate income, and is shown a non-traded REIT paying a handsome yield. Name the suitability problem and the alternative wrapper that cures it.

Show answer

A non-traded REIT has no exchange market; her capital could be locked up for years, with redemption programs limited or suspended. A listed equity REIT offers the same asset class with daily liquidity — the yield difference is partly the price of being able to leave.

12. **Challenge** In this example, an ETF tracking an index charges 0.05% a year while an actively managed open-end fund in the same market charges 1.00% and a 4% front load on $10,000. Both portfolios earn 7% a year before costs for 10 years. Estimate each ending value and the gap. (Use $1.0695^{10} \approx 1.958$ and $1.06^{10} \approx 1.791$.)

Show answer

ETF: all $10,000 invested, net growth about 6.95%: $\$10{,}000 \times 1.958 = \$19{,}580$. Load fund: $9,600 invested at about 6%: $\$9{,}600 \times 1.791 = \$17{,}194$. Gap: roughly $2,386, the compounded price of the load and the fee difference — Bogle's whole argument in one subtraction.

COMMON MISTAKES

- Saying a closed-end fund is redeemable. It is not; investors sell shares to other investors at the market price.
- Swapping the REIT numbers — it is 75% of assets and income, 90% of income distributed, not 90% of assets.
- Treating a closed-end discount as a sure profit; discounts can persist or deepen.
- Claiming an individual investor redeems ETF shares at NAV; only institutions do, in creation units — individuals sell on the exchange.
- Confusing the UIT (fixed, supervised, terminating) with a managed fund; "no adviser, no board, fixed portfolio" always means UIT.

Make it a game · Premium, Discount, Pass. Make ten cards, each with an NAV and a market price (for example NAV $40 / price $36; NAV $12.50 / price $13). A parent flips a card; players shout "premium" or "discount," then race to compute the percent to the nearest whole number — correct call is 1 point, correct percent is 2 more. Trick cards: two with price equal to NAV (shout "ETF behavior!") and one labeled "open-end fund" (the only right answer is "no market price — next NAV!"). Highest score after all cards wins; a full pass takes about twelve minutes.

Scripture. "Except the LORD build the house, they labour in vain that build it: except the LORD keep the city, the watchman waketh but in vain." (Psalm 127:1, KJV)

A lesson full of towers and the funds that own them needs this anchor: buildings, portfolios and the clever machinery that prices them are all labor in vain unless the Builder stands behind the builders. The steward works the arithmetic diligently and holds the result loosely.

6.3 Private Funds and Alternative Investments

OBJECTIVES

- Describe hedge funds: private offering, accredited investors, lock-ups, performance fees and light regulation.
- Explain limited partnerships and DPPs: the general partner's role and liability, the limited partners' passivity, flow-through and illiquidity.
- State why an exchange-traded note carries issuer credit risk even when its index performs well.
- Explain the daily reset of leveraged and inverse funds and why they are unsuitable for buy-and-hold investors.
- Identify private equity, venture capital, structured products, viatical settlements, commodities and investment real estate at exam depth.

> **Warm-up.** In this example, a hedge fund charges 2% of assets plus 20% of profits. With pencil and paper: on a $1,000,000 account that gains $100,000 this year, how many dollars does the manager collect? What percent of the gain did the client keep?

WATCH

Hedge funds intro | Finance & Capital Markets | Khan Academy

Khan Academy · 3:31

https://www.youtube.com/watch?v=Qb7tbWuDc2U

> **WHEN TO WATCH**
> Right after the story of A. W. Jones; notice how the structure he draws — a private partnership with a performance fee — is exactly the one Jones invented in 1949.

BACKUP VIDEO

What Exactly Are Hedge Funds (And Why Are They Always Causing Problems)?

The Plain Bagel · 13:13

https://www.youtube.com/watch?v=QFj7gVatEeM

After the core ideas, for a fuller tour of strategies, fees and blow-ups; note every point where he says ordinary investors cannot buy in, and write down why.

KEY TERMS

hedge fund

A private pooled fund, sold without public registration to wealthy or institutional investors, free to use leverage, short sales and derivatives, and typically charging an asset fee plus a share of profits.

lock-up period

The months or years during which a private fund's investors may not withdraw their money.

limited partnership (DPP)

A direct participation program in which a general partner manages the business with unlimited liability while limited partners supply capital, stay passive, and risk only their investment; income and losses flow through to the partners.

leveraged / inverse fund

A fund engineered to deliver a multiple, or the opposite, of an index's return for a single day, resetting daily — so long-period returns drift away from the multiple.

accredited investor

Under Regulation D, an investor qualified for private offerings — for an individual, net worth over $1 million excluding the primary residence, or income over $200,000 ($300,000 with a spouse) in each of the last two years.

private equity

Funds that buy whole companies or large stakes outside public markets, improve or restructure them over years, and sell; venture capital is its early-stage branch.

exchange-traded note (ETN)

An unsecured debt obligation of a bank that promises the return of an index; it holds no portfolio, so the holder bears the issuer's credit risk no matter how the index performs.

structured product

A note built by a bank from bonds and derivatives to offer a customized payoff, often with capped upside and with any "protection" resting on the bank's own credit.

viatical / life settlement

The purchase of a stranger's life insurance policy at a discount to its death benefit; the investor pays the premiums and collects when the insured dies.

flow-through

Tax treatment in which an entity pays no tax itself and passes income and losses directly to its owners, as partnerships do.

CORE IDEAS

The story. Alfred Winslow Jones was the unlikeliest man on Wall Street: an Australian-born diplomat's clerk turned sociologist, with a Columbia doctorate and a berth writing for *Fortune* magazine. In 1948 he reported a story on stock-market forecasting and came away convinced he could do better than the forecasters. In 1949, at age 48, he opened a private partnership with about $100,000 — $40,000 of it his own. His design was genuinely new. Jones bought the stocks he judged strong and **sold short** the ones he judged weak, so that a general market fall would hurt his longs but help his shorts: the portfolio was, in his word, *hedged*. He used borrowed money to enlarge the bets, kept the partnership private and quiet, and paid himself 20% of the profits. For seventeen years almost nobody noticed. Then, in 1966, *Fortune* ran "The Jones Nobody Keeps Up With," revealing that the professor's partnership had outrun the best mutual funds of the era — and within two years, imitators by the dozen had founded an industry that keeps his name for its products: the hedge fund.

How they figured it out. Why private? Because everything Jones wanted to do — concentrate, borrow, sell short, charge a profit share — was impossible inside a registered investment company built for the public. The securities laws left a door open: an offering not made to the public, taken only by sophisticated investors who can fend for themselves, need not be registered. Private funds live through that door to this day. The trade-off is the exam's favorite theme: the investors give up daily pricing, daily liquidity and much of the 1940 Act's protection, and in exchange the manager gains freedom. That is why the law restricts the clientele — **accredited investors** under Regulation D, and for many funds the still-wealthier **qualified purchasers** — on the theory that the rich can afford both the risks and the lawyers.

The big idea. A **hedge fund** is a private pool: offered without registration, open to accredited or qualified investors, often subject to **lock-ups** and quarterly-at-best withdrawals, lightly regulated compared with mutual funds, and free to use

leverage, shorts, derivatives and concentration. Its classic price is **"2 and 20"** — 2% of assets yearly plus 20% of profits. **Private equity** funds buy companies whole and work on them for years; **venture capital** buys pieces of young companies, expecting most to fail and a few to repay everything. A **limited partnership** (the exam says **DPP**, direct participation program) splits roles cleanly: the **general partner** manages and bears **unlimited liability**; the **limited partners** contribute capital, stay passive (managing would forfeit their shield), and can lose only what they invested; income and losses **flow through** untaxed at the entity to the partners' own returns. DPP units are famously illiquid — there is no real secondary market — so suitability turns on the client's ability to wait.

Now the traps with sharper teeth. An **exchange-traded note** looks like an ETF's cousin — it trades on an exchange and tracks an index — but it is a different species: an **unsecured promise of a bank**. The ETN holds no stocks at all. If the index rises 30% and the issuing bank fails, the holder stands in line with the bank's other unsecured creditors; when Lehman Brothers collapsed in 2008, its ETNs taught this lesson at full price. **Leveraged and inverse funds** deliver their 2× or −1× only *per day*, because they rebalance — reset — every evening. Over weeks, compounding bends the result: if an index gains 10% one day and loses 10% the next, it stands at 99% of its start, but a 2× fund — up 20%, then down 20% — stands at 96%. Volatility grinds these funds down even when the index goes nowhere, which is why every regulator's bulletin and every exam answer calls them **unsuitable for buy-and-hold investors**. **Structured products** are bank-built notes with tailored payoffs — upside to a cap, "protected" principal — and the protection is only as good as the bank's credit, with liquidity thin and fees buried in the terms.

One alternative deserves to be handled with gravity. In a **viatical settlement** (and its modern form, the **life settlement**), an investor buys a living person's life-insurance policy at a discount, pays the premiums, and collects the death benefit when that person dies. The arrangement began in the 1980s so that terminally ill patients could reach their policies' value while they still lived — a mercy on its face. But see what the investor now owns: a position that pays better the sooner another human being dies. The return is literally a wager on the shortness of a life, the "asset" has no income until death, the holding period is unknowable, and abuses in this market have filled enforcement files. States regulate these transactions closely, and many treat the investment contracts as securities. A Christian adviser can know what they

are, explain them honestly, and still conclude that profiting from the speed of a stranger's death is a trade he will not recommend; at minimum, the fiduciary owes the client every one of these facts in plain words.

Round out the shelf with the tangibles. **Commodities and precious metals** — grain, oil, gold — produce no earnings, dividends or interest; their return is price change alone, which makes them inflation hedges and diversifiers but never income investments. **Investment real estate** held directly offers rent, appreciation and depreciation deductions, at the price of illiquidity, management burden and concentration in single properties. For every alternative, the exam's suitability logic is the same four questions: can the client lose it all, can the client wait, does the client understand it, and is the client eligible to buy it at all?

On the exam today. The Series 65 tests alternatives mostly as traps to recognize. ETN: the answer is **credit risk of the issuer**, even when the index performs — any choice blaming market risk alone is a decoy. Leveraged and inverse funds: the phrase to find is **daily reset**, and the conclusion is "unsuitable for long-term holders." Hedge funds: private, accredited or qualified investors, lock-ups, performance fees, light regulation — the exam may ask which investor qualifies, so know the numbers: $1 million net worth excluding the home, or $200,000 income ($300,000 joint) for two years. DPPs: the general partner manages with unlimited liability, limiteds are passive with limited liability, losses flow through, and illiquidity is the standing objection. And when a question pairs "conservative retiree needing liquidity" with any alternative in this lesson, the suitable answer is almost always *none of it*.

PICTURE STUDY

In the Wheat Pit of the Chicago Board of Trade, Unknown photographer, 1920 · Photograph · Library of Congress, Washington

Image: Wikimedia Commons, public domain

This Library of Congress photograph catches the wheat pit of the Chicago Board of Trade in full cry in 1920. Every raised hand is an offer or a bid in the open-outcry code — palm out to sell, palm in to buy, fingers counting price and quantity — and the chalkboard above carries the closing figures to the world. Pits like this one priced the harvests of the whole Mississippi Valley, and they are the natural habitat of this lesson's wilder creatures: commodities, speculation, and fortunes made and unmade on margin.

Look closely

- Find the chalkboard with WHEAT and the closing prices. Who, hundreds of miles away, lived by these numbers?
- Find the hands — palms out, palms in, fingers spread. Why signal instead of speak in a room this loud?
- Pick out the one man in the light jacket, arm at full stretch. Is he buying or selling? Can you tell? Could his neighbor?
- Notice how many men crowd one small ring. What does the density say about how much money met in this spot each day?

Talk about it

1. A farmer who sold his crop ahead in this pit slept better; a speculator who bought it hoped to profit. Why does the market need both?
2. Nothing in this photograph — no wheat, no money — is physically present. What exactly is being traded, and how is that like a modern derivative?
3. Alfred Jones kept his fund private and quiet; the pit was public and deafening. What are the dangers of each way of trading?

PROJECT

The Alternatives Dossier

An adviser who cannot explain an alternative investment in four honest lines has no business recommending it. You will write the dossier: one index card per alternative, each card forced to answer the same four questions, finished with a signed opinion on the one product you would decline to sell.

You will need

- Eight index cards (or eight ruled boxes on two notebook pages)
- Pen and a red pencil for the risk line
- Your notes from this lesson

Steps

1. Label the eight cards: hedge fund, private equity/venture capital, limited partnership (DPP), exchange-traded note, leveraged/inverse fund, structured product, viatical/life settlement, commodities & precious metals.
2. On every card answer the same four questions in one line each: What is it? Who may buy it? When can you get out? Where is the worst risk hiding?
3. Write each card's risk line in red: for the ETN, "bank's credit, not the index"; for the leveraged fund, "daily reset grinds long holders"; and so on.
4. On the DPP card, add the cast: GP manages, unlimited liability; LPs passive, limited liability; losses flow through; no real resale market.
5. On the viatical card, add one sentence of your own on the ethics of profiting from the timing of a death — state your position and the reason, plainly.
6. Shuffle the cards and have a parent read risk lines aloud; name the product from its risk alone.
7. Close the dossier with a half-page letter to an imaginary client who wants "whatever the wealthy buy," explaining which of these eight you would discuss first, which last, and why eligibility rules exist at all.

Tips

- If a card's "what is it?" line runs past fifteen words, you do not understand it yet; compress until it is true and short.

- The four questions are the exam's own logic — loss, liquidity, understanding, eligibility.

Check your work

- ☐ All eight cards answer all four questions.
- ☐ My red risk lines name the specific danger, not just "risky."
- ☐ I can identify any product from its risk line alone.
- ☐ My viatical sentence states a position and a reason, not just discomfort.
- ☐ My client letter mentions accredited-investor limits accurately.

EXAM NOTEBOOK

1. Draw the Jones hedge: a seesaw with longs on one side, shorts on the other, and "market falls" written beneath — show which side gains.
2. Make a two-row table of the ETF versus the ETN: what each one owns (a basket of stocks / nothing but a bank's promise) and what kills each one (tracking error / issuer default).
3. Trap list additions: "ETN = credit risk even if index wins," "leveraged fund = daily reset, never buy-and-hold," "accredited = $1M net worth ex-home or $200k/$300k income," "GP unlimited liability, LP passive."

KEY FORMULAS

$$\text{Hedge fund fee} = 0.02 \times \text{assets} + 0.20 \times \text{profits}$$

$$\text{Two-day result of a daily } 2\times \text{ fund} = (1 + 2r_1)(1 + 2r_2) - 1$$

From history. Carol Loomis's 1966 Fortune article did more than expose Jones's returns; it coined the industry's name, shortening his "hedged fund" to "hedge fund." Jones disliked the clipped form — a fund could be hedged, he said, but a fund could not hedge — and the grammarians lost that fight as thoroughly as the mutual fund managers his record embarrassed. By 1968 the SEC counted roughly 140 imitators, most of which abandoned the hedging and kept only the fees — and were duly wrecked in the bear market that followed.

Example 1. In this example, a hedge fund manages $\$50{,}000{,}000$ and earns a $\$6{,}000{,}000$ profit this year under a 2-and-20 arrangement. Find the manager's total fee and the investors' net return.

Show solution

1. Asset fee: $0.02 \times \$50{,}000{,}000 = \$1{,}000{,}000$.
2. Performance fee: $0.20 \times \$6{,}000{,}000 = \$1{,}200{,}000$.
3. Total fee: $\$2{,}200{,}000$. Investors keep $\$6{,}000{,}000 - \$2{,}200{,}000 = \$3{,}800{,}000$.
4. Net return: $\$3{,}800{,}000 \div \$50{,}000{,}000 = 7.6\%$ against a 12% gross.

Answer: The manager collects $\$2{,}200{,}000$; the investors' 12% gross becomes 7.6% net. Fees of this size demand performance of that size.

Example 2. An index falls 10% on Monday and rises 10% on Tuesday. Show the two-day result for the index, for a 2× leveraged fund, and for a −1× inverse fund, each resetting daily.

Show solution

1. Index: $0.90 \times 1.10 = 0.99$, down 1%.
2. 2× fund: $0.80 \times 1.20 = 0.96$, down 4% — not merely double the index's 1% loss.
3. Inverse fund: $1.10 \times 0.90 = 0.99$, down 1% — even though the index it bets against also fell.
4. Volatility alone eroded both engineered funds; the daily reset is the reason.

Answer: Index −1%; 2× fund −4%; inverse fund −1%. Over months of chop the drift compounds, which is why these are day-trading tools, not investments.

Example 3. Exam style. An ETN tracking a commodity index gains 25% over two years, but its issuing bank's credit is downgraded toward default. The ETN holder's chief exposure is:

A. Market risk, since the index could reverse

B. Credit risk of the issuer, because the note is an unsecured debt

C. No exposure; the index gain is segregated in a trust

D. Regulatory risk from the SEC's review of commodity funds

Show solution

1. Recall the structure: an ETN owns nothing; it is the bank's promise to pay the index result.
2. Choice C is the seductive one — it describes an ETF or UIT, which do hold assets. An ETN has no trust and no portfolio. Eliminate.
3. Choice A is always technically true of anything index-linked, but the question says the index already gained; the live threat is the promisor. Eliminate.
4. Choice D is noise. The defining risk, and the tested one, is B.

Answer: B. Index up 25% means nothing if the only debtor cannot pay — the Lehman ETN lesson in one question.

PRACTICE

1. Easy Under Regulation D, which individual is an accredited investor?

   A. Net worth $800,000 including a $400,000 home

   B. Income of $150,000 in each of the last two years

   C. Net worth of $1,200,000 excluding the primary residence

   D. Any licensed schoolteacher with a pension

   Show answer

   C. The individual tests are net worth over $1 million excluding the home, or income over $200,000 ($300,000 joint) for two years with the same expected this year. A fails once the home is excluded; B is below the income line; D is not a category.

2. Easy In a limited partnership, the business is managed by:
A. The limited partners, who vote their units like shareholders
B. The general partner, who bears unlimited personal liability
C. A board of directors elected yearly
D. The trustee named in the partnership's indenture

Show answer

B. The general partner manages and answers for the partnership's debts without limit; the limited partners stay passive and risk only their investment — and forfeit that shield if they start managing. C describes a corporation, D a UIT.

3. Easy From the story: name two features of A. W. Jones's 1949 partnership that remain the defining marks of hedge funds today.

Show answer

Any two of: the long-and-short "hedged" portfolio, leverage, the private unregistered structure for sophisticated investors, and the performance fee of 20% of profits.

4. Medium A 2× leveraged fund tracks an index that finishes a volatile month exactly where it began. The fund most likely:
A. Also finishes unchanged
B. Finishes up by twice the index's daily average
C. Finishes lower, because daily resets compound against volatile paths
D. Finishes higher, because leverage amplifies gains only

Show answer

C. Each day's doubling is applied to a new base; a down-then-up path multiplies to less than the start ($0.80 \times 1.20 = 0.96$). A describes a fund without reset; B and D misunderstand leverage entirely.

5. **Medium** An investor wants index exposure but refuses to accept any single bank's credit risk. She must avoid:

A. An open-end index fund

B. An exchange-traded fund tracking the index

C. An exchange-traded note tracking the index

D. A unit investment trust holding the index stocks

Show answer

C. An ETN is an unsecured debt of the issuing bank — it owns no securities, only promises the index's return, so issuer default can erase her money however well the index does. A, B and D all actually hold portfolios of securities.

6. **Medium** Which pair correctly matches product to chief drawback?

A. Hedge fund — daily redemption obligations

B. DPP — no flow-through of losses

C. Structured product — upside often capped and protection only as strong as the issuer

D. Commodities — excessive dividend taxation

Show answer

C. Structured notes cap gains and rest on bank credit. Hedge funds restrict redemption rather than offer it daily (A); flow-through is precisely what DPPs do provide (B); commodities pay no dividends to tax (D).

7. **Medium** Gold and wheat differ from stocks and bonds in one way that drives every exam question about them. Name it and its consequence for income investors.

Show answer

They produce nothing — no interest, dividends or earnings. Their only return is price change, so they can hedge inflation or diversify, but they can never serve a client who needs income.

8. Medium A private fund bars withdrawals for two years after an investor subscribes. This restriction is called:

A. A surrender charge

B. A lock-up period

C. A contingent deferred sales charge

D. Forward pricing

Show answer

B. The lock-up exists because the fund holds illiquid, leveraged or concentrated positions that cannot be unwound on demand — investors trade liquidity for strategy freedom. A and C are fees for leaving (annuities and B shares), not bans on leaving; D is mutual fund order handling.

9. Hard A client's tax preparer celebrates that a real-estate DPP passed $14,000 of losses to the client this year. Which TWO cautions belong in the adviser's reply?

A. Flow-through losses are generally passive and offset passive income, not wages

B. Partnership losses convert to capital gains automatically

C. The units may be nearly impossible to sell if the client's plans change

D. The general partner shares the client's limited liability

Show answer

A and C. Passive-loss rules cage those deductions, and DPP illiquidity is the standing suitability objection. B is gibberish; D reverses the structure — the GP's liability is unlimited.

10. Hard Rank venture capital, private equity buyouts, and a diversified hedge fund by how long an investor should expect to wait for her money, and justify the ordering in one sentence each.

Show answer

Venture capital longest — young companies need a decade to fail or flourish; buyout private equity next — funds typically work companies over for several years before selling; hedge funds shortest — liquid underlying positions, but still lock-ups and periodic windows rather than daily redemption.

11. Hard An agent pitches viatical settlements to a church retirement circle as "guaranteed by insurance companies." Identify the misrepresentation and the two risks the pitch hides.

Show answer

The death benefit may be insurer-backed, but the investment return is not guaranteed by anyone — it depends entirely on when the insured dies. Hidden risks: an unknowable holding period during which the investor must keep paying premiums, and deep illiquidity (plus, in many states, the fact that these are regulated as securities and demand suitability and disclosure the pitch skipped).

12. Challenge In this example, an index moves: day one +5%, day two −5%, day three +5%, day four −5%. Compute the four-day result for the index and for a daily-reset 3× fund. (Keep four decimals.)

Show answer

Index: $1.05 \times 0.95 \times 1.05 \times 0.95 = 0.9950$ — down 0.50%. 3× fund: $1.15 \times 0.85 \times 1.15 \times 0.85 = 0.9555$ — down about 4.45%, nearly nine times the index's loss instead of three. The reset, compounded over a choppy path, is the whole story.

COMMON MISTAKES

- Treating an ETN like an ETF. The ETF owns a basket of securities; the ETN owns nothing and is one bank's unsecured IOU.
- Recommending a leveraged or inverse fund for a long-term holder. The daily reset makes multi-month results drift far from the advertised multiple.
- Forgetting that the accredited-investor net worth test excludes the primary residence.
- Letting a limited partner "help manage" the partnership — active management forfeits limited liability.
- Assuming light regulation means low risk. Hedge funds are lightly regulated precisely because their investors are presumed able to absorb losses.

Make it a game · Suitable or Scandal?. Write six client cards (retired widow needing income; 30-year-old surgeon earning $400,000; college fund needed in 3 years; accredited entrepreneur with 20-year horizon; church endowment; new graduate with $3,000) and eight product cards from this lesson. A parent flips one of each; within ten seconds the player must rule “suitable to discuss” or “unsuitable,” then give the one-line reason — eligibility, liquidity, risk or income. Correct ruling with a correct reason scores 2; right ruling with a wrong reason scores 1; the parent may challenge any ruling and steal a point with a better reason. Two passes through the deck takes about fifteen minutes.

Scripture. “The simple believeth every word: but the prudent man looketh well to his going.” (Proverbs 14:15, KJV)

Private funds and structured notes live where disclosure is thinnest, and every product in this lesson has been sold with words stronger than its substance. The prudent steward’s discipline — look well before going — is not cynicism; it is obedience, and it is also precisely the fiduciary’s legal duty of investigation.

6.4 Options, Futures and Other Derivatives

OBJECTIVES

- Define calls and puts, premium, strike price and expiration, and state the rights of buyers and the obligations of writers.
- Compute an option's intrinsic value and time value, and classify it as in, at or out of the money.
- State maximum gain, maximum loss and breakeven for long calls, long puts, covered calls and naked calls.
- Explain the protective put as insurance and distinguish warrants from options.
- Contrast forwards with futures and hedgers with speculators.

> **Warm-up.** With pencil and paper: a coupon lets you buy a $60 concert ticket for $50 any time this month. A friend offers to buy the coupon from you. What is it worth right now at minimum? Would you ask a little more than that minimum, and why? You have just priced intrinsic value and time value.

WATCH

Stock Options Explained

The Plain Bagel · 10:15

https://www.youtube.com/watch?v=VJgHkAqohbU

> **WHEN TO WATCH**
> After the Thales story; as he works through calls and puts, pause at each payoff diagram and copy it — four diagrams by the end, which the exam will expect you to know cold.

BACKUP VIDEO

American call options | Finance & Capital Markets | Khan Academy

Khan Academy · 3:32

https://www.youtube.com/watch?v=nnl3x1wo25g

Before the worked examples if calls are still fuzzy; three and a half quiet minutes on one call contract — recompute his numbers in the margin as he goes.

KEY TERMS

call option

A contract giving its buyer the right, not the obligation, to buy 100 shares at the strike price before expiration; the seller (writer) is obligated to deliver if called.

put option

A contract giving its buyer the right to sell 100 shares at the strike price before expiration; the writer is obligated to buy if the put is exercised.

premium

The price paid for an option, quoted per share for a 100-share contract; it is the buyer's maximum loss and the writer's maximum gain.

strike price

The fixed price at which the option holder may buy (call) or sell (put) the underlying stock.

intrinsic value

The amount an option is in the money: for a call, market price minus strike; for a put, strike minus market price; never less than zero.

time value

The part of the premium above intrinsic value, paid for the chance that the stock moves before expiration; it shrinks to zero at expiry.

covered call

Writing a call while owning the underlying shares — a conservative income strategy whose risk is only lost upside above the strike.

protective put

Buying a put against stock you own, setting a floor under your sale price — insurance, with the premium as the insurance cost.

warrant

A long-term right to buy the issuer's own stock at a set price, created by the corporation (often as a financing sweetener) and typically issued with no intrinsic value.

futures contract

A standardized, exchange-traded agreement to buy or sell a set quantity at a set price on a future date, guaranteed by a clearinghouse and marked to market daily; a forward is the same promise made privately and customized.

The story. The oldest option on record was written on olive presses. Aristotle tells it in Book I of the *Politics*: the philosopher Thales of Miletus, stung by taunts that philosophy makes no money, read the stars one winter and foresaw a heavy olive harvest. With a little money he placed deposits on every olive press in Miletus and Chios — cheaply, "because no one bid against him." When harvest came and every grower needed presses at once, Thales let them out at whatever rate he pleased, and, says Aristotle, showed the world "that philosophers can easily be rich if they like, but that their ambition is of another sort." Notice what Thales bought: not presses, but the *right to use presses* — small money down, great gain if he was right, only the deposits lost if he was wrong. Twenty-three centuries later, in 1848, eighty-two Chicago merchants founded the Board of Trade above a flour store, and farmers began selling their grain months ahead through "to-arrive" contracts — promises of future delivery at a price fixed today, which the Board standardized within two decades into the modern futures contract.

How they figured it out. Both inventions solve the same human problem: the future is uncertain, and people will pay to move risk onto shoulders willing to bear it. The Illinois farmer in 1850 could not know October's wheat price in April; by selling ahead he fixed his price and slept, while the buyer took the risk in hope of profit. The exam names these two parties for you: the farmer is a **hedger**, using the contract to shed a risk his business already has; the buyer who seeks the risk for profit is a **speculator**. Chicago's refinement was standardization — one grade, fixed quantities, set delivery months — so that contracts themselves could be traded like goods, with a clearinghouse guaranteeing both sides and daily **marking to market** settling gains and losses each evening. A **derivative**, old or new, is any contract whose value derives from something else — a stock, an index, a bushel; Thales's deposits derived their worth from the olive harvest.

The big idea. An option is a right that trades for a price. The **call buyer** pays a **premium** for the right to buy 100 shares at the **strike price** before **expiration**; the **call writer** pockets the premium and owes delivery if called. The **put buyer** pays for the right to sell at the strike; the **put writer** must buy if the put lands on him. Buyers have rights and can lose only the premium; writers have obligations and earn only the premium. Value splits cleanly in two. **Intrinsic value** is what exercise would be worth now: for a call, market minus strike; for a put, strike minus market; never

below zero. Whatever premium remains above intrinsic is **time value**, melting toward zero at expiry. A call with strike $50 on a $53 stock is **in the money** by $3; at $50 it is **at the money**; at $47 it is **out of the money** — and note, in-the-money says nothing about profit, which depends on what you paid.

The four basic positions have exam-standard arithmetic, worth engraving. **Long call**: maximum loss the premium, maximum gain unlimited, breakeven strike plus premium. **Long put**: maximum loss the premium, maximum gain strike minus premium (the stock can only fall to zero), breakeven strike minus premium. **Call writer**: maximum gain the premium, and if he is **naked** — owning no shares to deliver — maximum loss *unlimited*, because he must someday buy the stock at any price the market demands. If he is **covered**, owning the shares, nothing is at risk but his upside above the strike, which is why covered call writing is the one option strategy the exam calls conservative: income from premiums in exchange for capped gains. **Put writer**: maximum gain the premium, maximum loss strike minus premium.

The **protective put** is insurance, and saying so is the right answer, not a metaphor. An investor holding stock at $80 buys an $75 put for $2: whatever happens, she can sell at $75, so her worst case is a $5 fall plus the $2 premium — a known deductible on a policy against catastrophe, while her upside stays open. Distinguish the option from its corporate cousin, the **warrant**: options are created by the market with terms of months, while warrants are created by the issuing corporation itself, often attached to bonds as a sweetener, run for years, and are issued with strike above market — no intrinsic value at birth. And hold the forward/futures line steady: a **forward** is private, customized, unlisted, and each side bears the other's credit risk; a **futures** contract is standardized and exchange-traded, with a clearinghouse guaranteeing performance and daily marking to market.

On the exam today. The Series 65 keeps options at definition-and-arithmetic depth, and it repeats itself. Compute intrinsic value both ways — call: market minus strike; put: strike minus market — and expect the premium split into intrinsic and time (a $4 premium on a call $3 in the money carries $1 of time value). Know breakevens cold: call, strike plus premium; put, strike minus premium — for buyer and writer alike. The phrase "unlimited risk" in any answer choice belongs to exactly two positions: short stock and the naked call writer. "Conservative income from a stock portfolio" means covered calls; "insurance on a holding" means protective puts;

“issued by the corporation with no intrinsic value” means warrants. And when a question pairs a wheat farmer with a flour miller, the farmer hedges by selling futures and the miller hedges by buying them — the speculator is whoever stands between them for profit.

PICTURE STUDY

Women Picking Olives, Vincent van Gogh, 1889 · Oil on canvas · The Metropolitan Museum of Art, New York

Image: Wikimedia Commons, public domain

Van Gogh painted the olive groves around Saint-Rémy in the last year of his life, returning to them more than a dozen times; this canvas of three women at the December harvest now hangs in the Metropolitan Museum. Every stroke bends — trees, earth and sky all seem to move with the pickers. An olive grove is the slowest of investments: a tree bears for centuries, but no one knows if this year's crop will be heavy or thin. On exactly that uncertainty Thales of Miletus built the first recorded option, twenty-three centuries before this picture was painted.

Look closely

- Find the three women and their three different postures — climbing, reaching, stooping. How does a whole harvest live in three figures?
- Follow the curling strokes in the ground. Where does the painter make the earth itself seem to flow like the trees?
- Notice the pink-and-cream sky. Is this morning or evening? Does the grove feel anxious or peaceful to you?
- Find the baskets. How much crop is actually visible — and how much of the harvest's value is still hanging, unpicked and uncertain?

Talk about it

1. Thales paid winter deposits for presses he might never use. What did he lose if the harvest failed, and why is that bounded loss the signature of an option buyer?
2. The grove's owner could have sold rights to this harvest months early at a fixed price. What would he gain, and what pleasant surprise would he give up — and which Chicago contract does that resemble?
3. Van Gogh worked for years with no buyer for his paintings. In what sense is every long labor — a grove, a craft, a calling — an act of faith in an uncertain harvest?

PROJECT

Payoff Tables by Hand

Options stop being mysterious the day you tabulate one by hand. You will build complete payoff tables for a call and a put — buyer and writer, covered and naked — and discover that every exam answer about maximum gain, maximum loss and breakeven is already sitting in your rows.

You will need

- Graph paper or ruled notebook
- Calculator (barely needed)
- Two colors of pen — one for the buyer, one for the writer

Steps

1. Set the contract: a 50 call at a $3 premium. Rule a table with stock prices at expiration down the left: $40, 44, 47, 50, 53, 56, 60, 70.
2. Column 1: the call buyer's profit or loss per share at each price (exercise value minus $3). Column 2: the naked writer's result (the mirror image).
3. Circle three cells: the buyer's worst case (−$3 everywhere below $50), the breakeven ($53), and the writer's result at $70 — then write what the writer loses if the stock goes to $100 and see why "unlimited."
4. Add Column 3: a covered writer who owns stock bought at $50. Show that his combined result caps at $3 above the strike and simply shadows the stock below it, cushioned by the premium.
5. New table: a 50 put at a $2 premium, same price column, with buyer and writer columns. Circle max gain ($48 at zero), max loss, and breakeven ($48).
6. Below each table, sketch the payoff as a simple line graph — the hockey-stick shapes the video showed. Label kinks at the strikes.
7. Finish with a four-line summary box: long call, long put, covered call, naked call — max gain, max loss, breakeven for each, from your own tables, not from the book.

Tips

- Work per share, then remember the exam multiplies by 100 per contract.

- If a row surprises you, compute it twice; the tables are self-checking because buyer and writer must sum to zero.

Check your work

- ☐ My call table shows breakeven exactly at strike + premium, and my put table at strike − premium.
- ☐ Buyer and writer columns sum to zero in every row.
- ☐ My covered-call column caps at the premium plus strike-minus-cost and never shows unlimited loss.
- ☐ My summary box matches the lesson's formulas from memory.

EXAM NOTEBOOK

1. Draw the four payoff diagrams — long call, short call, long put, short put — small, in a row, with breakevens marked; this strip is the single most useful figure in the unit.
2. Make a two-column chart: rights (buyers) versus obligations (writers), and under it the two positions with unlimited risk (short stock, naked call).
3. Trap list additions: "in the money ≠ profitable," "put max gain = strike − premium, not unlimited," "warrant = issued by the corporation, no intrinsic value at issue," "forward = private and customized; futures = standardized, cleared, marked to market."

KEY FORMULAS

$$\text{Call intrinsic value} = \max(0,\ \text{market price} - \text{strike})$$
$$\text{Put intrinsic value} = \max(0,\ \text{strike} - \text{market price})$$
$$\text{Premium} = \text{intrinsic value} + \text{time value}$$
$$\text{Call breakeven} = \text{strike} + \text{premium}; \quad \text{Put breakeven} = \text{strike} - \text{premium}$$

From history. Chicago's pits produced one of the strangest laws on the books. In the 1950s two traders cornered the onion market so thoroughly that a 50-pound bag of onions briefly sold for less than the empty bag it came in, and ruined growers marched on Washington. Congress answered with the Onion Futures Act of 1958, which bans futures trading on onions — one vegetable, singled out by name — to this day. Markets transfer risk; cornered markets transfer wealth, and the law has never forgotten the difference.

WORKED EXAMPLES

Example 1. With XYZ stock at $47, an XYZ 45 call trades at a premium of $3.50. Find the intrinsic value, the time value, and whether the option is in, at or out of the money.

Show solution

1. Intrinsic: $\$47 - \$45 = \$2.00$. Positive, so the call is in the money.
2. Time value: $\$3.50 - \$2.00 = \$1.50$, the price of the weeks remaining.
3. Per contract (100 shares): $350 premium, of which $200 is intrinsic.

Answer: In the money by $2.00; time value $1.50. A buyer at $3.50 still needs the stock above $48.50 by expiry to profit.

Example 2. An investor buys an ABC 60 put for a premium of $4 with ABC at $61. Find her maximum loss, maximum gain and breakeven.

Show solution

1. Maximum loss: the premium, $4 per share ($400 per contract), if ABC stays above $60.
2. Maximum gain: the stock can fall only to zero, so $\$60 - \$4 = \$56$ per share ($5,600).
3. Breakeven: strike minus premium, $\$60 - \$4 = \$56$. Below $56 she profits.

Answer: Max loss $400; max gain $5,600; breakeven $56.

Example 3. Exam style. An investor owns 100 shares of DEF, bought at $52, now trading at $55. Seeking extra income and willing to sell at $60, she should:

A. Buy a DEF 60 call

B. Write a DEF 60 call against her shares

C. Write a DEF 60 call without owning shares

D. Buy a DEF 50 put

Show solution

1. Her goals: income now, comfortable parting with the stock at $60.
2. Choice A spends money for upside she already owns through the stock; no income. Eliminate.
3. Choice C is a naked call — unlimited risk, the opposite of income with safety, and she does own shares anyway. Eliminate.
4. Choice D is insurance against a fall — prudent for a worrier, but it costs premium instead of collecting it. Not her goal. Eliminate.
5. Choice B collects the premium today; if DEF passes $60 the shares are called away at a price she already accepted. The covered call matches both goals.

Answer: B. “Income from stock I own and would sell at the strike” is the covered call’s exam signature.

Example 4. A wheat farmer expects 5,000 bushels at harvest and fears falling prices; a miller fears rising prices. Using futures at $6.00 per bushel, state what each should do today and what each has accomplished.

Show solution

1. The farmer sells (goes short) futures on 5,000 bushels at $6.00: his sale price is now fixed; if cash wheat drops to $5.40 his futures gain offsets the loss on his crop.
2. The miller buys (goes long) futures at $6.00: her cost is fixed against a rise.
3. Each has hedged — shed a business risk — and each gave up the pleasant surprise: the farmer gains nothing extra if wheat soars, the miller saves nothing if it crashes.
4. Whoever took the other side purely for profit, with no wheat to grow or grind, is the speculator — and the market needs him to absorb the risk the hedgers shed.

Answer: Farmer sells futures, miller buys them; both exchange uncertainty for a fixed price, which is the whole purpose Chicago built in 1848.

PRACTICE

1. Easy With the stock at $58, find the intrinsic value of: (a) a 55 call; (b) a 60 call; (c) a 60 put.

   Show answer

   (a) $3 in the money; (b) $0 — out of the money by $2, and intrinsic value is never negative; (c) $60 − $58 = $2.

2. Easy An option buyer's maximum possible loss is always:

   A. The strike price

   B. The premium paid

   C. Unlimited

   D. The difference between strike and market

   Show answer

   B. A buyer holds a right he can simply abandon, so only the premium is at stake. C belongs to naked call writers and short sellers; A and D confuse the contract's terms with its cost.

3. **Easy** From the story: what did Thales actually buy, what was his maximum loss, and why does Aristotle's tale count as the first recorded option?

Show answer

He bought the right to use every olive press at harvest, paying small winter deposits. If the harvest failed he lost only the deposits. Small fixed cost, right-not-obligation, large contingent payoff — the complete anatomy of an option, recorded in the Politics.

4. **Medium** A 40 call trades at $5.25 with the stock at $43. Intrinsic value, time value and the buyer's breakeven are:

A. $3.00; $2.25; $45.25

B. $2.25; $3.00; $45.25

C. $3.00; $2.25; $34.75

D. $5.25; $0; $43.00

Show answer

A. Intrinsic = $43 − $40 = $3.00; the rest of the premium, $2.25, is time value; breakeven = strike + premium = $45.25. B swaps the split, C uses the put breakeven direction, D pretends the whole premium is intrinsic.

5. **Medium** Which position carries theoretically unlimited loss?

A. Buying a call

B. Buying a put

C. Writing a covered call

D. Writing a naked call

Show answer

D. The naked writer must deliver stock he does not own at whatever price it then costs — no ceiling. A and B risk only premiums; C risks only the upside on shares already owned.

6. **Medium** An investor writes a 35 put for a $2 premium. His maximum gain and maximum loss per contract are:

   A. $200; unlimited

   B. $200; $3,300

   C. $3,300; $200

   D. $3,500; $200

   Show answer

   B. A writer's best outcome is keeping the $200 premium; his worst is being put stock at $35 that falls to zero — $(\$35 - \$2) \times 100 = \$3{,}300$, with breakeven at $33. Put losses are never unlimited (A); C reverses the roles; D forgets the premium cushion.

7. **Medium** A client holds a large position in one stock at $90 and cannot sell for tax reasons until next year, but fears a decline. The textbook recommendation is to:

   A. Write covered calls at 95

   B. Buy protective puts

   C. Write naked puts at 85

   D. Buy more stock at lower prices

   Show answer

   B. A protective put sets a floor under the position — insurance for the holding period. A earns income but gives no downside floor beyond the premium; C adds downside exposure; D doubles it.

8. **Medium** Which is TRUE of warrants but NOT of exchange-listed call options?

   A. They give the right to buy stock at a set price

   B. They are issued by the corporation itself, run for years, and carry no intrinsic value at issue

   C. They can expire worthless

   D. Their value rises when the underlying stock rises

   Show answer

   B. All four choices describe both instruments except B: warrants come from the issuer (often as a bond sweetener), live for years rather than months, and are born with the strike above market. Exercise also makes the company issue new dilutive shares — something a listed call never does.

9. Hard Which features belong to futures rather than forwards? I. Standardized terms II. Clearinghouse guarantee III. Negotiated privately between two parties IV. Marked to market daily

A. I and III

B. I, II and IV

C. II and III

D. III only

Show answer

B. Futures are standardized, cleared and settled daily; the private, customized negotiation of III is the forward's defining trait — and its credit risk, since no clearinghouse stands behind it.

10. Hard An investor bought 100 shares at $62 and buys a 60 put for $1.50. Compute her worst-case total loss and her result if the stock rises to $75.

Show answer

Worst case: sell at $60 via the put, losing $2 on the stock plus the $1.50 premium — $350 total, however far the stock falls. At $75: $13 gain minus $1.50 premium = $11.50 per share, $1,150. Floor below, open sky above — that asymmetry is what the premium buys.

11. Hard With a stock at $50, an exam question says a 50 call "has no value." Correct the statement with the two-part vocabulary of this lesson.

Show answer

At the money, its intrinsic value is zero, but the option still has time value — the market will pay for the chance of a move before expiration. Premium = intrinsic + time, so zero intrinsic never means zero premium until expiry.

12. **Challenge** Build Thales in modern dress: olive-press capacity for the harvest is renting forward at $1,000 per press. Thales pays $50 per press for the right (not the duty) to rent any of 40 presses at $1,000. The harvest is huge and press rental soars to $2,500. Compute his outlay, his gross and net profit, and his result had the harvest failed. Then name his position in option language.

Show answer

Outlay: $40 \times \$50 = \$2{,}000$. Exercise: rent at $1,000, worth $2,500 — $1,500 intrinsic per press, $60,000 gross, $58,000 net. Had the harvest failed: options abandoned, loss capped at $2,000. He was long 40 call options on press capacity, strike $1,000, premium $50.

COMMON MISTAKES

- Computing negative intrinsic value. An out-of-the-money option's intrinsic value is zero, never negative.
- Calling a put buyer's maximum gain unlimited. The stock stops at zero: max gain is strike minus premium.
- Confusing in-the-money with profitable — profit depends on the premium paid, not just the strike.
- Marking the covered call as risky and the naked call as income. It is the reverse: covered = conservative income, naked = unlimited risk.
- Swapping forwards and futures: "standardized, clearinghouse, marked to market" is futures; "private, customized, credit risk" is forwards.

> **Make it a game · In, At or Out!.** Make a deck of twelve cards, each with an option and a stock price (for example "45 call, stock $49" or "70 put, stock $73"). A parent flips cards one at a time. Round one: slap the table and call "In!", "At!" or "Out!" — 1 point each. Round two, same deck: you must also give the intrinsic value — 2 points. Round three, parent adds a premium aloud ("premium $4"): give the time value and the breakeven — 3 points. Wrong call, opponent may steal. Three rounds take about twelve minutes; champion is crowned at 25 points.

> **Scripture.** “Whereas ye know not what shall be on the morrow. For what is your life? It is even a vapour, that appeareth for a little time, and then vanisheth away.” (James 4:14, KJV)
>
> Every derivative is a confession that James is right: no farmer, miller or philosopher knows the morrow. Hedging is the humble use of that truth — paying to be safe from what you cannot foresee. Speculation forgets the second half of the verse; the steward prices tomorrow without presuming to own it.

6.5 Annuities and Life Insurance

OBJECTIVES

- Contrast fixed, variable and equity-indexed annuities by who bears the investment risk and which account holds the money.
- Explain why a variable annuity is a security sold by prospectus, and describe accumulation and annuity units.
- Apply the tax rules: deferred growth, LIFO withdrawals taxed as ordinary income, the 10% penalty before age 59½, and the exclusion ratio.
- Compare the annuitization options: life, period certain, and joint and last survivor.
- Distinguish term, whole, universal and variable life insurance, and explain why commissions and surrender charges demand a fiduciary's disclosure.

> **Warm-up.** In this example, a widow receives a $500 annuity payment each month for life. With pencil and paper: if she lives 30 more years, how much will she have received in all? If only 5 years, how much? Who kept the difference in the second case — and who paid for the surprise in the first? You have just discovered why insurers pool many lives.

WATCH

Annuities - Series 65 Exam Prep

CertFuel · 11:04

https://www.youtube.com/watch?v=D-MVrFzcVsI

> **WHEN TO WATCH**
> After the story and the big idea; he walks the fixed/variable/indexed split and the tax rules the exam tests — pause and write each rule as a flashcard the moment he states it.

BACKUP VIDEO

Group, term and whole life insurance | Insurance | Financial Literacy | Khan Academy

Khan Academy · 4:27

https://www.youtube.com/watch?v=ORSoDbdDlY8

Before the life-insurance paragraph of the core ideas; as he compares term and whole life, note the premium difference and what the extra whole-life dollars are actually buying.

KEY TERMS

fixed annuity

An insurance contract paying a guaranteed rate from the insurer's general account; the insurer bears the investment risk, and the product is insurance, not a security.

variable annuity

An annuity whose value rides on separate-account portfolios chosen by the owner; the owner bears the investment risk, so it is a security sold by prospectus.

equity-indexed annuity

A fixed annuity whose credited interest follows a stock index, limited by a participation rate and a cap, with a guaranteed floor.

general account / separate account

The insurer's own invested assets backing guaranteed products, versus the walled-off account funding variable products, which is registered under the Investment Company Act.

accumulation unit

The measure of a variable annuity owner's stake while paying in; units are purchased at varying values as contributions arrive.

annuity unit

The fixed number of units used to compute each payout after annuitization; the number is fixed, the value varies with the separate account.

mortality and expense (M&E) charge

The yearly insurance fee inside a variable annuity that pays for the death benefit and lifetime-income guarantees.

surrender charge

A declining back-end fee for withdrawing from an annuity in its early years, often six to ten of them.

exclusion ratio

Investment in the contract divided by expected return — the fraction of each annuitized payment that comes back tax-free as return of principal.

1035 exchange

A tax-free exchange of one insurance or annuity contract for another under Internal Revenue Code Section 1035 — though new surrender periods and charges may still make it a bad deal.

CORE IDEAS

The story. In colonial America, when a minister died, his widow and children often lost the manse, the salary and everything else in the same week. In 1759, the Presbyterian Synod of Philadelphia answered with a charter for the **Corporation for the Relief of Poor and Distressed Presbyterian Ministers, and of the Poor and Distressed Widows and Children of Presbyterian Ministers** — mercifully shortened, in time, to the Presbyterian Ministers' Fund. It was the first life insurance company in America. The plan was sober arithmetic in the service of charity: ministers paid modest yearly premiums during their lives, and the fund paid annuities to their widows and orphans. No one could know which minister would die young — but the fund did not need to know. Pooling many lives made the unknowable single death into a calculable average, and the mathematics of mortality became an instrument of mercy. The fund paid its annuities through revolution, epidemics and two centuries of panics, and its descendants were still writing policies into the 1990s.

How they figured it out. The 1759 fund solved death coming *too soon*; the annuity solves the opposite peril — a purse that dies before its owner. An **annuity** is an

insurance contract that can pay an income for as long as a person lives, because the insurer pools thousands of lives: those who die early, in effect, fund those who live long, and the actuary prices the average. Two centuries after Philadelphia, insurers tried a new variation — annuities whose payments rode the stock market — and in 1959 the Supreme Court, in *SEC v. Variable Annuity Life Insurance Co.*, drew the line the exam still tests: when the **customer** bears the investment risk, the product is a **security**, whatever the company that sells it calls itself. Fixed annuity: insurance only. Variable annuity: insurance *and* a security, registered, sold by prospectus, by a person holding both licenses.

The big idea. The **fixed annuity** promises a guaranteed rate from the insurer's **general account**; the insurer bears the investment risk, and the owner's enemy is quiet — **purchasing-power risk**, since a fixed $500 buys less every decade. The **variable annuity** moves the money to a **separate account** of portfolios the owner selects; the owner bears the risk, payments can rise or fall, and the hoped-for reward is growth that outruns inflation. While paying in, the owner buys **accumulation units**; at **annuitization** the stake converts to a fixed *number* of **annuity units** whose *value* — and therefore each check — varies with the separate account. The **equity-indexed annuity** stands between: a fixed annuity whose interest credit follows a stock index, trimmed by a **participation rate** (say 80% of the index gain) and a **cap** (say 10% at most), with a **floor** (often 0%) that bars outright loss in a down year. Zero percent is kinder than a loss, but a client told "stock returns with no risk" was told a half-truth: the participation rate and cap quietly hand back much of the upside, and surrender periods on these contracts run long.

The taxes are exam staples, so take them slowly. Money inside any annuity grows **tax-deferred**; nothing is owed until it comes out. But every dollar of *earnings* that comes out is **ordinary income** — an annuity converts what might have been capital gains into ordinary income, a fact the exam loves. Withdrawals before annuitization are taxed **LIFO**: last-in, first-out, meaning *earnings out first*, fully taxable, and principal only after. Take money before age **59½** and the taxable part generally bears a **10% penalty** besides. Annuitized payments are gentler: the **exclusion ratio** — investment in the contract divided by expected return — fixes the fraction of each check that is tax-free return of principal, with the rest ordinary income. Nonqualified annuities are bought with after-tax dollars; there is no deduction going

in, no step-up at death, and the heirs owe income tax on the deferred gains — three quiet facts that separate annuities from both IRAs and inherited stock.

Now the charges, which is where the fiduciary earns his keep. A variable annuity stacks fees: the **M&E charge** for the insurance guarantees, the underlying portfolios' expenses, often an administrative fee, and a **surrender charge** that may start near 7% and fade over six to ten years. These products also pay the selling agent a healthy **commission** — which is why they are sometimes sold to people who should never own them. The classic abuses have names: recommending a variable annuity inside an IRA (the tax deferral is redundant — it must be justified by the insurance features alone, if at all), and churning contracts through **1035 exchanges** that restart surrender clocks so the agent earns a fresh commission. A 1035 exchange is tax-free by statute; it is not, for that reason, automatically in the client's interest. The adviser who is a steward names the commission, the surrender schedule and the alternatives, out loud, before the client signs.

Life insurance completes the shelf, and the four types map neatly onto the annuity logic. **Term** is pure protection: a death benefit for a period, no cash value, the most coverage per premium dollar — the default answer for a young family's need. **Whole life** adds a savings element: fixed premiums for life, a guaranteed **cash value** growing in the general account, and the right to borrow against it (unpaid loans reduce the death benefit, and a lapsed policy can turn a loan into taxable income). **Universal life** unbundles the machine: flexible premiums and an adjustable death benefit, with interest credited at the insurer's current rates. **Variable life** puts the cash value in a separate account — and so, like the variable annuity, it **is a security**, sold by prospectus by dually licensed persons. The dividing line never moves: general account and guarantees, insurance; separate account and customer risk, security.

On the exam today. The Series 65 asks which annuity is a security — variable (and variable life), because the customer bears the risk in a separate account; fixed and traditional indexed annuities are insurance products. It asks who bears the investment risk in each. It tests the units in order: accumulation units while paying in; at annuitization, a fixed *number* of annuity units with varying *value*. It drills the tax chain: deferred growth, LIFO withdrawals, ordinary income on earnings, 10% penalty under 59½, exclusion ratio after annuitization. It ranks payout options by check size: straight life pays the most (the insurer's obligation can end soonest), joint

and last survivor the least, period certain between. It flags the two abuse patterns — variable annuities in IRAs, and 1035 exchanges that serve the agent — and the EIA's participation rate and cap as the fine print behind "market returns without market risk." And it treats a liquid emergency fund inside a surrender-charged annuity as the suitability failure it is.

PICTURE STUDY

A Pastoral Visit, Richard Norris Brooke, 1881 · Oil on canvas · National Gallery of Art, Washington

Image: Wikimedia Commons, public domain

Richard Norris Brooke painted this supper scene in Warrenton, Virginia, in 1881, and it became his most beloved work, now in the National Gallery of Art. The old pastor is an honored guest at a humble table — the painting treats both his office and the family's dignity with complete seriousness. It sits in this lesson because America's first life insurance company was built in 1759 for men exactly like him: ministers of modest salary whose widows and orphans would have nothing when the visits ended, unless the church did arithmetic as faithfully as it did charity.

Look closely

- Find the pastor's hat and umbrella set carefully by his chair. What do they say about a life spent traveling from table to table?
- Look at each face around the table in turn. Who is listening, who is serving, who is shy? How does the painter honor each one?
- Find the banjo resting against the stool, waiting for after supper. What does it add to the story of this evening?
- Compare the plain table and floor with the family's best efforts — the white cloth, the full bowl. What is being offered to the guest besides food?

Talk about it

1. If this pastor died next winter, what would his family live on? What exactly did the 1759 Philadelphia fund create to answer that question?
2. Life insurance pools many families' premiums so no single widow is destitute. How is that arithmetic a form of bearing one another's burdens?
3. An agent earns a commission on every policy sold at tables like this one. What does a salesman owe a trusting family — and what more does a fiduciary owe?

PROJECT

The Annuity Grid and the Disclosure Script

Annuities are sold across kitchen tables by people who are paid when the pen moves. You will build the comparison grid an honest adviser carries in his head, work the tax arithmetic, and then write and perform the disclosure script a fiduciary would actually say out loud.

You will need

- Notebook ruled into a three-column grid, or a spreadsheet
- Calculator
- A parent willing to play a skeptical 60-year-old client

Steps

1. Rule the grid: columns for fixed, variable and equity-indexed annuities; rows for which account holds the money, who bears the investment risk, is it a security?, what the owner can earn, chief risk, typical charges, and right buyer.
2. Fill every cell from the lesson, then check the security row: variable yes; fixed no; traditional indexed sold as insurance — note that the exam treats it as the fine-print product.
3. Work the tax chain on a fresh example: $50,000 invested, now $72,000; a $25,000 withdrawal at age 55 in this example at a 22% rate. Compute taxable amount, tax, and penalty.
4. Add a payout panel: for one pretend account value, rank straight life, life with 10-year certain, and joint and last survivor from largest check to smallest, with one reason each.
5. Write the disclosure script — eight to twelve lines a fiduciary says before a variable annuity sale: the commission, the M&E and portfolio fees, the surrender schedule, the LIFO tax treatment and penalty, and the cheaper alternatives if the client mainly wants market growth.
6. Perform the script for your parent-client, who must ask at least two hard questions (“What do YOU earn if I sign?” is mandatory). Revise any line that made you mumble.

7. File grid, arithmetic and script together for the unit portfolio.

Tips

- If a grid cell needs more than one line, you are storing sentences, not knowledge; compress.
- The script must name dollar figures, not percentages alone — "*about* $3,500 of your $50,000 in year one" lands differently than "7%."

Check your work

- ☐ My grid's risk row reads: insurer / owner / shared-with-limits, left to right.
- ☐ My tax example yields $22,000 taxable, $4,840 tax, $2,200 penalty.
- ☐ My payout ranking is straight life, period certain, joint and survivor — largest to smallest.
- ☐ My script names the commission in dollars and at least one alternative product.
- ☐ I answered the client's hard questions without flinching or fudging.

EXAM NOTEBOOK

1. Draw the two-account diagram: general account (guarantees, insurer's risk, insurance) and separate account (market portfolios, owner's risk, security) — then list fixed, variable, indexed annuities and the four life policies under the correct account.
2. Make the tax-chain flashcard: deferred → LIFO → ordinary income → 10% under 59½ → exclusion ratio after annuitization.
3. Chart the payout options as three bars by check size — straight life tallest, period certain middle, joint and last survivor shortest — with one sentence on why guarantees shrink checks.

KEY FORMULAS

$$\text{Exclusion ratio} = \frac{\text{investment in the contract}}{\text{expected return}}$$

$$\text{Taxable part of a withdrawal (LIFO)} = \min(\text{withdrawal},\ \text{earnings in the contract})$$

From history. The 1959 case that drew the fixed/variable line, SEC v. Variable Annuity Life Insurance Co., split the Supreme Court. Insurance regulators argued the states had governed insurance since colonial times; the SEC answered that a contract shifting market risk onto the customer was an investment, whatever its wrapper. Justice Douglas's majority agreed, and every prospectus handed across a kitchen table with a variable annuity descends from that decision — as does the dual license its seller must hold.

WORKED EXAMPLES

Example 1. A 45-year-old invested $60,000 in a nonqualified variable annuity now worth $85,000. She withdraws $30,000 this year. In this example her ordinary-income rate is 24%. Find the tax and penalty.

Show solution

1. Earnings in the contract: $\$85{,}000 - \$60{,}000 = \$25{,}000$.
2. LIFO: earnings come out first, so $25,000 of the withdrawal is taxable; the last $5,000 is untaxed return of principal.
3. Income tax: $0.24 \times \$25{,}000 = \$6{,}000$.
4. She is under 59½: penalty $0.10 \times \$25{,}000 = \$2{,}500$.
5. Total cost: $8,500, plus any surrender charge the contract imposes.

Answer: Tax $6,000 and penalty $2,500: $8,500 on a $30,000 withdrawal. Earnings first, ordinary rates, penalty under 59½ — the exam's three-step chain.

Example 2. A retiree paid $90,000 for an annuity whose expected return is $120,000. Each monthly payment is $800. How much of each payment is tax-free?

Show solution

1. Exclusion ratio: $\$90{,}000 \div \$120{,}000 = 75\%$.
2. Tax-free portion: $0.75 \times \$800 = \$600$.
3. Taxable as ordinary income: $200.

Answer: $600 of each $800 payment returns principal tax-free; $200 is ordinary income — until the principal is fully recovered, after which payments are fully taxable.

Example 3. Exam style. Which annuitization option produces the LARGEST monthly check for a 70-year-old, and why?

A. Life with 20-year period certain

B. Joint and last survivor with his 68-year-old wife

C. Straight life

D. All options pay the same if the account values are equal

Show solution

1. The insurer prices each option by how long it may have to pay.
2. Choice B promises to pay until the second of two deaths — the longest expected stream, hence the smallest check. Eliminate.
3. Choice A guarantees at least 20 years even if he dies early — an added promise the insurer charges for in a smaller payment. Eliminate.
4. Choice D ignores pricing entirely. Eliminate.
5. Choice C ends at his death alone, with no minimum — the shortest expected obligation buys the largest check, and the risk is dying in month two with nothing for heirs.

Answer: C. The fewer the guarantees, the fatter the check; every added promise is paid for out of the payment.

PRACTICE

1. Easy In a fixed annuity, the investment risk is borne by the _____ and the premiums are held in the _____:

   A. owner; separate account

   B. insurer; general account

   C. owner; general account

   D. insurer; separate account

   Show answer

   B. The insurer guarantees the rate out of its own general account. The owner's remaining danger is purchasing-power risk — the fixed check shrinks in real terms. A describes a variable annuity; C and D mix the pairs.

2. Easy Which products are securities requiring a prospectus? I. Fixed annuity II. Variable annuity III. Whole life insurance IV. Variable life insurance

A. I and III

B. II and IV

C. II only

D. I, II, III and IV

Show answer

B. Separate account plus customer risk equals security — variable annuities and variable life. Fixed annuities and whole life are general-account insurance products.

3. Easy From the story: what risk did the 1759 Presbyterian fund insure, and what made the unpredictable death of any one minister a workable business?

Show answer

It insured a breadwinner's early death, paying annuities to ministers' widows and orphans from the ministers' pooled premiums. Pooling many lives turned single unknowable deaths into a calculable average — the actuarial foundation of all insurance.

4. Medium A variable annuity owner annuitizes her contract. From that point on she holds:

A. A varying number of accumulation units of fixed value

B. A fixed number of annuity units whose value varies

C. A fixed number of annuity units of fixed value

D. Shares of the insurer's general account

Show answer

B. While paying in she bought accumulation units at varying values; annuitization converts the stake into a fixed NUMBER of annuity units whose VALUE — and so each check — varies with the separate account. C describes a fixed annuity's behavior, D the wrong account entirely.

5. **Medium** An equity-indexed annuity has an 80% participation rate, a 10% cap and a 0% floor. The index gains 20% one year and falls 15% the next. The credited rates are:
   A. 20%, then −15%
   B. 16%, then −12%
   C. 10%, then 0%
   D. 16%, then 0%
   Show answer

   C. Participation gives $0.80 \times 20\% = 16\%$, but the cap cuts the credit to 10%; in the down year the floor holds it at 0%. D forgets the cap, B forgets cap and floor, A forgets the contract entirely — the client buys the floor by surrendering much of the up.

6. **Medium** Which statement about nonqualified annuity taxation is TRUE?
   A. Contributions are deductible in the year made
   B. Earnings withdrawn are taxed as long-term capital gains
   C. Withdrawals before annuitization are treated as earnings first, taxed as ordinary income
   D. At the owner's death, heirs receive a stepped-up basis
   Show answer

   C. LIFO: earnings out first, at ordinary rates. A confuses annuities with deductible IRAs; B is the exam's favorite lie — deferral never converts income to capital gain; D is false — annuity gains never step up.

7. **Medium** For the same account value and age, rank these payout options from largest monthly check to smallest:
   A. Straight life; life with 15-year period certain; joint and last survivor
   B. Joint and last survivor; period certain; straight life
   C. Period certain; straight life; joint and last survivor
   D. All three pay equally
   Show answer

   A. Straight life ends at one death with no minimum — shortest expected obligation, biggest check; the 15-year guarantee shrinks it; paying until the second of two deaths shrinks it most. Every added promise is financed out of the payment.

8. Medium A 30-year-old father of three earns a modest income and owns no life insurance. The suitability-first recommendation is:
   A. Variable life, for market growth in the cash value
   B. Whole life, for its guaranteed cash value
   C. Term life, for the largest death benefit per premium dollar
   D. A deferred variable annuity, for tax-deferred growth
   Show answer

   C. His problem is pure protection on a tight budget, and term buys the most of it. Whole and variable life (A, B) spend his scarce dollars on savings features; an annuity (D) protects against living long, the opposite peril, and insures no one.

9. Hard An agent urges a 62-year-old to move her IRA into a variable annuity "for the tax deferral." Give the exam's two-sentence objection.
   Show answer

   An IRA is already tax-deferred, so the annuity's deferral adds nothing — the recommendation must stand or fall on the insurance features (death benefit, lifetime income) and survive the added M&E and surrender charges. Deferral-on-deferral sales pitches are a flagged abuse because the agent's commission, not the client's interest, usually explains them.

10. Hard In this example, a 50-year-old's nonqualified annuity holds $40,000 of contributions and $12,000 of earnings. He withdraws $15,000. At a 22% rate, find the tax and penalty.
    Show answer

    LIFO: the first $12,000 is earnings — taxable; the last $3,000 is principal. Tax $0.22 \times \$12{,}000 = \$2{,}640$; penalty $0.10 \times \$12{,}000 = \$1{,}200$; total $3,840.

11. Hard A client's whole life policy has $30,000 of cash value, against which she borrows $20,000. Name two consequences the adviser must mention before she signs the loan form.

Show answer

An outstanding loan reduces the death benefit dollar for dollar (plus interest) if she dies, and if the policy lapses with the loan unpaid, the borrowed gains can become taxable income. Policy loans are real loans against her family's protection, not free money.

12. Challenge An agent proposes a 1035 exchange of a client's 8-year-old variable annuity (surrender period expired) into a new one with "better features," a 9-year surrender schedule and a 6% commission. The exchange is tax-free. Write the three-part analysis a fiduciary owes the client.

Show answer

First, tax-free is not cost-free: the new contract restarts a 9-year surrender prison the client has just finished escaping. Second, weigh the "better features" in dollars against the new M&E charges and the 6% commission the exchange generates — who is actually better off? Third, disclose the conflict plainly: the agent is paid only if the client switches. Unless the features demonstrably outweigh the new charges and lost liquidity, the fiduciary answer is to keep the old contract.

COMMON MISTAKES

- Calling annuity earnings capital gains. Every withdrawn dollar of earnings is ordinary income — deferral never converts the character of the gain.
- Forgetting LIFO: withdrawals before annuitization pull out taxable earnings first, principal last.
- Saying the number of annuity units varies after annuitization. The number is fixed; the units' value — and so the check — varies.
- Treating an equity-indexed annuity as a stock substitute. Participation rates and caps surrender much of the upside; the floor is what the client is paying for.
- Assuming a tax-free 1035 exchange is automatically suitable. New surrender schedules and commissions can make a tax-free move a costly one.

Make it a game · General or Separate?. Make eight product cards: fixed annuity, variable annuity, equity-indexed annuity, term life, whole life, universal life, variable life, and "variable annuity after annuitization." Mark two zones on the table: GENERAL ACCOUNT and SEPARATE ACCOUNT. A parent flips cards; players slap the right zone and must then answer the follow-up for 2 points: "Security or insurance?" — and for the annuity cards, "Who bears the risk?" Wrong zone and the opponent steals. Then reverse: the parent calls a feature ("sold by prospectus," "guaranteed cash value," "fixed number of units, varying value") and players name the product. Two rounds run about twelve minutes; 20 points wins.

Scripture. "But if any provide not for his own, and specially for those of his own house, he hath denied the faith, and is worse than an infidel." (1 Timothy 5:8, KJV)

The Philadelphia ministers took this verse seriously enough to do mathematics about it: providing for one's house includes the years after one's death. Life insurance and annuities, honestly priced and honestly sold, are instruments of this command — which is exactly why dishonest selling of them is doubly grievous.

UNIT 6

Funds, Derivatives and Insurance Products

So far you have studied securities one at a time — a bond, a share of stock. This unit is about **packages**: the pooled vehicles that let a family with fifty dollars a month own a slice of hundreds of companies at once. You will meet the Massachusetts Investors Trust of 1924, the Boston fund that made a startling promise — it would buy back its own shares any day the owner asked — and from it learn the whole machinery of **mutual funds**: net asset value, sales loads, breakpoints and share classes. Then come the cousins: closed-end funds that trade at premiums and discounts, unit investment trusts, the **ETFs** that began with the SPDR of 1993, and the **REITs** that let ordinary investors own office towers by the share.

The second half walks the wilder country. Alfred Winslow Jones, a sociologist moonlighting as a magazine writer, quietly built the first **hedged fund** in 1949; you will learn what hedge funds, private equity, limited partnerships and exchange-traded notes really are, and where their risks hide. You will learn **options and futures** at exam depth — calls, puts, intrinsic value, covered and naked writing — beginning with Thales of Miletus and his olive presses, the first option in recorded history. The unit closes with **annuities and life insurance**, told through America's first life insurer, a 1759 fund for ministers' widows and orphans — products that can bless a family or bury it in charges, which is why a fiduciary discloses every commission. Nearly a quarter of the Series 65 lives in this territory.

PREREQUISITES

- Can compute percents, decimals and simple averages quickly with a calculator
- Can explain what a share of common stock and a bond are, and how each is priced (Units 4 and 5)
- Can read a simple price quote and compute a gain or loss on a purchase and sale
- Can define a security and an issuer in plain words (Unit 1)

MASTERY CHECKLIST

- ☐ I can compute a fund's net asset value, its public offering price with a sales load, and the sales charge as a percent of the offering price.
- ☐ I can tell Class A, Class B and Class C shares apart and apply a breakpoint schedule, a letter of intent and rights of accumulation.
- ☐ I can compare open-end funds, closed-end funds, UITs, ETFs and REITs by how each is priced, traded and redeemed.
- ☐ I can describe hedge funds, private equity, limited partnerships, ETNs and leveraged funds, and name the chief risk of each.
- ☐ I can find an option's intrinsic value and time value, and give the maximum gain, maximum loss and breakeven for the four basic positions.
- ☐ I can explain covered versus naked call writing and why a protective put works like insurance.
- ☐ I can compare fixed, variable and equity-indexed annuities, and explain how annuity withdrawals are taxed.
- ☐ I can explain why a variable annuity and variable life insurance are securities, and what a fiduciary must disclose about commissions and surrender charges.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **Investor.gov: Mutual Funds and Exchange-Traded Funds**: Free, from the SEC's Office of Investor Education. Plain-English pages on loads, expense ratios and how ETFs differ from mutual funds. Read alongside Lessons 6.1 and 6.2. Ages 14 and up.
- **FINRA Fund Analyzer**: Free official tool that shows what loads and expenses cost over time for real funds' share classes. Use it to check your Class A versus Class C arithmetic in the Lesson 6.1 project — for study only, never as a shopping list. Ages 14 and up.
- **Investor.gov: Real Estate Investment Trusts (REITs)**: Free SEC page on equity and mortgage REITs, publicly traded and non-traded. Fits Lesson 6.2. Ages 14 and up.
- **Investor.gov: Annuities**: Free SEC pages on fixed, variable and indexed annuities, with the questions to ask before buying one. Read with Lesson 6.5. Ages 14 and up.
- ***Politics*, by Aristotle (Book I)**: Free on Project Gutenberg. Book I, chapter 11 contains the story of Thales and the olive presses — the first recorded option, told by a philosopher 2,300 years ago. Ten minutes with Lesson 6.4. Ages 14 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

6.1	**Mutual Funds: Shares of a Great Pool**	3 sessions of 50 minutes
6.2	**Closed-End Funds, UITs, ETFs and REITs**	3 sessions of 50 minutes
6.3	**Private Funds and Alternative Investments**	3 sessions of 50 minutes
6.4	**Options, Futures and Other Derivatives**	3 sessions of 50 minutes
6.5	**Annuities and Life Insurance**	3 sessions of 50 minutes

Unit 6 test

Closed book. Twenty questions, four choices each, 5 points apiece. Time yourself at about 83 seconds per question — set a timer for 28 minutes and answer every

question; on the real Series 65 an unanswered question is simply a wrong one. Calculators are allowed. Where a problem says “in this example,” use the figures given, not current law. Choose the BEST answer; several choices may be partly true.

1. 5 pts

   A mutual fund holds $84,000,000 of assets, owes $4,000,000, and has 5,000,000 shares outstanding. Its NAV per share is:

   A. $16.00

   B. $16.80

   C. $17.60

   D. $20.00

2. 5 pts

   A fund’s NAV is $18.60 and its sales charge is 7%. The public offering price is:

   A. $19.90

   B. $20.00

   C. $19.30

   D. $17.30

3. 5 pts

   An adviser recommends a $97,000 Class A purchase when the fund’s sales charge drops at $100,000. He says nothing about the schedule. This is:

   A. Acceptable, because the client chose the amount

   B. A breakpoint sale, a prohibited practice

   C. Permitted if the fund family approves

   D. Dollar-cost averaging

4. 5 pts

   An open-end fund order entered at 1:00 p.m. Eastern is filled at:

   A. The prior night’s NAV plus any load

   B. A price negotiated with the fund’s market maker

   C. The NAV next computed after the market close, plus any load

   D. The day’s average NAV

5. 5 pts

A closed-end fund with NAV of $16.00 trades at $14.00. The shares stand at:

A. A 12.5% discount to NAV

B. A 12.5% premium to NAV

C. A 14.3% discount to NAV

D. Exactly NAV, since closed-end funds must redeem at NAV

6. 5 pts

Which may be purchased on margin and sold short?

A. Open-end fund shares

B. Unit investment trust units

C. Exchange-traded fund shares

D. Variable annuity accumulation units

7. 5 pts

To maintain its tax treatment, a REIT must:

A. Hold 90% of assets in real estate and distribute 75% of income

B. Hold at least 75% of assets in real estate and distribute at least 90% of taxable income

C. Redeem its shares at NAV on demand

D. Register as an open-end investment company

8. 5 pts

An investment company with no investment adviser, a fixed portfolio of bonds, redeemable units and a stated termination date is a:

A. Closed-end fund

B. Hedge fund

C. Unit investment trust

D. Face-amount certificate company

9. **5 pts**

An exchange-traded note differs from an exchange-traded fund chiefly because the ETN:

A. Cannot be traded during market hours

B. Is an unsecured debt of its issuer and carries that issuer's credit risk

C. Must hold the securities of its index in a trust

D. Is guaranteed by SIPC against market loss

10. **5 pts**

In this example, a hedge fund charging 2-and-20 manages $20,000,000 and produces a $3,000,000 gain. The total fee is:

A. $400,000

B. $600,000

C. $1,000,000

D. $4,600,000

11. **5 pts**

Which individual qualifies as an accredited investor under Regulation D?

A. Income of $150,000 for each of the last two years

B. Net worth of $1,100,000 excluding her primary residence

C. Net worth of $1,100,000 of which $600,000 is home equity

D. Anyone employed by a bank

12. **5 pts**

A client plans to buy and hold "for several years." The LEAST suitable of these is a:

A. Diversified open-end index fund

B. 2× daily leveraged fund tracking the same index

C. Listed equity REIT

D. Investment-grade corporate bond

13. 5 pts

With a stock at $72, a 65 call trading at $9 has intrinsic value and time value of:

A. $9 and $0

B. $7 and $2

C. $2 and $7

D. $0 and $9

14. 5 pts

The writer of a naked call has a maximum potential loss that is:

A. The premium received

B. The strike price times 100

C. Unlimited

D. The difference between strike and premium

15. 5 pts

An investor buys a 40 put at a premium of $3. Maximum gain and breakeven are:

A. Unlimited; $43

B. $3,700; $37

C. $4,000; $40

D. $300; $43

16. 5 pts

“Conservative income from stock already owned” best describes:

A. Writing covered calls

B. Writing naked calls

C. Buying protective puts

D. Buying warrants

17. 5 pts

In this example, a 52-year-old’s nonqualified annuity contains $70,000 of contributions and $15,000 of earnings. He withdraws $15,000; his rate is 20%. Tax plus penalty equals:

A. $3,000

B. $1,500

C. $4,500

D. $0, because he withdrew only principal

18. 5 pts

A variable annuity is a security because:

A. It is issued by an insurance company

B. The owner bears the investment risk in a separate account

C. Its payments are guaranteed for life

D. Congress listed it in the Securities Act of 1933

19. 5 pts

An equity-indexed annuity has a 90% participation rate and an 8% cap. The index rises 15%. The credited rate is:

A. 15%

B. 13.5%

C. 8%

D. 0%

20. 5 pts

For the same account value and age, which annuitization option pays the SMALLEST monthly check?

A. Straight life

B. Life with 10-year period certain

C. Joint and last survivor

D. All pay equally by law

ANSWER KEY

1. A. $(\$84{,}000{,}000 - \$4{,}000{,}000) \div 5{,}000{,}000 = \$16.00$. B forgets the liabilities; C and D rearrange the arithmetic.
2. B. POP = NAV ÷ (1 − 0.07) = $\$18.60 \div 0.93 = \$20.00$. A is the trap: NAV × 1.07, wrong because the load is a percent of the offering price. D subtracts instead of adding a load.
3. B. Failing to disclose a reachable breakpoint — or placing orders just beneath one — is the named violation. Client choice (A) and fund approval (C) cure nothing; D is an unrelated term.
4. C. Forward pricing: every order waits for the next computed NAV. Open-end shares have no market makers (B) and no intraday or average prices (D); yesterday's NAV (A) is the stale-price decoy.
5. A. $(\$14 - \$16) \div \$16 = -12.5\%$ — a discount. C divides by the price instead of NAV; D is false — closed-end funds never redeem.
6. C. Only exchange-traded shares trade in a secondary market where borrowing and shorting are possible. A and B are redeemed with the issuer; D is a contract value, not a tradable share.
7. B. 75% of assets (and 75% of gross income) from real estate; 90% of taxable income distributed. A swaps the numbers — the exam's favorite move. REITs never redeem (C) and are not investment companies (D).
8. C. Fixed, supervised-not-managed, terminating, redeemable: the UIT's four fingerprints. Closed-end funds are managed and never redeem; hedge funds are private and managed; D is a different creature that promises a fixed sum at maturity.
9. B. The ETN owns nothing; it is a bank's promise, good only while the bank is. C describes the ETF; A is false; D misstates SIPC, which never covers market loss and does not guarantee an issuer's debt.
10. C. Asset fee $0.02 \times \$20{,}000{,}000 = \$400{,}000$ plus performance fee $0.20 \times \$3{,}000{,}000 = \$600{,}000$ totals $1,000,000. A and B are each half the answer; D taxes the whole fund as if it were profit.
11. B. The test is net worth over $1 million excluding the home, or income over $200,000 ($300,000 joint). C falls to $500,000 once the home is removed; A misses the income line; D is not a category.
12. B. The daily reset makes long-period results drift from twice the index — volatility alone erodes it — so regulators and the exam brand leveraged and

inverse funds unsuitable for buy-and-hold. A, C and D are ordinary long-term holdings.

13. B. Intrinsic = market − strike = $\$72 - \$65 = \$7$; the rest of the $9 premium, $2, is time value. C reverses them; D describes an at- or out-of-the-money call.
14. C. He may be forced to buy stock at any height to deliver at the strike; no ceiling exists. A is his maximum GAIN; D is the put writer's maximum loss; B invents a formula.
15. B. The stock can fall only to zero: $(\$40 - \$3) \times 100 = \$3{,}700$, with breakeven at $\$40 - \$3 = \$37$. "Unlimited" (A) is never true of puts; C ignores the premium; D states the maximum LOSS and a call-style breakeven.
16. A. The covered writer collects premiums and risks only the upside above the strike on shares he owns. B is the unlimited-risk position; C costs premium (insurance, not income); D is a speculation on the issuer's stock.
17. C. LIFO makes the entire $15,000 earnings, so tax $0.20 \times \$15{,}000 = \$3{,}000$ plus the 10% pre-59½ penalty $1,500 totals $4,500. D is the FIFO wish the tax code denies; A and B are each one piece.
18. B. The 1959 VALIC decision turned on who bears the risk: separate account plus customer risk equals security, sold by prospectus. A would make fixed annuities securities too; C describes the insurance feature, not the securities test; D never happened.
19. C. Participation yields $0.90 \times 15\% = 13.5\%$, but the cap cuts the credit to 8%. B stops before the cap; A ignores both limits; D is the floor, applied only in losing years.
20. C. Paying until the second of two deaths is the longest expected obligation, so each check is smallest. Straight life (A) pays the most; the period-certain guarantee (B) sits between; D confuses pricing with regulation.

PORTFOLIO PIECE: MY PRODUCTS ATLAS

Assemble the atlas an adviser-in-training should own: your one-page map of every pooled vehicle in this unit — open-end fund, closed-end fund, UIT, ETF, REIT, hedge fund, DPP, ETN — each marked with how it is priced, where it trades and whether it can be redeemed; your hand-drawn payoff tables and diagrams for one call and one put, buyer and writer, with breakevens circled; your annuity comparison grid (fixed, variable, indexed) with the tax-chain flashcard and your performed disclosure script; the share-class ledger and alternatives dossier from the projects; and, as the cover leaf, one honest paragraph on where commissions hide in this unit's products — loads, 12b-1 fees, M&E charges, surrender schedules, performance fees — and why a fiduciary names every one of them before the client signs.

LOOK FOR	WHAT IT MEANS
The map	Every pooled vehicle appears once, with pricing, trading venue and redeemability correct — including the three that trip candidates: closed-end (never redeemed), ETF (redeemed only in creation units), REIT (75/75/90, never redeemed).
Options arithmetic	Payoff tables are computed by hand without errors; breakevens, maximum gains and maximum losses match the formulas, and buyer and writer columns mirror to zero.
Annuity grid	Risk-bearer, account type and security status are right for all three annuity types, and the tax chain (deferral, LIFO, ordinary income, 59½ penalty, exclusion ratio) is stated and applied in one worked example.
The commissions paragraph	Names at least five places compensation hides, in plain words with a dollar illustration, and states the fiduciary's disclosure duty as an obligation, not a courtesy.
Craftsmanship	Pages are dated, legible and organized for fast exam review; a stranger could study from this atlas.

UNIT 7

The Client

Everything you have learned so far — markets, bonds, stocks, funds — now turns to face a person. NASAA calls this part of the outline "client investment recommendations and strategies," and it begins with a simple command: **know your client**. In this unit you will meet the client in every form the exam presents — the widow, the sole proprietor, the partnership, the corporation, the trustee bound by a document and by Justice Samuel Putnam's **prudent man rule** of 1830 — and you will learn to build the **client profile**: goals, cash flow, balance sheet, risk tolerance (both the ability and the willingness to bear it), time horizon, liquidity and taxes. Then come the taxes themselves, from the four-page Form 1040 of 1913 to capital gains, wash sales and stepped-up basis; the retirement plans, from IRAs to 401(k)s; and ERISA, the great pension law born from the broken promises of the Studebaker plant in 1963.

The unit ends with the accounts that carry wealth between generations — 529 plans, custodial accounts, HSAs, joint registrations, trusts and wills — and with the cautionary tale of Commodore Vanderbilt's contested will, fought in a New York courtroom for more than two years. Along the way you will build "My Client Book," two fully worked pretend client profiles, because the adviser's calling is Proverbs 27:23 put into practice: "Be thou diligent to know the state of thy flocks." Roughly a sixth of the real exam lives in this material, and it is where scenario questions — "A client, age 45, …" — are born.

PREREQUISITES

- Can compute percents, averages and simple differences quickly with a calculator
- Can explain bond and stock basics from Units 4 and 5, including taxable-equivalent yield
- Can read a simple balance sheet and income statement (Unit 3)
- Can state the fiduciary duties of loyalty and care from Unit 1

MASTERY CHECKLIST

- ☐ I can name the major client types — individuals, sole proprietorships, partnerships, LLCs, C and S corporations, trusts, estates and charities — and say who pays the tax for each.
- ☐ I can build a client profile covering goals, financial situation, risk tolerance (ability and willingness), time horizon, liquidity, taxes and nonfinancial considerations.
- ☐ I can net capital gains and losses, apply the $3,000 ordinary-income offset, and spot a wash sale and adjust the basis.
- ☐ I can contrast gifted basis (carryover) with inherited basis (stepped-up) and compute each.
- ☐ I can compare traditional and Roth IRAs, rollovers and transfers, and the major qualified employer plans, and say who bears the investment risk in defined benefit versus defined contribution plans.
- ☐ I can state the ERISA fiduciary duties, the 404(c) safe harbor conditions, and the main prohibited transactions.
- ☐ I can choose the right special account — 529, Coverdell, UTMA, HSA — and the right ownership form for a scenario, and explain why a beneficiary designation beats a will.

- ☐ I can explain what a QDRO does and the difference between revocable, irrevocable and testamentary trusts.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **IRS Publication 590-A: Contributions to IRAs**: Free from irs.gov. The official rules for putting money into traditional and Roth IRAs — the source for every limit that changes each year. Skim the tables with Lesson 7.3. Ages 15 and up.
- **IRS Publication 590-B: Distributions from IRAs**: Free from irs.gov. The companion volume: taking money out, required minimum distributions and the early-withdrawal penalty exceptions. Use with Lessons 7.3 and 7.5. Ages 15 and up.
- **IRS Tax Topic 409: Capital Gains and Losses**: Free from irs.gov. Two screens of plain language on short- and long-term gains, the $3,000 loss limit and the carryforward — the current figures behind Lesson 7.2. Ages 15 and up.
- **Investor.gov: Individual Retirement Accounts (IRAs)**: Free from the SEC's investor-education site. Short, official definitions of IRAs and the linked glossary pages on 401(k)s and retirement plans. A quick cross-check for Lesson 7.3. Ages 14 and up.
- ***Bleak House*, by Charles Dickens (1853)**: Free on Project Gutenberg. The endless estate case of Jarndyce and Jarndyce devours a family fortune in court costs — the most famous picture in literature of what Lesson 7.5 tries to prevent. Read Chapter 1 at least. Ages 15 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

7.1 Types of Clients and the Client Profile — 3 sessions of 50 minutes

7.2 Taxes the Adviser Must Know: Income, Capital Gains and Estates

3 sessions of 50 minutes

7.3 Retirement Plans: IRAs, Roths and Qualified Plans — 3 sessions of 50 minutes

7.4 ERISA: The Plan Fiduciary's Rules — 3 sessions of 50 minutes

Unit 7 test

Closed book, like the real exam. Give yourself about 28 minutes — roughly 83 seconds a question, the same pace as 130 questions in 180 minutes. Answer every question; there is no penalty for a wrong guess. Where a problem says “in this example,” use the figures given, not current law — real limits and brackets change each year and live at irs.gov. Each question is worth 5 points; 100 points total.

1. **5 pts**

   Which client’s business income is reported directly on the owner’s personal tax return, with the business account opened simply in the owner’s own name?

   A. C corporation

   B. S corporation

   C. Sole proprietorship

   D. Limited partnership

2. **5 pts**

   A trustee directs an adviser to buy aggressive growth stocks “because the beneficiaries insist.” The trust document restricts the account to investment-grade bonds and dividend-paying blue chips. The adviser should:

   A. Follow the beneficiaries’ wishes

   B. Follow the trust document

   C. Compromise with a balanced portfolio

   D. File a complaint with the Administrator

3. **5 pts**

A client, age 45, has a secure government salary, a paid-off house and a 20-year horizon, but says any loss over 5% would keep her up at night. The adviser should conclude:

A. High ability, low willingness — build the more conservative portfolio and educate

B. High ability, low willingness — build the aggressive portfolio her finances justify

C. Low ability, high willingness — hold only cash

D. The two measures should be averaged into a moderate portfolio

4. **5 pts**

A client who refuses to sell a losing stock "until it gets back to what I paid" is showing which pair of behavioral biases?

A. Herding and overconfidence

B. Anchoring and loss aversion

C. Overconfidence and anchoring

D. Herding and loss aversion

5. **5 pts**

Calculation. This year a client has short-term gains of $3,000, short-term losses of $8,000, long-term gains of $9,000 and long-term losses of $5,000. The result is:

A. $1,000 net long-term gain

B. $5,000 net short-term loss

C. $4,000 net long-term gain

D. $1,000 net capital loss

6. **5 pts**

Calculation. On October 5 a client sells 200 shares at a $3,000 loss; on October 25 she buys 200 shares of the same stock at $25. Her loss treatment and new basis are:

A. Loss allowed; basis $5,000

B. Loss disallowed; basis $5,000

C. Loss disallowed; basis $8,000

D. Loss allowed; basis $8,000

7. 5 pts

Calculation. Grandmother bought shares for $12,000. At her death they are worth $40,000 and pass to her grandson, who sells them soon after for $41,000. His taxable gain and holding period are:

A. $29,000, long-term

B. $1,000, short-term

C. $1,000, long-term

D. $29,000, short-term

8. 5 pts

Stock bought on May 20 of last year is sold on May 20 of this year at a profit. The gain is:

A. Long-term, because it was held a full year

B. Short-term, because long-term requires more than one year

C. Long-term if the proceeds are reinvested

D. Tax-free after one year

9. 5 pts

Which cost-basis method lets a client choose exactly which lot to sell in order to control the taxable result?

A. FIFO

B. Average cost

C. Specific identification

D. Highest-in, first-out, required by the IRS

10. 5 pts

Which statement about Roth IRAs is TRUE?

A. Contributions are deductible and withdrawals are taxed as ordinary income

B. There are no income limits on contributions

C. Qualified withdrawals are tax-free, and the owner faces no lifetime RMDs

D. RMDs must begin at the same age as a traditional IRA's

11. 5 pts

A client, age 45, takes a $50,000 distribution from his 401(k) when leaving his employer, intending a 60-day rollover. The check he receives will be:

A. $50,000, with nothing withheld

B. $40,000, after mandatory 20% withholding — and he must still deposit the full $50,000 to avoid tax on the shortfall

C. $45,000, after the 10% penalty is withheld

D. $50,000, provided he signs a rollover certification

12. 5 pts

In a defined contribution plan, the participant's retirement benefit equals:

A. A formula based on final salary and years of service

B. Whatever the account balance has grown to — so the employee bears the investment risk

C. A government-guaranteed annuity

D. The employer's promised target, with shortfalls made up by the sponsor

13. 5 pts

Calculation (concept). In this example, a 76-year-old's traditional IRA holds $300,000 and the IRS table factor for her age is 23.7. Her required minimum distribution is closest to:

A. $7,110

B. $30,000

C. $12,660

D. No RMD is required from a traditional IRA

14. 5 pts

A self-employed web designer with no employees and high, variable income wants the simplest plan with the largest employer-funded contributions. The best match is:

A. SIMPLE IRA

B. 403(b)

C. SEP IRA

D. Defined benefit plan at a large corporation

15. 5 pts

ERISA's requirements apply to:

A. A state highway workers' pension fund

B. A church plan that has not elected coverage

C. A private manufacturer's pension and 401(k) plans

D. All retirement plans in the United States

16. 5 pts

A 401(k) sponsor wants Section 404(c) protection. The plan must offer:

A. At least three diversified investment choices with materially different risk and return, participant control with switching at least quarterly, and sufficient information

B. At least ten funds and daily trading

C. A guaranteed account and company stock

D. Professional management of every participant's account

17. 5 pts

The committee of a profit-sharing plan votes to lend plan cash to the sponsoring company at an above-market rate, fully collateralized. Under ERISA the loan is:

A. Permitted because the plan profits

B. A prohibited transaction with a party in interest, regardless of terms

C. Permitted if participants are notified

D. Permitted up to 10% of plan assets

18. 5 pts

A father asks how to invest $40,000 for his 10-year-old daughter's college while keeping the right to take the money back if the family ever needs it, with no income limits on his contributions. The adviser should recommend:

A. An UTMA account, which he may revoke at need

B. A joint account with his daughter

C. A 529 plan, where the donor keeps control and may reclaim the money (tax and penalty on earnings)

D. A Coverdell ESA funded $40,000 at once

19. 5 pts

A client's will leaves everything to his two sons, but his $500,000 IRA names his brother as beneficiary and his home is held JTWROS with his second wife. At his death the IRA and home pass:

A. Both to the sons, under the will

B. IRA to the brother by designation; home to the wife by survivorship; the will controls neither

C. IRA to the sons; home to the wife

D. Everything to the probate court to divide

20. 5 pts

A divorce court issues a QDRO awarding a 45-year-old alternate payee $100,000 from her ex-husband's 401(k), which she takes in cash. The distribution is:

A. Subject to ordinary income tax and the 10% early-distribution penalty

B. Tax-free as a property settlement

C. Subject to ordinary income tax but exempt from the 10% penalty

D. Prohibited; qualified plans cannot be divided at divorce

ANSWER KEY

1. C. A sole proprietorship is not a separate legal entity; the account is the owner's personal account and the income lands on the owner's own return. The S corporation and limited partnership also pass income through, but each is a separate entity with its own accounts and filings.
2. B. The trustee — and the adviser serving the trust — is bound by the governing document first, then the prudent investor rule. Beneficiaries cannot override the instrument.
3. A. Ability (objective capacity) is high; willingness (emotional tolerance) is low; the adviser honors the more conservative of the two and closes the gap with education, never by overriding the client's stated feelings.
4. B. The purchase price is an anchor the market does not remember, and refusing to realize the loss is loss aversion. Nothing in the vignette involves following the crowd or overrating one's own skill.
5. A. Net short-term: $\$3{,}000 - \$8{,}000 = -\$5{,}000$; net long-term: $\$9{,}000 - \$5{,}000 = +\$4{,}000$; cross-net: a $1,000 net long-term gain — the loss soaked up gain first. B and C each stop one step early.
6. C. The repurchase within 30 days is a wash sale: the $3,000 loss is disallowed and added to the new cost — $200 \times \$25 + \$3{,}000 = \$8{,}000$. B disallows the loss but forgets where it goes.
7. C. Inherited property takes a stepped-up basis of $40,000 and is automatically long-term, so the gain is $\$41{,}000 - \$40{,}000 = \$1{,}000$, long-term. A uses the grandmother's basis — the gift rule, not the inheritance rule.
8. B. Exactly one year is short-term; one year plus a day begins long-term treatment. Reinvestment has no effect on holding period.
9. C. Specific identification names the lot and so controls the gain or loss realized. FIFO is merely the default and average cost the mutual-fund method; D invents a requirement.
10. C. After-tax money in, tax-free qualified withdrawals out (five years plus age 59½), and no RMDs during the owner's life. A describes the traditional IRA; income limits do exist for Roth contributions.
11. B. Employer-plan distributions paid to the participant carry mandatory 20% withholding ($10,000); a complete rollover still requires depositing the full $50,000 within 60 days. A direct trustee-to-trustee transfer would have avoided withholding entirely.

12. B. The contribution is defined; the outcome is not. A and D describe defined benefit plans, where the employer bears the investment risk; C overstates PBGC insurance, which covers defined benefit plans only, up to limits.
13. C. RMD = balance ÷ life-expectancy factor: $\$300{,}000 \div 23.7 \approx \$12{,}658$. B divides by ten, A multiplies by the factor as a percent; D confuses the traditional IRA with the Roth.
14. C. The SEP is employer-funded, high-limit and nearly paperwork-free — built for the profitable self-employed. The SIMPLE suits small employers wanting employee deferrals with a match; the 403(b) belongs to schools and nonprofits.
15. C. ERISA governs private-sector employer plans; government plans and non-electing church plans sit outside it. D is the overreach the exam loves to offer.
16. A. The safe-harbor trio: broad menu (three or more diversified core options), real control (at least quarterly), adequate information. Even then the sponsor remains responsible for prudently selecting and monitoring the menu itself.
17. B. Lending plan assets to a party in interest — the employer above all — is prohibited outright; favorable terms are no defense. (The 10% figure belongs to a different rule about holding employer securities, bait for the half-remembering.)
18. C. The 529 keeps the donor in control with high limits and no income limits. The UTMA is irrevocable, the joint account with a minor does not exist, and the Coverdell is capped at $2,000 a year with contributor income limits.
19. B. Beneficiary designations and survivorship titling operate outside the will: the designation beats the will, and JTWROS property vests in the survivor automatically. The will governs only what no designation or titling has already claimed.
20. C. The QDRO is precisely the lawful way to divide a qualified plan at divorce, and distributions to the alternate payee under it escape the 10% penalty — though ordinary income tax applies unless she rolls the money to her own IRA.

PORTFOLIO PIECE: MY CLIENT BOOK

Create a two-client practice book, the kind a new investment adviser representative might keep — all pretend, every number labeled "example." Client one is a young teacher, 26, single, steady salary, long horizon; client two is a retiring farmer, 64, married, selling equipment and land, short horizon and income needs. For each client build four pages: (1) a profile sheet — goals, cash flow, balance sheet with net worth, risk tolerance split into ability and willingness, time horizon, liquidity needs and tax situation; (2) account-type recommendations with a written reason for each (for the teacher, perhaps a Roth IRA and her school's 403(b); for the farmer, perhaps IRA rollover choices and a JTWROS account with his wife) — name the account types, never specific securities; (3) a tax-basis worksheet showing one netting of gains and losses and one gifted-versus-inherited basis comparison with invented numbers; and (4) an ownership and beneficiary map — who owns each account, how it is titled, who the beneficiaries are, and what passes by will versus by designation.

LOOK FOR	WHAT IT MEANS
Profiles	Both profile sheets are complete — goals, cash flow, balance sheet, ability and willingness to take risk, horizon, liquidity, taxes — and the two clients are genuinely different.
Recommendations	Every account type named fits the profile, with a stated reason tied to taxes, horizon or liquidity; no specific securities are recommended.
Tax worksheets	The netting worksheet and the basis comparison are arithmetically correct, clearly labeled and marked as example numbers.
Ownership map	Titling and beneficiary designations are consistent — nothing passes two ways — and the map notes what the will controls and what it cannot.
Craft	Pages are neat, dated and organized so a stranger could pick up the book and understand both clients in five minutes.

7.1 Types of Clients and the Client Profile

OBJECTIVES

- Name the major types of clients — natural persons, sole proprietorships, partnerships, LLCs, C and S corporations, trusts, estates, foundations and charities — and say who pays the tax for each.
- Explain what binds a trustee or executor: the governing document and the prudent investor rule.
- Build a client profile covering goals, financial situation, risk tolerance, time horizon, liquidity, taxes and nonfinancial considerations.
- Distinguish the ability to take risk from the willingness to take it, and say what an adviser does when they disagree.
- Recognize the four behavioral-finance biases the exam names most: overconfidence, loss aversion, anchoring and herding.

> **Warm-up.** Write down three people or organizations in your town that might hire an investment adviser — say, a retired couple, a family business and a church building fund. For each, write one sentence on what they want their money to do and one thing that could go wrong if the adviser never asked.

WATCH

Client Profile Development: Rapid Fire - Series 65 Exam Prep

CertFuel · 7:38

https://www.youtube.com/watch?v=EUPAyZwGDmI

> **WHEN TO WATCH**
> After the big idea, before the worked examples: a rapid run through the profile elements in exam language — pause after each question and answer it aloud before the teacher does.

BACKUP VIDEO

Behavioral Finance | Investor Irrationality

The Plain Bagel · 8:06

https://www.youtube.com/watch?v=utLIlOAwLeU

With the “How the mind misleads” paragraph: a working analyst walks through the classic biases — list each one he names and match it to the exam’s four.

KEY TERMS

natural person

A human being, as opposed to a legal entity such as a corporation or trust; the exam uses the phrase to separate individual clients from institutional ones.

sole proprietorship

A business owned by one person with no separate legal existence; its account is simply the owner's personal account, and its income lands on the owner's own tax return.

general partnership

A business owned by two or more general partners who all may manage and all have unlimited personal liability; the partnership files an information return but the partners pay the tax.

limited partnership

A partnership with at least one general partner who manages and bears unlimited liability, and limited partners who are passive and can lose only what they invested.

C corporation

A corporation that is itself a taxpayer: it pays corporate income tax, and shareholders pay tax again on dividends — the "double taxation" the exam loves to name.

S corporation

A corporation that elects to pass its income through to its shareholders (limited to 100, with one class of stock), so the shareholders pay the tax, not the company.

prudent investor rule

The modern standard for trustees: manage the portfolio as a whole, as a prudent investor would, considering the purposes and terms of the trust.

risk tolerance

A client's capacity for investment risk, made of two parts: the financial ability to absorb losses and the emotional willingness to endure them.

time horizon

How long the money can stay invested before it is needed; the single biggest driver of how much risk a portfolio can carry.

investment policy statement

A written document — standard for foundations, endowments and pension plans — stating objectives, spending needs, asset-allocation ranges and the criteria for choosing and monitoring investments.

CORE IDEAS

The story. In 1823 a Boston merchant named John McLean died and left $50,000 — a fortune then — in trust: the income to his widow for life, and at her death the principal to be split between Harvard College and Massachusetts General Hospital. The trustees, Jonathan and Francis Amory, invested the money in the stocks of manufacturing and insurance companies. By the time the widow died the fund had lost value, and Harvard sued the surviving trustee, Francis Amory, arguing that a trustee had no business holding anything so unsafe as common stock. In 1830 Justice Samuel Putnam of the Massachusetts Supreme Judicial Court ruled for Amory. "All that can be required of a trustee to invest," he wrote, "is, that he shall conduct himself faithfully and exercise a sound discretion. He is to observe how men of prudence, discretion and intelligence manage their own affairs, not in regard to speculation, but in regard to the permanent disposition of their funds, considering the probable income, as well as the probable safety of the capital to be invested."

How they figured it out. Putnam saw what Harvard's lawyers would not admit: there is no perfectly safe investment. Government securities fluctuate; banks fail; land sits idle. If "safe" was impossible, the law could not demand it. What the law could demand was a certain kind of **person** — faithful, careful, thinking of income and of safety together, managing the trust the way a prudent man manages his own affairs. This **prudent man rule** governed American trustees for a century and a half. In the 1990s it matured into the **prudent investor rule**, which judges the portfolio as a whole rather than each holding in isolation — a diversification idea you will meet again, mathematically, in Unit 8. The lesson for you is Putnam's deeper point: the standard of care attaches to the *client relationship*, and the first duty of care is to know whose money it is, what the governing document says, and what the money is for.

The big idea. Clients come in legal shapes, and each shape answers two exam questions: *who decides*, and *who pays the tax*. A **natural person** decides for himself and pays his own tax. A **sole proprietorship** is not a separate entity at all — the account is opened in the owner's name, and business income flows onto the owner's personal return. A **general partnership** and a **limited partnership** file an information return, but the income passes through to the partners, who pay tax on their shares; in a limited partnership, only the general partner manages, and the limited partners are passive. An **LLC** gives its members limited liability with pass-

through taxation by default. A **C corporation** is itself a taxpayer — tax at the company, tax again on dividends — while an **S corporation** passes income through to its shareholders, of whom there may be no more than 100, holding one class of stock. A **trust** is managed by its **trustee** and an **estate** by its **executor**; both are fiduciaries bound by the governing document first — the trust instrument or the will — and then by the prudent investor rule. The adviser who takes instructions from a trust beneficiary instead of the trustee, or who buys what the document forbids, has failed before the first trade settles. **Foundations, endowments and charities** invest under an **investment policy statement** and must mind their spending needs: a foundation that must pay out a share of assets every year needs income and liquidity, not just growth.

The profile. For any client, the adviser gathers the same picture the exam calls the client profile. *Goals*: retirement, education, a house, an inheritance to leave. *Current and future financial situation*: a cash-flow statement (what comes in, what goes out) and a personal balance sheet (what is owned, what is owed, and the net worth between them), plus what is already promised — a pension, Social Security, an expected inheritance. *Risk tolerance*, in two parts the exam insists on separating: the **ability** to take risk, which is objective — age, horizon, wealth, income security — and the **willingness** to take it, which is emotional. A 30-year-old surgeon with a large salary has high ability; if she lies awake over a 5% dip, her willingness is low, and the adviser must honor the more conservative of the two and educate gently, never override. *Time horizon* and *liquidity needs*: money needed within a year or two does not belong in stocks. *Taxes*: a client in a high bracket may prefer municipal bonds; a tax-deferred account changes the calculation. And *nonfinancial considerations*: a client's values, investment experience and life events — a new child, a divorce, a faith-based preference to avoid certain businesses. The adviser takes these as given facts about the client, weighs them neutrally, and builds around them.

How the mind misleads. The exam borrows four ideas from behavioral finance, and it tests them as one-line definitions. **Overconfidence**: believing your judgment is better than it is — the client who trades constantly because he "knows" tech. **Loss aversion**: losses hurt roughly twice as much as equal gains please, so clients hold losers too long, hoping to "get back to even." **Anchoring**: fixing on an arbitrary number — "I paid $80, I won't sell below $80" — as if the stock remembered what you paid. **Herding**: buying because everyone is buying; you saw where that led in 1929.

The adviser's job is not to mock these instincts but to recognize them, in the client and in the mirror.

Gathering the data. The profile is built from questionnaires and interviews — the new-account form, a risk questionnaire, and above all conversation, repeated as life changes; a profile is a living document, updated at marriage, birth, job change and retirement. One sentence of law belongs here: under the anti-money-laundering rules of the USA PATRIOT Act, every firm's **customer identification program** must verify who the client is — name, date of birth, address and taxpayer identification number — before the relationship begins.

On the exam today. This territory is pure scenario bait. Expect "who pays the tax" questions — the answer for partnerships, S corporations and LLCs is *the owners*, and for a C corporation *the entity itself* (then shareholders again on dividends). Expect a trustee question where the right answer is "follow the trust document," whatever the beneficiaries prefer. Expect the ability-versus-willingness trap: when the two conflict, the adviser goes with the more conservative and addresses the gap — never "proceeds with the higher risk because the client can afford it." Expect "which should the adviser determine FIRST?" — the answer is the client's goals and financial situation, before any product. And know the four biases cold; the exam gives a one-sentence vignette and asks you to name the bias.

PICTURE STUDY

A Westerly View of the Colleges in Cambridge, Paul Revere, after a drawing by Joshua Chadwick, 1767 (re-engraved by Sidney L. Smith, 1916) · Line engraving · Original in the Yale University Art Gallery; this restrike made for the Club of Odd Volumes, Boston

Image: Wikimedia Commons, public domain

Paul Revere — the same silversmith who would ride to Lexington eight years later — engraved this view of Harvard College in 1767. The college in the picture is the client in this lesson's story: when John McLean's trust lost value, Harvard went to court to get it back, and lost to a new idea — that a trustee is judged by prudence, not by hindsight.

Look closely

- Find the lettered key under the picture. Which building is Harvard Hall, and why would an engraver label each one?
- Find the coach and the riders in the yard. What do they tell you about who visited the college?
- Notice the row of buildings. A college like this lives on endowment income for centuries — what time horizon does such a client have?
- Look at the sky and the open yard. Revere engraved this to sell; what feeling about the college is he selling?

Talk about it

1. Harvard argued in 1830 that trustees should never hold common stock. If the court had agreed, how might endowments like this college's have grown differently?
2. A college, a widow and a young surgeon are three different clients. Name one way each differs in time horizon and liquidity needs.
3. Justice Putnam said to watch "how men of prudence … manage their own affairs." Is that a high standard or a low one? Defend your answer.

PROJECT

The Client Profile Interview

An adviser's first tool is the interview. You will build a one-page client questionnaire, test it on two willing "clients" at home, and turn one interview into a finished profile sheet — the first entries in the Client Book you will complete at the end of the unit.

You will need

- Ledger notebook or printer paper and a clipboard
- Your sketchbook table of client types from this lesson
- A parent and one other family member willing to be interviewed with pretend numbers
- Calculator

Steps

1. Draft a questionnaire with sections for goals, income and expenses, assets and liabilities, risk (two separate questions: one about finances, one about feelings), time horizon, liquidity needs, taxes and nonfinancial considerations.
2. Add one scenario question that tests willingness, such as: "Your $10,000 portfolio falls to $8,500 in three months. Do you sell, hold or buy more?"
3. Interview your parent using invented, labeled example numbers. Write everything down; do not trust memory.
4. Interview a second family member — ideally someone at a different stage of life — with pretend numbers of their own choosing.
5. Compute each client's net worth and monthly discretionary cash flow from the pretend figures.
6. Write one finished profile sheet for the client whose answers interested you more: a half page of facts, then three sentences stating ability, willingness, and which one should govern.
7. Close with one paragraph: what question drew out the most useful answer, and what question would you add next time?

Tips

- Ask open questions first ("What is this money for?") and numbers questions second; people answer stories more honestly than forms.
- Keep every figure clearly pretend — write "example" at the top of each page. The habit of labeling is itself adviser training.

Check your work

- ☐ My questionnaire covers all seven profile areas, with risk split into ability and willingness.
- ☐ I computed net worth and cash flow correctly from the example figures.
- ☐ My profile sheet states which risk measure governs and why.
- ☐ Both interviews used invented numbers, labeled as such.

EXAM NOTEBOOK

1. Make a client-types table with four columns: entity, who manages, who bears liability, who pays the tax — rows for sole proprietorship, general partnership, limited partnership, LLC, C corporation, S corporation, trust, estate.
2. Make four flashcards, one per bias — overconfidence, loss aversion, anchoring, herding — with a one-line vignette on the front and the bias name on the back.
3. Write the prudent man quotation from Harvard College v. Amory at the top of a page, and under it list the seven elements of the client profile from memory.

KEY FORMULAS

$$\text{Net worth} = \text{assets} - \text{liabilities}$$

$$\text{Discretionary cash flow} = \text{income} - \text{expenses}$$

From history. The prudent man rule reigned for so long that by the 1950s many states had turned it into "legal lists" of approved trustee investments — exactly the hindsight-proof safety Putnam had rejected. The pendulum swung back in 1992, when the Restatement (Third) of Trusts recast the standard as the prudent investor rule, and in 1994 the Uniform Prudent Investor Act carried it into state law: judge the whole portfolio, not each security alone, and let even a trust hold growth assets if the purpose calls for them. Markowitz's mathematics of diversification — waiting for you in Unit 8 — had become trust law.

WORKED EXAMPLES

Example 1. A new client lists: home $320,000, retirement account $95,000, savings $18,000, car $14,000; mortgage $210,000, car loan $9,000, credit cards $4,000. Her salary is $5,200 a month and her expenses run $4,300 a month. Find her net worth, her liquid assets and her monthly discretionary cash flow.

Show solution

1. Assets: $\$320{,}000 + \$95{,}000 + \$18{,}000 + \$14{,}000 = \$447{,}000$.
2. Liabilities: $\$210{,}000 + \$9{,}000 + \$4{,}000 = \$223{,}000$. Net worth: $\$447{,}000 - \$223{,}000 = \$224{,}000$.
3. Liquid assets — what can be spent quickly without penalty or sale of the house: the $18{,}000 savings. The home and retirement account are wealth, but not liquidity.
4. Discretionary cash flow: $\$5{,}200 - \$4{,}300 = \$900$ a month.

Answer: Net worth $224,000; liquid assets $18,000; about $900 a month available to invest. The balance sheet shows ability to take risk; it says nothing yet about willingness.

Example 2. Exam style — reason through every choice. The two owners of a growing bakery want a business form that limits their personal liability but lets all profits flow through to their personal tax returns, taxed once. Which form fits BEST?

A. General partnership

B. C corporation

C. S corporation

D. Sole proprietorship

Show solution

1. A. A general partnership passes income through, taxed once — but every general partner has unlimited personal liability. Fails the first requirement.
2. B. A C corporation limits liability, but it pays tax itself and dividends are taxed again. Fails the single-tax requirement.
3. C. An S corporation limits liability like any corporation and passes income through to its shareholders, taxed once. Meets both requirements.
4. D. A sole proprietorship has one owner by definition — there are two — and no liability shield at all.

Answer: C. An LLC would also fit, which is why the exam will offer only one of the two among the choices; if both appear, read for details such as the 100-shareholder or one-class-of-stock limit, which belong to the S corporation.

Example 3. Exam style. A client, age 38, earns a high, secure salary, has no debts and will not need her portfolio for 25 years, but tells you she could not sleep if her account fell 10% in a year. Her profile shows:

A. High ability and high willingness to take risk; invest aggressively

B. High ability but low willingness; recommend a more conservative portfolio than her finances alone would justify, and educate her about long-term risk and return

C. Low ability but high willingness; invest aggressively

D. Low ability and low willingness; hold only cash

Show solution

1. Ability is objective: long horizon, secure income, no debts — high. That eliminates C and D.
2. Willingness is emotional: she cannot bear a 10% drop — low. That eliminates A.
3. When ability and willingness conflict, the adviser honors the more conservative of the two and closes the gap with education, not pressure.

Answer: B. The exam never rewards overriding a client's stated feelings just because the spreadsheet says she can afford losses.

PRACTICE

1. Easy A client owns assets of $310,000 and owes $185,000. Find her net worth.

   Show answer

   $$\$310{,}000 - \$185{,}000 = \$125{,}000$$

2. Easy Which business form is NOT a separate legal entity from its owner?

   A. S corporation

   B. Limited partnership

   C. Sole proprietorship

   D. LLC

   Show answer

   C. A sole proprietorship is simply the owner doing business; its brokerage account is the owner's personal account. The other three are entities created under state law.

3. Easy In a limited partnership, who manages the business and who has unlimited liability?

Show answer

The general partner does both: manages the business and bears unlimited personal liability. Limited partners are passive and can lose only their investment.

4. Medium Which entity pays federal income tax at the entity level?

A. S corporation

B. C corporation

C. General partnership

D. LLC taxed as a partnership

Show answer

B. A C corporation is itself a taxpayer, and its shareholders are taxed again on dividends. The other three pass income through to owners, who pay the only layer of tax.

5. Medium A trustee asks an adviser to buy speculative stocks because the trust's adult beneficiaries are urging it. The trust document limits investments to investment-grade bonds and blue-chip stocks. The adviser should:

A. Follow the beneficiaries' wishes; it is their money eventually

B. Follow the trust document

C. Split the difference with a moderate portfolio

D. Resign the account immediately

Show answer

B. The trustee and the adviser are bound by the governing document first. Beneficiaries' wishes cannot override it; A is the classic trap.

6. Medium A client refuses to sell a stock that has fallen from his $60 purchase price to $35, saying he will "sell when it gets back to $60." Name the TWO biases at work.

Show answer

Anchoring (fixing on the $60 purchase price as if it mattered to the market) and loss aversion (refusing to realize a loss that already exists on paper).

7. Medium Which client type most needs a written investment policy statement with a spending policy?

A. A 30-year-old saving for a house

B. A charitable foundation that must pay out a share of its assets each year

C. A sole proprietor's personal account

D. A teenager's custodial account

Show answer

B. Foundations and endowments run on an IPS that states objectives, asset-allocation ranges and the annual spending need the portfolio must fund. Individuals benefit from plans too, but the IPS is the institutional standard.

8. Medium Under a firm's customer identification program, which of the following is among the four pieces of information that must be obtained from a new client?

A. Investment objectives

B. Employer's name

C. Date of birth

D. Mother's maiden name

Show answer

C. The CIP under the USA PATRIOT Act requires name, date of birth, address and taxpayer identification number. Objectives matter for suitability, not identification.

9. Hard An S corporation would lose its election if it:

A. Earned more than $10 million in a year

B. Issued a second class of stock

C. Hired more than 100 employees

D. Paid its shareholders salaries

Show answer

B. An S corporation may have at most 100 shareholders and only one class of stock. The 100 limit is on shareholders, not employees — C is the near-miss distractor.

10. Hard A client, age 70, widowed, has $900,000, a comfortable pension covering her expenses, and tells you she enjoys market risk and wants aggressive growth "for the grandchildren." Which statement about her profile is MOST accurate?
A. Her age makes her ability to take risk low, so the adviser must refuse
B. Because her pension covers her needs and the money is for heirs, the true time horizon is long and her ability to take risk is higher than age alone suggests
C. Willingness is irrelevant once a client is past retirement age
D. The adviser should determine the portfolio before asking about her estate plans

Show answer

B. Ability depends on horizon and need, not age alone; money destined for grandchildren has their horizon, not hers. A reads age as everything — the exam's favorite oversimplification.

11. Hard From the story: why did Harvard lose Harvard College v. Amory, even though the trust had lost money?

Show answer

Because Justice Putnam held that no investment is perfectly safe, so a trustee cannot be judged by results in hindsight. The standard is conduct: faithfulness and the sound discretion of a prudent man managing his own affairs, weighing income and safety together. The Amorys had met that standard.

12. Challenge A married couple runs a farm as a general partnership, holds a brokerage account as trustees of their family trust, and the wife directs a small charity's endowment. An adviser serving all three relationships must keep track of three different "clients." For each, name who gives instructions and what document or rule governs.

Show answer

Partnership: the general partners instruct, under the partnership agreement; income is taxed to the partners. Trust: the trustees instruct — not the beneficiaries — under the trust document and the prudent investor rule. Charity endowment: the charity's board (through its authorized officer) instructs, under the investment policy statement and its spending policy.

COMMON MISTAKES

- Treating a sole proprietorship as a separate entity — it is the owner's personal account, and the owner pays the tax.
- Letting trust beneficiaries direct the account; only the trustee instructs, under the document.
- Confusing the S corporation's 100-shareholder limit with a limit on employees or revenue.
- Averaging ability and willingness to take risk; the adviser honors the more conservative of the two.
- Picking a portfolio before completing the profile — the exam always wants goals and financial situation determined first.

Make it a game · Who Pays the Tax?. Make eight cards: sole proprietorship, general partnership, limited partnership, LLC, C corporation, S corporation, trust, estate. A parent or sibling shuffles and flips one card at a time. You have five seconds to call out two things: who manages it and who pays the tax. One point per correct pair; the dealer may challenge with one follow-up ("How many shareholders may it have?") worth a bonus point. Play through the deck twice, then trade seats — quizzing is studying too. Beat your first-round score.

Scripture. "Be thou diligent to know the state of thy flocks, and look well to thy herds." (Proverbs 27:23, KJV)

The shepherd's duty begins with knowing each animal's condition — not the market price of wool. Know-your-client is this proverb in a suit: diligent, particular knowledge of the one entrusted to you, before any decision about what to do with the flock.

7.2 Taxes the Adviser Must Know: Income, Capital Gains and Estates

OBJECTIVES

- Explain ordinary income and marginal brackets, and why only the dollars inside a bracket pay that bracket's rate.
- Classify gains as short- or long-term, compute basis, and net gains against losses with the $3,000 ordinary-income offset and carryforward.
- Apply the wash sale rule: the 30-day window, the disallowed loss and the basis adjustment.
- Contrast the basis of inherited assets (stepped up) with gifted assets (carryover), and compute each.
- Name the cost basis methods — FIFO, specific identification, average cost — and the outline's estate and gift tax basics: the annual exclusion and the marital deduction.

> **Warm-up.** In this example, a tax system charges 10% on the first $10,000 of income and 20% on everything above. Compute the tax on $15,000 two ways: (a) 20% of the whole $15,000, and (b) 10% of $10,000 plus 20% of $5,000. The difference between your two answers is the whole idea of marginal brackets.

WATCH

Calculating capital gains tax | Taxes and tax forms | Financial mathematics (TX TEKS) | Khan Academy

Khan Academy · 4:32

https://www.youtube.com/watch?v=ZYioN1rIHZE

> **WHEN TO WATCH**
> After the big idea, before the worked examples: Sal computes a capital gain from basis and sale price — redo each calculation on paper as he goes.

BACKUP VIDEO

Taxes you pay | Taxes and tax forms | Financial mathematics (TX TEKS) | Khan Academy

Khan Academy · 5:52

https://www.youtube.com/watch?v=SfKSOU729fM

If the bracket staircase feels shaky, watch this first: a plain tour of the taxes a household meets, with marginal rates shown as slices.

KEY TERMS

marginal tax rate

The rate paid on the next dollar of income — the rate of the bracket that dollar falls into, not the rate paid on all income.

capital gain

The profit when an asset is sold above its basis: long-term if held more than one year, short-term if held one year or less.

cost basis

What was paid for an asset, including commissions and reinvested dividends; the starting line from which gain or loss is measured.

realized vs. unrealized

A gain or loss is realized when the asset is actually sold; until then it is unrealized (“paper”) and generally not taxed.

wash sale

Selling a security at a loss and buying it (or something substantially identical) within 30 days before or after the sale; the loss is disallowed and added to the basis of the replacement shares.

qualified dividend

A dividend that meets holding-period rules and is taxed at the favorable long-term capital gains rates instead of ordinary rates.

stepped-up basis

An inherited asset's basis becomes its fair market value at the owner's death, and the holding period is automatically long-term.

carryover basis

A gifted asset keeps the donor's original basis for figuring gain; the gift wraps the paper, not the tax history.

annual gift tax exclusion

The amount anyone may give to any number of recipients each year free of gift tax; the figure adjusts with inflation — check irs.gov.

marital deduction

The unlimited deduction that lets spouses (U.S. citizens) transfer any amount to each other, during life or at death, free of gift and estate tax.

CORE IDEAS

The story. On February 3, 1913, the Sixteenth Amendment was ratified, and the Constitution for the first time plainly allowed Congress to tax incomes "from whatever source derived." That October the Revenue Act of 1913 created the modern income tax, and in January 1914 the Treasury unveiled the form that would carry it: **Form 1040** — four pages, including one page of instructions. Page one summarized; page two tallied income; page three took deductions; page four explained it all. The normal tax was 1% of net income above a $3,000 exemption ($4,000 for a married couple), with a surtax climbing to 6% on income over $500,000, for a top rate of 7% — and at those thresholds fewer than one American in a hundred owed anything at all. Returns were due March 1, 1914. For the investor the most important line was almost invisible: profits from selling property were simply income like any other. The whole apparatus you are about to learn — capital gains rates, holding periods, basis, netting — grew out of that modest four-page start.

How they figured it out. Once income was taxable, Congress had to answer a chain of questions investors forced on it. Is a profit on stock "income" in the year the stock

rises, or the year it is sold? The answer became the rule of **realization**: no sale, no tax. Then: measured from what? From **cost basis** — what you paid, including commissions and reinvested dividends. Then: should a profit built over twenty years be taxed like one year's wages? By the 1920s Congress said no, and the preference for **long-term** gains was born, with the dividing line eventually settling at one year. Every rule in this lesson is a patch sewn onto those answers — the wash sale rule, for instance, arrived in the 1920s because investors had discovered they could sell on December 30, harvest the "loss," and buy back on January 2 having risked nothing.

The big idea. Ordinary income — wages, interest, short-term gains, nonqualified dividends — climbs a staircase of **marginal brackets**: each bracket's rate applies only to the dollars inside it, so a client "in the 32% bracket" does not pay 32% on everything, only on the top slice (the bracket figures change every year; in this course, bracket numbers are always "in this example"). Capital gains have their own arithmetic. Hold an asset **more than one year** and the gain is long-term, taxed at the favorable rates (0%, 15% or 20% as of 2026); hold it one year or less — exactly one year counts as short — and the gain is short-term, taxed as ordinary income. **Qualified dividends** ride at the long-term rates. At year-end the investor **nets**: short-term gains against short-term losses, long-term against long-term, then the two results against each other. If a net loss survives, up to $3,000 of it offsets ordinary income that year, and the rest **carries forward** indefinitely, keeping its character.

The wash sale. Sell a security at a loss and buy it back — or buy anything *substantially identical*, including a call option on it or a convertible into it — within 30 days before or after the sale, and the loss is **disallowed**. It is not destroyed: the disallowed loss is **added to the basis** of the replacement shares, and the old holding period tacks on, so the tax benefit waits for the next sale. Count carefully: the window is 61 days wide — the sale date, 30 days before, 30 days after. Buying a similar but not identical security (another company's stock, a different issuer's bond) does not trigger the rule, which is exactly how tax-loss harvesting stays legal.

Which shares did you sell? A client who bought shares in several lots needs a **cost basis method**. **FIFO** — first in, first out — is the default: the oldest (often cheapest) shares sell first, usually maximizing the gain. **Specific identification** lets the client name the lot ("sell the shares bought in March at $48") to control the tax result. **Average cost** divides total cost by total shares and is the familiar method for mutual

funds. On the exam, specific identification is the method that gives the investor the most control over taxes.

Death and gifts — the classic pair. Inherit stock, and the basis **steps up** (or down) to fair market value at the owner's death, and the holding period is automatically long-term: Grandfather's $5 shares worth $90 at his death pass with a $90 basis, and the lifetime gain simply vanishes from the income tax. Receive the same shares as a **gift** during his life, and his $5 basis **carries over** to you, gain and all (if the shares have fallen below his basis, a special rule uses the lower value for figuring losses — know that one sentence). The exam adores this pair; keep them straight with four words: *inherit up, gift over*. Two more one-liners finish the outline's tax map: the **AMT** is a parallel minimum tax that adds back certain preference items — the exam's favorite is interest on private-activity municipal bonds. And entities are taxpayers too: C corporations file their own returns, while trusts and estates pay tax on income they keep — at brackets so compressed that the top rate arrives after only a few thousand dollars — and pass out the tax bill with income they distribute.

Estates and gifts in plain words. The federal government also taxes giving wealth away. The **annual exclusion** lets anyone give up to a set amount, to as many people as desired, every year, gift-tax-free (the figure adjusts with inflation; find this year's at irs.gov). Above that, gifts eat into a lifetime exemption shared with the **estate tax**, which touches only estates above a large threshold. Between spouses who are U.S. citizens, the **unlimited marital deduction** means no gift or estate tax at all, however much passes. An adviser is not a tax preparer — the exam knows it, and so should you; recommend a tax professional for tax advice — but an adviser who does not know these rules cannot tell a client why selling in December differs from selling in January.

On the exam today. Count the holding period on your fingers: bought March 10, sold the following March 10 is *exactly one year* — short-term; March 11 makes it long. Netting problems are pure arithmetic — do them in the margins, short with short, long with long, then cross — and remember the loss cap is $3,000 against ordinary income with an indefinite carryforward. The wash sale question nearly always asks for the *new basis*: replacement cost plus disallowed loss. The gift/inheritance pair appears constantly: stepped-up at death, carryover for gifts. And when a question mixes rates, remember qualified dividends and long-term gains share the favorable rates, while short-term gains are just ordinary income wearing a costume.

PICTURE STUDY

Counting Internal Revenue Stamps, Harris & Ewing, 1914 · Glass-negative photograph · Harris & Ewing Collection, Library of Congress, Washington

Image: Wikimedia Commons, public domain

The Washington photography firm of Harris & Ewing documented the federal government at work for half a century. Here, in 1914 — the first filing season of the new income tax — clerks of the Treasury's Bureau of Internal Revenue count revenue stamps by hand, bundle by bundle. This is what tax administration looked like the year the four-page Form 1040 arrived: paper, patience and arithmetic.

Look closely

- Count the workers you can see. Every bundle on these tables was counted by hand — what does that say about record-keeping in 1914?
- Find the baskets and wrapped parcels on the floor. Where might these stamps be going?
- Notice the light: tall windows and bare hanging bulbs. What hours could this work realistically keep?
- Look at the cabinets along the back wall. What happens to an office like this as the tax system grows from 1% to dozens of brackets and schedules?

Talk about it

1. In 1914 fewer than one American in a hundred owed income tax. What changed between then and now, and why does an adviser need to know the tax rules today?
2. The clerks here handle the government's side of the ledger. What records must the investor keep on his side, and why is basis the most important of them?
3. Is careful record-keeping a form of stewardship? Give a reason from this lesson and one from Scripture.

PROJECT

The Tax-Basis Worksheet

You will build the tax worksheet that goes into your Client Book: a full year of invented trades for a pretend client, netted correctly, with one wash sale caught and one gift-versus-inheritance comparison worked out.

You will need

- Ledger notebook or a free spreadsheet (Google Sheets or LibreOffice Calc)
- Calculator
- Index cards for the trade slips
- This lesson's formulas page from your exam notebook

Steps

1. Invent a client and eight trades for the year: for each, write the security, purchase date, purchase price (with a $10 commission), sale date and sale price. Make at least three losses, and make the holding periods a mix — including one of exactly 365 days.
2. Classify every trade long- or short-term, computing basis to include the commission.
3. Hide a wash sale in your trades: one loss sale with a repurchase 20 days later. Compute the disallowed loss and the adjusted basis of the replacement shares.
4. Build the netting table: short against short, long against long, then cross-net; apply the $3,000 rule and state any carryforward.
5. Add the family page: the client's father bought shares for $8,000, now worth $30,000. Compute the taxable gain if gifted and sold today versus inherited and sold at the same price. Label which basis rule applies to each.
6. Write three sentences to the pretend client explaining, kindly, why the wash-sale loss is delayed rather than lost.
7. Mark every page "Example figures — rates and limits change; see irs.gov."

Tips

- Do the netting with a pencil first, spreadsheet second; the exam gives you no spreadsheet.
- Watch the 365-day trade: exactly one year is short-term. That is the detail graders — and examiners — check first.

Check your work

- ☐ Every basis includes the commission, and every holding period is classified correctly, including the 365-day trap.
- ☐ My wash sale is identified, the loss disallowed and the basis adjusted by exactly that loss.
- ☐ The netting follows the order short/short, long/long, then cross, and the carryforward is stated.
- ☐ The gift and inheritance computations use carryover and stepped-up basis respectively.

EXAM NOTEBOOK

1. Make a two-column basis table: GIFT — carryover basis, donor's holding period; INHERITANCE — stepped-up basis, automatically long-term. Add the four-word memory hook: inherit up, gift over.
2. Draw the wash-sale window as a timeline: 30 days, the sale date, 30 days — 61 days wide — with the rule "disallowed loss adds to new basis" underneath.
3. Write the netting algorithm as four numbered steps and work one invented example beside it, ending with the $3,000 cap and carryforward.

KEY FORMULAS

$$\text{Gain or loss} = \text{proceeds} - \text{cost basis}$$

$$\text{Wash sale: new basis} = \text{repurchase price} + \text{disallowed loss}$$

$$\text{Net capital result} = (\text{ST gains} - \text{ST losses}) + (\text{LT gains} - \text{LT losses})$$

$$\text{Taxable-equivalent yield} = \frac{\text{tax-free yield}}{1 - \text{tax rate}}$$

From history. The 1913 rates did not stay small for long. By 1918, with America at war, the top rate had leapt from 7% to 77%; it fell through the 1920s under Treasury Secretary Andrew Mellon, rose past 90% in the 1940s and 1950s, and has wandered between roughly 28% and 40% in the decades since. Capital gains rates wandered with them, which is why this course never asks you to memorize a current number — the exam itself says "in this example" and expects you to know the machinery, not this year's dials.

WORKED EXAMPLES

Example 1. This year a client realized: short-term gains \$4,000, short-term losses \$9,000, long-term gains \$6,000, long-term losses \$5,000. What does she report, and is anything carried forward?

Show solution

1. Net short-term: $\$4{,}000 - \$9{,}000 = -\$5{,}000$.
2. Net long-term: $\$6{,}000 - \$5{,}000 = +\$1{,}000$.
3. Cross-net: $-\$5{,}000 + \$1{,}000 = -\$4{,}000$ net capital loss.
4. Deduct \$3,000 against ordinary income this year; carry the remaining \$1,000 forward (it keeps its short-term character).

Answer: A \$3,000 deduction against ordinary income now and a \$1,000 loss carried forward.

Example 2. On June 1 a client sells 100 shares of XYZ at a \$2,000 loss. On June 15 he buys 100 shares of XYZ back at \$40 a share. What happens to the loss, and what is his new basis?

Show solution

1. The repurchase is within 30 days of the loss sale — a wash sale. The \$2,000 loss is disallowed this year.
2. Repurchase cost: $100 \times \$40 = \$4{,}000$.
3. New basis: $\$4{,}000 + \$2{,}000 = \$6{,}000$ — the disallowed loss is stored in the basis, and the original holding period tacks on.

Answer: Loss disallowed; new basis \$6,000. He recovers the tax benefit when he finally sells without repurchasing inside the window.

Example 3. Exam style — reason through every choice. Grandfather bought stock for $10,000; it is worth $50,000 today. Compare the recipient's basis if (1) he gives it to his granddaughter now, or (2) she inherits it at his death when it is worth $50,000.

A. Gift basis $50,000; inherited basis $50,000

B. Gift basis $10,000; inherited basis $50,000

C. Gift basis $10,000; inherited basis $10,000

D. Gift basis $50,000; inherited basis $10,000

Show solution

1. A gift carries over the donor's basis: she takes his $10,000 basis, and selling at $50,000 realizes a $40,000 gain. That eliminates A and D.
2. An inheritance steps up to fair market value at death: basis $50,000, automatically long-term; selling at $50,000 realizes nothing. That eliminates C.
3. B states both correctly: gift carries over, inheritance steps up.

Answer: B. "Inherit up, gift over." The exam's favorite follow-up: her holding period on inherited shares is long-term from day one.

Example 4. A client in a 32% bracket (in this example) can buy a taxable bond yielding 6% or a municipal bond yielding 4.4%. Which gives more after tax?

Show solution

1. Taxable-equivalent yield of the muni:
   $4.4\% \div (1 - 0.32) = 4.4\% \div 0.68 = 6.47\%$.
2. Compare: $6.47\% > 6\%$ — the muni wins for this client.
3. Check the other direction: the taxable bond keeps $6\% \times 0.68 = 4.08\%$ after tax, less than 4.4%.

Answer: The municipal bond — its taxable-equivalent yield is about 6.47%. The higher the client's bracket, the stronger the muni's case; in a low bracket the answer flips.

PRACTICE

1. Easy A client buys stock for $7,200 including commission and sells it two years later for $9,500. What is the gain, and is it long- or short-term?

   Show answer

   $9,500 − $7,200 = $2,300 long-term gain — held more than one year.

2. Easy Stock bought on April 3 of one year and sold on April 3 of the next is:

   A. A long-term holding

   B. A short-term holding

   C. Long-term only if sold at a gain

   D. Neither until the trade settles

   Show answer

   B. Exactly one year is short-term; long-term requires *more than* one year — April 4 would do it. C invents a rule that does not exist.

3. Easy A client's netting produces an $8,000 net capital loss for the year. She may:

   A. Deduct all $8,000 against ordinary income this year

   B. Deduct $3,000 this year and carry the remaining $5,000 forward indefinitely

   C. Deduct $3,000 this year and forfeit the rest

   D. Deduct nothing; losses offset only capital gains

   Show answer

   B. The annual cap against ordinary income is $3,000, and the excess carries forward indefinitely, keeping its character. C invents a forfeiture, and D states the rule only for years with gains to absorb losses.

4. **Medium** A client realizes short-term gains of $2,500, short-term losses of $1,000, long-term gains of $3,000 and long-term losses of $7,000. What is the result?
   A. $2,500 net capital loss, all deductible this year
   B. $2,500 net long-term loss: deduct it all this year
   C. Net long-term loss of $4,000 less net short-term gain of $1,500 = $2,500 net loss, deductible this year since it is under $3,000
   D. No deduction; losses only offset gains
   Show answer

   C. ST: $+\$1{,}500$; LT: $-\$4{,}000$; cross-net $-\$2{,}500$, fully deductible because it is under the $3,000 cap. D states the rule for personal-use property losses, not capital losses generally.

5. **Medium** On March 1 a client sells ABC at a $1,500 loss. Which repurchase does NOT trigger a wash sale?
   A. Buying ABC stock on March 20
   B. Buying a call option on ABC on March 10
   C. Buying ABC on February 10, before the sale
   D. Buying stock of ABC's closest competitor on March 5
   Show answer

   D. A different company's stock is similar, not substantially identical — that is legal tax-loss harvesting. Calls and convertibles on the same issuer count (B), and the window reaches 30 days *before* the sale too (C).

6. **Medium** In the wash sale of problem 5 choice A, the client repurchased 100 shares at $32 after a disallowed loss of $1,500. His basis in the new shares is:
   A. $3,200
   B. $1,700
   C. $4,700
   D. $3,200, and the $1,500 loss is deductible this year
   Show answer

   C. $100 \times \$32 + \$1{,}500 = \$4{,}700$ — the disallowed loss hides in the basis until a clean sale. A forgets the adjustment, B subtracts instead of adding, and D deducts a loss the wash sale rule just disallowed.

7. Medium Which cost basis method gives an investor the MOST control over the tax result of a partial sale?

A. FIFO

B. Average cost

C. Specific identification

D. LIFO, which the IRS requires for stocks

Show answer

C. Naming the exact lot sold lets the investor choose the gain or loss realized. FIFO is only the default, average cost is the mutual-fund convenience, and D misstates the law.

8. Medium A client holds a municipal bond whose interest is free of federal tax. Which statement about the AMT should the adviser remember?

Show answer

Interest on *private-activity* municipal bonds is a preference item that can be taxable under the alternative minimum tax — a parallel computation that ensures a minimum tax is paid. Ordinary public-purpose muni interest is not an AMT preference.

9. Hard A client, age 45, gives his daughter shares he bought for $20,000 when they are worth $35,000. She sells them later for $42,000. Her taxable gain is:

A. $7,000

B. $22,000

C. $42,000

D. Zero until her father dies

Show answer

B. Carryover basis: she inherits his $20,000 basis with the gift, so the gain is $\$42{,}000 - \$20{,}000 = \$22{,}000$. A measures from the gift-date value — the stepped-up rule, which belongs to inheritances, not gifts.

10. Hard Why do trusts reach the top income tax bracket so much faster than individuals, and what does a trustee often do about it?

Show answer

Trust brackets are compressed — the top rate arrives after only a few thousand dollars of retained income. Trustees therefore often distribute income to beneficiaries (where allowed by the document), who are usually taxed at lower individual rates; the tax follows the income.

11. Hard In this example the annual gift tax exclusion is $18,000. A married couple wants to help their three children as much as possible this year without touching the lifetime exemption. How much can they give in total, and what transfer between the spouses themselves would be taxed?

Show answer

Each spouse may give $18,000 to each child: $2 \times 3 \times \$18{,}000 = \$108{,}000$ in total. Between the spouses themselves, nothing is ever taxed — the marital deduction is unlimited for citizen spouses.

12. Challenge From the story: the first Form 1040 taxed a sale of stock as plain income at rates up to 7%. A modern client asks why the code now has holding periods, netting rules, wash sales and stepped-up basis. In four sentences, explain how each rule answers a problem the simple 1913 tax created.

Show answer

Taxing only realized sales let Congress start simply, but it meant a gain built over decades landed in a single year, so the long-term preference and the one-year line were added to soften the bunching. Once losses could offset gains, investors manufactured fake losses by selling and instantly repurchasing, so the wash sale rule closed the revolving door. Netting rules were needed to decide which losses meet which gains, with the $3,000 valve against ordinary income. And because tracing a dead owner's basis across a lifetime of records proved nearly impossible, the stepped-up basis reset the clock at death — simplicity purchased at the price of forgiving the old gain.

COMMON MISTAKES

- Calling a holding of exactly one year long-term — long-term begins at one year plus a day.
- Forgetting the wash-sale window runs 30 days before the sale as well as after.

- Treating the disallowed wash-sale loss as lost forever instead of added to the replacement shares' basis.
- Giving gifted stock a stepped-up basis — only inherited assets step up; gifts carry the donor's basis over.
- Applying a client's marginal rate to all of his income instead of only the top slice.

Make it a game · Basis Battle. Deal yourselves ten index cards each; on every card a parent writes a quick scenario — "bought $40, sold $55, held 9 months," "inherited at $80, grandfather paid $12, sold $85," "sold at a loss Monday, bought back Friday." Flip cards simultaneously and race to call the tax result: gain or loss, long or short, basis figure, or "WASH!" First correct call keeps the card; wrong call hands over a card. Twelve cards decide the match — and the $3,000 netting cap settles any tie question.

Scripture. "Render therefore unto Caesar the things which are Caesar's; and unto God the things which are God's." (Matthew 22:21, KJV)

Jesus neither flattered the tax collector nor excused the taxpayer. Paying what is lawfully owed — no more, through honest planning; no less, through honest reporting — is part of rendering rightly. The adviser who knows the rules helps a client do both.

7.3 Retirement Plans: IRAs, Roths and Qualified Plans

OBJECTIVES

- Compare traditional and Roth IRAs: deductibility, tax treatment in and out, income limits, RMDs and the early-withdrawal penalty with its named exceptions.
- Distinguish a rollover from a trustee-to-trustee transfer, and apply the 60-day and once-per-year rules.
- Describe the qualified employer plans — 401(k), 403(b), defined benefit, defined contribution, profit-sharing, SEP and SIMPLE — and match each to its employer.
- State who bears the investment risk in a defined benefit versus a defined contribution plan.
- Explain nonqualified deferred compensation and the difference between payroll deduction and salary reduction.

> **Warm-up.** With pencil and paper: $100 grows to $200 in an account. Compare (a) paying 20% tax on the $100 first, then letting the $80 double tax-free, with (b) letting the $100 double, then paying 20% on the whole $200 as it comes out. Compute both endings. What do you notice — and what would change the answer?

WATCH

Retirement Plans: Rapid Fire - Series 65 Exam Prep

CertFuel · 10:49

https://www.youtube.com/watch?v=Pnc6NF76MYA

> **WHEN TO WATCH**
> After the big idea, before the worked examples: exam-pointed drill on IRAs and employer plans — keep your plan table from the sketchbook open and tick each plan as it appears.

BACKUP VIDEO

Traditional IRAs | Finance & Capital Markets | Khan Academy

Khan Academy · 13:23

https://www.youtube.com/watch?v=UV8kgqk_DAY

If the deferral arithmetic feels abstract, watch Sal build a traditional IRA's tax story number by number — then redo your warm-up and see which account it resembles.

traditional IRA

An individual retirement account funded with contributions that may be tax-deductible; earnings grow tax-deferred, and withdrawals are taxed as ordinary income.

Roth IRA

An IRA funded with after-tax dollars; qualified withdrawals — after age 59½ and a five-year wait — come out entirely tax-free, and the owner never faces lifetime RMDs.

required minimum distribution (RMD)

The amount tax law forces out of traditional IRAs and most employer plans each year once the owner reaches the trigger age in the early seventies (73 as of 2026; check irs.gov).

rollover

Moving retirement money by taking a distribution and redepositing it within 60 days; allowed once per 12 months across all of a person's IRAs.

trustee-to-trustee transfer

Moving retirement money directly between custodians without the owner touching it; unlimited in number and free of withholding.

defined benefit plan

An employer plan promising a formula-based pension at retirement; the employer invests the fund and bears the investment risk.

defined contribution plan

An employer plan defining only what goes in — such as a 401(k) deferral and match; the account balance is the benefit, and the employee bears the investment risk.

403(b) plan

The salary-reduction retirement plan of public schools and 501(c)(3) nonprofit organizations, also called a tax-sheltered annuity.

SEP IRA

A simplified employee pension: an employer-funded IRA-based plan prized by small businesses and the self-employed for high limits and easy paperwork.

SIMPLE IRA

A salary-deferral plan with an employer match for businesses with 100 or fewer employees that maintain no other plan.

nonqualified deferred compensation

A contractual promise to pay an executive later; unfunded, unsecured and outside ERISA — if the company fails, the executive stands with the general creditors.

CORE IDEAS

The story. In the week before Christmas 1963, the last Studebaker automobile built in the United States rolled off the line at South Bend, Indiana. The company that had made wagons since 1852 — wagons for the Union Army, then carriages, then cars — was dying, and when the plant closed, the books revealed a quieter catastrophe: the pension plan did not have nearly enough money in it to keep its promises. About 10,500 workers were covered. Those already retired or at retirement age kept their pensions. But roughly 4,000 workers in mid-career — average age 52, with an average of 23 years' service — received a lump sum worth about **15 cents on the dollar** of the benefits they had earned, and some 2,900 younger workers received nothing at all. Men who had spent their working lives building cars learned that a pension promise is only as good as the money set aside behind it. The scandal smoldered for a decade, and in the next lesson you will watch Congress answer it with ERISA.

How they figured it out. Studebaker taught the country the difference between a *promise* and a *fund*. Reformers drew two conclusions. First, promises need rules: minimum funding, vesting, insurance — the ERISA agenda. Second, a worker ought to be able to carry retirement savings in his own name, whatever happens to his employer. That second idea produced the **individual retirement account** in the very same 1974 law, and Congress has tinkered ever since: the Roth IRA arrived in 1997 (named for Senator William Roth of Delaware), the 401(k) grew from a clause added to the tax code in 1978, and the SECURE Acts of 2019 and 2022 moved the RMD age and dropped the age limit on contributions. The numbers move; the architecture stands.

The big idea — IRAs. Anyone with **earned income** — wages, salary, self-employment income, not interest or dividends — may contribute to an IRA up to the annual limit (the figure changes; this course says "in this example," and the current number lives in IRS Publication 590-A). A **traditional IRA** may be funded with deductible dollars, but the deduction phases out for active participants in employer plans above certain

incomes; earnings grow **tax-deferred**; every withdrawal of deductible money and earnings is **ordinary income**; withdrawals before age 59½ add a **10% penalty** unless an exception applies — death, disability, a first home (to $10,000), higher education, medical costs above a floor, health insurance while unemployed, birth or adoption, or a series of substantially equal periodic payments; and **RMDs** must begin at the trigger age. A **Roth IRA** reverses the flow: no deduction going in, but qualified withdrawals — five years plus age 59½ (or death, disability, first home) — are entirely **tax-free**, there are **income limits** on who may contribute, and the owner faces **no lifetime RMDs**. A nonworking spouse may fund a **spousal IRA** on the working spouse's income if they file jointly. Exam shorthand: traditional = deduction now, taxed later, forced out; Roth = taxed now, free later, never forced out while the owner lives.

Moving the money. A **trustee-to-trustee transfer** — custodian to custodian, the owner never touching the check — may be done as often as desired, with nothing withheld. A **60-day rollover** — distribution paid to the owner, redeposited within 60 days — is allowed only **once per 12 months** across all of a person's IRAs, and when the money leaves an employer plan payable to the worker, the plan must withhold **20%**, which the worker must replace from his own pocket to complete a full rollover. The exam's favorite trap lives right there: the client who takes a $100,000 distribution receives $80,000 and must still deposit $100,000 within 60 days or owe tax — and possibly penalty — on the shortfall. The clean answer to nearly every moving-money question is a **direct transfer**.

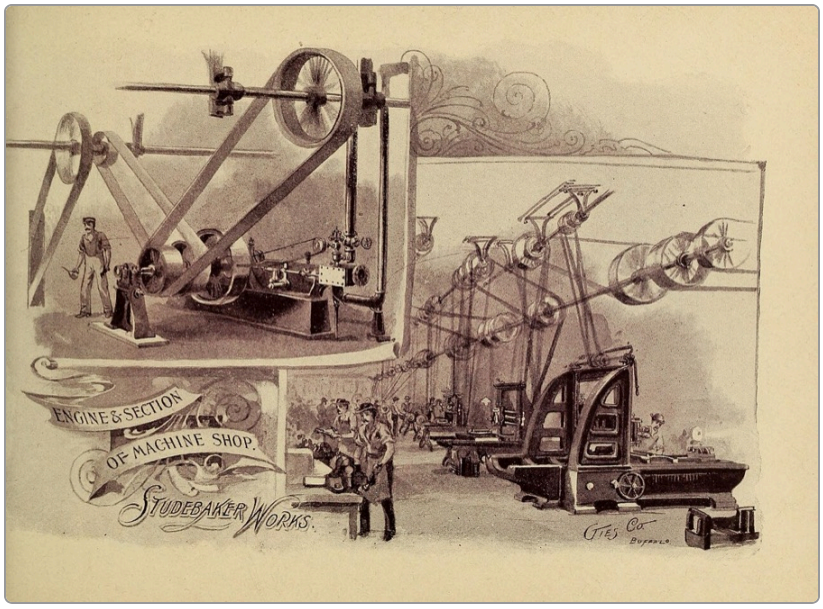
Employer plans. A **qualified plan** meets ERISA and tax-code standards, covers employees without discrimination, and gets tax deferral in exchange. The great divide: a **defined benefit** plan promises an outcome — a pension computed from salary and years of service — so the **employer** must invest the fund and bears the investment risk, and actuaries decide the contributions; it favors older, long-tenured employees because less time remains to fund their promise. A **defined contribution** plan promises only an input: the **401(k)** lets the employee defer salary pre-tax, often with an employer **match** — free money the exam expects the adviser to capture first; the account balance at retirement is whatever the markets made of it, so the **employee** bears the investment risk. The **403(b)** is the 401(k)'s cousin for public schools and 501(c)(3) nonprofits. **Profit-sharing** plans let the employer contribute flexibly from year to year. For small business, the **SEP IRA** is employer-funded with

generous limits and minimal paperwork — the self-employed carpenter's plan — and the **SIMPLE IRA** adds employee deferrals with a required employer match for firms of 100 or fewer employees with no other plan.

Nonqualified arrangements. When a company wants to reward a few executives without covering everyone, it uses **nonqualified deferred compensation**: a contract to pay later. It may discriminate freely — that is its point — but it must remain an **unfunded promise**; the executive is a general creditor, and if the company fails the way Studebaker did, the promise can fail with it. Keep two payroll phrases straight: **salary reduction** means pre-tax dollars flowing into a plan like a 401(k); **payroll deduction** means after-tax dollars the employer conveniently forwards somewhere — a savings bond, an insurance premium. One is a tax shelter; the other is a convenience.

On the exam today. "Who bears the investment risk?" — employer in defined benefit, employee in defined contribution; that single line is worth a question nearly every sitting. Know the Roth staples: income limits exist for contributions, qualified withdrawals are tax-free, no lifetime RMDs. Know the traditional staples: contributions may be deductible, everything out is ordinary income, RMDs are mandatory, and the 10% penalty has named exceptions — the exam likes death, disability, first home and higher education. Count the 60 days and the once-per-12-months rule, and remember the 20% withholding applies only when an employer-plan distribution is paid to the worker instead of transferred directly. Match the employer to the plan: public school teacher — 403(b); self-employed with no employees — SEP; 80-employee shop wanting simple deferrals — SIMPLE; executives only — nonqualified. And when a question asks what an adviser should recommend first for a client whose employer matches 401(k) contributions, the answer is: contribute at least enough to collect the full match.

PICTURE STUDY



Engine and Machine Shop, Studebaker Works, Gies & Co., Buffalo (lithographers), 1893 · Photolithograph from a souvenir volume · From a printed album of the Studebaker Brothers Manufacturing Company, South Bend, Indiana

Image: Wikimedia Commons, public domain

In 1893 the Studebaker Brothers of South Bend were the largest wagon builders in the world, and proud enough of their works to print souvenir albums like this plate of the engine room and machine shop. Seventy years later the same works closed, and the broken pension promise made to the men of shops like this one became the scandal that gave America ERISA — and, in the same law, the IRA.

Look closely

- Find the great flywheel and the belts. One central steam engine drove the whole shop — what happens to every lathe when it stops?
- Count the workmen you can find among the machines. Picture each one forty years on, expecting a pension from this company.
- Notice the decorative banner and flourishes. Why would a wagon company print a luxurious album of its own factory?
- Compare the 1893 confidence of this plate with what you know happened in 1963. What changed in seventy years?

Talk about it

1. The Studebaker workers trusted a promise instead of a funded account. What questions should they — or their union — have asked about the pension fund?
2. One engine drove every machine in this shop. How is a company pension plan like that single engine, and an IRA like a machine with its own motor?
3. Does an employer owe its workers the same faithfulness a trustee owes a beneficiary? What would Justice Putnam say?

PROJECT

The Retirement Plan Matcher

Advisers earn their keep matching savers to the right plan. You will build a reference card for ten plan types, then use it to write recommendations for four invented savers — including the two clients of your Client Book.

You will need

- Ten index cards and your exam notebook
- Calculator
- IRS Publication 590-A (free at irs.gov) for the current IRA limits
- Your warm-up calculation from this lesson

Steps

1. Make one card per plan: traditional IRA, Roth IRA, spousal IRA, 401(k), 403(b), defined benefit, profit-sharing, SEP, SIMPLE, nonqualified deferred compensation. On each: who may use it, tax in, tax out, RMDs or not, penalty rules, and who bears the investment risk.
2. Look up the current IRA contribution limit and catch-up amount in Publication 590-A and write them, dated, on the two IRA cards.
3. Invent four savers: a public-school teacher age 26; a self-employed photographer age 35 with no employees; a factory worker age 50 whose employer matches 401(k) deferrals; an executive age 58 offered deferred compensation.
4. For each saver, write a three-sentence recommendation naming one or two plan types and the reasons — tax treatment, match, limits, risk-bearing. Capture the full employer match before any IRA, where a match exists.
5. For the factory worker, compute one year of saving in this example: salary $60,000, deferring 6% with a 50-cents-per-dollar match on the first 6%. Find his deferral, the match and the total.
6. Transfer the teacher's and one other saver's recommendations into your Client Book pages from Lesson 7.1.

7. Close with two sentences: which plan surprised you most, and what question would you ask a real employer's plan documents?

Tips

- Write "employer risk" in one color and "employee risk" in another across the cards; the pattern teaches the defined benefit/defined contribution divide by sight.
- Date every dollar limit you copy — next year it will change, and the habit of checking is the skill.

Check your work

- ☐ All ten cards state tax in, tax out, RMD treatment and risk-bearer correctly.
- ☐ My match calculation is right: $3,600 deferral, $1,800 match, $5,400 total.
- ☐ Each recommendation gives reasons, not just plan names, and captures any match first.
- ☐ The IRA limits on my cards are dated and sourced to Publication 590-A.

EXAM NOTEBOOK

1. Build the master plan table: rows for the ten plan types, columns for tax in, tax out, RMDs, penalty exceptions, risk-bearer and typical employer.
2. Draw the rollover decision tree: direct transfer (unlimited, no withholding) versus 60-day rollover (once per 12 months, 20% withheld from employer plans) — with the $48,000/$60,000 example worked in the margin.
3. Make flashcards for the 10% penalty exceptions: death, disability, first home ($10,000), higher education, medical above the floor, health insurance while unemployed, birth or adoption, substantially equal periodic payments.

KEY FORMULAS

$$\text{Full rollover deposit} = \text{gross distribution} = \text{check received} + 20\%\ \text{withheld}$$

$$\text{RMD (concept)} = \frac{\text{account balance}}{\text{life-expectancy factor from the IRS table}}$$

From history. The 401(k) was never designed — it was discovered. Congress added subsection (k) to Section 401 of the tax code in 1978 as a minor clarification about deferred bonuses, and in 1980 a benefits consultant named Ted Benna read it sideways: it could house regular salary deferrals, with an employer match to coax workers in. The IRS blessed his reading in 1981, and within a generation the quiet subsection had displaced the defined benefit pension as the way most Americans save — moving the investment risk from company to worker in the process, which is why Unit 8's portfolio tools now matter to every household.

WORKED EXAMPLES

Example 1. A client, age 40, leaves her job with $60,000 in her 401(k) and asks the plan to send her a check so she can move it to an IRA herself. How much does she receive, and what must she do to avoid any tax this year?

Show solution

1. The plan must withhold 20% from a distribution paid to her: $0.20 \times \$60{,}000 = \$12{,}000$. She receives $48,000.
2. To complete a full rollover she must deposit the entire $60,000 in an IRA within 60 days — finding the missing $12,000 from her own savings until the withholding returns as a tax refund.
3. If she deposits only the $48,000 check, the $12,000 shortfall is a taxable distribution, plus a 10% penalty ($1,200) because she is under 59½.
4. The lesson: a direct trustee-to-trustee transfer would have moved the whole $60,000 with no withholding at all.

Answer: She receives $48,000 and must deposit $60,000 within 60 days. The exam answer to "how should she have moved it?" is always the direct transfer.

Example 2. Exam style — reason through every choice. Which statement about a Roth IRA is TRUE?

A. Contributions are tax-deductible, and qualified withdrawals are tax-free

B. Anyone with earned income may contribute, regardless of how much they earn

C. The owner must begin required minimum distributions at the trigger age

D. Qualified withdrawals after age 59½ and five years are free of federal income tax

Show solution

1. A. Half right, and therefore wrong: Roth contributions are never deductible; the tax-free treatment comes on the way out.
2. B. Wrong — Roth contributions have income limits; high earners are phased out (the figures change; see irs.gov).
3. C. Wrong — the Roth owner faces no lifetime RMDs; that burden belongs to the traditional IRA.
4. D. Exactly the rule: five years plus age 59½ (or death, disability, first home) makes a withdrawal qualified and tax-free.

Answer: D. The three wrong choices are each a true statement about the *traditional* IRA bent slightly out of shape — the exam's standard method.

Example 3. In this example, a client, age 75, has $400,000 in a traditional IRA, and the IRS table gives a life-expectancy factor of 24.6 for her age. Estimate this year's RMD.

Show solution

1. RMD = balance ÷ factor: $\$400{,}000 \div 24.6 \approx \$16{,}260$.
2. The factor comes from the IRS Uniform Lifetime Table and shrinks each year, so the required percentage grows as she ages.
3. Missing an RMD triggers an excise tax on the shortfall — reason enough for the adviser's December calendar note.

Answer: About $16,260, taxed as ordinary income. The exam tests the concept — balance divided by a life-expectancy factor — not the current table.

Example 4. Exam style. In a defined benefit pension plan, the investment risk is borne by:

A. The employee, because the benefit depends on market returns

B. The employer, because the benefit is fixed by formula and the fund must be made sufficient

C. The PBGC, in all cases and amounts

D. The plan's custodian

Show solution

1. The benefit is defined — a formula of salary and service — so poor investment returns cannot shrink it; someone must make up shortfalls.
2. That someone is the employer, whose required contributions are set by actuaries. B states it.
3. A describes a defined contribution plan. C overreaches: PBGC insurance (next lesson) backstops failed plans only up to limits. D confuses safekeeping with risk-bearing.

Answer: B. Flip the question for the twin exam point: in a defined contribution plan, the employee bears the risk because the balance is the benefit.

PRACTICE

1. Easy Which kind of income permits an IRA contribution?

   A. Dividend income

   B. Earned income from wages or self-employment

   C. Interest income

   D. Capital gains

   Show answer

   B. IRA contributions require earned income — compensation from work. Investment income of every kind fails; that is why a retiree living on dividends alone cannot contribute.

2. **Easy** Withdrawals from a traditional IRA funded entirely with deductible contributions are taxed as:

   A. Long-term capital gains on the growth

   B. Ordinary income on every dollar withdrawn

   C. Ordinary income on the earnings only

   D. Nothing — IRA withdrawals are tax-free after 59½

   Show answer

   B. Deductible money in means every dollar out is ordinary income — contributions and earnings alike; nothing inside an IRA ever becomes a capital gain. D describes the Roth, and only for qualified withdrawals.

3. **Easy** A public high school wants a salary-reduction retirement plan for its teachers. Which plan is designed for it?

   A. 401(k)

   B. SEP IRA

   C. 403(b)

   D. Nonqualified deferred compensation

   Show answer

   C. The 403(b) — tax-sheltered annuity — belongs to public schools and 501(c)(3) nonprofits. The 401(k) is its corporate cousin.

4. **Medium** A client, age 45, withdraws $20,000 from his traditional IRA to buy a boat. In this example his marginal rate is 24%. What does the withdrawal cost him in tax and penalty?

   Show answer

   Tax $0.24 \times \$20{,}000 = \$4{,}800$ plus the 10% early-withdrawal penalty $2,000 — $6,800 in all. A boat is not among the named exceptions.

5. **Medium** Which is NOT an exception to the 10% early-withdrawal penalty on an IRA?

A. Permanent disability

B. Up to $10,000 for a first home

C. Qualified higher-education expenses

D. A down payment on a vacation home

Show answer

D. First home, yes — vacation home, no. Death, disability, higher education, medical costs above the floor, health insurance while unemployed, birth or adoption, and substantially equal periodic payments complete the list.

6. **Medium** How many 60-day rollovers may a client make in a 12-month period?

A. One per IRA she owns

B. One, counting all of her IRAs together

C. Four

D. As many as she likes, like trustee-to-trustee transfers

Show answer

B. The once-per-12-months limit applies across all of a person's IRAs combined — A is the old reading the IRS closed. Trustee-to-trustee transfers (D's bait) are the route that truly is unlimited.

7. **Medium** A 62-year-old client opened her first Roth IRA three years ago and wants to withdraw everything, earnings included, tax-free. Can she?

A. Yes — she is over 59½

B. No — the five-year requirement is not yet met, so the earnings portion is not a qualified withdrawal

C. No — Roth withdrawals are never tax-free before age 65

D. Yes — Roth withdrawals are always tax-free

Show answer

B. Qualified means BOTH five years since the first Roth contribution AND age 59½ (or death, disability, first home). She has the age but not the years; the earnings would be taxable. A and D each test only half the rule.

8. Medium A company wants to reward its three top executives with retirement benefits while excluding everyone else. A qualified plan cannot do this. What arrangement can, and what is its great risk to the executive?

Show answer

Nonqualified deferred compensation — it may discriminate freely because it forgoes the tax advantages of qualified status. But it must remain an unfunded promise, so if the company fails, the executive is only a general creditor — the Studebaker lesson at the top of the pay scale.

9. Hard A client, age 45, has a nonworking husband. They file jointly, and she earns $150,000. Which statement about the husband's IRA options is TRUE?
A. He cannot contribute, because he has no earned income
B. He may fund a spousal IRA based on his wife's compensation, up to his own annual limit
C. He may contribute only to a Roth IRA
D. The couple must share a single combined IRA

Show answer

B. A spousal IRA lets a nonworking spouse contribute on the working spouse's income with a joint return. A states the general rule while missing the spousal exception; D is impossible — the I in IRA means individual, and accounts are never joint.

10. Hard An 80-employee machine shop with no retirement plan wants employee salary deferrals and a required employer match with minimal administration. A self-employed engraver with no employees wants to shelter a large, variable share of her profits. Match each to SEP or SIMPLE, with one reason.

Show answer

The shop: SIMPLE IRA — built for employers of 100 or fewer with no other plan, combining employee deferrals with a required match. The engraver: SEP IRA — employer-funded with high, flexible limits and almost no paperwork, ideal for the profitable self-employed.

11. Hard From the story: about 4,000 mid-career Studebaker workers received roughly 15 cents on the dollar of their earned pensions. A worker had earned a pension worth $48,000 in present value. About what lump sum did he receive, and which later plan type would have made his benefit depend on a funded account in his own name all along?

Show answer

About $0.15 \times \$48{,}000 = \$7{,}200$. A defined contribution plan — such as a 401(k) — holds the money in the worker's own account as it is earned, so there is no unfunded promise to break; the trade is that the worker, not the employer, bears the investment risk.

12. Challenge A client, age 58, leaves her employer with $250,000 in a 401(k). She asks you to compare three moves: (1) direct transfer to a traditional IRA, (2) a check to herself rolled over within 60 days, (3) converting the balance to a Roth IRA this year. State the immediate tax consequence of each and one reason a client might still choose the Roth conversion.

Show answer

(1) No tax, no withholding, unlimited; the default recommendation. (2) The plan withholds 20% ($50,000); she must deposit the full $250,000 within 60 days, fronting the withheld amount, or the shortfall is taxed. (3) The converted amount is ordinary income this year — a large, deliberate tax bill — but afterward qualified withdrawals are tax-free and no lifetime RMDs apply; a client expecting higher future rates, or wanting to leave heirs tax-free dollars, might pay now to be done.

COMMON MISTAKES

- Assigning RMDs or contribution income limits to the wrong IRA — the traditional has RMDs and deduction phase-outs; the Roth has contribution income limits and no lifetime RMDs.
- Forgetting the 20% withholding applies when an employer-plan distribution is paid to the worker — and that the full gross amount must still be redeposited within 60 days.
- Treating the once-per-12-months rollover limit as applying to trustee-to-trustee transfers, which are unlimited.

- Reversing the risk-bearers: employer in defined benefit, employee in defined contribution.
- Recommending an IRA before capturing an available employer match — the match is an instant, guaranteed return.

Make it a game · Plan Snap. Use the ten plan cards from this lesson's project. A parent or sibling reads a clue aloud — "my employer bears the investment risk," "I'm limited to employers with 100 or fewer employees," "no lifetime RMDs," "I'm just an unfunded promise." First player to slap the right card and say one extra true fact about it keeps the card; a wrong slap returns a card to the table. Play two rounds, then swap reader and player. Most cards after four rounds wins.

Scripture. "Go to the ant, thou sluggard; consider her ways, and be wise: which having no guide, overseer, or ruler, provideth her meat in the summer, and gathereth her food in the harvest." (Proverbs 6:6-8, KJV)

The ant funds her winter while it is still summer — no employer, no overseer, no promise from anyone else. That is the IRA idea exactly: provision set aside in your own store, in working years, against the season when wages stop.

7.4 ERISA: The Plan Fiduciary's Rules

OBJECTIVES

- State what ERISA covers — private employer plans — and what it does not: government and church plans.
- Name the four plan fiduciary duties: exclusive benefit, prudent expert care, diversification, and following the plan documents.
- List the Section 404(c) safe harbor conditions and what the safe harbor relieves the sponsor of.
- Describe what belongs in an investment policy statement and identify prohibited transactions.
- Explain vesting and eligibility in plain terms.

> **Warm-up.** Pretend your family runs a ten-employee bakery with a retirement plan. With pencil and paper, write the three rules you would want if you were the newest employee — about whose benefit the plan serves, how the money is invested, and when the employer's contributions become truly yours. Keep the list; by the end of the lesson, match each of your rules to its ERISA name.

WATCH

ERISA Issues: Rapid Fire - Series 65 Exam Prep

CertFuel · 7:55

https://www.youtube.com/watch?v=EhL3ueNKZrg

> **WHEN TO WATCH**
> After the big idea, before the worked examples: rapid exam drill on fiduciary duties, 404(c) and prohibited transactions — answer each question aloud before the teacher does.

BACKUP VIDEO

[Series 65] 56, ERISA and Plan Fiduciary Standards

Open Exam Prep · 3:16

https://www.youtube.com/watch?v=iXbIqWWHr58

A three-minute recap for the day before the unit test: as it plays, write the four duties and the 404(c) trio from memory, then check yourself.

KEY TERMS

ERISA

The Employee Retirement Income Security Act of 1974: the federal law setting fiduciary, funding, vesting, disclosure and insurance standards for private-sector employee benefit plans.

exclusive benefit rule

A plan fiduciary must act solely in the interest of participants and beneficiaries, for the exclusive purpose of providing benefits and paying reasonable expenses.

Section 404(c) safe harbor

The rule relieving a sponsor of liability for participants' own investment choices when the plan offers a broad menu, real control and sufficient information.

prohibited transaction

A deal ERISA forbids between a plan and a party in interest — selling to, buying from, lending to or self-dealing with the plan — regardless of how fair it looks.

vesting

The schedule by which employer contributions become the employee's own, forfeitable no longer; employee contributions are always 100% vested at once.

plan fiduciary

Anyone who exercises discretion over a plan's management or assets, or gives paid investment advice to the plan — held to ERISA's duties personally.

prudent expert standard

ERISA's care standard: the skill and diligence of a prudent person *familiar with such matters* — an expert's prudence, stricter than the ordinary prudent man.

investment policy statement

The plan's written investment road map: objectives, asset classes and ranges, and the criteria for selecting, monitoring and replacing investment options and managers.

party in interest

Anyone close enough to the plan to raise conflict concerns: the employer, fiduciaries, service providers, unions and certain relatives and affiliates.

Pension Benefit Guaranty Corporation (PBGC)

The federal corporation created by ERISA that insures defined benefit pensions up to set limits when a plan fails.

CORE IDEAS

The story. The Studebaker workers of Lesson 7.3 did not get their pensions back — but they were heard. Through the 1960s their story was told in Senate hearing rooms: men with twenty years' service describing the morning they learned their pension was worth fifteen cents on the dollar. Senator Vance Hartke of Indiana — the Studebaker men were his constituents — proposed pension insurance as early as 1965, and Senator Jacob Javits of New York spent a decade building the full framework against stiff resistance. The votes, when they finally came in 1974, were overwhelming: 376 to 4 in the House on the original bill, 85 to 0 in the Senate on the final version. On **Labor Day — September 2, 1974** — President Gerald Ford, one month in office, signed the Employee Retirement Income Security Act in the White House Rose Garden, calling it "an historic Labor Day" and saying the law might "finally give the American worker solid protection in his pension plan." Title IV created the **Pension Benefit Guaranty Corporation**, the insurance fund that would have saved the Studebaker men — eleven years too late for them, in time for everyone after.

How they figured it out. Congress had a model ready: trust law. The Studebaker pension failed because the promise was nobody's enforceable duty, so ERISA's drafters reached back to Justice Putnam and made every plan a trust with teeth. Plan assets must be held in trust; everyone with discretion over them is a **fiduciary**, personally liable for breaches; and the care standard was raised a notch above Putnam's prudent man. Because a pension fund is run by people who claim professional competence, ERISA demands the prudence of one *familiar with such matters* — the **prudent expert**. Know the law's boundary line, because the exam does: ERISA governs **private-sector** employee benefit plans. Government plans — a state teachers' pension, a city employees' fund — and church plans are **not** covered by ERISA, however similar they look.

The big idea — four duties. A plan fiduciary must: (1) act for the **exclusive benefit** of participants and beneficiaries — not the company's stock price, not the sponsor's bank relationships, not a cause, however worthy; plan assets exist to pay benefits and reasonable expenses, and nothing else; (2) act with **prudent expert** care, skill and diligence; (3) **diversify** plan investments to minimize the risk of large losses, unless it is clearly prudent not to; and (4) **follow the plan documents**, so far as they are consistent with ERISA — the plan's own rules bind its managers exactly as a trust

instrument binds a trustee. The echo of Lesson 7.1 is deliberate: the client profile tells the adviser who the money serves; ERISA tells the plan fiduciary the same thing with statutory force.

The 404(c) safe harbor. In a 401(k), participants pick their own investments — so when a participant picks badly, is the sponsor liable? Not if the plan meets **Section 404(c)**: it must offer a **broad menu** — at least **three** core choices, each diversified, with materially different risk and return characteristics (a stock fund, a bond fund and a money market fund is the classic trio); participants must have real **control**, able to move money among the choices at least quarterly; and they must receive sufficient **information** to choose wisely — descriptions, objectives, fees. Meet all three, and the sponsor is relieved of liability for the participant's own allocation decisions. The safe harbor never excuses the duties that remain: the menu itself must still be prudently selected and monitored. The sponsor is off the hook for the participant's *choice*, never for its own *list*.

The investment policy statement. ERISA does not literally require an IPS, but the Department of Labor and every careful fiduciary treat one as the evidence of prudence. A plan's IPS states the plan's objectives; the asset classes offered and their target ranges; the criteria for selecting investment options and managers; the benchmarks and schedule for monitoring them; and the discipline for replacing what fails. What an IPS does not contain is a list of specific securities to buy — it is a constitution, not a shopping list. Written policy, followed consistently, is how a fiduciary proves years later that a loss was a risk prudently taken rather than a duty breached.

Prohibited transactions, vesting and eligibility. Certain deals are forbidden outright between a plan and a **party in interest** — the employer, the fiduciaries, service providers and their kin: selling or leasing property to the plan, lending plan money to a party in interest, using plan assets for one's own account, or taking kickbacks for steering plan business. Fairness is no defense; the conflict itself is the offense. (Loans to *participants* from their own accounts are a separate, permitted program when the plan allows them under the rules.) **Vesting** is the gentler topic: your own deferrals are always 100% yours immediately; employer contributions become yours on a schedule — all at once after a few years ("cliff") or gradually ("graded") — and ERISA caps how slow those schedules may be. Eligibility, in one breath: a plan may make employees wait until age 21 and one year of service, and no longer.

On the exam today. The coverage question is nearly guaranteed: ERISA applies to *private* employer plans — a state pension fund is the classic wrong answer dressed as right. Know the four fiduciary duties by name and the prudent *expert* standard by its one raised word. For 404(c), memorize the trio — broad menu of at least three diversified choices, control with at least quarterly switching, adequate information — and the precise scope of the relief: the sponsor escapes liability for the participant's choices, never for selecting and monitoring the menu. IPS questions ask what belongs inside (criteria, ranges, benchmarks) and what does not (specific securities, market timing calls). Prohibited-transaction questions bait you with "but the terms were fair" — fairness does not cure self-dealing. And remember from the last lesson: the PBGC insures defined *benefit* plans, not defined contribution accounts, and only up to limits.

PICTURE STUDY

Ford Assembly Line, 1913, Ford Motor Company photographer (unknown), 1913 · Photograph · Highland Park plant, Michigan; print from the Library of Congress

Image: Wikimedia Commons, public domain

In 1913 Ford's Highland Park plant set its first moving assembly line in motion — this one, the magneto line — and cut the time to build a flywheel magneto from twenty minutes to five. Industrial labor on this scale created the modern pension question: when a man gives thirty years to a line like this, who guards the promise made for his old age? Sixty-one years after this photograph, on Labor Day 1974, ERISA finally gave the answer the force of law.

Look closely

- Follow the line of workers from front to back. Each man does one small task, all day — what does the line gain, and what does the worker give up?
- Find the troughs of parts beside the line. Why must every piece be identical for a line like this to work?
- Look at the ceiling: belts and shafts everywhere. Compare this power system with the single engine in the Studebaker plate from Lesson 7.3.
- Count the decades from 1913 to 1974. A man who started on this line at twenty was eighty-one when ERISA was signed — what protected his pension in between?

Talk about it

1. Mass production made employers enormous and employees interchangeable. Why did that imbalance make federal pension law necessary where a handshake had once served?
2. ERISA holds plan fiduciaries to the prudence of an expert. Why is a higher standard fair for someone managing other people’s retirement money?
3. “Exclusive benefit” means the plan serves only its participants. Name one temptation a company treasurer might feel that this rule forbids.

PROJECT

Write the Plan's Rulebook

You will play plan fiduciary for an invented company and write the two documents at the heart of this lesson: a one-page investment policy statement and a one-page fiduciary checklist — then stress-test them against four tempting proposals.

You will need

- Ledger notebook or printer paper
- Your warm-up rules from this lesson
- The 404(c) trio and the four duties from your exam notebook
- A parent to play the company president

Steps

1. Invent the company: name, 60 employees, a 401(k) with a 50% match on the first 6% of pay.
2. Draft the IPS: the plan's objective; at least three diversified core options with materially different risk and return; target ranges; the benchmark each option is measured against; how often the committee reviews (at least annually); and the replacement discipline for a failing option. No specific securities.
3. Draft the fiduciary checklist from the four duties — exclusive benefit, prudent expert, diversification, follow the documents — one line each, in your own words.
4. Have your parent, as president, propose four deals: (1) lend $50,000 of plan money to the company for new ovens at a generous interest rate; (2) move the plan's record-keeping to the president's brother-in-law without comparing fees; (3) put the whole menu in one aggressive stock fund that has been "hot"; (4) add a fourth menu option after comparing three vendors' funds on fees and performance.
5. Rule on each proposal in writing: allowed or prohibited, citing the duty or rule it honors or breaks.

6. Check your menu and procedures against the 404(c) trio and note, in two sentences, exactly what liability the safe harbor would and would not lift from your company.
7. Staple the warm-up list to the back and label each of your original three rules with its ERISA name.

Tips

- Write the IPS as criteria and schedules, never predictions; a fiduciary documents process, not market opinions.
- For each ruling, name the rule first, then apply it — exam answers and fiduciary minutes share the same grammar.

Check your work

- ☐ My IPS has objectives, three-plus diversified options, ranges, benchmarks, a review schedule and a replacement discipline — and no ticker symbols.
- ☐ I ruled proposals 1 and 2 prohibited (loan to a party in interest; self-dealing without prudent process), 3 imprudent and undiversified, and 4 a prudent process.
- ☐ I can state what 404(c) relieves and what it never relieves.
- ☐ Each warm-up rule is matched to its ERISA name.

EXAM NOTEBOOK

1. Make a four-duties page: exclusive benefit, prudent expert, diversification, follow the documents — each with a one-line vignette of its violation.
2. Draw the 404(c) safe harbor as a three-legged stool — menu (3+ diversified choices), control (quarterly or better), information — with the seat labeled "sponsor not liable for participant choices" and a footnote: "still liable for the menu."
3. Make a coverage T-chart: ERISA YES — private employer plans; ERISA NO — government plans, church plans. Add the PBGC line: insures defined benefit only, up to limits.

KEY FORMULAS

$$\text{Vested balance} = \text{employee contributions} + (\text{vesting } \% \times \text{employer contributions})$$

From history. ERISA nearly died of complexity a dozen times; it took the Studebaker story, Senator Javits's persistence and a 1972 NBC documentary, "Pensions: The Broken Promise," to carry it. The PBGC it created has since paid pensions to hundreds of thousands of workers of failed plans — airlines and steelmakers chief among them — funded by premiums on healthy plans, not taxes. The guarantee has limits, which is why the exam still distinguishes an insured defined benefit promise from an uninsured one like nonqualified deferred compensation.

WORKED EXAMPLES

Example 1. A worker leaves her job with $30,000 of her own 401(k) deferrals and $12,000 of employer matching contributions. The plan uses a graded schedule under which she is 60% vested. How much does she take with her?

Show solution

1. Her own deferrals are always 100% vested: $30,000.
2. Vested employer money: $0.60 \times \$12{,}000 = \$7{,}200$.
3. Total: $\$30{,}000 + \$7{,}200 = \$37{,}200$; the unvested $4,800 is forfeited to the plan.

Answer: $37,200. Exam point inside the arithmetic: only the employer's money is ever subject to vesting.

Example 2. Exam style — reason through every choice. A 401(k) plan offers a growth stock fund, a diversified bond fund and a money market fund; participants may reallocate daily online and receive fee and objective disclosures for each option. A participant puts everything in the stock fund and suffers a large loss. Under ERISA Section 404(c), the sponsor is:

A. Liable, because the menu should have prevented a 100% stock allocation

B. Not liable for the participant's allocation, because the plan offered a broad menu, control and information

C. Not liable for anything connected with the plan

D. Liable unless the plan also offered company stock

Show solution

1. Check the trio: at least three diversified core options with different risk/return — yes; control at least quarterly — daily, so yes; sufficient information — yes.
2. The safe harbor therefore shields the sponsor from liability for the participant's own choice. That is B.
3. A misreads 404(c): the safe harbor exists precisely so participants may choose, even badly. C goes too far — the sponsor remains liable for prudently selecting and monitoring the menu itself. D invents a requirement; company stock is nowhere required.

Answer: B. The scope of the relief — choice yes, menu no — is the whole question, nearly every time it is asked.

Example 3. Exam style. ERISA's fiduciary standards apply to which of the following plans?

A. A state teachers' retirement system

B. A church denomination's pension fund that has not elected ERISA coverage

C. A manufacturer's 401(k) plan

D. A city police pension fund

Show solution

1. ERISA covers private-sector employer plans. A and D are government plans — excluded.
2. B is a church plan — excluded unless it elects coverage, and this one has not.
3. C is a private employer's plan: covered. The pattern to memorize — private in; government and church out.

Answer: C. When the exam wants a wrong-but-tempting answer, it dresses a government plan in corporate clothes; read for who the employer is.

PRACTICE

1. Easy ERISA was passed in what year, and what broken promise pushed Congress to act?

   Show answer

   1974 — signed by President Ford on Labor Day, September 2. The collapse of the Studebaker pension plan in 1963-64, which paid mid-career workers about 15 cents on the dollar, was the scandal that symbolized the need.

2. Easy Which plan is subject to ERISA?

   A. A county sheriff's pension plan

   B. A parochial school plan run by a church

   C. A private trucking company's profit-sharing plan

   D. A state university's retirement system

   Show answer

   C. ERISA governs private-sector plans; federal, state and local government plans and church plans are excluded.

3. Easy Under ERISA, a plan fiduciary investing plan assets may consider the interests of:

A. Participants and beneficiaries only

B. The sponsoring company's shareholders

C. The participants and the sponsor equally

D. Whichever party bears the investment risk

Show answer

A. The exclusive benefit rule admits no second constituency: plan assets exist to provide benefits and pay reasonable expenses. C's even-handedness is precisely what the rule forbids.

4. Medium ERISA's standard of care requires a fiduciary to act with the prudence of:

A. An average investor

B. A prudent person familiar with such matters — a prudent expert

C. A licensed attorney

D. The plan's most sophisticated participant

Show answer

B. ERISA raises Putnam's prudent man to a prudent expert: one familiar with retirement plan matters. Hiring expert help is itself part of prudence for a fiduciary who lacks the skill.

5. Medium Which of the following is NOT a condition of the Section 404(c) safe harbor?

A. At least three diversified core options with materially different risk and return

B. Participant control, with switching at least quarterly

C. Sufficient information about each option

D. Professional management of each participant's allocation

Show answer

D. The safe harbor's three legs are menu, control and information; professional management of each account is nowhere required — 404(c) exists so participants may direct their own accounts. Met, the trio relieves the sponsor of liability for participants' choices, never for the menu itself.

6. **Medium** Which belongs in a plan's investment policy statement?

A. A list of the specific stocks the plan will buy this quarter

B. The criteria for selecting and replacing investment options, with benchmarks and review schedules

C. The chief executive's market forecast

D. A guarantee of minimum returns to participants

Show answer

B. The IPS is criteria, ranges, benchmarks and discipline. Specific securities (A) and forecasts (C) do not belong, and guarantees (D) are impossible — no one may guarantee market results.

7. **Medium** The plan committee lends plan assets to the sponsoring employer at two points above the market rate, fully secured. Under ERISA this is:

A. Permitted, because the terms favor the plan

B. Permitted with participant notice

C. A prohibited transaction regardless of the favorable terms

D. Permitted if repaid within one year

Show answer

C. A loan of plan assets to a party in interest is prohibited outright; fairness is no cure, because the rule forbids the conflict itself. A is the exam's standing trap.

8. **Medium** An employee contributes $8,000 to her 401(k); her employer has contributed $5,000. She quits when 40% vested. How much is hers?

Show answer

$\$8{,}000 + 0.40 \times \$5{,}000 = \$8{,}000 + \$2{,}000 = \$10{,}000$. Her own deferrals were never at risk; vesting touches only employer money.

9. Hard A client, age 45, is the sole trustee of his company's profit-sharing plan and also owns the building next door. He proposes selling the building to the plan at an independently appraised price, below market, as "a good deal for everyone." Evaluate.

Show answer

Prohibited transaction. He is a fiduciary and a party in interest; a sale of his property to the plan is self-dealing whatever the appraisal says. The exam rewards the flat answer: the conflict, not the price, is the violation.

10. Hard A 401(k) plan offers twelve diversified funds, daily switching and full disclosures. A participant sues the sponsor because one menu fund was kept for years despite consistently failing its benchmark and charging fees far above peers. Does 404(c) protect the sponsor?

A. Yes — the participant chose the fund himself

B. Yes — twelve funds is a broad menu

C. No — the safe harbor never relieves the sponsor of prudently selecting and monitoring the menu itself

D. No — 404(c) applies only to defined benefit plans

Show answer

C. The participant's allocation among options is his own; the quality of the options remains the fiduciary's duty. A and B state the safe harbor's letter while missing its boundary; D reverses the plan types — 404(c) lives in participant-directed defined contribution plans.

11. Hard Why did ERISA's drafters require plan assets to be held in trust, and what nineteenth-century standard did they sharpen into the "prudent expert" rule?

Show answer

Trust ownership makes the pension promise enforceable property law instead of a corporate intention — the Studebaker failure was possible because nothing obliged anyone to fund the promise. The care standard sharpened was Justice Putnam's prudent man rule from Harvard College v. Amory (1830): ERISA demands the prudence of one familiar with such matters, because plan fiduciaries hold themselves out as competent.

12. **Challenge** A client, age 52, sits on her company's 401(k) committee. The president urges the committee to (1) add the company's own stock as one of three core options, (2) drop the bond fund to "simplify," and (3) hire the president's golf partner as adviser at twice the going fee. Write the committee's response to each, naming the ERISA principle at stake.

Show answer

(1) Company stock is not a diversified option; if the plan keeps only three core choices, each must be diversified with materially different risk/return, so the trio cannot include it — and concentration in employer stock strains the diversification duty. (2) Dropping the bond fund would leave fewer than three materially different diversified options, forfeiting 404(c) protection and weakening prudence. (3) Hiring at double the market fee without comparison violates the exclusive benefit rule and prudent process; fees paid from plan assets must be reasonable, and the relationship makes it self-dealing territory. Each answer is process, duty, document — in that order.

COMMON MISTAKES

- Applying ERISA to government or church plans — it covers private employer plans only.
- Believing 404(c) immunizes the sponsor entirely; it lifts liability for participant choices, never for selecting and monitoring the menu.
- Accepting a prohibited transaction because the terms were fair — the conflict itself is the offense.
- Putting specific securities or market forecasts into an investment policy statement.
- Forgetting that employee contributions are always 100% vested immediately — vesting schedules touch employer money only.

> **Make it a game · Prudent or Prohibited?.** A parent or sibling plays the scheming company president, inventing plan proposals one at a time — some honest ("compare three record-keepers and hire the cheapest adequate one"), some crooked ("lend the plan's cash to my cousin's diner"), some subtle ("keep the hot fund that beat its benchmark twice"). You have ten seconds to bang the table and rule: PRUDENT or PROHIBITED, plus the duty involved. Score two points per correct ruling, minus one for a wrong one; the president scores whenever a crooked deal slips past you. First to ten points wins — then swap chairs.

> **Scripture.** “Moreover it is required in stewards, that a man be found faithful.” (1 Corinthians 4:2, KJV)
>
> ERISA is this verse written into federal law: the plan fiduciary is a steward of other men’s harvests, and the one thing required — before brilliance, before results — is faithfulness. Exclusive benefit, prudent care, diversification, fidelity to the documents: four legal names for being found faithful.

7.5 Special Accounts and Passing Wealth On

OBJECTIVES

- Compare the education accounts — 529 plans and Coverdell ESAs — and the custodial accounts, UTMA and UGMA.
- State the HSA's triple tax advantage and its high-deductible health plan requirement.
- Distinguish the ownership forms: individual, JTWROS, tenants in common, tenancy by the entirety and community property, plus TOD and POD designations.
- Explain why beneficiary designations beat the will, and the differences among revocable, irrevocable and testamentary trusts.
- Describe what a QDRO does at divorce and define per stirpes in one sentence.

> **Warm-up.** With pencil and paper, list everything a teenager you know "owns" — bike, savings account, a few shares a grandparent bought. For each item, write who holds legal title and who decides when to sell it. The gap between enjoying property and controlling it is this whole lesson in miniature.

WATCH

Special Account Types: Rapid Fire - Series 65 Exam Prep

CertFuel · 8:48

https://www.youtube.com/watch?v=nHAIL6SNCko

> **WHEN TO WATCH**
> After the big idea, before the worked examples: rapid exam drill on 529s, Coverdells, custodial accounts and HSAs — pause after each and recite the account's tax treatment before resuming.

BACKUP VIDEO

Ownership and Estate Planning Techniques: Rapid Fire - Series 65 Exam Prep

CertFuel · 7:46

https://www.youtube.com/watch?v=-WBdxuhMH2Q

Before the unit test: a second rapid drill, this one on titling, trusts and estate techniques — score yourself a point per question answered before the teacher.

KEY TERMS

529 plan

A state-sponsored education savings plan with high limits and no income limits: after-tax money grows tax-deferred and comes out federally tax-free for qualified education expenses, while the donor keeps control of the account.

Coverdell ESA

An education savings account limited to a small annual contribution per child ($2,000) with income limits on contributors; tax-free for qualified education costs.

UTMA/UGMA account

A custodial account holding an irrevocable gift to a minor under the Uniform Transfers (or Gifts) to Minors Act: the child's Social Security number, one custodian managing until the age of majority, income taxed to the minor.

kiddie tax

The rule taxing a child's unearned income above a small threshold at the parents' rate, so custodial accounts cannot be used to shift the family tax bill to the children.

health savings account (HSA)

A triple-tax-advantaged account available only with a high-deductible health plan: deductible going in, tax-free growth, tax-free out for qualified medical expenses.

JTWROS

Joint tenants with right of survivorship: co-owners hold equal undivided interests, and at a death the survivor automatically takes all, outside probate — the standard registration for spouses.

tenants in common

Co-ownership in fractional interests that need not be equal; at death an owner's share passes by his will to his estate, not to the co-owner.

transfer on death (TOD)

A registration naming who receives a security or account at the owner's death, passing it outside probate while the owner keeps full lifetime control.

revocable (living) trust

A trust the grantor can amend or revoke; it avoids probate at death but saves no income or estate tax, because the grantor kept control.

QDRO

A qualified domestic relations order: the court order that divides a qualified retirement plan at divorce, letting the alternate payee receive a share without the 10% early-distribution penalty.

per stirpes

"By the branch": a deceased heir's share passes down to that heir's own children rather than back into the pool.

CORE IDEAS

The story. Commodore Cornelius Vanderbilt died on January 4, 1877, the richest man in America, leaving a fortune reckoned at close to $100 million — more than the United States Treasury then held. His will gave roughly $95 of every $100 to one son, William Henry, trusting him to keep the railroad empire whole, with comparatively modest trusts and legacies for the Commodore's daughters and his troubled son Cornelius Jeremiah. The disappointed heirs sued. From November 1877 the Surrogate's Court in New York was a public spectacle: lawyers for daughter Mary La Bau and for Cornelius Jeremiah set out to prove the old man of unsound mind, parading spiritualists, grudges and family secrets before packed benches, while William Henry's counsel defended his father's competence. The court upheld the will in March 1879 — two years, two months and some days after it began — and William Henry quietly bought peace anyway, settling roughly half a million dollars on each sister and guaranteeing his brother the income of a million. The richest estate in America passed on, but only after the family's griefs had been sold as newspaper copy for two years. Good planning is partly arithmetic; it is also mercy toward the people left behind.

How they figured it out. American law has spent the 150 years since building quieter roads around that courtroom. Some run through *titling*: registrations like **JTWROS** and **TOD** move property at death by operation of law, no judge required. Some run through *contract*: the **beneficiary designation** on an IRA, a life insurance policy or an annuity is a contract with the custodian that pays the named person directly —

which is why the designation **beats the will** whenever the two disagree. Some run through *trusts*, which hold property under a document and a trustee, exactly as you learned in Lesson 7.1. And some run through purpose-built accounts Congress added one need at a time: for education, for minors, for medical costs. The adviser's craft is matching the road to the family.

The big idea — accounts with a purpose. For education, the **529 plan** is the workhorse: state-sponsored, high aggregate limits, no income limits on contributors; money goes in after tax, grows tax-deferred and emerges federally **tax-free for qualified education expenses**; the **donor keeps control** — may change the beneficiary to another family member or even take the money back (tax and penalty on earnings) — and a special election lets a giver **front-load five years of annual exclusions** in one contribution. The **Coverdell ESA** is its small cousin: $2,000 per child per year, contributor income limits, tax-free for education. The **UTMA/UGMA custodial account** is not an education account at all but an **irrevocable gift** to the child: it carries the child's Social Security number, is managed by one custodian for one minor until the age of majority set by state law, and then it is simply the young adult's money, for college or a motorcycle. Income is **taxed to the minor**, trimmed by the kiddie tax above a small threshold. And mark the exam's favorite trap: there is **no such thing as a joint account with a minor** — a minor cannot own a securities account or give binding instructions; the custodial account exists precisely because of that.

The HSA. The **health savings account** is the only account in the code with a **triple tax advantage**: contributions deductible, growth tax-free, withdrawals tax-free for qualified medical expenses. The price of admission is a **high-deductible health plan**; the reward is money that rolls over year to year, moves with the owner, can be invested, and — after age 65 — may be spent on anything, taxed then as ordinary income like an IRA, with no penalty. For a healthy client the HSA can quietly become a second retirement account with a medical fast lane.

Ownership forms. How an account is titled decides who controls it in life and where it goes at death. **Individual**: one owner, passing by will. **JTWROS**: equal undivided interests; either owner may act for the whole; at a death the survivor takes everything, outside probate — standard for spouses. **Tenants in common**: fractional interests that may be unequal (60/40 between business partners); a decedent's fraction goes to his *estate*, to pass by his will — not to the surviving co-owner.

Tenancy by the entirety: a marriage-only variant in many states, with consent of both spouses required and protection from one spouse's creditors. **Community property**: in a minority of states, most property acquired in marriage belongs to both spouses equally by law. **TOD/POD** registrations keep sole control for life and route the account at death to the named person, skipping probate. Above them all, remember the hierarchy: operation of law and beneficiary contracts first; the will governs only what nothing else has already claimed.

Trusts, wills and the divorce order. A **revocable (living) trust** lets the grantor keep control, amend or dissolve at pleasure; it avoids probate and provides for incapacity, but because control was kept, it saves **no income or estate tax** — the assets stay in the grantor's taxable estate. An **irrevocable trust** is the opposite wager: the grantor truly gives the property away, losing control and generally removing the assets from the estate. A **testamentary trust** is written inside a will and is born only at death — through probate, since the will must be proved first. A will still matters: it catches individually owned property, names guardians for children, and can speak **per stirpes** — one sentence: a deceased child's share descends to that child's children, by the branch. Dying without any will is **intestacy**, and the state's formula decides — the fate Howard Hughes's heirs litigated for years. Finally, divorce: a **QDRO** is the court order that divides a qualified plan, and a distribution to the alternate payee under it escapes the 10% early-distribution penalty (ordinary income tax still applies unless rolled over).

On the exam today. Match the account to the clue: high limits, donor control, five-year front-load — 529; $2,000 and income limits — Coverdell; irrevocable gift, child's SSN, custodian until majority — UTMA; triple tax advantage, HDHP — HSA. Expect "a father wants to open a joint account with his 15-year-old" — the answer is that he cannot; recommend a custodial account. Titling questions hinge on one fact: survivor takes all (JTWROS) versus share passes by will (tenants in common). The beneficiary-beats-the-will question is nearly guaranteed: the ex-spouse still named on the IRA takes it, whatever the new will says — which is why advisers review designations at every life event. And the QDRO earns its point: division of a qualified plan at divorce, no 10% penalty on the alternate payee's distribution.

PICTURE STUDY

Reading the Will, Sir David Wilkie, 1820 · Oil on panel · Neue Pinakothek, Munich

Image: Wikimedia Commons, public domain

David Wilkie, the Scottish master of the story-picture, painted this parlor for the King of Bavaria in 1820, borrowing the scene from Walter Scott's novel Guy Mannering. The lawyer reads; every face calculates. It is the Vanderbilt courtroom in miniature, fifty-seven years early — proof that where there is a will, there is a family waiting to hear it read.

Look closely

- Find the lawyer and the document. Who leans closest, and who pretends not to care?
- Find the widow in black and the woman sweeping out the door. What has each just learned?
- Notice the dead man's portrait on the wall. Why would Wilkie have him watch the scene?
- Count the generations in the room — baby to grandmother. Which of this lesson's tools (titling, designations, trusts) would have quieted this room?

Talk about it

1. Wilkie's drama happens because everything waited for one document read aloud after death. How do beneficiary designations and TOD registrations drain the drama from that moment?

2. Vanderbilt's will was upheld, yet the family still paid two years of public grief. Is avoiding conflict a legitimate goal of estate planning, alongside taxes? Why?
3. Proverbs says a good man leaves an inheritance. What, besides money, is being passed — or squandered — in this room?

PROJECT

The Ownership and Beneficiary Map

You will finish your Client Book with its fourth page: a complete ownership and beneficiary map for each of your two clients — every account titled, every designation named, and a plain-language note on what the will does and does not control.

You will need

- Your Client Book pages from Lessons 7.1–7.3
- A large sheet of paper or a two-page spread per client
- Ruler and two colors of pen
- Calculator

Steps

1. For the young teacher, list plausible accounts with pretend balances: checking, Roth IRA, 403(b), an old UTMA from her grandmother, an HSA. For the retiring farmer: joint checking, traditional IRA, a brokerage account with his wife, farm land held tenants in common with his brother, a life insurance policy.
2. Title every account: individual, JTWROS, tenants in common, custodial, TOD — one color for the titling, the second color for beneficiary designations.
3. Draw the death-path arrows: for each account, an arrow to where it goes at the owner's death, labeled "by designation," "by survivorship," or "by will."
4. Find the planted conflict in each client's facts — the teacher's UTMA still lists her grandmother as custodian though the teacher is 26; the farmer's IRA beneficiary is outdated. Write the fix in one sentence each.
5. Compute one number per client: the teacher's five-year 529 front-load capacity if she someday funds a niece's plan (use an example exclusion figure and label it), and the farmer's wife's share if the tenants-in-common land (60/40 with the brother) is worth $400,000 at his death.
6. Write the will note: three sentences per client on what passes by will after designations and survivorship have taken their property.

7. Assemble the full Client Book — profile, recommendations, tax worksheet, map — and read it through as a stranger would. Fix anything a stranger would stumble on.

Tips

- Follow each arrow to a named person, not a vague "family" — vagueness is what filled Wilkie's parlor and the Vanderbilt courtroom.
- Check that no account passes two ways; a beneficiary designation and a will clause pointing different directions is exactly the error advisers are paid to catch.

Check your work

- ☐ Every account has a titling label, and every arrow names its legal route — designation, survivorship or will.
- ☐ Both planted conflicts are found and fixed in writing.
- ☐ The farmer calculation is right: his 60% share, $240,000, passes by his will to his estate — not to his brother.
- ☐ The finished Client Book reads clean front to back, with all figures labeled as examples.

EXAM NOTEBOOK

1. Make the account-matcher table: 529, Coverdell, UTMA/UGMA, HSA — columns for limits, income limits, who controls, tax treatment, and the one clue the exam uses for each.
2. Draw the titling ladder: what claims property at death, in order — operation of law (JTWROS, TOD) and beneficiary contracts first, the will last, intestacy if there is no will. Add the one-liner: the designation beats the will.
3. Make three trust flashcards — revocable, irrevocable, testamentary — each with who controls, probate or not, and estate-tax effect in a phrase.

KEY FORMULAS

Five-year 529 front-load $= 5 \times$ annual exclusion (in this example $5 \times \$18{,}000 = \$90{,}000$)

From history. The other famous cautionary tale ended worse. When Howard Hughes died in 1976 with a fortune in the billions, no valid will could be found — a forged "Mormon Will" surfaced, naming a Utah gas-station owner, and was exposed at trial — so the estate fell to intestacy: years of litigation among hundreds of claimants and multiple states before roughly two dozen cousins divided what remained. Vanderbilt at least chose his heirs and was overruled by no one; Hughes let the statute books choose for him. Between them the two estates make the adviser's case: the documents you sign while living are the only voice you keep afterward.

WORKED EXAMPLES

Example 1. In this example the annual gift tax exclusion is $18,000. Grandparents want to fund a newborn granddaughter's 529 as fast as possible without touching their lifetime exemptions. How much can the two of them contribute at once, and what must they not do for the next four years?

Show solution

1. Each grandparent may elect the five-year front-load: $5 \times \$18{,}000 = \$90{,}000$.
2. Two grandparents: $2 \times \$90{,}000 = \$180{,}000$ into the 529 in one year.
3. The election spreads the gift over five years of exclusions, so neither may make further excluded gifts to this granddaughter during those years without eating into the lifetime exemption.

Answer: $180,000 now, treated as five years of exclusion gifts from each grandparent. The figures change with inflation — check irs.gov — but the five-times structure is the exam point.

Example 2. Exam style — reason through every choice. Two brothers own a brokerage account as tenants in common, 70/30. The elder brother dies, leaving a will that gives everything he owns to his church. Who gets his 70% interest?

A. The younger brother, by right of survivorship

B. The church, through the elder brother's estate

C. The brothers' parents, by intestacy

D. The account must be liquidated and split 50/50

Show solution

1. Tenants in common has no survivorship — that feature belongs to JTWROS. Eliminate A.
2. A decedent tenant-in-common's fractional share passes to his estate and then by his will: here, to the church. B is right.
3. C would apply only with no will; D invents a rule — fractions need not be equal and nothing forces a sale.

Answer: B. One sentence to memorize: JTWROS — survivor takes all; tenants in common — the share passes by will.

Example 3. A client, age 45, divorces. The court issues a QDRO awarding his 40-year-old ex-wife half of his $300,000 401(k). She takes her $150,000 as a cash distribution. What does she owe?

Show solution

1. The QDRO makes her an alternate payee, so the 10% early-distribution penalty does not apply despite her age.
2. The distribution is still ordinary income: at a 22% rate in this example, $0.22 \times \$150{,}000 = \$33{,}000$.
3. Had she rolled the $150,000 into her own IRA, there would be no current tax at all — the usual wiser course, but note the subtlety: once inside her IRA, later early withdrawals face the normal 10% penalty; the QDRO exception applies to the distribution from the plan.

Answer: About $33,000 of tax, no penalty. QDRO = division without penalty; rollover = division without current tax.

Example 4. Exam style. A father opens an UTMA for his daughter with $30,000 of stock. Three years later he loses his job and wants the money back. Which is TRUE?

A. He may reclaim it; he is the custodian

B. The gift was irrevocable; the property belongs to the daughter, and the custodian may spend it only for her benefit

C. He may reclaim half as the donor

D. The account converts to a joint account at her request

Show solution

1. UTMA gifts are irrevocable and vest in the minor — title is hers, under her Social Security number. B states the law.
2. Custodianship is management, not ownership — A confuses the two. C invents a rule. D is impossible: minors cannot hold joint securities accounts at all.

Answer: B. The exam phrase to carry: custodial property is the minor's, the gift cannot be taken back, and the custodian manages it for the minor's benefit until majority.

PRACTICE

1. Easy Which education account has high contribution limits, no contributor income limits, and leaves the donor in control?

   A. Coverdell ESA

   B. UTMA

   C. 529 plan

   D. HSA

   Show answer

   C. The 529 carries all three features. The Coverdell is capped at $2,000 with income limits; the UTMA is an irrevocable gift with no education requirement; the HSA is for medical costs.

2. Easy What are the three tax advantages of an HSA, and what kind of health plan must the owner have?

Show answer

Deductible contributions, tax-free growth, and tax-free withdrawals for qualified medical expenses — the triple tax advantage. It requires a high-deductible health plan.

3. Easy When one owner of a JTWROS account dies, the account:

A. Passes under the decedent's will

B. Belongs entirely to the surviving owner, outside probate

C. Is split between the survivor and the decedent's estate

D. Is frozen until the probate court rules

Show answer

B. Survivorship operates by law the moment of death; the will has nothing to say about it. C describes tenants in common thinking, the exam's favorite swap.

4. Easy A 16-year-old wants to open a brokerage account jointly with his father. The adviser should explain that:

A. The account needs both signatures

B. A minor cannot own a securities account or give instructions; the proper vehicle is a custodial UTMA/UGMA account

C. Joint accounts with minors require court approval

D. The account may be opened if the father takes the dividends

Show answer

B. There is no such thing as a joint account with a minor — the classic exam trap. The custodial account exists precisely to hold a minor's property under an adult custodian.

5. **Medium** An UTMA account's income is reported under whose Social Security number and taxed to whom?

A. The custodian's number; taxed to the custodian

B. The donor's number; taxed to the donor

C. The minor's number; taxed to the minor, subject to the kiddie tax above a small threshold

D. No one's; custodial income is tax-deferred until majority

Show answer

C. The property is the child's, so the number and the tax are the child's — with the kiddie tax sending unearned income above the threshold to the parents' rate, which is what caps the income-shifting game. D invents a deferral that does not exist.

6. **Medium** A client's will leaves everything to his new wife, but his IRA still names his ex-wife as beneficiary. At his death the IRA goes to:

A. The new wife, because the will is more recent

B. The ex-wife, because the beneficiary designation controls the IRA

C. The estate, to be divided by the probate court

D. Half to each

Show answer

B. A beneficiary designation is a contract that beats the will. This is why advisers review designations at marriage, divorce, birth and death — the exam asks it almost verbatim.

7. **Medium** Which trust avoids probate but gives the grantor no estate-tax savings, and why?

Show answer

The revocable living trust. Because the grantor keeps the power to amend or revoke, the assets remain under his control and stay in his taxable estate; probate avoidance and incapacity planning are its real gifts, not tax savings.

8. Medium Married business partners ask how to title their company's building so each half passes to each owner's own children. Which form fits?

A. JTWROS

B. Tenancy by the entirety

C. Tenants in common

D. Community property

Show answer

C. Tenants in common lets each co-owner's fractional share pass by his own will. JTWROS and tenancy by the entirety would hand everything to the survivor, and community property is a marital regime, not a partners' choice.

9. Hard A widow's will leaves her estate "to my three children, per stirpes." One son died before her, leaving two daughters. How is the estate divided?

A. Half to each surviving child

B. One third to each surviving child and one third split between the deceased son's two daughters

C. One quarter to each surviving child and each granddaughter

D. All to the surviving children; the granddaughters take nothing

Show answer

B. Per stirpes — by the branch — sends the dead son's third down to his daughters, one sixth each. A and D describe per capita outcomes among survivors; C re-divides by head count, which per stirpes exists to prevent.

10. Hard A client, age 45, asks whether to save for his daughter's college in a 529 or an UTMA. Give the two strongest contrasts an adviser should draw.

Show answer

Control: the 529's donor keeps control and can change the beneficiary; the UTMA is an irrevocable gift that becomes the child's outright at majority, for any purpose. Taxes: 529 withdrawals for qualified education are federally tax-free, while UTMA income is taxed to the child each year, with the kiddie tax limiting the advantage.

11. Hard From the story: Commodore Vanderbilt's will survived its two-year contest, yet planners still count the episode a failure. Name two modern tools that would have moved most of that wealth outside the courtroom's reach, and say how each works.

Show answer

Trusts funded during life — an irrevocable trust holds property under a trustee and a document, so there is nothing for the probate court to construe; and nonprobate transfers such as beneficiary designations or TOD registrations, which pass property by contract and operation of law at death. What never enters probate can scarcely be contested there.

12. Challenge A client, age 52, divorcing, will receive by QDRO half of her husband's $400,000 401(k). She needs $40,000 in cash now and wants the rest working for retirement. In this example her rate is 24%. Sketch the adviser's plan and its tax arithmetic.

Show answer

Take $40,000 as a direct distribution under the QDRO: no 10% penalty (she is an alternate payee), but ordinary income — $0.24 \times \$40{,}000 = \$9{,}600$ of tax, so she nets about $30,400; if she needs $40,000 in hand she should distribute about $\$40{,}000 \div 0.76 \approx \$52{,}600$. Roll the remaining balance directly to her own IRA — no current tax, full deferral — remembering that future early withdrawals from the IRA lose the QDRO exception.

COMMON MISTAKES

- Confusing the 529 (high limits, donor control, no income limits) with the Coverdell ($2,000 cap, income limits).
- Treating an UTMA gift as reversible or as the custodian's property — it is the child's, irrevocably.
- Opening — or recommending — a "joint account with a minor," which does not exist.
- Assuming a will controls IRAs, life insurance or JTWROS property; designations and survivorship come first.
- Expecting estate-tax savings from a revocable trust — kept control means kept estate inclusion.

Make it a game · Where Does It Go?. A parent writes ten slips, each describing one asset and its paperwork — "IRA, beneficiary: sister," "house, JTWROS with spouse," "brokerage account, TOD to nephew," "pickup truck, individually owned, will leaves all to church," "UTMA for the twelve-year-old." Shuffle. For each slip you have ten seconds to declare where the asset goes at death and by what route — designation, survivorship, custodial ownership, or the will — while the parent keeps score. Two points per correct route, bonus point for naming whether probate is involved. Nine or more routes right out of ten wins; then you write ten slips and quiz the parent.

Scripture. "A good man leaveth an inheritance to his children's children: and the wealth of the sinner is laid up for the just." (Proverbs 13:22, KJV)

The proverb blesses planning that looks two generations down — exactly what per stirpes language, trusts and careful designations do in law. Leaving an inheritance well is named a mark of goodness, not of greed; the squandered estate in the courtroom is the counterexample.

UNIT 7

The Client

Everything you have learned so far — markets, bonds, stocks, funds — now turns to face a person. NASAA calls this part of the outline "client investment recommendations and strategies," and it begins with a simple command: **know your client**. In this unit you will meet the client in every form the exam presents — the widow, the sole proprietor, the partnership, the corporation, the trustee bound by a document and by Justice Samuel Putnam's **prudent man rule** of 1830 — and you will learn to build the **client profile**: goals, cash flow, balance sheet, risk tolerance (both the ability and the willingness to bear it), time horizon, liquidity and taxes. Then come the taxes themselves, from the four-page Form 1040 of 1913 to capital gains, wash sales and stepped-up basis; the retirement plans, from IRAs to 401(k)s; and ERISA, the great pension law born from the broken promises of the Studebaker plant in 1963.

The unit ends with the accounts that carry wealth between generations — 529 plans, custodial accounts, HSAs, joint registrations, trusts and wills — and with the cautionary tale of Commodore Vanderbilt's contested will, fought in a New York courtroom for more than two years. Along the way you will build "My Client Book," two fully worked pretend client profiles, because the adviser's calling is Proverbs 27:23 put into practice: "Be thou diligent to know the state of thy flocks." Roughly a sixth of the real exam lives in this material, and it is where scenario questions — "A client, age 45, …" — are born.

PREREQUISITES

- Can compute percents, averages and simple differences quickly with a calculator
- Can explain bond and stock basics from Units 4 and 5, including taxable-equivalent yield
- Can read a simple balance sheet and income statement (Unit 3)
- Can state the fiduciary duties of loyalty and care from Unit 1

MASTERY CHECKLIST

- ☐ I can name the major client types — individuals, sole proprietorships, partnerships, LLCs, C and S corporations, trusts, estates and charities — and say who pays the tax for each.
- ☐ I can build a client profile covering goals, financial situation, risk tolerance (ability and willingness), time horizon, liquidity, taxes and nonfinancial considerations.
- ☐ I can net capital gains and losses, apply the $3,000 ordinary-income offset, and spot a wash sale and adjust the basis.
- ☐ I can contrast gifted basis (carryover) with inherited basis (stepped-up) and compute each.
- ☐ I can compare traditional and Roth IRAs, rollovers and transfers, and the major qualified employer plans, and say who bears the investment risk in defined benefit versus defined contribution plans.
- ☐ I can state the ERISA fiduciary duties, the 404(c) safe harbor conditions, and the main prohibited transactions.
- ☐ I can choose the right special account — 529, Coverdell, UTMA, HSA — and the right ownership form for a scenario, and explain why a beneficiary designation beats a will.

- ☐ I can explain what a QDRO does and the difference between revocable, irrevocable and testamentary trusts.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **IRS Publication 590-A: Contributions to IRAs**: Free from irs.gov. The official rules for putting money into traditional and Roth IRAs — the source for every limit that changes each year. Skim the tables with Lesson 7.3. Ages 15 and up.
- **IRS Publication 590-B: Distributions from IRAs**: Free from irs.gov. The companion volume: taking money out, required minimum distributions and the early-withdrawal penalty exceptions. Use with Lessons 7.3 and 7.5. Ages 15 and up.
- **IRS Tax Topic 409: Capital Gains and Losses**: Free from irs.gov. Two screens of plain language on short- and long-term gains, the $3,000 loss limit and the carryforward — the current figures behind Lesson 7.2. Ages 15 and up.
- **Investor.gov: Individual Retirement Accounts (IRAs)**: Free from the SEC's investor-education site. Short, official definitions of IRAs and the linked glossary pages on 401(k)s and retirement plans. A quick cross-check for Lesson 7.3. Ages 14 and up.
- ***Bleak House*, by Charles Dickens (1853)**: Free on Project Gutenberg. The endless estate case of Jarndyce and Jarndyce devours a family fortune in court costs — the most famous picture in literature of what Lesson 7.5 tries to prevent. Read Chapter 1 at least. Ages 15 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

7.1 Types of Clients and the Client Profile — 3 sessions of 50 minutes

7.2 Taxes the Adviser Must Know: Income, Capital Gains and Estates

3 sessions of 50 minutes

7.3 Retirement Plans: IRAs, Roths and Qualified Plans — 3 sessions of 50 minutes

7.4 ERISA: The Plan Fiduciary's Rules — 3 sessions of 50 minutes

Unit 7 test

Closed book, like the real exam. Give yourself about 28 minutes — roughly 83 seconds a question, the same pace as 130 questions in 180 minutes. Answer every question; there is no penalty for a wrong guess. Where a problem says “in this example,” use the figures given, not current law — real limits and brackets change each year and live at irs.gov. Each question is worth 5 points; 100 points total.

1. **5 pts**

   Which client’s business income is reported directly on the owner’s personal tax return, with the business account opened simply in the owner’s own name?

   A. C corporation

   B. S corporation

   C. Sole proprietorship

   D. Limited partnership

2. **5 pts**

   A trustee directs an adviser to buy aggressive growth stocks “because the beneficiaries insist.” The trust document restricts the account to investment-grade bonds and dividend-paying blue chips. The adviser should:

   A. Follow the beneficiaries’ wishes

   B. Follow the trust document

   C. Compromise with a balanced portfolio

   D. File a complaint with the Administrator

3. 5 pts

A client, age 45, has a secure government salary, a paid-off house and a 20-year horizon, but says any loss over 5% would keep her up at night. The adviser should conclude:

A. High ability, low willingness — build the more conservative portfolio and educate

B. High ability, low willingness — build the aggressive portfolio her finances justify

C. Low ability, high willingness — hold only cash

D. The two measures should be averaged into a moderate portfolio

4. 5 pts

A client who refuses to sell a losing stock "until it gets back to what I paid" is showing which pair of behavioral biases?

A. Herding and overconfidence

B. Anchoring and loss aversion

C. Overconfidence and anchoring

D. Herding and loss aversion

5. 5 pts

Calculation. This year a client has short-term gains of $3,000, short-term losses of $8,000, long-term gains of $9,000 and long-term losses of $5,000. The result is:

A. $1,000 net long-term gain

B. $5,000 net short-term loss

C. $4,000 net long-term gain

D. $1,000 net capital loss

6. 5 pts

Calculation. On October 5 a client sells 200 shares at a $3,000 loss; on October 25 she buys 200 shares of the same stock at $25. Her loss treatment and new basis are:

A. Loss allowed; basis $5,000

B. Loss disallowed; basis $5,000

C. Loss disallowed; basis $8,000

D. Loss allowed; basis $8,000

7. 5 pts

Calculation. Grandmother bought shares for $12,000. At her death they are worth $40,000 and pass to her grandson, who sells them soon after for $41,000. His taxable gain and holding period are:

A. $29,000, long-term

B. $1,000, short-term

C. $1,000, long-term

D. $29,000, short-term

8. 5 pts

Stock bought on May 20 of last year is sold on May 20 of this year at a profit. The gain is:

A. Long-term, because it was held a full year

B. Short-term, because long-term requires more than one year

C. Long-term if the proceeds are reinvested

D. Tax-free after one year

9. 5 pts

Which cost-basis method lets a client choose exactly which lot to sell in order to control the taxable result?

A. FIFO

B. Average cost

C. Specific identification

D. Highest-in, first-out, required by the IRS

10. 5 pts

Which statement about Roth IRAs is TRUE?

A. Contributions are deductible and withdrawals are taxed as ordinary income

B. There are no income limits on contributions

C. Qualified withdrawals are tax-free, and the owner faces no lifetime RMDs

D. RMDs must begin at the same age as a traditional IRA's

11. 5 pts

A client, age 45, takes a $50,000 distribution from his 401(k) when leaving his employer, intending a 60-day rollover. The check he receives will be:

A. $50,000, with nothing withheld

B. $40,000, after mandatory 20% withholding — and he must still deposit the full $50,000 to avoid tax on the shortfall

C. $45,000, after the 10% penalty is withheld

D. $50,000, provided he signs a rollover certification

12. 5 pts

In a defined contribution plan, the participant's retirement benefit equals:

A. A formula based on final salary and years of service

B. Whatever the account balance has grown to — so the employee bears the investment risk

C. A government-guaranteed annuity

D. The employer's promised target, with shortfalls made up by the sponsor

13. 5 pts

Calculation (concept). In this example, a 76-year-old's traditional IRA holds $300,000 and the IRS table factor for her age is 23.7. Her required minimum distribution is closest to:

A. $7,110

B. $30,000

C. $12,660

D. No RMD is required from a traditional IRA

14. 5 pts

A self-employed web designer with no employees and high, variable income wants the simplest plan with the largest employer-funded contributions. The best match is:

A. SIMPLE IRA

B. 403(b)

C. SEP IRA

D. Defined benefit plan at a large corporation

15. 5 pts

ERISA's requirements apply to:

A. A state highway workers' pension fund

B. A church plan that has not elected coverage

C. A private manufacturer's pension and 401(k) plans

D. All retirement plans in the United States

16. 5 pts

A 401(k) sponsor wants Section 404(c) protection. The plan must offer:

A. At least three diversified investment choices with materially different risk and return, participant control with switching at least quarterly, and sufficient information

B. At least ten funds and daily trading

C. A guaranteed account and company stock

D. Professional management of every participant's account

17. 5 pts

The committee of a profit-sharing plan votes to lend plan cash to the sponsoring company at an above-market rate, fully collateralized. Under ERISA the loan is:

A. Permitted because the plan profits

B. A prohibited transaction with a party in interest, regardless of terms

C. Permitted if participants are notified

D. Permitted up to 10% of plan assets

18. 5 pts

A father asks how to invest $40,000 for his 10-year-old daughter's college while keeping the right to take the money back if the family ever needs it, with no income limits on his contributions. The adviser should recommend:

A. An UTMA account, which he may revoke at need

B. A joint account with his daughter

C. A 529 plan, where the donor keeps control and may reclaim the money (tax and penalty on earnings)

D. A Coverdell ESA funded $40,000 at once

19. 5 pts

A client's will leaves everything to his two sons, but his $500,000 IRA names his brother as beneficiary and his home is held JTWROS with his second wife. At his death the IRA and home pass:

A. Both to the sons, under the will

B. IRA to the brother by designation; home to the wife by survivorship; the will controls neither

C. IRA to the sons; home to the wife

D. Everything to the probate court to divide

20. 5 pts

A divorce court issues a QDRO awarding a 45-year-old alternate payee $100,000 from her ex-husband's 401(k), which she takes in cash. The distribution is:

A. Subject to ordinary income tax and the 10% early-distribution penalty

B. Tax-free as a property settlement

C. Subject to ordinary income tax but exempt from the 10% penalty

D. Prohibited; qualified plans cannot be divided at divorce

ANSWER KEY

1. C. A sole proprietorship is not a separate legal entity; the account is the owner's personal account and the income lands on the owner's own return. The S corporation and limited partnership also pass income through, but each is a separate entity with its own accounts and filings.
2. B. The trustee — and the adviser serving the trust — is bound by the governing document first, then the prudent investor rule. Beneficiaries cannot override the instrument.
3. A. Ability (objective capacity) is high; willingness (emotional tolerance) is low; the adviser honors the more conservative of the two and closes the gap with education, never by overriding the client's stated feelings.
4. B. The purchase price is an anchor the market does not remember, and refusing to realize the loss is loss aversion. Nothing in the vignette involves following the crowd or overrating one's own skill.
5. A. Net short-term: $\$3{,}000 - \$8{,}000 = -\$5{,}000$; net long-term: $\$9{,}000 - \$5{,}000 = +\$4{,}000$; cross-net: a $1,000 net long-term gain — the loss soaked up gain first. B and C each stop one step early.
6. C. The repurchase within 30 days is a wash sale: the $3,000 loss is disallowed and added to the new cost — $200 \times \$25 + \$3{,}000 = \$8{,}000$. B disallows the loss but forgets where it goes.
7. C. Inherited property takes a stepped-up basis of $40,000 and is automatically long-term, so the gain is $\$41{,}000 - \$40{,}000 = \$1{,}000$, long-term. A uses the grandmother's basis — the gift rule, not the inheritance rule.
8. B. Exactly one year is short-term; one year plus a day begins long-term treatment. Reinvestment has no effect on holding period.
9. C. Specific identification names the lot and so controls the gain or loss realized. FIFO is merely the default and average cost the mutual-fund method; D invents a requirement.
10. C. After-tax money in, tax-free qualified withdrawals out (five years plus age 59½), and no RMDs during the owner's life. A describes the traditional IRA; income limits do exist for Roth contributions.
11. B. Employer-plan distributions paid to the participant carry mandatory 20% withholding ($10,000); a complete rollover still requires depositing the full $50,000 within 60 days. A direct trustee-to-trustee transfer would have avoided withholding entirely.

12. B. The contribution is defined; the outcome is not. A and D describe defined benefit plans, where the employer bears the investment risk; C overstates PBGC insurance, which covers defined benefit plans only, up to limits.
13. C. RMD = balance ÷ life-expectancy factor: $\$300{,}000 \div 23.7 \approx \$12{,}658$. B divides by ten, A multiplies by the factor as a percent; D confuses the traditional IRA with the Roth.
14. C. The SEP is employer-funded, high-limit and nearly paperwork-free — built for the profitable self-employed. The SIMPLE suits small employers wanting employee deferrals with a match; the 403(b) belongs to schools and nonprofits.
15. C. ERISA governs private-sector employer plans; government plans and non-electing church plans sit outside it. D is the overreach the exam loves to offer.
16. A. The safe-harbor trio: broad menu (three or more diversified core options), real control (at least quarterly), adequate information. Even then the sponsor remains responsible for prudently selecting and monitoring the menu itself.
17. B. Lending plan assets to a party in interest — the employer above all — is prohibited outright; favorable terms are no defense. (The 10% figure belongs to a different rule about holding employer securities, bait for the half-remembering.)
18. C. The 529 keeps the donor in control with high limits and no income limits. The UTMA is irrevocable, the joint account with a minor does not exist, and the Coverdell is capped at $2,000 a year with contributor income limits.
19. B. Beneficiary designations and survivorship titling operate outside the will: the designation beats the will, and JTWROS property vests in the survivor automatically. The will governs only what no designation or titling has already claimed.
20. C. The QDRO is precisely the lawful way to divide a qualified plan at divorce, and distributions to the alternate payee under it escape the 10% penalty — though ordinary income tax applies unless she rolls the money to her own IRA.

PORTFOLIO PIECE: MY CLIENT BOOK

Create a two-client practice book, the kind a new investment adviser representative might keep — all pretend, every number labeled "example." Client one is a young teacher, 26, single, steady salary, long horizon; client two is a retiring farmer, 64, married, selling equipment and land, short horizon and income needs. For each client build four pages: (1) a profile sheet — goals, cash flow, balance sheet with net worth, risk tolerance split into ability and willingness, time horizon, liquidity needs and tax situation; (2) account-type recommendations with a written reason for each (for the teacher, perhaps a Roth IRA and her school's 403(b); for the farmer, perhaps IRA rollover choices and a JTWROS account with his wife) — name the account types, never specific securities; (3) a tax-basis worksheet showing one netting of gains and losses and one gifted-versus-inherited basis comparison with invented numbers; and (4) an ownership and beneficiary map — who owns each account, how it is titled, who the beneficiaries are, and what passes by will versus by designation.

LOOK FOR	WHAT IT MEANS
Profiles	Both profile sheets are complete — goals, cash flow, balance sheet, ability and willingness to take risk, horizon, liquidity, taxes — and the two clients are genuinely different.
Recommendations	Every account type named fits the profile, with a stated reason tied to taxes, horizon or liquidity; no specific securities are recommended.
Tax worksheets	The netting worksheet and the basis comparison are arithmetically correct, clearly labeled and marked as example numbers.
Ownership map	Titling and beneficiary designations are consistent — nothing passes two ways — and the map notes what the will controls and what it cannot.
Craft	Pages are neat, dated and organized so a stranger could pick up the book and understand both clients in five minutes.

UNIT 8

Building and Measuring Portfolios

A steward rarely watches over one talent; he watches over several at once, and the question is never only "how did this stock do?" but "how is the whole household doing?" This unit is about the **whole portfolio**. You will meet Harry Markowitz, a graduate student reading in a Chicago library in 1950, who noticed that nobody had ever put a number on risk, and whose 1952 paper won a Nobel Prize; you will learn the **CAPM** formula the exam loves, the three forms of the **efficient market hypothesis**, and the **Sharpe ratio**. Then come the working tools: asset allocation and the styles of investing (John Bogle's 1974 founding of Vanguard tells the active-versus-passive story), and the quiet techniques — diversification, rebalancing and dollar-cost averaging — practiced for fifty years by an IRS auditor named Anne Scheiber, who turned a modest nest egg into millions for charity.

The last two lessons take you onto the trading floor and into the report card. You will learn the order types (market, limit, stop and stop-limit), margin accounts under Regulation T, principal versus agency capacity, and the duty of best execution — told through "May Day," the first of May 1975, when fixed commissions died on the New York Stock Exchange and the cost of trading collapsed. Finally you will measure performance the way the Series 65 demands: holding period return, annualized, real, time-weighted versus dollar-weighted, and matched against the right benchmark, from Charles Dow's hand-computed average of 1896 to the index families of today. This unit completes the exam's section on investment vehicle characteristics and strategies; by its end you can build a pretend portfolio, run it honestly and grade it fairly.

PREREQUISITES

- Can compute percents, decimals and weighted averages, and use a simple spreadsheet
- Can explain stocks, bonds, mutual funds and ETFs, and read a quote (from Units 5 and 6)
- Can define standard deviation and beta as risk measures (from Unit 7)
- Can compute current yield and simple interest, and tell income from appreciation

MASTERY CHECKLIST

- ☐ I can explain modern portfolio theory: judge risk and return at the level of the whole portfolio, and let correlation do the work of diversification.
- ☐ I can compute an expected return with CAPM, find alpha against it, state the three forms of the efficient market hypothesis, and compute a Sharpe ratio.
- ☐ I can distinguish strategic from tactical asset allocation, active from passive management, and growth, value and income styles.
- ☐ I can work a dollar-cost averaging table and show why average cost per share falls below average price, and explain rebalancing, hedging with puts and income from covered calls.
- ☐ I can name every common order type, say exactly what a stop order does when triggered, and work a Regulation T margin deposit.
- ☐ I can explain principal versus agency capacity, markups versus commissions, and the adviser's duty of best execution.
- ☐ I can compute holding period, annualized, real, after-tax and probability-weighted expected returns, and contrast time-weighted with dollar-weighted return.

- ☐ I can match a portfolio to its proper benchmark and name what the DJIA, S&P 500, Russell 2000, EAFE and Bloomberg Aggregate each measure.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **Investor.gov: Asset Allocation**: Free from the SEC's investor-education site. A plain-English page on dividing a portfolio among stocks, bonds and cash, with the risk-and-time-horizon reasoning Lesson 8.2 teaches. Ages 14 and up.
- **Investor.gov: Types of Orders**: Free from the SEC. Official one-page definitions of market, limit and stop orders — read it beside Lesson 8.4 and notice how exactly its wording matches the exam's. Ages 14 and up.
- **Federal Reserve Bank of St. Louis: Economic Education**: Free lessons, videos and the FRED data tool from the St. Louis Fed. Use FRED to chart a stock index against inflation for the real-return work in Lessons 8.1 and 8.5. Ages 14 and up.
- ***The Stock Market Barometer*, by William Peter Hamilton (1922)**: Free on the Internet Archive. Dow's successor at the *Wall Street Journal* explains how Charles Dow's averages were meant to be read. Skim the opening chapters with Lesson 8.5. Ages 15 and up.
- **Poor's *Manual of the Railroads of the United States* (1868)**: Free on the Internet Archive. Henry Varnum Poor's first annual manual — the grandfather of Standard & Poor's. Browse a few railroad pages with Lesson 8.5 to see what investors knew before indexes existed. Ages 15 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

8.1 Capital Market Theory: Markowitz, CAPM and Efficient Markets

3 sessions of 50 minutes

8.2 Strategies and Styles: Allocation, Active and Passive

3 sessions of 50 minutes

8.3 Techniques: Diversification, Rebalancing and Dollar-Cost Averaging

3 sessions of 50 minutes

8.4 **Trading: Orders, Margin and Best Execution** 3 sessions of 50 minutes

8.5 **Measuring Performance: Returns, Benchmarks and Risk Adjustment**
3 sessions of 50 minutes

Unit 8 test

Closed book. Allow about 28 minutes for these 20 questions — roughly 83 seconds each, the real exam's pace — and answer every question; there is no penalty for guessing. Calculators are allowed. Where a problem says "in this example," use the figures given, not current rates or law. Each question is worth 5 points; the test is worth 100.

1. **5 pts**
   The risk-free rate is 3% and the expected market return is 9%. Under CAPM, the expected return of a stock with a beta of 1.2 is:
   A. 7.2%
   B. 10.2%
   C. 10.8%
   D. 13.8%

2. **5 pts**
   A fund returned 11% with a beta of 1.0 in a year when the market returned 10% and T-bills paid 2%. Its alpha was:
   A. +1.0%
   B. +9.0%
   C. −1.0%
   D. 0.0%

3. **5 pts**

Under the WEAK form of the efficient market hypothesis, which activity cannot consistently produce superior returns?

A. Fundamental analysis of financial statements

B. Technical analysis of past prices and volume

C. Acting on material nonpublic information

D. Both A and B

4. **5 pts**

A portfolio earned 12% with a standard deviation of 16% while the risk-free rate was 4%. Its Sharpe ratio is:

A. 0.75

B. 0.50

C. 3.00

D. 1.33

5. **5 pts**

The famous Brinson studies of pension funds are correctly summarized as finding that asset allocation policy explained most of a portfolio's:

A. Alpha

B. Variability of returns over time

C. Tax liability

D. Trading costs

6. **5 pts**

A portfolio is 60% stocks returning 11%, 30% bonds returning 4%, and 10% cash returning 1%. The portfolio return is:

A. 5.33%

B. 7.9%

C. 8.4%

D. 16.0%

7. 5 pts

An adviser shifts a client from her 70/30 stock-bond targets to 40/60 for six months because he expects a market decline, intending to shift back afterward. This is:

A. Strategic asset allocation

B. Rebalancing

C. Tactical asset allocation

D. Dollar-cost averaging

8. 5 pts

A fund buys stocks with price-to-earnings ratios well below the market average, in industries currently out of favor, with above-average dividend yields. Its style is:

A. Growth

B. Momentum

C. Value

D. Capital appreciation

9. 5 pts

An investor invests $300 a month for four months at share prices of $10, $12, $6 and $10. Her average cost per share is approximately:

A. $9.50

B. $8.89

C. $8.00

D. $10.00

10. 5 pts

Dollar-cost averaging, accurately described, results in:

A. A guaranteed profit when markets are volatile

B. An average cost per share below the average price per share when prices fluctuate

C. Protection against loss in a steadily declining market

D. Fewer shares purchased when prices are low

11. 5 pts

A portfolio targeted 60% stocks / 40% bonds has drifted to 68% stocks after a rally. A threshold-rebalancing policy set at 5 percentage points requires the adviser to:

A. Do nothing until the annual review date

B. Sell stocks and buy bonds to restore 60/40

C. Buy more stocks to follow the trend

D. Move the portfolio to cash

12. 5 pts

An investor who owns 400 shares of a stock and fears a near-term decline, but wishes to keep the position, would most appropriately:

A. Sell covered calls

B. Buy protective puts

C. Buy additional shares on margin

D. Enter a GTC buy stop order

13. 5 pts

An investor enters a sell stop at $38 on a stock trading at $42. Bad news sends consecutive trades at $39, $37.50, $36. His order most likely executed:

A. At exactly $38

B. At or near $37.50 or the next trade

C. Only if the stock recovers to $38

D. Not at all, because the stock skipped $38

14. 5 pts

Under Regulation T's 50% initial requirement (in this example), an investor buying 400 shares at $35 in a margin account must deposit:

A. $3,500

B. $7,000

C. $14,000

D. $10,500

15. **5 pts**

A broker-dealer fills a customer's buy order out of its own inventory. The firm acted as:

A. Agent, earning a commission

B. Principal, earning a markup

C. Investment adviser, earning a fee

D. Underwriter, earning a spread

16. **5 pts**

Which position exposes an investor to theoretically unlimited loss?

A. Buying stock in a cash account

B. Buying a put option

C. Selling stock short

D. Buying stock on 50% margin

17. **5 pts**

A stock is bought for $25, pays $0.75 in dividends over six months, and is sold for $26.50. The holding period return and simple annualized return are:

A. 6% and 12%

B. 9% and 18%

C. 9% and 9%

D. 6% and 3%

18. **5 pts**

A security has a 30% probability of returning +20%, a 50% probability of +6%, and a 20% probability of −15%. Its expected return is:

A. 3.7%

B. 6.0%

C. 9.0%

D. 11.0%

19. 5 pts

To evaluate a mutual fund MANAGER'S performance without distortion from shareholder deposits and withdrawals, use the fund's:

A. Dollar-weighted return

B. Time-weighted return

C. Current yield

D. After-tax real return

20. 5 pts

The LEAST appropriate benchmark pairing is:

A. Large-cap U.S. stock fund — S&P 500

B. Small-cap U.S. stock fund — Russell 2000

C. Investment-grade bond fund — S&P 500

D. International developed-markets fund — MSCI EAFE

ANSWER KEY

1. B. $3\% + 1.2(9\% - 3\%) = 3\% + 7.2\% = 10.2\%$. C multiplies beta by the full market return without subtracting the risk-free rate first.
2. A. With beta 1.0, CAPM expects the market's 10%; the fund earned 11%, so alpha is $+1\%$. B subtracts the risk-free rate instead of the CAPM expectation.
3. B. The weak form holds only that past market data are fully priced, killing charts while leaving fundamental analysis possible. D describes the semi-strong form.
4. B. $(12 - 4) \div 16 = 0.50$. A forgets to subtract the risk-free rate ($12/16$); remember Sharpe divides excess return by standard deviation, not beta.
5. B. The studies attributed on the order of ninety percent of the variability of returns to the allocation policy — a claim about how returns fluctuate, which careful advisers state modestly.
6. B. $0.6(11) + 0.3(4) + 0.1(1) = 6.6 + 1.2 + 0.1 = 7.9\%$. A is the simple average of the three returns, ignoring the weights.
7. C. A temporary, forecast-driven departure from targets is tactical allocation — market timing. Rebalancing (B) moves toward targets, not away from them.
8. C. Low P/E, out of favor, decent yield — the value signature. Growth (A) is the mirror image: high P/E and rapid earnings momentum.
9. B. Shares: $300/10 = 30$, $300/12 = 25$, $300/6 = 50$, $300/10 = 30$ — 135 shares for \$1,200, so $\$1{,}200 \div 135 = \$8.89$. A is the average *price* ($38 \div 4 = \$9.50$), the planted distractor — note cost lands below it.
10. B. Fixed dollars buy more shares cheap and fewer dear, pulling average cost below average price. A and C are the claims the exam wants denied; D is backwards.
11. B. The 8-point drift exceeds the 5-point threshold, so the discipline sells the overweight winner and buys the laggard. A describes calendar rebalancing, a different policy.
12. B. Puts set a floor under his sale price — insurance for a long position. Covered calls (A) earn income but protect only by the premium's width.
13. B. The \$37.50 print is at-or-through the stop, triggering a market order that fills at the next available price. A stop never guarantees its own price; C describes a sell limit.
14. B. Cost is $400 \times \$35 = \$14{,}000$; half is \$7,000, the broker lending the rest. C is a cash-account purchase.

15. B. Trading from inventory is principal (dealer) capacity, compensated by a markup built into the price. An agent (A) merely matches parties and charges a commission.
16. C. A short seller must repurchase at a price with no ceiling. Long positions (A, D) can lose at most their cost (plus the loan's interest), and an option buyer (B) only the premium.
17. B. HPR: $(1.50 + 0.75) \div 25 = 9\%$ over six months; annualized simply, $9\% \times 2 = 18\%$. A drops the dividend from the numerator.
18. B. $0.3(20) + 0.5(6) + 0.2(-15) = 6 + 3 - 3 = 6\%$. C ignores the loss branch; every probability-weighted outcome, good or bad, enters the sum.
19. B. Time-weighting gives each period equal weight regardless of assets invested, isolating the manager's results; the dollar-weighted (IRR) figure instead reflects the investor's own cash-flow timing.
20. C. A bond fund graded against a large-cap stock index is the exam's classic mismatch; the Bloomberg U.S. Aggregate is the standard bond benchmark. The other three pairings are the textbook matches.

PORTFOLIO PIECE: MY PORTFOLIO LAB

Assemble the record of a working portfolio-builder: three pretend model portfolios — conservative, balanced and growth — each with a hand-drawn allocation pie chart, target percentages and two sentences on the investor it suits; your dollar-cost averaging spreadsheet with its five runs and the falling-market disclaimer; your CAPM worksheet (expected returns at five betas, the security market line, and one alpha computed and interpreted); your one-page benchmark match-up chart pairing each sleeve of your models with its proper index; and your annual-review letter from Lesson 8.5. Close with a one-page reflection on the sower: what diversification, steady buying and honest measurement have to do with "thou knowest not what evil shall be upon the earth," and which discipline you intend to practice with your own first hundred dollars.

LOOK FOR	WHAT IT MEANS
Models	Three allocations are complete, sum to 100%, differ sensibly in risk, and each pie chart is neat, labeled and matched to a written investor profile.
Calculations	CAPM, alpha, Sharpe, weighted returns, DCA average cost versus average price, HPR and real return are all computed correctly, with work shown.
Benchmarks	Every sleeve is paired with a defensible index (no bond sleeve against the S&P 500), and the match-up chart reads clearly at arm's length.
Honesty of claims	Nowhere does the lab promise profit, guarantee protection, or annualize a lucky quarter; disclaimers appear where the techniques require them.
Reflection	The closing page connects Ecclesiastes 11:2 and Luke 16:2 to specific habits — diversifying, steady buying, honest measuring — in the student's own words.

8.1 Capital Market Theory: Markowitz, CAPM and Efficient Markets

OBJECTIVES

- Explain modern portfolio theory: risk and return belong to the whole portfolio, and low correlation between holdings reduces risk.
- Describe the efficient frontier in plain words.
- Compute an expected return with the CAPM formula and find a security's alpha.
- State the three forms of the efficient market hypothesis and what each form says is useless.
- Compute and interpret the Sharpe ratio.

> **Warm-up.** Two pretend investments each returned 8% a year on average. A swung between −20% and +36%; B swung between +2% and +14%. Write two sentences: which would you rather hold, and why? Keep your answer; by the end of the lesson you will defend it with a ratio.

WATCH

Capital Asset Pricing Model (CAPM)

Ryan O'Connell, CFA, FRM · 6:42

https://www.youtube.com/watch?v=0XL8G4D0jvk

> **WHEN TO WATCH**
> After the big idea, before the worked examples: a CFA walks through each term of the CAPM formula — pause and compute his example yourself before he does.

BACKUP VIDEO

What Is the Efficient Market Hypothesis?

Marginal Revolution University · 2:34

https://www.youtube.com/watch?v=AEv9AszJ4_U

With the humbling idea: two and a half brisk minutes on why beating the market is so hard — list the three EMH forms from memory right after it ends.

KEY TERMS

modern portfolio theory (MPT)

Markowitz's framework that evaluates risk and expected return for the portfolio as a whole, not security by security.

efficient frontier

The set of portfolios that offer the highest expected return for each level of risk; no portfolio above it exists, and none below it is worth holding.

correlation

A measure from +1 to −1 of how two investments move together; the lower the correlation, the more diversification reduces portfolio risk.

capital asset pricing model (CAPM)

A model giving a security's expected return as the risk-free rate plus beta times the market risk premium.

beta

A measure of a security's systematic (market) risk: the market itself has a beta of 1.0, and a beta of 1.5 means moves about half again as large as the market's.

alpha

The return earned above (or below) what CAPM predicted for the risk taken; positive alpha means the manager beat the risk-adjusted expectation.

efficient market hypothesis (EMH)

The claim that market prices already reflect information, so investors cannot consistently beat the market using that information.

Sharpe ratio

Excess return over the risk-free rate divided by standard deviation: reward earned per unit of total risk.

risk-free rate

The return on an investment considered free of default risk, in practice the yield on short-term U.S. Treasury bills.

CORE IDEAS

The story. One afternoon in 1950, a University of Chicago graduate student in his early twenties sat in the library reading John Burr Williams's *The Theory of Investment Value*. Harry Markowitz was hunting for a dissertation topic — a stockbroker he had

chatted with in his professor's waiting room had suggested the stock market — and Williams's book said a stock is worth the present value of its future dividends. Markowitz saw the hole at once: if that were the whole truth, everyone should put all his money into the single stock with the best expected return. But nobody sane does that. Investors diversify, which means they care about *risk* as well as return — and yet nowhere in finance had anyone put a number on risk. Markowitz did, that afternoon and in the months after: let expected return be the mean, let risk be the variance, and choose the *portfolio*, not the stock. His short paper "Portfolio Selection" appeared in the *Journal of Finance* in March 1952, when he was twenty-four. In 1990 it won him a share of the Nobel Prize in economics, alongside William Sharpe and Merton Miller.

How they figured it out. Markowitz's machinery turned a proverb — don't put all your eggs in one basket — into arithmetic. The key quantity is **correlation**: how two holdings move together. If two stocks always rise and fall in step (correlation +1), holding both gives no protection at all; the basket just has two identical eggs. If they move independently, or better, in opposite directions, one's bad year is cushioned by the other's good one, and the *portfolio's* swings are smaller than the average of its parts — while its expected return is exactly the average. Risk partly cancels; return does not. That free lunch is the whole engine of diversification, and it means a security must be judged by what it does *to the portfolio*, not by its own chart alone. Plotting every possible mix of holdings by risk and return, Markowitz traced the **efficient frontier**: the upper edge of the cloud, the portfolios that give the most return for each amount of risk. A rational investor picks a spot on that edge to match his courage and his calendar; anything below the edge is wasted risk. Twelve years later William Sharpe, building on Markowitz, asked what prices would look like if everyone invested this way, and the answer was the **capital asset pricing model**.

The big idea. CAPM says the market only pays you for risk you cannot diversify away — the market-wide, *systematic* risk measured by **beta**. The formula the exam expects you to work: expected return $= r_f + \beta\,(r_m - r_f)$, the risk-free rate plus beta times the *market risk premium*. Work one: T-bills yield 3%, the market is expected to return 9%, and a stock's beta is 1.4. The premium is $9\% - 3\% = 6\%$, so the expected return is $3\% + 1.4 \times 6\% = 11.4\%$. A beta of 1.0 is the market itself; below 1.0 is tamer than the market; a T-bill's beta is zero. **Alpha** is the report card written against that prediction: actual return minus CAPM's expected return. If that stock actually

returned 13%, its alpha is $13\% - 11.4\% = +1.6\%$: it beat its risk-adjusted expectation. Positive alpha is skill (or luck); negative alpha means the return did not pay for the risk, even if the raw number looked handsome.

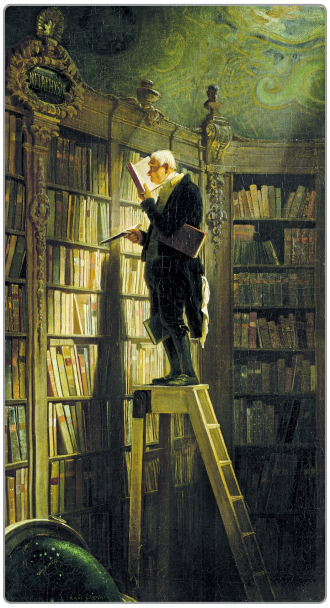
The humbling idea. If thousands of sharp-eyed traders hunt for bargains all day, bargains get scarce. The **efficient market hypothesis** says prices already reflect information, and it comes in three strengths the exam asks by name. The **weak form** says past prices and volume are fully reflected — so charts and technical analysis are useless, though fundamental research might still help. The **semi-strong form** says *all public information* is already in the price — so fundamental analysis of annual reports and news is useless too; only secrets could help. The **strong form** says even inside information is reflected — nothing helps, not even the whispers (which are illegal to trade on in any case). Remember the ladder: weak kills charts; semi-strong kills charts and public research; strong kills everything. Each stronger form swallows the ones below it.

The measuring stick. If returns must be judged against risk, we need a ratio, and the most-quoted one is William Sharpe's. The **Sharpe ratio** divides excess return by total risk: $\text{Sharpe} = \dfrac{r_p - r_f}{\sigma_p}$, where σ_p is the portfolio's standard deviation. A portfolio returning 10% with a standard deviation of 8% while T-bills pay 2% earned $(10 - 2) \div 8 = 1.0$ units of reward per unit of risk. Another returning 12% with a deviation of 16% earned only $(12 - 2) \div 16 = 0.625$: more return, worse deal. Note the division of labor the exam tests: **Sharpe uses standard deviation** (total risk); **alpha and CAPM use beta** (market risk only). Your warm-up answer now has a number behind it: steady B, with the same average return and smaller swings, has the higher Sharpe ratio.

Think it through. Is the market really efficient? Hold the claim with both humility and common sense. The evidence is strong that *most* professional managers, after costs, fail to beat simple index portfolios for long — which is exactly what the semi-strong form predicts, and a good reason ordinary stewards diversify broadly and keep costs low rather than chase hot tips. Yet the strong form fails the plainest test: insiders do profit from inside information, which is why Scripture-level honesty and federal law both forbid it. A wise adviser uses the theory the way Markowitz did — as discipline, not superstition: diversify because you cannot predict, measure risk because you must answer for it, and promise no alpha you have not earned.

On the exam today. CAPM is a near-certain calculation: be fast with $r_f + \beta(r_m - r_f)$, and watch the classic trap — the problem gives the *market return*, and a wrong answer choice is built by multiplying beta by it without first subtracting the risk-free rate. If the question gives the "market risk premium" directly, do not subtract again. The EMH forms are pure recall: weak = technical analysis useless; semi-strong = public information (fundamental analysis) useless; strong = even inside information useless. Expect "which form is contradicted if insiders earn excess profits?" (the strong form). Sharpe-ratio questions either compute it or ask what the denominator is — standard deviation, never beta. And alpha questions love a fund with a high raw return and a higher beta: run the CAPM first, then subtract.

PICTURE STUDY



The Bookworm, Carl Spitzweg, About 1850 · Oil on canvas · Museum Georg Schäfer, Schweinfurt, Germany

Image: Wikimedia Commons, public domain

Carl Spitzweg, a Munich pharmacist turned painter, loved to poke gentle fun at scholars and dreamers. His bookworm has climbed to the "Metaphysics" shelf and loaded himself with four volumes at once, too absorbed to climb down. We hang him here for Harry Markowitz, who found the idea of a lifetime not on a trading floor but on an ordinary afternoon in a library — proof that one person reading carefully can see what a whole profession missed.

Look closely

- Find all four books the old man is holding and where he has wedged each one.
- Notice the light from above. What does it fall on, and what is left in darkness?
- Find the ladder. How high is he, and what does that say about how long he has been searching?
- Look at his spectacles pushed down his nose. Is he skimming or studying?

Talk about it

1. Markowitz read a famous book and noticed what it left out. Why is spotting a gap sometimes worth more than learning what a book says?

2. The scholar gathers four books at once. When does gathering more information stop helping a decision — and what does the efficient market hypothesis say about that?
3. Great ideas in finance came from libraries as often as from trading floors. What does that suggest about how a young adviser should spend his hours?

PROJECT

Draw the Frontier: Risk and Return by Hand

Markowitz's idea becomes unforgettable once you plot it yourself. You will graph eight pretend portfolios by risk and return, trace the efficient frontier, and then grade every portfolio with CAPM and the Sharpe ratio.

You will need

- Graph paper, ruler and pencil
- Calculator
- The table of eight portfolios below (copy it into your notebook)
- Exam notebook for the write-up

Steps

1. Copy this table of pretend portfolios — (standard deviation %, expected return %): A (4, 4.5); B (6, 6); C (6, 5); D (9, 7.5); E (9, 6); F (13, 8.5); G (13, 7); H (18, 9).
2. Draw axes: standard deviation (risk) across the bottom from 0 to 20, expected return up the side from 0 to 10. Plot all eight points and label them.
3. For each level of risk, circle the portfolio with the highest return (A, B, D, F, H). Connect the circled points with a smooth curve: that upper edge is your efficient frontier.
4. Write one sentence for each uncircled portfolio explaining which circled portfolio "dominates" it (same risk, more return).
5. Using a risk-free rate of 2%, compute the Sharpe ratio of all eight portfolios and rank them. Note that the ranking does not simply follow return.
6. Now the CAPM step: with a risk-free rate of 2% and expected market return of 8%, compute CAPM expected returns for betas of 0.0, 0.5, 1.0, 1.5 and 2.0, and plot this line on a second graph of beta versus return (this line is called the security market line).
7. A stock with beta 1.5 is forecast by an analyst to return 13%. Mark it on your second graph: is it above or below the line, and what is its alpha?

8. Write a half-page: where on your frontier would you put a 70-year-old widow's portfolio, and where a 25-year-old saver's — and why the answer differs though the frontier is the same.

Tips

- Draw the frontier as a curve bending up and to the right, not a straight line — each extra unit of risk buys a little less extra return.
- Keep the two graphs separate in your mind: the frontier plots standard deviation (total risk); the security market line plots beta (market risk).

Check your work

- ☐ My frontier passes through A, B, D, F and H, and I can say why C, E and G fall below it.
- ☐ My Sharpe ranking is computed correctly and I can name the best portfolio per unit of risk.
- ☐ My CAPM line is straight, starts at 2% at beta 0, and shows the 13% forecast as positive alpha.
- ☐ My half-page explains risk tolerance and time horizon in my own words.

EXAM NOTEBOOK

1. Formula page: write CAPM, alpha and the Sharpe ratio large, each with a two-line worked example and the trap note "subtract the risk-free rate FIRST" beside CAPM.
2. Make a three-row EMH table: form; what is already in the price; what is therefore useless. Add the one-line memory hook: weak kills charts, semi-strong kills research, strong kills everything.
3. Flashcards: beta vs standard deviation, alpha vs raw return, efficient frontier, correlation of +1 vs −1, and "who shared the 1990 Nobel" (Markowitz, Sharpe, Miller).

KEY FORMULAS

$$\text{Expected return (CAPM)} = r_f + \beta\,(r_m - r_f)$$

$$\alpha = \text{actual return} - \text{CAPM expected return}$$

$$\text{Sharpe ratio} = \frac{r_p - r_f}{\sigma_p}$$

From history. William Sharpe, who shared the 1990 Nobel with Markowitz and Merton Miller, had been sent to Markowitz at the RAND Corporation as a doctoral student looking for a topic. His 1964 paper "Capital Asset Prices" asked what the market would look like if every investor followed Markowitz's advice — and the answer, CAPM, gave Wall Street beta, alpha, and four decades of exam questions.

WORKED EXAMPLES

Example 1. The risk-free rate is 2%, the expected market return is 8%, and a stock has a beta of 1.5. Find the stock's expected return under CAPM.

Show solution

1. Market risk premium: $8\% - 2\% = 6\%$.
2. Multiply by beta: $1.5 \times 6\% = 9\%$.
3. Add the risk-free rate: $2\% + 9\% = 11\%$.

Answer: 11%. (The trap answer, $1.5 \times 8\% + 2\% = 14\%$, forgets to subtract the risk-free rate from the market return.)

Example 2. A fund returned 12% last year with a beta of 0.9. The risk-free rate was 3% and the market returned 11%. Find the fund's alpha.

Show solution

1. CAPM expectation: $3\% + 0.9 \times (11\% - 3\%) = 3\% + 7.2\% = 10.2\%$.
2. Alpha: actual minus expected: $12\% - 10.2\% = +1.8\%$.

Answer: Alpha is +1.8%: the fund beat its risk-adjusted expectation.

Example 3. Portfolio X returned 9% with a standard deviation of 7%; Portfolio Y returned 14% with a standard deviation of 20%. T-bills paid 2%. Which had the better risk-adjusted performance by the Sharpe ratio?

Show solution

1. X: $(9 - 2) \div 7 = 1.00$.
2. Y: $(14 - 2) \div 20 = 0.60$.
3. Compare: X earned a full unit of excess return per unit of risk; Y earned barely more than half a unit.

Answer: Portfolio X, Sharpe 1.00 versus 0.60, despite Y's higher raw return.

Example 4. Exam-style: Under the semi-strong form of the efficient market hypothesis, which of the following could still produce consistently superior returns?

A. Analysis of price charts and trading volume

B. Careful study of published annual reports

C. Trading on material nonpublic information

D. Buying last year's best-performing funds

Show solution

1. A — wrong: charts are past price data, already useless under the *weak* form, which semi-strong includes.
2. B — wrong: annual reports are public information, exactly what the semi-strong form says is already priced in.
3. C — correct as to the theory: semi-strong efficiency claims only *public* information is reflected, so nonpublic information could still beat the market — which is why trading on it is illegal, and why the *strong* form (which denies even this) is the form contradicted by insider profits.
4. D — wrong: past fund performance is public information, and chasing it is priced in too.

Answer: C. Semi-strong efficiency leaves only inside information as a (forbidden) edge; the strong form would deny even that.

PRACTICE

1. Easy The risk-free rate is 4% and the expected market return is 10%. Using CAPM, what is the expected return of a stock with a beta of 1.0?

Show answer

$4\% + 1.0 \times (10\% - 4\%) = 10\%$ — a beta of 1.0 simply earns the market return.

2. Easy Which form of the efficient market hypothesis says that technical analysis (charts of past prices) cannot produce superior returns, while fundamental analysis still might?

A. Weak form

B. Semi-strong form

C. Strong form

D. No form of the EMH says this

Show answer

A. The weak form holds only that *past price and volume data* are fully reflected. B and C also kill charts, but they kill fundamental analysis too, so they do not leave it as a possibility.

3. Easy In one sentence each: what does the efficient frontier show, and why does a rational investor refuse any portfolio below it?

Show answer

The frontier is the set of portfolios giving the highest expected return at each level of risk; a portfolio below it is dominated — the same risk could buy more return on the frontier.

4. Medium The risk-free rate is 3%, the market is expected to return 9%, and a stock has a beta of 0.8. Its CAPM expected return is:

A. 7.2%

B. 7.8%

C. 10.2%

D. 12.0%

Show answer

B. $3\% + 0.8(9\% - 3\%) = 3\% + 4.8\% = 7.8\%$. A ($0.8 \times 9\%$) forgets to add the risk-free rate back; C and D misuse the full market return.

5. **Medium** A portfolio returned 11% with a standard deviation of 12% while T-bills paid 2%. Its Sharpe ratio is:

   A. 0.75

   B. 0.92

   C. 1.33

   D. 9.0

   Show answer

   A. $(11 - 2) \div 12 = 0.75$. B divides 11 by 12 without removing the risk-free rate; D is just the excess return, undivided.

6. **Medium** Markowitz's central insight, as tested on the exam, is that an investor should evaluate:

   A. Each security's risk and return individually

   B. The risk and return of the portfolio as a whole

   C. Only expected return, since risk cannot be measured

   D. Only securities with betas below 1.0

   Show answer

   B. MPT judges every holding by its effect on the whole portfolio. A is precisely the pre-1952 habit Markowitz overthrew; C reverses his achievement (he measured risk as variance); D is a strategy, not the theory.

7. **Medium** Adding which asset would do MOST to reduce a portfolio's risk?

   A. One with correlation +1.0 to the portfolio

   B. One with correlation +0.9 to the portfolio

   C. One with correlation 0.0 to the portfolio

   D. One with correlation −0.6 to the portfolio

   Show answer

   D. The lower (more negative) the correlation, the more the new asset's swings offset the portfolio's. C helps, but an asset that tends to move *opposite* helps more; A adds no diversification at all.

8. Hard A fund returned 15% with a beta of 1.6. The risk-free rate was 3% and the market returned 10%. The fund's alpha is:

   A. +5.0%

   B. +0.8%

   C. 0.0%

   D. −1.0%

   Show answer

   B. CAPM: $3\% + 1.6(10\% - 3\%) = 14.2\%$; alpha $15\% - 14.2\% = +0.8\%$. A compares the fund to the market without adjusting for its higher beta; D is the error of using $1.6 \times 10\%$ as the expectation.

9. Hard Studies find that corporate insiders earn excess returns trading their own companies' shares (legally reported trades included). Which form of the EMH does this contradict, and which forms can survive it?

   Show answer

   It contradicts the strong form, which claims even inside information is already priced. The weak and semi-strong forms survive, since they claim only that past prices and public information are reflected.

10. Hard Fund P: return 10%, standard deviation 10%. Fund Q: return 16%, standard deviation 28%. T-bills: 2%. An adviser calls Q "clearly superior." Compute both Sharpe ratios and judge the claim like a Series 65 grader.

    Show answer

    P: $(10 - 2)/10 = 0.80$; Q: $(16 - 2)/28 = 0.50$. On a risk-adjusted basis P is superior; Q's extra return did not pay for its extra volatility. "Clearly superior" by raw return alone is exactly the half-truth the exam punishes.

11. Medium In Markowitz's story, what gap did he notice while reading John Burr Williams in the library in 1950?

A. Williams ignored dividends

B. Williams's theory priced return but gave no weight to risk

C. Williams rejected diversification

D. Williams used the wrong interest rate

Show answer

B. Williams valued a stock as the present value of future dividends; taken alone, that logic would send all your money into one "best" stock. Since real investors diversify, risk must matter — and Markowitz supplied the missing measure.

12. Challenge A stock has an expected return of 12%. The market risk premium is 6% and the risk-free rate is 3%. What beta makes CAPM agree with this expectation — and if the stock's actual beta is 1.2, is the stock (per CAPM) priced to deliver positive or negative alpha at that 12% expectation?

Show answer

Solve $3 + 6\beta = 12$, so $\beta = 1.5$. With a true beta of 1.2, CAPM requires only $3 + 1.2 \times 6 = 10.2\%$, so a 12% expectation implies positive alpha of +1.8%.

COMMON MISTAKES

- Multiplying beta by the whole market return instead of the market risk premium (market return minus risk-free rate).
- Subtracting the risk-free rate again when the problem already hands you the "market risk premium."
- Putting beta in the Sharpe ratio's denominator — Sharpe uses standard deviation (total risk); alpha and CAPM use beta.
- Mixing up the EMH ladder: weak = charts useless; semi-strong = all public information useless; strong = even inside information useless.
- Calling a fund with the higher raw return "better" without checking alpha or Sharpe — the exam grades risk-adjusted.

Make it a game · Price the Line. A parent writes three numbers on a card: a risk-free rate (1–4%), an expected market return (6–12%) and a beta (0.5, 0.8, 1.0, 1.2, 1.5 or 2.0). You have twenty seconds to call out the CAPM expected return; a sibling can race you on a second card. One point per correct answer. Bonus round: the parent then announces the investment's "actual" return, and the first to call out the correct alpha — sign and size — steals two points. First to ten wins.

Scripture. "I returned, and saw under the sun, that the race is not to the swift, nor the battle to the strong, neither yet bread to the wise, nor yet riches to men of understanding, nor yet favour to men of skill; but time and chance happeneth to them all." (Ecclesiastes 9:11, KJV)

Three thousand years before the efficient market hypothesis, the Preacher observed that cleverness does not guarantee riches, because time and chance fall on everyone. Markowitz's mathematics and Solomon's humility teach the same discipline: since you cannot foresee, diversify — and never promise what chance can break.

8.2 Strategies and Styles: Allocation, Active and Passive

OBJECTIVES

- Explain why asset allocation is the dominant decision in a portfolio's behavior, stating the research claim carefully.
- Distinguish strategic asset allocation (with rebalancing) from tactical asset allocation (market-timing tilts).
- Contrast active and passive (index) management, including costs and the EMH connection.
- Identify the classic styles: growth, value, income, capital appreciation, blend and buy-and-hold.
- Compute a portfolio's return as the weighted average of its pieces.

> **Warm-up.** With pencil and paper, split a pretend $10,000 among three buckets — stocks, bonds and cash — for two different savers: a 25-year-old saving for retirement and a 65-year-old already retired. Write the two splits as percentages and one sentence defending each.

WATCH

Styles of Investing | Active, Passive, & More

The Plain Bagel · 8:32

https://www.youtube.com/watch?v=yEjK5zvi3l0

> **WHEN TO WATCH**
> After the big idea, before the style paragraphs: a portfolio manager sorts the styles in plain words — list growth, value, income and passive with one trait each as you watch.

BACKUP VIDEO

What The Heck Is An Index Fund?

Two Cents · 7:07

https://www.youtube.com/watch?v=u5eewhr7KKY

With the active-or-passive paragraph: a friendly history of indexing and its cost logic — note the one sentence that restates Bogle's bet.

KEY TERMS

asset allocation

The division of a portfolio among asset classes — stocks, bonds, cash and others — which largely determines how the portfolio behaves.

strategic asset allocation

Setting long-term target percentages suited to the investor's goals and risk tolerance, then rebalancing back to those targets as markets drift.

tactical asset allocation

Deliberately shifting the mix away from targets for the short term to exploit an expected market move — a form of market timing.

active management

Trying to beat a benchmark through security selection or timing, with the higher costs that effort brings.

passive management (indexing)

Holding the securities of an index to match its return at minimal cost, making no attempt to beat it.

growth investing

Buying companies with rapidly growing earnings, typically at high price-to-earnings ratios, expecting the growth to justify the price.

value investing

Buying out-of-favor companies at low price-to-earnings or price-to-book ratios, expecting the market to recognize the bargain.

income investing

Choosing securities mainly for the cash they pay out — dividends and interest — rather than for price gains.

capital appreciation

An objective that seeks growth in the value of the principal itself, accepting more risk and little current income.

buy-and-hold

Keeping positions for the long term with minimal trading, which lowers transaction costs and defers capital gains taxes.

CORE IDEAS

The story. In January 1974, John Bogle was fired. He had run Wellington Management, one of the oldest fund houses in America, and a merger he later called the biggest mistake of his career had ended with his partners voting him out. But the mutual funds themselves had their own boards, and those boards let Bogle stay on

the funds' side of the table. From that scrap of authority he built something no one had tried: a fund company owned by the funds themselves — run at cost, for the shareholders, with no outside owner to pay. Leafing through a book of naval prints, he found HMS *Vanguard*, Lord Nelson's flagship at the Nile, and took the name. The Vanguard Group was incorporated in September 1974, in the teeth of a brutal bear market. Bogle's bet was simple and, at the time, almost heretical: over long periods, *costs decide*. A manager might beat the market for a season, but fees, trading costs and taxes grind away every year without fail — so the company that charged least would, over decades, serve savers best. You met the index fund he launched in 1976 back in Unit 6; this lesson is about the idea underneath it.

How they figured it out. Through the 1960s, most investors assumed the manager's picks were what mattered. Two findings wore that assumption down. First, researchers kept failing to find funds that beat the market persistently after costs — just what the efficient market hypothesis of Lesson 8.1 predicts. Second, in 1986 Gary Brinson and his colleagues studied large pension funds and reported that the *asset allocation policy* — the chosen split among stocks, bonds and cash — explained on the order of ninety percent of the *variability* of a fund's returns over time. State that famous result carefully, as the best advisers do: it concerns how much a portfolio's returns *bounce around*, not exactly how much it earns, and later studies have refined it. But the practical moral has held up for forty years: the big decision is the mix. Whether you hold 80% stocks or 20% stocks will shape your result far more than which stocks you picked.

The big idea. So an adviser's first serious act is **asset allocation**, set from the client's time horizon, goals and risk tolerance — Unit 7's suitability work made arithmetic. **Strategic** allocation sets long-term targets, say 60% stocks, 35% bonds, 5% cash, and holds them through weather, *rebalancing* back when drift pulls them off (Lesson 8.3 works the mechanics). **Tactical** allocation deliberately departs from the targets for a season — lightening stocks because the manager expects a storm, say — which is market timing, with its costs and its risk of being wrong twice (once selling, once buying back). The portfolio's expected return is just the weighted average of its parts: with 60% in stocks expected to earn 9%, 35% in bonds at 4% and 5% in cash at 1%, the portfolio expects $0.60 \times 9 + 0.35 \times 4 + 0.05 \times 1 = 6.85\%$. The exam computes exactly this.

Active or passive. Within each asset class, someone must choose securities. **Active** managers research, select and trade, trying to beat the benchmark; their costs are higher, and the EMH explains why most fail to overcome them over long periods. **Passive** managers simply hold the index — all of it — and collect the market return minus a very small fee. Notice the logical links the exam likes: a believer in strong or semi-strong market efficiency has little reason to pay for active management; a believer in inefficient markets may hunt alpha. Indexing also trades rarely, so it generates few taxable capital gains — a point for taxable accounts. Many stewards split the difference with a **core-satellite** design: a large, cheap indexed core with small active or specialized positions around it.

The styles. Active equity managers tend to fish in different ponds, and the exam asks you to tell the ponds apart. **Growth** investors buy companies whose earnings are rising fast — high price-to-earnings ratios, often no dividend — paying up for tomorrow. **Value** investors buy what is unloved — low price-to-earnings, low price-to-book, often a decent dividend — trusting the market to come to its senses; Benjamin Graham's *The Intelligent Investor* (1949) is the school's founding book. **Income** investors want the check: dividends and interest for a client who must eat from the portfolio. **Capital appreciation** seeks growth of principal and tolerates volatility to get it. A **blend** fund mixes growth and value; **buy-and-hold** is less a pond than a temperament — trade little, let compounding and low costs work. Match the style to the objective on the client's profile: an income objective answered with a zero-dividend growth fund is a suitability violation before it is anything else.

Think it through. Is passive investing "settling for average"? Arithmetic says otherwise. All investors together hold the market, so the *average* actively managed dollar earns the market return *before* costs — and less than the market after costs. The indexer concedes the chance of brilliance in exchange for a guarantee of never trailing the market by more than a few hundredths of a percent. A steward can make either choice honestly; what he cannot do honestly is promise outperformance, hide the costs of seeking it, or drift from the client's chosen course because this quarter's pond looks better stocked. Bogle's deeper point was moral before it was financial: the fund exists for the saver, not the saver for the fund.

On the exam today. Expect the weighted-average portfolio return as a quick calculation. Expect "which decision most determines a portfolio's long-term variability of returns?" — answer *asset allocation*, not security selection or timing.

Strategic versus tactical is a one-word test: targets held and rebalanced = strategic; short-term shifts to exploit forecasts = tactical. Style questions describe a fund — “low P/E, out-of-favor industries” (value) or “high P/E, rapid earnings growth, no dividend” (growth) — and ask for the label. And watch the EMH crossover: a question may ask which investor logically prefers indexing (the one who believes markets are efficient). Rebalancing mechanics are tested too, but the heavy arithmetic waits for Lesson 8.3.

PICTURE STUDY

Breezing Up (A Fair Wind), Winslow Homer, 1873–1876 · Oil on canvas · National Gallery of Art, Washington

Image: Wikimedia Commons, public domain

Winslow Homer began this picture after a sailing trip out of Gloucester, Massachusetts, and finished it for America's centennial year of 1876, when it was shown in Philadelphia and became one of the nation's best-loved paintings. A boy — not the grown fisherman — holds the tiller, steering a set course through a lively sea. That is asset allocation in one image: you cannot command the wind, but you can set the sail, hold the heading, and let a steady course carry you home.

Look closely

- Find who is steering. Why might the painter have given the tiller to the boy while the fisherman rests?
- Notice how all the weight is on the windward rail. What would happen if everyone sat on the low side — and what does that say about balance in a portfolio?
- Find the anchor lying in the bow. The boat carries it even in fair wind; what is its job?
- Compare the little catboat with the big schooner on the horizon. Both use the same wind; do they sail the same course?

Talk about it

1. A helmsman holds a heading through gusts rather than chasing every shift of wind. How is that like strategic allocation with rebalancing — and what would “tactical sailing” look like?
2. The crew balances the boat by moving their weight, not by stopping the wind. Which risks can an investor actually control?
3. Homer painted this in the depression years after the Panic of 1873, yet called it A Fair Wind. What does steady hopefulness have to do with long-term investing?

PROJECT

Three Clients, Three Mixes

Allocation only makes sense attached to a person. You will write brief profiles for three pretend clients, set a strategic allocation for each, compute expected returns, and defend every choice in plain English — the adviser's core craft.

You will need

- Exam notebook and calculator
- Free spreadsheet (Google Sheets or LibreOffice Calc)
- The Investor.gov asset allocation page from the kit list, read with a parent
- Colored pencils for the allocation bars

Steps

1. Invent three pretend clients: a 24-year-old nurse saving for retirement; a 45-year-old couple saving for college in eight years and retirement in twenty; a 70-year-old widow living partly on her portfolio. Give each two sentences of goals and risk tolerance.
2. For each client, set a strategic allocation across stocks, bonds and cash (percentages summing to 100). Draw the three allocations as colored bars side by side.
3. Using in-this-example expected returns of 9% stocks, 4% bonds, 1% cash, compute each portfolio's expected return as a weighted average, by hand and then in the spreadsheet.
4. For each client, write one sentence on which style emphasis fits inside the stock bucket (growth, value, income, blend) and why.
5. Now a market shock: stocks fall 30% in a year while bonds gain 5%. In the spreadsheet, compute each client's new dollar balances from a $100,000 start and the drifted percentages.
6. Write the rebalancing order (dollars to move) that restores each client's targets, and label each order strategic, not tactical — the plan, not a forecast, is doing the deciding.

7. Finish with a half-page: which client's plan changed least in the shock, and why the allocation — not stock-picking — did most of the work.

Tips

- There is no single right allocation; there are defensible and indefensible ones. Your sentences matter as much as your percentages.
- Rebalancing after a crash means buying stocks when they are frightening — write that sentence now, while it is only pretend.

Check your work

- ☐ My three allocations differ sensibly with age, horizon and need for income.
- ☐ My weighted-average expected returns are computed correctly by hand and machine.
- ☐ My rebalancing orders restore the exact targets in dollars.
- ☐ My half-page states the Brinson-style claim carefully: allocation drives most of the variability of returns.

EXAM NOTEBOOK

1. Make a two-column table: strategic vs tactical allocation — definition, what triggers a trade, costs, and the exam's one-word cues for each.
2. Make a styles grid: growth, value, income, capital appreciation, blend, buy-and-hold — with P/E level, dividend habit, and the client objective each fits.
3. Formula page: the weighted-average portfolio return, with your three clients' computations worked underneath as permanent examples.

KEY FORMULAS

Portfolio return $= w_1 r_1 + w_2 r_2 + \cdots + w_n r_n$

From history. Benjamin Graham drew the same line in *The Intelligent Investor* (1949) a generation before the active/passive debate had its name: the "defensive" investor should hold a simple, diversified mix with minimal effort and cost, while only the "enterprising" investor — willing to work like a part-time analyst — should attempt more. Graham's most famous pupil, Warren Buffett, has said that for most people the defensive road is the wise one.

WORKED EXAMPLES

Example 1. A portfolio is 50% stocks, 40% bonds and 10% cash. The pieces return 12%, 5% and 2% respectively. Find the portfolio return.

Show solution

1. Stocks: $0.50 \times 12\% = 6.0\%$.
2. Bonds: $0.40 \times 5\% = 2.0\%$.
3. Cash: $0.10 \times 2\% = 0.2\%$.
4. Sum: $6.0 + 2.0 + 0.2 = 8.2\%$.

Answer: 8.2% — always the weighted average, never the simple average of 12, 5 and 2.

Example 2. A client's plan sets 60% stocks / 40% bonds. After a strong year, a $100,000 portfolio holds $70,000 of stocks and $30,000 of bonds. What does strategic allocation with rebalancing require, in dollars?

Show solution

1. Targets on the current $100,000 total: stocks $60,000, bonds $40,000.
2. Stocks are over by $\$70{,}000 - \$60{,}000 = \$10{,}000$; bonds are under by the same.
3. Sell $10,000 of stocks and buy $10,000 of bonds — selling what has risen, buying what has lagged, by discipline rather than forecast.

Answer: Sell $10,000 of stocks, buy $10,000 of bonds, restoring 60/40.

Example 3. Exam-style: An adviser who believes markets are semi-strong-form efficient would most logically recommend:

A. A fund that trades on patterns in past prices

B. A fund whose analysts seek mispriced stocks in public filings

C. A low-cost index fund matched to the client's allocation

D. Frequent tactical shifts based on economic forecasts

Show solution

1. A — wrong: past-price patterns are useless even under the weak form.
2. B — wrong: under semi-strong efficiency, public filings are already in the price, so paying analysts to mine them buys nothing but costs.
3. C — correct: if public information cannot yield an edge, the rational course is to hold the market cheaply at the client's chosen risk level.
4. D — wrong: forecasts are built from public information too, and tactical trading adds costs and tax.

Answer: C. Belief in market efficiency and preference for low-cost indexing go together — a link the exam tests directly.

Example 4. Exam-style: A fund holds companies with low price-to-earnings ratios and above-average dividend yields, purchased when temporarily out of favor. Its style is best described as:

A. Growth

B. Value

C. Capital appreciation

D. Tactical allocation

Show solution

1. A — wrong: growth means high P/E and fast earnings momentum, usually small or no dividend.
2. B — correct: low P/E, decent yield, out of favor — the value school's textbook description.
3. C — wrong: capital appreciation is an objective about growing principal, not a description of buying cheap stocks.
4. D — wrong: tactical allocation is an asset-mix timing strategy, not an equity style.

Answer: B. Memorize the pairing: growth = high P/E and earnings momentum; value = low P/E and out of favor.

PRACTICE

1. Easy A portfolio is 70% stocks returning 10% and 30% bonds returning 4%. Its return is:

   A. 7.0%

   B. 7.6%

   C. 8.2%

   D. 14.0%

   Show answer

   C. $0.70 \times 10 + 0.30 \times 4 = 7.0 + 1.2 = 8.2\%$. A is just the simple average of the two returns; B swaps the weights.

2. Easy Which decision has research shown to explain most of the variability of a diversified portfolio's returns over time?

   A. Security selection

   B. Market timing

   C. Asset allocation

   D. Tax management

   Show answer

   C. The Brinson studies of pension funds attributed on the order of ninety percent of return variability to the allocation policy. A and B are the activities investors obsess over, which is exactly why the exam asks.

3. Easy Define passive management in one sentence, and name its two chief cost advantages.

   Show answer

   Passive management holds an index to match (not beat) its return; its advantages are very low fees and little trading — which also means few taxable capital gains distributions.

4. Medium An adviser keeps clients at long-term target weights, selling stocks after they rise and buying after they fall to restore the targets. This is best described as:

   A. Tactical asset allocation

   B. Strategic asset allocation with rebalancing

   C. Market timing

   D. Sector rotation

   Show answer

   B. Targets plus disciplined restoration is the definition of strategic allocation. A and C involve forecast-driven departures from targets; D rotates among industries, not asset classes.

5. **Medium** A manager moves the stock weight from a 60% target down to 40% because she expects a recession within a year, planning to move back afterward. This is:
   A. Rebalancing
   B. Strategic allocation
   C. Tactical asset allocation
   D. Indexing
   Show answer

   C. A short-term, forecast-driven departure from targets is tactical allocation — market timing by its polite name. Rebalancing (A) moves *toward* targets; she is moving away from them.

6. **Medium** A fund buys companies with rapidly rising earnings at price-to-earnings ratios well above the market's, paying no attention to dividends. Its style is:
   A. Value
   B. Income
   C. Growth
   D. Blend
   Show answer

   C. High P/E plus earnings momentum is the growth signature. Value (A) is the mirror image — low P/E, out of favor; income (B) would insist on the dividends this fund ignores.

7. **Medium** A retired client needs regular cash from her portfolio with modest risk. Which style objective fits best, and name two security types that serve it?
   Show answer

   Income investing — dividend-paying blue-chip or utility stocks and investment-grade bonds (preferred stock also fits). A growth or capital-appreciation fund would force her to sell shares for grocery money.

8. Hard A $200,000 portfolio is targeted 50% stocks / 50% bonds. Stocks return +20% this year; bonds return 0%. To rebalance, the adviser should:
   A. Buy $10,000 of stocks
   B. Sell $10,000 of stocks and buy bonds
   C. Sell $20,000 of stocks and buy bonds
   D. Do nothing; 50/50 is maintained automatically
   Show answer

   B. Stocks grow to $120,000 of a $220,000 total; the 50% target is $110,000, so move $10,000 from stocks to bonds. C forgets the total grew; D confuses targets with reality.

9. Hard Explain in two or three sentences why the average actively managed dollar must underperform the market after costs — the arithmetic Bogle built Vanguard on.
   Show answer

   All investors together own the whole market, so before costs the average invested dollar earns exactly the market return. Active management adds fees and trading costs, so after costs the average active dollar must earn less than the market. Individual managers can win, but the group cannot — only costs distinguish the averages.

10. Hard A client's profile states an objective of long-term capital appreciation with high risk tolerance and no income need. The adviser recommends a portfolio of utility stocks and bond funds chosen for yield. The core problem is:
    A. Tactical allocation
    B. Excessive costs
    C. A style/objective mismatch, hence unsuitability
    D. Improper diversification
    Show answer

    C. Income vehicles answer an objective the client does not have and shortchange the one he does; matching style to the stated objective is a suitability duty. B and D may or may not be true — the stem only establishes the mismatch.

11. Medium In the story of Vanguard's founding, what structure did Bogle create in 1974, and what was his core bet about long-term results?

Show answer

A fund company owned by its own mutual funds and run at cost, so no outside owner skimmed profits; his bet was that costs decide long-term results — the cheapest honest steward wins over decades.

12. Challenge A portfolio is 40% in a stock fund, 40% in a bond fund and 20% in cash. In a year when the funds return −10%, +6% and +2% respectively, compute the portfolio return — then state the allocation (same three assets) that would have returned exactly 0% holding the same fund returns, keeping cash at 20%.

Show answer

Return: $0.4(-10) + 0.4(6) + 0.2(2) = -4 + 2.4 + 0.4 = -1.2\%$. For 0% with cash fixed at 20%, let s be the stock weight (so bonds are $0.8 - s$): solve $-10s + 6(0.8 - s) + 0.4 = 0$, giving $16s = 5.2$ and $s = 32.5\%$ stocks, 47.5% bonds, 20% cash.

COMMON MISTAKES

- Taking the simple average of asset returns instead of the weighted average.
- Overstating the Brinson result — it concerns the variability of returns explained by allocation policy, not a promise that allocation sets exact performance.
- Confusing rebalancing (moving back to targets) with tactical allocation (moving away from targets on a forecast).
- Reversing the style labels: growth = high P/E and earnings momentum; value = low P/E and out of favor.
- Forgetting the EMH link: belief in efficient markets logically pairs with passive, low-cost indexing.

> **Make it a game · Name That Style.** A parent reads clues one at a time about a mystery fund — "P/E twice the market's," "big dividend, sleepy industry," "holds every stock in the index," "sold stocks because a recession is coming" — drawing from the lesson's styles and strategies. Shout the label (growth, value, income, blend, passive, strategic, tactical) as early as you dare: three points if you get it on the first clue, two on the second, one on the third, minus one for a wrong shout. Play ten rounds against a sibling; highest score advises the family piggy bank.

> **Scripture.** “Where no counsel is, the people fall: but in the multitude of counsellors there is safety.” (Proverbs 11:14, KJV)
>
> The Hebrew word for “counsel” here is a pilot’s word — the ropes that steer a ship. A portfolio needs steering of the same kind: a course set with wise counsel and held with discipline, not a hand that jerks the tiller at every gust.

8.3 Techniques: Diversification, Rebalancing and Dollar-Cost Averaging

OBJECTIVES

- Explain diversification across and within asset classes.
- Work a rebalancing problem and distinguish calendar from threshold rebalancing.
- Compute a dollar-cost averaging table and show why average cost per share is below average price when prices vary.
- Describe sector rotation, protective puts, covered calls, and margin as a risk amplifier.
- Explain volatility management in plain words.

> **Warm-up.** You buy $12 of pretend stock each week for three weeks at prices of $4, $2 and $4 a share. With pencil and paper: how many shares each week, how many in all, and what did the average share cost you? (Hint: it is not $3.33.)

WATCH

How Diversification Works

The Plain Bagel · 10:53

https://www.youtube.com/watch?v=Pmlsa5-ruMk

> **WHEN TO WATCH**
> After the big idea: a portfolio manager shows what diversification does and does not protect against — note his distinction between risks you are paid for and risks you are not.

BACKUP VIDEO

Dollar-Cost Averaging Explained | Better Than Timing the Market?

Ryan O'Connell, CFA, FRM · 3:56

https://www.youtube.com/watch?v=GxWNJIy2EPQ

Right before the DCA worked example: four minutes on the mechanics — pause at his table and compute the average cost yourself before he reveals it.

KEY TERMS

diversification

Spreading money across and within asset classes so no single failure can sink the portfolio; it reduces unsystematic risk but not market risk.

calendar rebalancing

Rebalancing on a fixed schedule, such as once a year, regardless of how far the weights have drifted.

dollar-cost averaging (DCA)

Investing a fixed dollar amount at regular intervals, which buys more shares when prices are low and fewer when high, making the average cost per share less than the average price when prices vary.

protective put

Buying a put option on stock you own, setting a floor on your sale price for the cost of the premium — insurance against a fall.

leverage

Investing with borrowed money, as in a margin account, which amplifies both gains and losses on the investor's own capital.

rebalancing

Restoring a portfolio to its target allocation by selling what has grown overweight and buying what has fallen underweight.

threshold rebalancing

Rebalancing whenever an asset's weight drifts a set distance from target, such as five percentage points, regardless of the date.

sector rotation

Shifting among industry sectors as the business cycle turns, favoring the industries that history says lead each phase.

covered call

Selling a call option against stock you own, collecting premium income in exchange for giving up gains above the strike price.

CORE IDEAS

The story. Anne Scheiber retired from the Internal Revenue Service in 1944 with no fortune: an auditor passed over for promotion year after year, she had never earned

more than a few thousand dollars a year, and she left with savings of about $5,000 and a small pension. Then, for fifty years, she did the least dramatic thing in finance. From a small rent-controlled apartment in New York she bought shares of sturdy companies she understood, reinvested every dividend, added what her pension allowed, diversified across dozens of names, and almost never sold. No margin, no timing, no system — just steady purchases through booms, crashes, wars and recoveries. When she died in January 1995, aged 101, her estate was worth roughly $22 million, and her will gave nearly all of it to Yeshiva University to fund scholarships for young women — students who would get the chances she had been denied. Her executor later cautioned that legend had inflated her stock-picking genius; the honest moral is better than the legend. Time, reinvestment, diversification and discipline did the work. This lesson is about those disciplines — the techniques any steward can practice without a prophet's gift.

How they figured it out. None of these techniques began as theory; they began as habits that survived. Farmers and merchants scattered risk long before Markowitz measured it — Solomon advised dividing one's substance seven or eight ways against evils no one can foresee, and medieval merchants split cargoes among several ships for the same reason. Installment investing grew from ordinary pay rhythms: Americans bought Liberty Bonds through weekly payroll installments during the First World War, and the habit matured into the automatic monthly fund purchase. What the twentieth century added was arithmetic: the discovery that fixed-dollar buying has a built-in mathematical tilt in the buyer's favor, and that rules — calendars and thresholds — do reliably what feelings do erratically. The rules matter because the investor's emotions always argue the wrong side: euphoria says buy more at the top; fear says sell at the bottom; a schedule says nothing at all and is therefore wiser than both.

The big idea: diversification and rebalancing. Diversify on two levels. **Across** asset classes — stocks, bonds, cash, perhaps real estate — because they respond differently to the same weather; this is Lesson 8.2's allocation. **Within** each class — many companies, several industries, more than one country; many issuers and maturities on the bond side — so no single bankruptcy, scandal or default matters much. Remember Unit 7's boundary: diversification removes *unsystematic* (single-company) risk but cannot remove *systematic* market risk — in a general crash, nearly everything falls together. **Rebalancing** keeps the mix honest: on a **calendar** (say,

every January) or at a **threshold** (whenever a weight drifts, say, five points from target), sell the overweight winner and buy the underweight laggard. Notice what the discipline quietly does: it sells high and buys low, by rule rather than by nerve, and it keeps the portfolio's risk from creeping upward as winners swell.

The big idea: dollar-cost averaging. Invest a fixed dollar amount on a fixed schedule and the arithmetic tilts your way: the same $100 buys more shares cheap and fewer dear. Work the exam's favorite table. You invest $100 a month for four months at prices of $10, $8, $5 and $10 a share: you buy 10, 12.5, 20 and 10 shares — 52.5 shares for $400. Your **average cost per share** is $\$400 \div 52.5 = \$7.62$. The **average price per share** over those months was $(10 + 8 + 5 + 10) \div 4 = \$8.25$. Cost beat price — not by foresight, but because fixed dollars automatically overweight the cheap months. Whenever prices vary, average cost is below average price; that inequality, and the two divisions that prove it, are tested nearly word for word. What DCA does *not* do: guarantee a profit or protect against loss in a steadily falling market — a disclaimer the exam also likes.

The toolbox. Four more techniques, each in a sentence or three. **Sector rotation** ties to Unit 2's business cycle: shifting toward the industries that historically lead each phase — defensive food and utilities late in a boom, cyclicals and small caps at the turn upward — an active, forecast-dependent game. **Hedging with a protective put**: owning the stock at $50 and buying a $45 put for a $2 premium caps your worst case near $7 a share (the $5 drop to the floor plus the premium) — insurance, with insurance's cost. **Income with a covered call**: selling a call against stock you own pockets the premium but surrenders gains above the strike — the conservative option strategy you met in Lesson 6.4. **Leverage** through a margin account amplifies everything: borrow half and a 20% rise becomes roughly 40% on your own money — and a 20% fall becomes 40% too, before interest. Margin manages nothing; it magnifies. Finally, **volatility management** in plain words: hold enough cash and bonds that you are never forced to sell stocks at the bottom, size positions so no single storm matters, and write the plan down while seas are calm.

Think it through. Scripture gives this lesson its oldest text: "Give a portion to seven, and also to eight; for thou knowest not what evil shall be upon the earth" (Ecclesiastes 11:2). Notice the reason attached — *for thou knowest not*. Diversification is not distrust of God's providence; it is honesty about our ignorance of it. The same humility powers DCA (you do not know which month is cheap until afterward) and

rebalancing (you do not know the top until it has passed). The techniques in this lesson are mechanical substitutes for a prophecy no one has — which is why they suit a steward better than any forecast: they require faithfulness, not foresight. Anne Scheiber had no edge the public lacked; she had fifty years of not stopping.

On the exam today. DCA is a near-certain computation: build the little table, divide total dollars by total shares for average *cost*, average the prices for average *price*, and expect the answer choices to contain both numbers — read whether the question wants cost or price. Recall the catechism: DCA results in average cost below average price when prices fluctuate, and guarantees nothing. Rebalancing questions ask what to sell and buy after drift (sell the winner, buy the laggard — many students pick the reverse) and the calendar-versus-threshold labels. Protective put = hedge a long position; covered call = income, limited upside; expect "an investor wants to protect unrealized gains in a stock he holds" (buy puts). And margin appears as a concept: leverage amplifies returns and losses — it is never a hedge.

PICTURE STUDY

The Sower, Jean-François Millet, 1850 · Oil on canvas · Museum of Fine Arts, Boston

Image: Wikimedia Commons, public domain

Millet painted this striding sower the year after he settled among the farmers of Barbizon, and it caused a stir at the Paris Salon of 1850 — no one had painted a peasant so monumental. The sower cannot know which seeds will sprout, so he scatters them broadly, steadily, stride after stride, season after season. He is this lesson in one figure: diversification and dollar-cost averaging are the sower's rhythm brought to money — many seeds, many throws, and the harvest left to God.

Look closely

- Watch the rhythm: stride and throw, stride and throw. How is this like investing on a schedule instead of all at once?
- Find the birds swooping toward the seed. Some seed is always lost; why does the sower keep walking anyway?
- Notice how the seed is scattered broadly, not planted in one hole. What investing technique is that?
- Find the second farmer harrowing in the distance. How many steps, and how many workers, stand between seed and bread?

Talk about it

1. Jesus built a parable on a sower (Matthew 13). What do seedtime and harvest teach about the time between an investment and its fruit?
2. The sower cannot tell this evening which seeds took root. How is that like not knowing which month's purchase was the cheap one?
3. Anne Scheiber invested like this sower for fifty years. Which matters more to a harvest — brilliance in a single throw, or faithfulness in ten thousand?

PROJECT

The Dollar-Cost Averaging Laboratory

You will prove the DCA inequality yourself — three times. Once with a table by hand, once in a spreadsheet with prices you invent, and once with a lump sum for comparison, so you can state honestly what the technique does and does not promise.

You will need

- Exam notebook, pencil and calculator
- Free spreadsheet (Google Sheets or LibreOffice Calc)
- Graph paper for the price path
- A die, for inventing honest price paths

Steps

1. By hand: build the four-month table for $300 a month at prices $15, $10, $6, $15 — shares each month, total shares, total dollars, average cost, average price. Confirm cost is below price.
2. In the spreadsheet: set up twelve months of $100 purchases. Generate each month's price by rolling a die and adding 4 (prices $5–$10). Formulas compute shares per month, running total, average cost and average price.
3. Run the sheet five times with fresh dice rolls, recording average cost and average price each run. Does the inequality ever reverse?
4. Draw one run's price path on graph paper and mark where the most shares were bought. Write the one-sentence reason.
5. Lump-sum comparison: for the same five runs, compute what $1,200 invested entirely in month one would have become by month twelve, versus the DCA result (total shares times final price). Which won more often, and why can either win?
6. Build a steadily falling path ($12 down to $1) and compute the DCA result. Write the honest disclaimer this proves: DCA does not guarantee profit or protect against loss in a declining market.

7. Finish with a half-page to a pretend client explaining DCA: the tilt in its arithmetic, the discipline it builds, and exactly what it does not promise.

Tips

- Keep shares to four decimal places in the spreadsheet; rounding too early visibly bends the result.
- If a run's price never varies, cost equals price exactly — that edge case is why the exam says "when prices fluctuate."

Check your work

- ☐ My hand table matches my spreadsheet to the cent.
- ☐ In every varying-price run, average cost came in below average price, and I can give the reason in one sentence.
- ☐ My falling-price run shows a loss, and my disclaimer states it plainly.
- ☐ My client letter promises arithmetic and discipline, never profit.

EXAM NOTEBOOK

1. Work the full DCA table for $100 a month at $10, $8, $5, $10 and box the two answers: average cost $7.62, average price $8.25. Add the rule in red: cost < price when prices vary.
2. Make a techniques one-pager: diversification (across/within), rebalancing (calendar/threshold), DCA, sector rotation, protective put, covered call, leverage — each with a five-word purpose line.
3. Flashcards: "protect a long position" → buy puts; "income from a long position" → sell covered calls; "sell winners, buy laggards by rule" → rebalancing; "amplifies gains and losses" → margin.

KEY FORMULAS

$$\text{DCA average cost} = \frac{\text{total dollars invested}}{\text{total shares bought}}$$

$$\text{Average price} = \frac{\text{sum of purchase prices}}{\text{number of purchases}}$$

From history. The installment habit entered American life through war finance: the Liberty Loan drives of 1917–1918 let workers buy bonds through weekly payroll deductions, and millions who had never owned a security learned to invest a little from every paycheck. Payroll savings plans for U.S. Savings Bonds carried the habit through the Second World War, and the automatic monthly fund purchase — dollar-cost averaging by payroll — is its direct descendant.

WORKED EXAMPLES

Example 1. An investor puts $200 a month into a fund for four months at share prices of $20, $10, $16 and $20. Find the average cost per share and the average price per share.

Show solution

1. Shares each month: $200/20 = 10$; $200/10 = 20$; $200/16 = 12.5$; $200/20 = 10$.
2. Totals: 52.5 shares for $800.
3. Average cost: $\$800 \div 52.5 = \$15.24$.
4. Average price: $(20 + 10 + 16 + 20) \div 4 = \$16.50$.

Answer: Average cost $15.24, average price $16.50. Cost is below price because the fixed $200 bought most shares in the cheap month.

Example 2. A $50,000 portfolio is targeted 60% stocks / 40% bonds with a 5-percentage-point rebalancing threshold. Stocks rise until the portfolio is $42,000 stocks and $18,000 bonds. Has the threshold been crossed, and what trade restores the targets?

Show solution

1. Current total: $60,000. Stock weight: $42{,}000/60{,}000 = 70\%$ — ten points over target, so the 5-point threshold is crossed.
2. Targets on $60,000: stocks $36,000, bonds $24,000.
3. Trade: sell $6,000 of stocks, buy $6,000 of bonds.

Answer: Yes — stocks drifted to 70%. Sell $6,000 of stocks and buy $6,000 of bonds: selling high and buying low by rule.

Example 3. Exam-style: An investor owns 100 shares of a stock trading at $80 with large unrealized gains and fears a decline over the next six months, but does not want to sell. The most appropriate hedge is to:

A. Sell covered calls on the position

B. Buy put options on the stock

C. Buy more shares on margin

D. Sell the stock short

Show solution

1. A — tempting but wrong: covered calls bring income, yet protect only to the extent of the premium; a real decline still hurts.
2. B — correct: a protective put sets a floor price for the life of the option; the cost is the premium, like any insurance.
3. C — wrong direction entirely: margin adds leverage and risk.
4. D — selling short against stock you own locks the price but also ends your upside, and as a hedge-plus-exit it defeats his wish to keep the position; the put is the textbook answer.

Answer: B. "Protect a long stock position" = buy puts; "income from a long position" = sell covered calls. The exam swaps these two constantly.

Example 4. In this example, an investor buys $10,000 of stock in a margin account, borrowing $5,000 and investing $5,000 of his own. Ignoring interest, what is his percentage gain or loss on his own money if the stock rises 20%? If it falls 20%?

Show solution

1. Rise: position becomes $12,000; after repaying $5,000, equity is $7,000 — a gain of $2,000 on $5,000 $= +40\%$.
2. Fall: position becomes $8,000; equity is $3,000 — a loss of $2,000 on $5,000 $= -40\%$.
3. Compare: unleveraged, both answers would be 20%.

Answer: +40% and −40%: borrowing half doubles the swing either way, before interest. Leverage amplifies; it never protects.

PRACTICE

1. Easy Dollar-cost averaging requires an investor to:

   A. Buy the same number of shares each period

   B. Invest the same dollar amount each period

   C. Buy only when prices fall

   D. Rebalance monthly

   Show answer

   B. Fixed dollars, fixed schedule. A is the trap — fixed *shares* loses the arithmetic tilt, since it no longer buys extra shares when prices are cheap.

2. Easy Diversifying a stock portfolio across many companies and industries reduces which risk — and which risk remains?

   Show answer

   It reduces unsystematic (single-company or single-industry) risk; systematic market risk remains, because in a general decline nearly all stocks fall together.

3. Easy An investor rebalances every January 1 regardless of market moves. This is best called:

   A. Threshold rebalancing

   B. Calendar rebalancing

   C. Tactical allocation

   D. Dollar-cost averaging

   Show answer

   B. A fixed date is calendar rebalancing; a fixed drift limit (say 5 points) is threshold rebalancing. C moves away from targets; this investor moves back to them.

4. **Medium** An investor puts $600 a month into a fund for three months at prices of $30, $20 and $30. Her average cost per share is:

   A. $25.71

   B. $26.67

   C. $22.50

   D. $30.00

   Show answer

   A. Shares: $600/30 = 20$, $600/20 = 30$, $600/30 = 20$ — 70 shares for $1,800, so $1,800 \div 70 = \$25.71$. B is the average *price* ($80 \div 3$), the distractor the exam always plants; note cost sits below it.

5. **Medium** When share prices fluctuate, dollar-cost averaging produces:

   A. An average cost per share below the average price per share

   B. An average cost per share above the average price per share

   C. A guaranteed profit over any period

   D. Protection against loss in a declining market

   Show answer

   A. Fixed dollars buy more shares cheap and fewer dear, pulling cost below the simple average of prices. C and D are the two claims the exam specifically wants you to deny.

6. **Medium** A portfolio targeted 50/50 stocks and bonds now stands at 62% stocks after a rally. Disciplined rebalancing means:

   A. Selling bonds to buy stocks, since stocks are performing

   B. Selling stocks to buy bonds, restoring 50/50

   C. Moving entirely to cash until volatility passes

   D. Raising the target to 62% to match the market

   Show answer

   B. Rebalancing sells the overweight winner and buys the laggard — mechanically selling high and buying low. A chases, D capitulates, C abandons the plan altogether.

7. Medium An investor owns 500 shares of a utility and wants extra income from the position, accepting a cap on upside. The fitting strategy is:

A. Buying protective puts

B. Selling covered calls

C. Buying calls

D. Selling the stock short

Show answer

B. Selling calls against owned stock collects premium income at the price of gains above the strike. A costs money (it is insurance, not income); C is a bullish bet, not income.

8. Hard In this example, a stock trades at $60. Its owner buys a six-month put with a $55 strike for a $3 premium. Ignoring commissions, what is the owner's maximum possible loss per share over the six months, and why?

Show answer

$8: at worst he sells at the $55 floor, losing $5 from $60, plus the $3 premium paid. However far the stock falls, the put guarantees the $55 sale price.

9. Hard Sector rotation, properly described, is:

A. A passive strategy of holding every sector at market weight

B. Shifting among industry groups as the business cycle changes phase

C. Rebalancing between stocks and bonds annually

D. Selling all equities in a recession

Show answer

B. It is an active, forecast-dependent strategy keyed to the cycle — defensive sectors late in expansions, cyclicals at recoveries. A describes indexing; C is asset-class rebalancing, not sector work.

10. Hard Using margin, an investor buys $20,000 of stock with $10,000 of his own money. The stock falls 30%. Ignoring interest, what is the percentage loss on his own capital, and what principle does this illustrate?

Show answer

Position falls to $14,000; after the $10,000 loan, equity is $4,000 — a 60% loss on his $10,000. Leverage amplifies returns in both directions; at 50% borrowing it doubles them, before interest.

11. Medium Anne Scheiber's fifty years illustrate which techniques from this lesson? Name three she used and one she never touched.

Show answer

She used broad diversification, steady periodic investing (the DCA habit) and dividend reinvestment with buy-and-hold patience; she never used margin or leverage. The moral: faithfulness, not forecasting, compounds.

12. Challenge An investor DCAs $240 a month for four months at prices $12, $8, $6, $12, then sells all shares at $10. Compute average cost, average price, and the profit or loss in dollars — and explain how a sale below two of his purchase prices still made money.

Show answer

Shares: $20 + 30 + 40 + 20 = 110$ for $960; average cost $8.73; average price $9.50. Sale: $110 \times \$10 = \$1{,}100$, a profit of $140. Most shares were bought in the cheap months, so the position's cost ($8.73) sat below the $10 exit even though two purchases were above it.

COMMON MISTAKES

- Computing DCA "average cost" by averaging the prices — average cost is total dollars divided by total shares; the price average is a different (higher) number.
- Claiming DCA guarantees a profit or protects against loss in a declining market — it does neither, and the exam asks.
- Rebalancing backwards: buying more of the winner because it is winning (that is momentum-chasing, the opposite of the discipline).
- Swapping the option strategies: protective puts protect; covered calls generate income and cap upside.
- Treating margin as a risk-management tool — leverage amplifies risk; it never hedges it.

> **Make it a game · The Sower's Dice.** You and a sibling each "invest" $12 of pretend money per round for six rounds. Each round, roll a die: the number rolled is that round's share price, and you record how many shares your $12 bought (fractions allowed). After six rolls, both compute total shares, average cost ($72 divided by shares) and the average of the six prices. Lowest average cost below the average price wins the round of applause — then race, in sixty seconds, to explain WHY cost beat price. Parent referees the arithmetic.

> **Scripture.** “Give a portion to seven, and also to eight; for thou knowest not what evil shall be upon the earth.” (Ecclesiastes 11:2, KJV)
>
> Solomon commands division — seven portions, even eight — and gives the reason every diversifier since has repeated: thou knowest not. Spreading what we steward is not faithlessness; it is honesty about what no man can foresee, written a millennium before anyone priced the idea.

8.4 Trading: Orders, Margin and Best Execution

OBJECTIVES

- Read a quote: bid, ask and spread, and name who pays which.
- Define every common order type and state exactly what a stop order becomes when triggered.
- Explain short selling, cash versus margin accounts, and work a Regulation T initial deposit.
- Distinguish principal (dealer, markup) from agency (broker, commission) capacity.
- Describe market makers, exchanges versus OTC, custodians and clearing, best execution, and the full list of trading costs.

> **Warm-up.** A pretend quote reads: bid $40.00, ask $40.10. With pencil and paper: what price do you get selling 100 shares right now, what do you pay buying 100 right now, and how many dollars does the round trip cost you before any commission?

WATCH

There are only Two Type of Orders - Market and Limit. SIE Exam, Series 7 Exam, Series 65 Exam

Series 7 Guru · 4:48

https://www.youtube.com/watch?v=NQJ6TjwgD98

> **WHEN TO WATCH**
> After the order-type paragraph: a veteran securities-exam teacher shows why every stop order is just a trigger wearing a coat — restate his rule aloud when he finishes.

BACKUP VIDEO

How Short Selling Works

The Plain Bagel · 9:40

https://www.youtube.com/watch?v=CAs_aX95tVQ

With the short-sale paragraph: borrow, sell, cover, locate — and listen for why the loss has no ceiling; that sentence is the exam question.

KEY TERMS

bid and ask

The bid is the highest price buyers will pay (what a seller receives); the ask (offer) is the lowest price sellers will take (what a buyer pays); the gap is the spread.

limit order

An order to buy or sell only at a stated price or better — the price is protected, but execution may never happen.

stop-limit order

A stop order that becomes a limit order (not a market order) when triggered, protecting price but risking no execution in a fast decline.

short sale

Selling borrowed shares hoping to buy them back cheaper; losses are unlimited because there is no ceiling on a stock's price.

principal vs. agency capacity

A firm acting as principal (dealer) trades from its own inventory and is paid a markup or markdown; acting as agent (broker) it matches the customer with another party for a commission.

market order

An order to buy or sell immediately at the best available price — execution is certain, the price is not.

stop order

An order that lies dormant until the stock trades at or through the stop price, then becomes a market order; a sell stop (stop-loss) protects a long position below the market.

good-til-canceled (GTC)

An order that remains working until executed or canceled, unlike a day order, which dies at the close.

Regulation T

The Federal Reserve rule governing broker-dealer credit, setting the initial margin deposit — 50% of a stock purchase in this lesson's examples.

best execution

The duty to execute customer orders on the most favorable terms reasonably available — price, speed and total cost considered.

The story. For 183 years, Wall Street ran on a price-fixing agreement. From the Buttonwood days of 1792 onward, New York Stock Exchange members charged fixed minimum commissions — every broker the same rate, discounts forbidden on pain of expulsion. By the 1960s the arrangement had grown indefensible: institutions trading huge blocks paid the same per-share rates as widows trading ten shares, the Justice Department and the SEC were circling, and in 1973 the SEC set the date. On May 1, 1975 — "May Day," Wall Street called it, borrowing the distress signal — fixed commissions died, and brokers had to compete on price for the first time in living memory. The old guard predicted ruin. Instead, competition did what competition does: commissions for ordinary investors fell and kept falling, and within months a young Californian named Charles Schwab opened a "discount brokerage" built on the new rules. Over the following decades, the cost of trading a share fell from dollars toward pennies — and the cheap, liquid markets your clients take for granted were born on that May morning.

How they figured it out. May Day taught the industry that trading costs are not trivia; they are the pipe through which every strategy must flow, and the pipe has a price. Count the costs an investor pays even today: the **commission** (an agent's fee) or **markup** (a dealer's), the **bid-ask spread**, and for large orders **market impact** — the way a big buy pushes the price up before it fills. A quote is two prices for this reason: the **bid** is what the market pays you when you sell; the **ask** is what you pay when you buy. Bid $40.00, ask $40.10: buy 100 shares and immediately sell them and you are out $10 on the spread alone — your warm-up answer. **Market makers** (dealers quoting both sides all day) earn that spread for standing ready to trade; on exchanges and in the over-the-counter market alike, their competition narrows it.

The big idea: orders. Four order types do nearly all the work, and the exam tests their exact behavior. A **market order** executes now at the best available price: certain to fill, uncertain in price. A **limit order** names your price: a buy limit at $38 fills only at $38 or lower, a sell limit at $45 only at $45 or higher — price protected, fill never promised. A **stop order** is a sleeping trigger: it does nothing until the stock trades at or through the stop price, and then — say it precisely — **it becomes a market order.** A sell stop at $55 under a stock you bought at $60 is the classic *stop-loss*: if bad news gaps the stock from $58 to $52, the trigger trips and the market order fills near $52 — not at $55. No stop guarantees its stop price. A **stop-limit** order

triggers into a *limit* order instead: price protected, but in a plunge it may never fill, leaving you still holding. Remember placement: buy limits and sell stops live *below* the current market; sell limits and buy stops live *above* it (buy stops are how short sellers cap their risk). A **day order** dies at the close; **good-til-canceled** works until filled or canceled.

The big idea: short sales and margin. A **short sale** reverses the usual order of things: borrow shares (the broker must *locate* them first), sell them today, and hope to buy them back — *cover* — cheaper later. Profit is capped (a stock can only fall to zero) but **loss is unlimited**, because no law caps how high the price can rise before you must buy it back; that asymmetry is the exam's favorite fact about shorting, and it is why short sales happen only in margin accounts. A **cash account** pays in full; a **margin account** borrows from the broker against the securities. Under **Regulation T** of the Federal Reserve, the initial deposit on a stock purchase is 50% in this example: buying $10,000 of stock requires $5,000 down, the broker lending the rest against the shares as collateral. Your equity is market value minus the loan; if the stock falls far enough, the firm issues a **margin call** demanding more money, and can sell your shares if you fail to answer. Lesson 8.3 already showed what the borrowed half does to your percentage swings.

Who stands where. Every confirmation discloses the firm's **capacity**. Acting as **agent** (broker), the firm matches you with another buyer or seller and charges a **commission**. Acting as **principal** (dealer), the firm sells you stock from its own inventory or buys yours into inventory, and is paid by a **markup** (or markdown) built into your price. A firm may not reasonably charge both on one trade. Around the trade stand the quieter machinery: **exchanges** with central order books and the **over-the-counter** network of dealers; **dark pools**, private venues where institutions match large blocks away from public view — lawful, lightly tested, named without drama; **high-frequency traders**, firms whose computers trade in millionths of a second, supplying much of today's quoted liquidity; the **custodian**, which holds the client's cash and securities for safekeeping; and **clearing**, the back-office settlement that actually moves shares and money after the handshake. Over all of it sits the duty of **best execution**: a broker-dealer routing your order, and an adviser choosing brokers for client trades, must seek the most favorable terms reasonably available — price first, but speed, likelihood of execution and total cost too. An adviser who

routes trades to a friendly broker charging double has a loyalty problem before anything else.

Think it through. "A false balance is abomination to the LORD: but a just weight is his delight" (Proverbs 11:1). Trading is where the adviser's invisible choices touch the client's money most directly: which broker, which venue, markup or commission, disclosed or buried. May Day is the historical proof that these pennies compound into fortunes — the fall in trading costs after 1975 put billions back into savers' accounts. A steward treats the client's transaction costs as he would a just weight on a scale: measured, disclosed and as light as faithful service allows. Routing a client's order is a small act; doing it for the client's benefit every time, when no one is watching, is the character the license is supposed to certify.

On the exam today. The stop order is the staple: know that a triggered stop becomes a *market* order with no price guarantee, and that a stop-limit becomes a *limit* order that may not execute. Expect a gap scenario — stop at $55, stock opens at $52, fills near $52. Know placement (buy stop above market; sell stop below; limits the reverse) and that short sellers protect themselves with buy stops. Reg T questions are one multiplication: 50% of the purchase. "Unlimited risk" means one thing on this exam: a short sale (or naked call). Capacity pairs are pure vocabulary: principal/dealer/markup versus agent/broker/commission. And best execution appears as a duty question: the adviser must seek the most favorable terms for the client — not the cheapest commission for the adviser's own research budget (soft dollars, which Unit 4 covered, must meet their own safe harbor).

PICTURE STUDY

Brokers Signalling on the Curb Market, Bain News Service, About 1916 · Photograph (glass negative) · Library of Congress, George Grantham Bain Collection, Washington

Image: Wikimedia Commons, public domain

Before 1921, stocks too small or too new for the Big Board traded outdoors on Broad Street, in every weather, at the "curb market." Bain News Service photographed the brokers mid-shout: orders came down by telephone to clerks hanging out the windows, who relayed them to the street by finger signals — price, size, buy or sell — a living order book made of hands. Every order type in this lesson existed in that crowd; only the machinery has changed.

Look closely

- Find the raised hands making signals. Each gesture encoded a price or quantity — a quote without a screen.
- Look up: find anyone leaning from the windows above. Trace an order's path from telephone to window to street.
- Notice the weather coats and hats. The curb traded outdoors in rain and snow until 1921 — what does that say about the money at stake?
- Find the sheer density of the crowd. Where in this picture is the bid, and where is the ask?

Talk about it

1. A hand signal misread could cost thousands. Why do modern markets still prize exact order language — market, limit, stop — as much as these brokers prized exact fingers?
2. The curb brokers stood between buyers and sellers all day. What were they earning, in the language of this lesson?
3. In 1921 the curb moved indoors (it later became the American Stock Exchange). What is gained and lost when a market becomes invisible machinery instead of a visible crowd?

PROJECT

Run Your Own Trading Desk

You will play exchange for a week of pretend trading: post quotes, take orders from your family in exact order language, trigger stops honestly, and settle a margin position — discovering by hand why precise words and honest execution matter.

You will need

- Exam notebook ruled into an order book (columns: time, side, type, price, size, status)
- Index cards for order tickets
- Two dice to move the pretend stock price
- Calculator

Steps

1. Create a pretend stock, SLAUNCH, starting at $50. Each "day" (one sitting), roll two dice: the total moves the price — 2–6 means down that many dollars, 8–12 up (total minus 6), 7 unchanged. Record a daily closing price for ten days.
2. Before day one, have each family member write two order tickets in exact language (e.g., "buy 100 limit $48 GTC," "sell 100 stop $45 day"). Reject any ticket with vague language — exchanges do.
3. Each day after the roll, work the book: fill market orders at the day's price, limits only at their price or better, and check every stop — if the day's price trades at or through a stop, it becomes a market order and fills at the DAY'S price, not the stop price. Mark each ticket filled, working or expired.
4. Keep one position on margin: buy 100 shares with a 50% Reg T deposit, track market value, debit balance and equity daily in three columns.
5. On one day, gap the stock: declare overnight news and open $6 away from the prior close before working orders. Watch what happens to any stop sitting inside the gap, and write two sentences about it.

6. Charge costs honestly: a $0.10 spread on every fill plus a $1 commission per ticket. Total each trader's costs for the week.
7. Close the desk: deliver each family member a plain-English confirmation for each fill, stating price, capacity (you were agent) and commission. Then write a half-page: which order types protected people, which surprised them, and what "best execution" meant when you were the one executing.

Tips

- The gap day is the whole lesson in miniature — make it big enough to jump over at least one stop price.
- If no orders trigger for a day or two, that is realistic; limits and stops spend most of their lives waiting.

Check your work

- ☐ My order book shows every ticket's exact type and its honest fate, including a stop that filled away from its stop price.
- ☐ My margin columns prove equity = market value − debit every day.
- ☐ My cost totals show the spread quietly out-costing the commissions.
- ☐ My half-page uses principal/agent, trigger and best execution correctly.

EXAM NOTEBOOK

1. Draw the order-placement map: a vertical price line with the current market in the middle; place buy limit and sell stop below, sell limit and buy stop above, each with its one-line purpose.
2. Make a two-column capacity table: principal/dealer/inventory/markup versus agent/broker/matchmaker/commission, plus one line on why a firm may not charge both on one trade.
3. Flashcards: triggered stop becomes..., triggered stop-limit becomes..., Reg T %, unlimited-risk position, spread = ask − bid, GTC vs day, custodian, clearing, dark pool, best execution.

KEY FORMULAS

$$\text{Spread} = \text{ask} - \text{bid}$$

$$\text{Reg T initial deposit} = 0.50 \times \text{purchase cost (in this example)}$$

$$\text{Equity in a margin account} = \text{market value} - \text{debit balance}$$

From history. The curb market in the photograph moved indoors in 1921 and became the New York Curb Exchange, renamed the American Stock Exchange in 1953. The window-to-street hand signals survived indoors for decades as floor-trading sign language — and the American habit of calling junior markets "the curb" preserves the memory of brokers who traded in the rain.

WORKED EXAMPLES

Example 1. An investor buys 300 shares at \$42 in a margin account. Under Regulation T's 50% initial requirement (in this example), what must she deposit, and what is her equity if the stock falls to \$36?

Show solution

1. Purchase cost: $300 \times \$42 = \$12{,}600$.
2. Reg T deposit: $0.50 \times \$12{,}600 = \$6{,}300$; the debit balance (loan) is the other \$6,300.
3. At \$36: market value $300 \times \$36 = \$10{,}800$; equity $= \$10{,}800 - \$6{,}300 = \$4{,}500$.

Answer: Deposit \$6,300; equity after the fall is \$4,500 — the loan never shrinks, so every dollar of decline comes out of her side.

Example 2. Exam-style: An investor bought stock at $60, now $75, and wants to protect his gain without selling today. He enters a sell stop at $70. Overnight bad news opens the stock at $64. His order:

A. Executes at $70

B. Executes at or near $64

C. Becomes a limit order at $70

D. Is canceled at the opening

Show solution

1. A — wrong: the stop price is a trigger, not a guarantee; no seller was available at $70 after the gap.
2. B — correct: the opening trade at $64 is at-or-through $70, which triggers the stop; it becomes a market order and fills near $64.
3. C — wrong: that describes a stop-LIMIT order, which he did not enter.
4. D — wrong: nothing cancels a stop; it either sleeps or fires.

Answer: B. A triggered stop becomes a market order — the single most-tested sentence in this lesson.

Example 3. A customer sells 200 shares through Firm X, which takes the shares into its own inventory and pays the customer $39.80 when the market is $40.00 . In what capacity did Firm X act, and what is its compensation called and how much?

Show solution

1. The firm traded from (into) its own inventory — that is principal, or dealer, capacity.
2. A principal is compensated by a markup when selling to a customer and a markdown when buying from one.
3. Markdown here: $(\$40.00 - \$39.80) \times 200 = \$40$.

Answer: Principal (dealer) capacity, compensated by a $0.20-per-share markdown, $40 in all. Had it merely matched the customer with a buyer, it would be an agent charging a commission.

Example 4. Exam-style: Which investor faces theoretically unlimited loss?

A. A buyer of 100 shares in a cash account

B. A buyer of a put option

C. A short seller of 100 shares

D. A seller of a covered call

Show solution

1. A — wrong: a stock can only fall to zero; the loss stops at the amount invested.
2. B — wrong: an option buyer can lose only the premium paid.
3. C — correct: the short seller must eventually buy the shares back, and there is no ceiling on the repurchase price.
4. D — wrong: the call is covered by owned shares; the seller's risk is the stock's own downside, not the call.

Answer: C. "Unlimited risk" on this exam means a short sale of stock (or an uncovered call, which is a short sale in option's clothing).

PRACTICE

1. Easy A quote is bid $25.00, ask $25.08. An investor who sells at the market receives about:

   A. $25.08

   B. $25.04

   C. $25.00

   D. The last trade price, whatever it was

   Show answer

   C. Sellers hit the bid; buyers pay the ask. A reverses them — the most common quote mistake — and B splits a spread nobody offered to split.

2. Easy When a sell stop order is triggered, it becomes:

   A. A limit order at the stop price

   B. A market order

   C. A GTC order

   D. A short sale

   Show answer

   B. The stop price is only the trigger; execution is at the next available market price, which in a fast market can be well below the stop. A describes a stop-limit order.

3. Easy In one sentence each: what does a custodian do, and what does clearing do?

   Show answer

   A custodian holds the client's cash and securities for safekeeping; clearing is the settlement machinery that actually transfers shares and money between parties after a trade.

4. Medium Under Regulation T's 50% initial requirement (in this example), the deposit required to buy $18,000 of stock on margin is:

   A. $4,500

   B. $9,000

   C. $18,000

   D. $13,500

   Show answer

   B. $0.50 \times \$18{,}000 = \$9{,}000$, the broker lending the rest. C is a cash account; A and D play with the wrong percentages.

5. **Medium** An investor wants to buy a stock now at $52, but only if it can be had for $50 or less, and she is willing to wait weeks. She should enter a:

   A. Buy stop at $50, day order

   B. Buy limit at $50, GTC

   C. Market order

   D. Buy stop-limit at $52

   Show answer

   B. A buy limit names the maximum price and sits below the market; GTC keeps it alive past today. A buy stop at $50 is impossible — buy stops go above the market.

6. **Medium** A short seller is most likely to protect against unlimited loss by entering:

   A. A sell stop below the market

   B. A buy stop above the market

   C. A sell limit above the market

   D. A buy limit below the market

   Show answer

   B. If the stock rises against the short, the buy stop triggers and covers the position. A protects longs; D is how the short hopes to cover at a profit, not a protection.

7. **Medium** A confirmation shows the firm sold the customer 300 shares “as principal.” This means the firm:

   A. Charged a commission for matching the customer with a seller

   B. Sold from its own inventory and was compensated by a markup

   C. Acted as the customer’s investment adviser

   D. Violated best execution

   Show answer

   B. Principal = dealer = own inventory = markup/markdown. A is agency capacity; D does not follow — principal trades are lawful when the price, with its markup, is fair and disclosed.

8. Hard An investor holds stock bought at $30, now $48, and enters a sell stop-limit order: stop $45, limit $45. The stock then falls rapidly: trades print at $45.10, $44.60, $43.00, $41.00. What most likely happens to his order, and what was the trade-off he accepted?

Show answer

The $44.60 print triggers the stop (at or through $45), creating a sell limit at $45 — but the market is already below $45 and keeps falling, so the order likely never executes and he still holds at $41. He protected his price and gave up certainty of execution; a plain stop would have sold him out near $44.60.

9. Hard Rank the trading costs an ordinary investor pays — commission, bid-ask spread, markup, market impact — and state which one applies only to principal trades and which mainly to very large orders.

Show answer

All are real costs: commissions (agency trades), markups/markdowns (principal trades only), the spread (every round trip), and market impact (mainly large institutional orders that move the price while filling). The exam wants you to name the spread as a cost even when the commission is zero.

10. Hard An adviser directs all client trades to a broker whose commissions run twice the going rate because the broker provides the adviser free office space. Which duties are implicated?

A. Best execution only

B. Best execution and the fiduciary duty of loyalty (an undisclosed conflict)

C. None, if trades eventually execute

D. Regulation T

Show answer

B. The adviser is spending client money to buy himself a benefit: a failure of best execution and an unmanaged, undisclosed conflict of interest. Office space is not eligible research under the soft-dollar safe harbor (Unit 4).

11. Medium In the May Day story, what changed on May 1, 1975, and what two consequences followed within a decade?

Show answer

Fixed minimum commissions on the NYSE ended and rates became competitive. Commissions for ordinary investors fell steeply, and discount brokers (Charles Schwab opened that same year) made cheap trading a business model — slashing the cost of being a small investor.

12. Challenge In this example, an investor shorts 100 shares at $40. Compute her profit or loss if she covers at $25; at $40; at $70. Then state her maximum possible gain and maximum possible loss on the position and why they differ.

Show answer

Cover at $25: $(\$40 - \$25) \times 100 = +\$1{,}500$. At $40: zero (minus costs). At $70: $-\$3{,}000$. Maximum gain is $4,000 (stock to zero); maximum loss is unlimited, because there is no ceiling on the repurchase price. The asymmetry is the exam's defining fact about short selling.

COMMON MISTAKES

- Believing a stop-loss guarantees the stop price — a triggered stop is a market order and can fill far away in a gap.
- Confusing stop-limit with stop: the stop-limit protects price but may never execute in a fast decline.
- Misplacing orders: buy limits and sell stops go below the market; sell limits and buy stops go above it.
- Reading the quote backwards — customers sell at the bid and buy at the ask.
- Mixing capacities: principal = dealer = markup; agent = broker = commission; one trade, one form of compensation.

> **Make it a game · Order! Order!.** A parent plays the exchange with a deck of scenario cards you write first (ten slips: "you own it at $80 and fear a fall," "you want in, but only under $30," "you are short from $50 and nervous," and so on). Draw a slip, and within fifteen seconds call out the exact order — side, type, price placement relative to market, day or GTC. One point per correct order; lose a point if you place a buy stop below the market or promise anyone a stop price. Sibling plays auctioneer and challenges sloppy language. First to eight runs the desk.

> **Scripture.** “A false balance is abomination to the LORD: but a just weight is his delight.” (Proverbs 11:1, KJV)
>
> Markets run on measured prices the way ancient commerce ran on scales. Markups, spreads and routing choices are the adviser’s weights and measures — honest when disclosed and fair, abominable when a thumb rests quietly on the scale. Best execution is the just weight written into securities law.

8.5 Measuring Performance: Returns, Benchmarks and Risk Adjustment

OBJECTIVES

- Compute total return, holding period return and a simple annualized return.
- Contrast time-weighted and dollar-weighted returns and say which judges the manager and which the investor.
- Compute real (inflation-adjusted), after-tax and probability-weighted expected returns.
- Recap the risk-adjusted measures: Sharpe ratio and alpha.
- Match portfolios to proper benchmarks and identify the major named indexes.

> **Warm-up.** You bought a pretend share for $50 a year ago. Today it is worth $53, and it paid you a $2 dividend during the year. With pencil only: what was your total return in dollars, and what percent of your $50 is that?

WATCH

Stock Indices & Index Fund Investing

The Plain Bagel · 8:31

https://www.youtube.com/watch?v=5A4lp_oZ5zg

> **WHEN TO WATCH**
> After the benchmark paragraph: how the major indexes are built and weighted — write down which index he names as price-weighted and which as cap-weighted.

BACKUP VIDEO

Time Weighted Return Versus Dollar Weighted Return Series 65 Exam & Series 66 Exams

Series 7 Guru · 2:15

https://www.youtube.com/watch?v=cArRhkps-tk

Right after the whose-return-is-it paragraph: a securities-exam teacher drills the exact contrast the test asks — repeat his catechism aloud twice.

KEY TERMS

total return

Income (dividends or interest) plus capital appreciation, taken together — the full fruit of an investment, as opposed to yield alone.

holding period return (HPR)

Total gain or loss over the time an investment was held, divided by the amount invested, regardless of how long the period was.

annualized return

A return restated as a yearly rate so investments held for different lengths of time can be compared.

time-weighted return

The return of the portfolio itself, computed so that deposits and withdrawals do not distort it — the standard for judging and comparing managers and funds.

dollar-weighted return (IRR)

The internal rate of return on the investor's actual cash flows, reflecting the timing of deposits and withdrawals — it judges the investor's experience, not the manager.

real return

The return after subtracting inflation; approximately the nominal return minus the inflation rate.

expected return

The probability-weighted average of an investment's possible returns.

benchmark

The index a portfolio is measured against, which must match the portfolio's asset class and style to be meaningful.

price-weighted index

An index averaging member share prices, so high-priced stocks move it most — the Dow Jones Industrial Average is the classic example.

capitalization-weighted index

An index weighting members by total market value, so the largest companies move it most — the S&P 500 is the classic example.

CORE IDEAS

The story. Before anyone could ask "did my portfolio beat the market?", someone had to measure the market. Two journalists did the work. Henry Varnum Poor,

editor of the *American Railroad Journal*, began publishing fat annual volumes on the railroads — his *Manual of the Railroads of the United States* appeared in 1868 — giving investors, for the first time, systematic facts about the century's great growth industry; his name survives in Standard & Poor's. Charles H. Dow went further: he compressed the whole market into one number. Dow and his partner Edward Jones had founded a financial news agency in 1882 and a two-page bulletin that grew into *The Wall Street Journal* (first issue 1889). In 1884 Dow began averaging a short list of active stocks, mostly railroads; then, on May 26, 1896, he published the first **Dow Jones Industrial Average** — twelve industrial companies, their prices simply added and divided by twelve, computed by hand. It stood that day at 40.94. The number itself mattered less than the idea: now a farmer in Kansas and a banker in Boston could both know what "the market" did today — and, in time, whether the man managing their money had done any better.

How they figured it out. Dow's arithmetic was a newspaperman's, not a mathematician's: add twelve prices, divide by twelve. That makes the DJIA **price-weighted** — a $200 stock sways it ten times as much as a $20 stock, regardless of company size — a quirk it keeps to this day, with thirty stocks and a special divisor adjusted for splits. Most modern indexes instead weight by size: the **S&P 500**, descended from Poor's firm, is **capitalization-weighted**, moved most by the largest companies. Learn the exam's short list: **DJIA** — 30 large U.S. industrials, price-weighted; **S&P 500** — 500 large U.S. companies, cap-weighted, the standard large-cap benchmark; **Russell 2000** — U.S. small-cap; **MSCI EAFE** — developed markets of Europe, Australasia and the Far East, the international stock benchmark; **Bloomberg U.S. Aggregate** — the broad investment-grade bond benchmark. The matching rule is the tested skill: a benchmark is only honest when it holds what the portfolio holds. Grade a small-cap fund against the Russell 2000, an international fund against EAFE, a bond fund against the Aggregate — and never a bond fund against the S&P 500, the exam's favorite mismatch.

The big idea: the return family. Begin with **total return**: income *plus* appreciation. The warm-up stock delivered $3 of gain and $2 of dividend on $50: **holding period return** $= \dfrac{(53-50)+2}{50} = 10\%$. HPR ignores time, so to compare investments held for different spans, **annualize**: a 10% HPR earned in six months is about 20% a year at the same pace ($10\% \times \frac{12}{6}$); earned over two years, about 5% a year by the simple method (compounding gives 4.88% — the exam is normally content with the simple

version, and says so by offering round choices). Distinguish **yield** from total return: the $2 dividend on a $50 stock is a 4% **current yield** — income only — while total return was 10%; a bond fund can have a handsome yield and a negative total return in the same year if prices fall. **Expected return** is the probability-weighted average of outcomes: a 30% chance of +20%, 50% chance of +8% and 20% chance of −10% expects $0.3(20) + 0.5(8) + 0.2(-10) = 6 + 4 - 2 = 8\%$.

The big idea: whose return is it? Now the distinction the exam contrasts by name. A portfolio's **time-weighted return** chains together the return of each sub-period, giving every period equal weight no matter how much money happened to be invested — deposits and withdrawals cannot distort it. That is why it is the industry standard for judging *managers* and the required basis for mutual fund performance figures: the manager does not control when clients add or pull money, so he is graded as if money never moved. The **dollar-weighted return** — an internal rate of return on actual cash flows — weights each period by the dollars invested in it, so it captures the *investor's* timing. The two can differ sharply: if a client doubles her investment right before a bad year, her dollar-weighted return sinks below the fund's time-weighted return, because her biggest dollars caught the worst stretch. Catechism: **time-weighted judges the manager; dollar-weighted judges the investor's cash-flow timing.** Finally, adjust for what matters: **real return** strips inflation (approximately nominal minus inflation: earn 7% while prices rise 3% and your purchasing power grew about 4%), and **after-tax return** strips the tax bill (an 8% return taxed at 25% nets 6%) — a steward spends only real, after-tax dollars.

The report card, risk-adjusted. Raw return is half a grade; Lesson 8.1's tools finish it. The **Sharpe ratio** — excess return per unit of standard deviation — lets you compare portfolios of different volatility. **Alpha** — actual return minus the CAPM expectation — asks whether the manager earned more than his beta alone would explain; a fund that returned 15% with a beta of 1.6 in a market that would predict 14.2% earned only 0.8% of skill. Put the pieces together the way an adviser must in an annual review: compute the total return, state it time-weighted, set it beside the *matching* benchmark, subtract inflation and taxes to show what the client truly kept, and then ask the risk-adjusted question before praising or firing anyone. A manager who "beat the market" by holding a beta of 1.5 in a bull market has not necessarily done anything but borrow the client's courage.

Think it through. “Give an account of thy stewardship” (Luke 16:2) is the oldest performance review on record, and honest measurement is a moral discipline before it is a mathematical one. Every trick of dishonest reporting is a mismatch dressed up: a bond fund graded against stocks in a bad stock year; a lucky quarter annualized into a prophecy; a return quoted gross of fees, before inflation, before tax; the dollar-weighted consequences of the adviser’s own bad timing quietly blamed on the fund. NASAA’s rules on performance advertising (Unit 4) exist because every one of these has been tried on real clients. The steward’s standard is simpler and harder: measure as you would be measured.

On the exam today. HPR is a near-certain calculation — remember the dividend goes in the numerator — and expect to annualize a short HPR by simple multiplication. Expected return is a probability-weighted sum; show no fear. Real return: subtract inflation (the approximation is accepted); after-tax: multiply by one minus the rate. The time-weighted/dollar-weighted contrast is tested in words: “which return measure evaluates the manager without distortion from client deposits?” (time-weighted) and “which reflects the investor’s own timing?” (dollar-weighted/IRR). Benchmarks: expect one mismatch question (the S&P 500 is wrong for a bond or small-cap fund) and one identification (DJIA = 30 stocks, price-weighted; S&P 500 = cap-weighted; Russell 2000 = small-cap; EAFE = international developed; Bloomberg Aggregate = bonds). And remember from 8.1: Sharpe divides by standard deviation, alpha measures against CAPM — the exam recycles both here.

PICTURE STUDY

The Bulls and Bears in the Market, William Holbrook Beard, 1879 · Oil on canvas · New-York Historical Society

Image: Wikimedia Commons, public domain

William Holbrook Beard made a career of painting animals doing human things, and this is his most famous joke: the market's two moods made flesh and fur, brawling on the exchange steps. Every investor hears the words daily — bulls expect prices to rise, bears expect them to fall — and the picture shows what the struggle feels like from inside the crowd. Charles Dow's great idea, a few years after this canvas, was to stop watching the brawl and start measuring it: one average, computed the same way every day, that tells you which side is actually winning.

Look closely

- Decide which side is winning in this picture. What did the painter leave uncertain?
- Find the exchange building. How does its calm architecture play against the fight?
- Find one bull-and-bear pair locked together and follow what each is trying to do.
- Notice how far the battle stretches into the distance — the whole street, not one corner.

Talk about it

1. Why do the names “bull” and “bear” fit the two moods of a market?
2. What can a benchmark index tell you that watching the day’s noise cannot? What can it not tell you?
3. Beard painted the market as a brawl. Dow measured it as a number. Which picture is truer, and why might an adviser need both?

PROJECT

The Annual Review: Grade a Pretend Year

You will play adviser at year's end: compute every return measure in this lesson for a pretend portfolio, choose honest benchmarks, and write the one-page client review — the document where measurement and stewardship meet.

You will need

- Exam notebook and calculator
- Free spreadsheet (Google Sheets or LibreOffice Calc)
- Graph paper for the benchmark chart
- The in-this-example data in step 1

Steps

1. Copy the pretend year: a client began with $50,000 in a large-cap U.S. stock fund (fund return +10% with $1,000 of dividends counted inside it), $30,000 in a bond fund (+3%), and $20,000 in a small-cap fund (−4%). Benchmarks returned: S&P 500 +9%, Bloomberg Aggregate +3.5%, Russell 2000 −2%. Inflation 3%; the client's tax rate on the year's distributions 15%.
2. Compute each fund's dollar result and the whole portfolio's weighted return (weights 50/30/20).
3. Build the benchmark match-up: a three-row table pairing each fund with its proper index, the fund return, the index return, and over/under in percentage points.
4. Draw the match-up as a hand-drawn bar chart: paired bars per fund, fund beside benchmark, labeled.
5. Adjust the portfolio return: real (subtract inflation) and a rough after-tax figure, stated with the honest caveat that only the taxable share is taxed.
6. Timing study: suppose the client added $25,000 to the small-cap fund on July 1, just before its bad half. In two sentences, explain why her dollar-weighted return now trails the funds' time-weighted returns, and whose "fault" the gap is.

7. Write the one-page review in plain English: what the portfolio earned (time-weighted, against matched benchmarks), what inflation and taxes kept, one risk-adjusted observation, and one recommendation — rebalance, stay the course or adjust — with its reason.
8. Read the review aloud to a parent playing the client; answer two of their questions without jargon.

Tips

- Never grade the bond fund against the S&P 500 — build the table so each row's pairing is defensible out loud.
- Write the review as if a regulator and the client's grandmother will both read it; both standards are real.

Check your work

- ☐ My weighted portfolio return, real return and after-tax figures are computed correctly and labeled.
- ☐ Every fund is matched to the right index, and my bars show over/under honestly.
- ☐ My timing paragraph uses time-weighted and dollar-weighted correctly.
- ☐ My one-page review contains no promise, no mismatch and no unexplained number.

EXAM NOTEBOOK

1. Formula page: HPR, simple annualization, expected return, real return and after-tax return, each with a two-line worked example.
2. Make the benchmark table from memory: DJIA (30, price-weighted), S&P 500 (large-cap, cap-weighted), Russell 2000 (small-cap), MSCI EAFE (international developed), Bloomberg U.S. Aggregate (bonds) — and one line on the mismatch trap.
3. Flashcards: time-weighted vs dollar-weighted (who is judged by each), total return vs yield, price-weighted vs cap-weighted, real vs nominal, and "dividend goes in the HPR numerator."

KEY FORMULAS

$$\text{HPR} = \frac{(\text{ending} - \text{beginning}) + \text{income}}{\text{beginning}}$$

$$\text{Annualized (simple)} = \text{HPR} \times \frac{12}{\text{months held}}$$

$$\text{Expected return} = \sum p_i \, r_i$$

$$\text{Real return} \approx \text{nominal return} - \text{inflation}$$

From history. Poor's Publishing merged with the Standard Statistics Company in 1941 to form Standard & Poor's, and in 1957 the firm's computers began calculating the S&P 500 — five hundred companies, weighted by market value, updated continuously: Dow's one-number idea grown to the benchmark against which most of the world's managers are now graded.

WORKED EXAMPLES

Example 1. An investor buys a stock for \$80, collects \$4 in dividends over 18 months, and sells for \$86. Find the holding period return and the simple annualized return.

Show solution

1. Total gain: appreciation \$6 plus income \$4 = \$10.
2. HPR: $\$10 \div \$80 = 12.5\%$ over 18 months.
3. Annualize (simple): $12.5\% \times \frac{12}{18} = 8.33\%$ per year.

Answer: HPR 12.5%; about 8.3% annualized. Forgetting the \$4 dividend (7.5% HPR) is the planted wrong answer.

Example 2. An analyst assigns a stock a 25% probability of returning +24%, a 50% probability of +8%, and a 25% probability of −12%. Find the expected return.

Show solution

1. $0.25 \times 24 = 6.0$.
2. $0.50 \times 8 = 4.0$.
3. $0.25 \times (-12) = -3.0$.
4. Sum: $6.0 + 4.0 - 3.0 = 7.0\%$.

Answer: 7.0% — the probability-weighted average, with the loss branch subtracted, not ignored.

Example 3. A portfolio returned 9% in a year when inflation ran 3.5%, and the investor's tax rate on the gains was 20%. Find the approximate real return and the after-tax return (separately).

Show solution

1. Real (approximate): $9\% - 3.5\% = 5.5\%$.
2. After-tax: $9\% \times (1 - 0.20) = 7.2\%$.
3. Note: after tax AND inflation, the investor truly kept about $7.2\% - 3.5\% = 3.7\%$ of purchasing power.

Answer: Real return about 5.5%; after-tax return 7.2%; both adjustments together leave about 3.7% — the number a steward actually spends.

Example 4. Exam-style: Which return measure is the industry standard for comparing mutual fund managers, and why?

A. Dollar-weighted, because it reflects actual client cash flows

B. Time-weighted, because deposits and withdrawals the manager cannot control do not distort it

C. Holding period return, because it is simplest

D. Current yield, because income is what clients spend

Show solution

1. A — wrong for managers, right for a different question: dollar-weighted (IRR) grades the INVESTOR'S timing of deposits and withdrawals.
2. B — correct: time-weighting chains sub-period returns with equal weight, isolating the manager's results from cash-flow timing he does not control.
3. C — wrong: HPR ignores both time and cash flows; fine for one lump sum, useless for comparing funds.
4. D — wrong: yield ignores price change entirely — a fund can yield 6% and lose money.

Answer: B. Time-weighted judges the manager; dollar-weighted judges the investor. The exam states one and asks for the other.

PRACTICE

1. Easy A stock bought at $40 pays $1 in dividends and is sold a year later at $43. The holding period return is:

   A. 7.5%

   B. 10.0%

   C. 2.5%

   D. 12.5%

   Show answer

   B. $(3 + 1) \div 40 = 10\%$. A forgets the dividend; C counts only the dividend — both halves of total return belong in the numerator.

2. Easy Which index is price-weighted, so that a high-priced share moves it more than a large company?

   A. S&P 500

   B. Russell 2000

   C. Dow Jones Industrial Average

   D. MSCI EAFE

   Show answer

   C. The DJIA still averages its 30 members' prices (with a divisor), as Charles Dow did by hand in 1896. The others are capitalization-weighted.

3. Easy In one sentence: what is the difference between a fund's yield and its total return?

   Show answer

   Yield measures only the income (dividends or interest) against the price; total return adds the change in the investment's value — so a high-yield fund can still have a negative total return.

4. Medium An investment earned a 4% holding period return over 3 months. Its simple annualized return is:

   A. 4%

   B. 8%

   C. 12%

   D. 16%

   Show answer

   D. Three months is a quarter of a year: $4\% \times 4 = 16\%$. C multiplies by 3 — months held, not periods per year.

5. **Medium** A portfolio returned 8% while inflation was 3%. The investor's approximate real return is:

   A. 11%

   B. 8%

   C. 5%

   D. 2.67%

   Show answer

   C. Real return ≈ nominal − inflation = $8\% - 3\% = 5\%$. A adds; D divides — purchasing power grew by about five percent, the number the client can actually spend.

6. **Medium** The most appropriate benchmark for a diversified U.S. small-cap stock fund is:

   A. The S&P 500

   B. The Russell 2000

   C. The Bloomberg U.S. Aggregate

   D. The MSCI EAFE

   Show answer

   B. Russell 2000 is the small-cap standard. The S&P 500 (A) holds large caps — the exam's classic mismatch; C is bonds and D is international.

7. **Medium** A client wants to know how well her fund's MANAGER performed, excluding the effect of her own deposits and withdrawals. She should look at the fund's:

   A. Dollar-weighted return

   B. Time-weighted return

   C. Current yield

   D. After-tax return

   Show answer

   B. Time-weighting removes the distortion of cash flows the manager cannot control; that is why fund performance must be reported this way. A answers the opposite question — her own timing.

8. Hard A stock has a 40% chance of returning +15%, a 40% chance of +5%, and a 20% chance of −20%. Its expected return is:

   A. 0%

   B. 4%

   C. 6%

   D. 8%

   Show answer

   B. $0.4(15) + 0.4(5) + 0.2(-20) = 6 + 2 - 4 = 4\%$. C ignores the loss branch; the probability-weighted loss must be subtracted, not dropped.

9. Hard A fund reports a +12% time-weighted return for the year, yet a client who invested most of her money in September computed a −3% return on her own cash flows. Explain both numbers and name the measure she computed.

   Show answer

   The fund's portfolio genuinely earned 12% across the year (time-weighted), but her largest dollars were only invested for the autumn, which was negative; her internal rate of return on actual cash flows — the dollar-weighted return — is −3%. Neither number is false; they answer different questions (manager versus her timing).

10. Hard An adviser's report shows a municipal bond portfolio "outperforming" the S&P 500 in a year stocks fell 15%. What is wrong, and what two corrections make the report honest?

    Show answer

    The benchmark is mismatched — a bond portfolio measured against a large-cap stock index proves nothing in either direction. Honest corrections: benchmark against a bond index (such as the Bloomberg U.S. Aggregate or a municipal index), and present time-weighted total return net of fees, with the comparison period stated.

11. Medium In the story of the first benchmarks: what did Charles Dow publish on May 26, 1896, and how was it computed?

A. The S&P 500, weighted by market value

B. An average of twelve industrial stocks, their prices summed and divided by twelve

C. A railroad bond index weighted by par value

D. The first mutual fund prospectus

Show answer

B. Dow added twelve industrial share prices and divided by twelve — by hand — getting 40.94; price-weighting survives in today's 30-stock DJIA. Poor's railroad manuals (from 1868) supplied facts, not an index.

12. Challenge A stock is bought for \$60, pays \$1.50 in dividends over 8 months, and is sold for \$63. Inflation ran 2% during the period. Compute the HPR, the simple annualized return, and the approximate annualized real return.

Show answer

HPR: $(3 + 1.50) \div 60 = 7.5\%$ over 8 months. Annualized: $7.5\% \times \frac{12}{8} = 11.25\%$. Inflation 2% over 8 months is 3% annualized, so the real return is about $11.25\% - 3\% = 8.25\%$ a year.

COMMON MISTAKES

- Leaving the dividend out of the holding period return — income and appreciation both belong in the numerator.
- Annualizing by the wrong factor: multiply the HPR by 12 over the months held, not by the number of months.
- Reversing the pair: time-weighted judges the manager; dollar-weighted (IRR) reflects the investor's cash-flow timing.
- Benchmark mismatches — grading a bond or small-cap fund against the S&P 500 is the exam's standing trap.
- Forgetting to subtract the probability-weighted loss branch in an expected-return calculation.

Make it a game · Beat the Benchmark. Write the five index names on five cards and spread them out. A parent fires portfolio descriptions — "a fund of 2,000 small U.S. companies," "blue-chip bonds," "stocks of Japan, Germany and Australia," "500 of the largest U.S. companies" — and you slap the matching card within five seconds. Then switch to speed math: the parent gives purchase price, dividend and sale price, and you call the HPR before a sibling does (start with round numbers like $50 buys). One point per slap or HPR; subtract one for any bond fund graded against the S&P 500. Eleven points wins the corner office.

Scripture. "And he called him, and said unto him, How is it that I hear this of thee? give an account of thy stewardship; for thou mayest be no longer steward." (Luke 16:2, KJV)

The steward in the parable is summoned to show his books, honestly measured. Performance measurement is that summons made routine: true numbers, fair benchmarks and full disclosure are how an adviser gives account of a stewardship — before the client, the regulator, and the Lord who hears of it.

UNIT 8

Building and Measuring Portfolios

A steward rarely watches over one talent; he watches over several at once, and the question is never only “how did this stock do?” but “how is the whole household doing?” This unit is about the **whole portfolio**. You will meet Harry Markowitz, a graduate student reading in a Chicago library in 1950, who noticed that nobody had ever put a number on risk, and whose 1952 paper won a Nobel Prize; you will learn the **CAPM** formula the exam loves, the three forms of the **efficient market hypothesis**, and the **Sharpe ratio**. Then come the working tools: asset allocation and the styles of investing (John Bogle’s 1974 founding of Vanguard tells the active-versus-passive story), and the quiet techniques — diversification, rebalancing and dollar-cost averaging — practiced for fifty years by an IRS auditor named Anne Scheiber, who turned a modest nest egg into millions for charity.

The last two lessons take you onto the trading floor and into the report card. You will learn the order types (market, limit, stop and stop-limit), margin accounts under Regulation T, principal versus agency capacity, and the duty of best execution — told through “May Day,” the first of May 1975, when fixed commissions died on the New York Stock Exchange and the cost of trading collapsed. Finally you will measure performance the way the Series 65 demands: holding period return, annualized, real, time-weighted versus dollar-weighted, and matched against the right benchmark, from Charles Dow’s hand-computed average of 1896 to the index families of today. This unit completes the exam’s section on investment vehicle characteristics and strategies; by its end you can build a pretend portfolio, run it honestly and grade it fairly.

PREREQUISITES

- Can compute percents, decimals and weighted averages, and use a simple spreadsheet
- Can explain stocks, bonds, mutual funds and ETFs, and read a quote (from Units 5 and 6)
- Can define standard deviation and beta as risk measures (from Unit 7)
- Can compute current yield and simple interest, and tell income from appreciation

MASTERY CHECKLIST

- ☐ I can explain modern portfolio theory: judge risk and return at the level of the whole portfolio, and let correlation do the work of diversification.
- ☐ I can compute an expected return with CAPM, find alpha against it, state the three forms of the efficient market hypothesis, and compute a Sharpe ratio.
- ☐ I can distinguish strategic from tactical asset allocation, active from passive management, and growth, value and income styles.
- ☐ I can work a dollar-cost averaging table and show why average cost per share falls below average price, and explain rebalancing, hedging with puts and income from covered calls.
- ☐ I can name every common order type, say exactly what a stop order does when triggered, and work a Regulation T margin deposit.
- ☐ I can explain principal versus agency capacity, markups versus commissions, and the adviser's duty of best execution.
- ☐ I can compute holding period, annualized, real, after-tax and probability-weighted expected returns, and contrast time-weighted with dollar-weighted return.

- ☐ I can match a portfolio to its proper benchmark and name what the DJIA, S&P 500, Russell 2000, EAFE and Bloomberg Aggregate each measure.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **Investor.gov: Asset Allocation**: Free from the SEC's investor-education site. A plain-English page on dividing a portfolio among stocks, bonds and cash, with the risk-and-time-horizon reasoning Lesson 8.2 teaches. Ages 14 and up.
- **Investor.gov: Types of Orders**: Free from the SEC. Official one-page definitions of market, limit and stop orders — read it beside Lesson 8.4 and notice how exactly its wording matches the exam's. Ages 14 and up.
- **Federal Reserve Bank of St. Louis: Economic Education**: Free lessons, videos and the FRED data tool from the St. Louis Fed. Use FRED to chart a stock index against inflation for the real-return work in Lessons 8.1 and 8.5. Ages 14 and up.
- ***The Stock Market Barometer*, by William Peter Hamilton (1922)**: Free on the Internet Archive. Dow's successor at the *Wall Street Journal* explains how Charles Dow's averages were meant to be read. Skim the opening chapters with Lesson 8.5. Ages 15 and up.
- **Poor's *Manual of the Railroads of the United States* (1868)**: Free on the Internet Archive. Henry Varnum Poor's first annual manual — the grandfather of Standard & Poor's. Browse a few railroad pages with Lesson 8.5 to see what investors knew before indexes existed. Ages 15 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

8.1 Capital Market Theory: Markowitz, CAPM and Efficient Markets

3 sessions of 50 minutes

8.2 Strategies and Styles: Allocation, Active and Passive

3 sessions of 50 minutes

8.3 Techniques: Diversification, Rebalancing and Dollar-Cost Averaging

3 sessions of 50 minutes

8.4 **Trading: Orders, Margin and Best Execution** 3 sessions of 50 minutes

8.5 **Measuring Performance: Returns, Benchmarks and Risk Adjustment**

3 sessions of 50 minutes

Unit 8 test

Closed book. Allow about 28 minutes for these 20 questions — roughly 83 seconds each, the real exam's pace — and answer every question; there is no penalty for guessing. Calculators are allowed. Where a problem says "in this example," use the figures given, not current rates or law. Each question is worth 5 points; the test is worth 100.

1. **5 pts**

   The risk-free rate is 3% and the expected market return is 9%. Under CAPM, the expected return of a stock with a beta of 1.2 is:

   A. 7.2%

   B. 10.2%

   C. 10.8%

   D. 13.8%

2. **5 pts**

   A fund returned 11% with a beta of 1.0 in a year when the market returned 10% and T-bills paid 2%. Its alpha was:

   A. +1.0%

   B. +9.0%

   C. −1.0%

   D. 0.0%

3. 5 pts

Under the WEAK form of the efficient market hypothesis, which activity cannot consistently produce superior returns?

A. Fundamental analysis of financial statements

B. Technical analysis of past prices and volume

C. Acting on material nonpublic information

D. Both A and B

4. 5 pts

A portfolio earned 12% with a standard deviation of 16% while the risk-free rate was 4%. Its Sharpe ratio is:

A. 0.75

B. 0.50

C. 3.00

D. 1.33

5. 5 pts

The famous Brinson studies of pension funds are correctly summarized as finding that asset allocation policy explained most of a portfolio's:

A. Alpha

B. Variability of returns over time

C. Tax liability

D. Trading costs

6. 5 pts

A portfolio is 60% stocks returning 11%, 30% bonds returning 4%, and 10% cash returning 1%. The portfolio return is:

A. 5.33%

B. 7.9%

C. 8.4%

D. 16.0%

7. 5 pts

An adviser shifts a client from her 70/30 stock-bond targets to 40/60 for six months because he expects a market decline, intending to shift back afterward. This is:

A. Strategic asset allocation

B. Rebalancing

C. Tactical asset allocation

D. Dollar-cost averaging

8. 5 pts

A fund buys stocks with price-to-earnings ratios well below the market average, in industries currently out of favor, with above-average dividend yields. Its style is:

A. Growth

B. Momentum

C. Value

D. Capital appreciation

9. 5 pts

An investor invests $300 a month for four months at share prices of $10, $12, $6 and $10. Her average cost per share is approximately:

A. $9.50

B. $8.89

C. $8.00

D. $10.00

10. 5 pts

Dollar-cost averaging, accurately described, results in:

A. A guaranteed profit when markets are volatile

B. An average cost per share below the average price per share when prices fluctuate

C. Protection against loss in a steadily declining market

D. Fewer shares purchased when prices are low

11. 5 pts

A portfolio targeted 60% stocks / 40% bonds has drifted to 68% stocks after a rally. A threshold-rebalancing policy set at 5 percentage points requires the adviser to:

A. Do nothing until the annual review date

B. Sell stocks and buy bonds to restore 60/40

C. Buy more stocks to follow the trend

D. Move the portfolio to cash

12. 5 pts

An investor who owns 400 shares of a stock and fears a near-term decline, but wishes to keep the position, would most appropriately:

A. Sell covered calls

B. Buy protective puts

C. Buy additional shares on margin

D. Enter a GTC buy stop order

13. 5 pts

An investor enters a sell stop at $38 on a stock trading at $42. Bad news sends consecutive trades at $39, $37.50, $36. His order most likely executed:

A. At exactly $38

B. At or near $37.50 or the next trade

C. Only if the stock recovers to $38

D. Not at all, because the stock skipped $38

14. 5 pts

Under Regulation T's 50% initial requirement (in this example), an investor buying 400 shares at $35 in a margin account must deposit:

A. $3,500

B. $7,000

C. $14,000

D. $10,500

15. **5 pts**

A broker-dealer fills a customer's buy order out of its own inventory. The firm acted as:

A. Agent, earning a commission

B. Principal, earning a markup

C. Investment adviser, earning a fee

D. Underwriter, earning a spread

16. **5 pts**

Which position exposes an investor to theoretically unlimited loss?

A. Buying stock in a cash account

B. Buying a put option

C. Selling stock short

D. Buying stock on 50% margin

17. **5 pts**

A stock is bought for $25, pays $0.75 in dividends over six months, and is sold for $26.50. The holding period return and simple annualized return are:

A. 6% and 12%

B. 9% and 18%

C. 9% and 9%

D. 6% and 3%

18. **5 pts**

A security has a 30% probability of returning +20%, a 50% probability of +6%, and a 20% probability of −15%. Its expected return is:

A. 3.7%

B. 6.0%

C. 9.0%

D. 11.0%

19. 5 pts

To evaluate a mutual fund MANAGER'S performance without distortion from shareholder deposits and withdrawals, use the fund's:

A. Dollar-weighted return

B. Time-weighted return

C. Current yield

D. After-tax real return

20. 5 pts

The LEAST appropriate benchmark pairing is:

A. Large-cap U.S. stock fund — S&P 500

B. Small-cap U.S. stock fund — Russell 2000

C. Investment-grade bond fund — S&P 500

D. International developed-markets fund — MSCI EAFE

ANSWER KEY

1. B. $3\% + 1.2(9\% - 3\%) = 3\% + 7.2\% = 10.2\%$. C multiplies beta by the full market return without subtracting the risk-free rate first.
2. A. With beta 1.0, CAPM expects the market's 10%; the fund earned 11%, so alpha is $+1\%$. B subtracts the risk-free rate instead of the CAPM expectation.
3. B. The weak form holds only that past market data are fully priced, killing charts while leaving fundamental analysis possible. D describes the semi-strong form.
4. B. $(12 - 4) \div 16 = 0.50$. A forgets to subtract the risk-free rate ($12/16$); remember Sharpe divides excess return by standard deviation, not beta.
5. B. The studies attributed on the order of ninety percent of the variability of returns to the allocation policy — a claim about how returns fluctuate, which careful advisers state modestly.
6. B. $0.6(11) + 0.3(4) + 0.1(1) = 6.6 + 1.2 + 0.1 = 7.9\%$. A is the simple average of the three returns, ignoring the weights.
7. C. A temporary, forecast-driven departure from targets is tactical allocation — market timing. Rebalancing (B) moves toward targets, not away from them.
8. C. Low P/E, out of favor, decent yield — the value signature. Growth (A) is the mirror image: high P/E and rapid earnings momentum.
9. B. Shares: $300/10 = 30$, $300/12 = 25$, $300/6 = 50$, $300/10 = 30$ — 135 shares for \$1,200, so $\$1{,}200 \div 135 = \$8.89$. A is the average *price* ($38 \div 4 = \$9.50$), the planted distractor — note cost lands below it.
10. B. Fixed dollars buy more shares cheap and fewer dear, pulling average cost below average price. A and C are the claims the exam wants denied; D is backwards.
11. B. The 8-point drift exceeds the 5-point threshold, so the discipline sells the overweight winner and buys the laggard. A describes calendar rebalancing, a different policy.
12. B. Puts set a floor under his sale price — insurance for a long position. Covered calls (A) earn income but protect only by the premium's width.
13. B. The \$37.50 print is at-or-through the stop, triggering a market order that fills at the next available price. A stop never guarantees its own price; C describes a sell limit.
14. B. Cost is $400 \times \$35 = \$14{,}000$; half is \$7,000, the broker lending the rest. C is a cash-account purchase.

15. B. Trading from inventory is principal (dealer) capacity, compensated by a markup built into the price. An agent (A) merely matches parties and charges a commission.
16. C. A short seller must repurchase at a price with no ceiling. Long positions (A, D) can lose at most their cost (plus the loan's interest), and an option buyer (B) only the premium.
17. B. HPR: $(1.50 + 0.75) \div 25 = 9\%$ over six months; annualized simply, $9\% \times 2 = 18\%$. A drops the dividend from the numerator.
18. B. $0.3(20) + 0.5(6) + 0.2(-15) = 6 + 3 - 3 = 6\%$. C ignores the loss branch; every probability-weighted outcome, good or bad, enters the sum.
19. B. Time-weighting gives each period equal weight regardless of assets invested, isolating the manager's results; the dollar-weighted (IRR) figure instead reflects the investor's own cash-flow timing.
20. C. A bond fund graded against a large-cap stock index is the exam's classic mismatch; the Bloomberg U.S. Aggregate is the standard bond benchmark. The other three pairings are the textbook matches.

PORTFOLIO PIECE: MY PORTFOLIO LAB

Assemble the record of a working portfolio-builder: three pretend model portfolios — conservative, balanced and growth — each with a hand-drawn allocation pie chart, target percentages and two sentences on the investor it suits; your dollar-cost averaging spreadsheet with its five runs and the falling-market disclaimer; your CAPM worksheet (expected returns at five betas, the security market line, and one alpha computed and interpreted); your one-page benchmark match-up chart pairing each sleeve of your models with its proper index; and your annual-review letter from Lesson 8.5. Close with a one-page reflection on the sower: what diversification, steady buying and honest measurement have to do with "thou knowest not what evil shall be upon the earth," and which discipline you intend to practice with your own first hundred dollars.

LOOK FOR	WHAT IT MEANS
Models	Three allocations are complete, sum to 100%, differ sensibly in risk, and each pie chart is neat, labeled and matched to a written investor profile.
Calculations	CAPM, alpha, Sharpe, weighted returns, DCA average cost versus average price, HPR and real return are all computed correctly, with work shown.
Benchmarks	Every sleeve is paired with a defensible index (no bond sleeve against the S&P 500), and the match-up chart reads clearly at arm's length.
Honesty of claims	Nowhere does the lab promise profit, guarantee protection, or annualize a lucky quarter; disclaimers appear where the techniques require them.
Reflection	The closing page connects Ecclesiastes 11:2 and Luke 16:2 to specific habits — diversifying, steady buying, honest measuring — in the student's own words.

UNIT 9

The Laws

This unit begins the part of the course the Series 65 weighs most heavily: the laws themselves. You will set the five great federal acts in order — 1933, 1934, the two acts of 1940, and the modern amendments of 1996 and 2010 — and then step down to the state level, where the **Uniform Securities Act** gives every state Administrator the power to register, investigate and discipline the people who sell securities and advice. You will meet the four roles the exam never tires of testing — investment adviser, investment adviser representative, broker-dealer and agent — and learn exactly who must register, who is excluded, and who is exempt. You will follow a small firm, Shoemaker & Daughter Advisers, through every page of Form ADV, and you will walk Mr. Howey's Florida orange groves with the Supreme Court in 1946 to learn what a **security** really is.

The stories are true and worth knowing: the SEC's 1939 study of the investment-counsel business that produced the Investment Advisers Act; Christopher Lowe, the barred adviser whose newsletter went all the way to the Supreme Court; and Kansas bank commissioner J. N. Dolley, who in 1911 wrote the first blue-sky law and threw out hundreds of worthless mining and oil schemes. By the end you will answer the exam's favorite questions — "Which of the following must register?" and "Which of the following transactions is exempt?" — quickly, precisely and with reasons.

PREREQUISITES

- Can tell the story of the 1929 crash and the founding of the SEC from Unit 1
- Can define a fiduciary and explain why an adviser is one
- Can read a four-choice exam question carefully and eliminate wrong answers
- Can compute simple interest and percents for the rescission arithmetic in Lesson 9.5

MASTERY CHECKLIST

- ☐ I can name the five major federal securities acts, their dates, and exactly what each one governs.
- ☐ I can explain NSMIA's division of labor: federal covered advisers and securities, state notice filings, and the antifraud power the states always keep.
- ☐ I can apply the assets-under-management lines — under $100 million to the states, $110 million and up to the SEC, and the buffer between — to any adviser scenario.
- ☐ I can apply the three-prong definition of an investment adviser and the exclusions and exemptions for advisers, IARs, broker-dealers and agents to decide who must register.
- ☐ I can describe registration by Form ADV through IARD: the parts of the form, the effective date, renewals, amendments, records and the U4/U5 paperwork for individuals.
- ☐ I can state the Howey test, sort securities from non-securities, and compare registration by coordination, qualification and notice filing.
- ☐ I can distinguish exempt securities from exempt transactions and explain why no exemption ever touches the antifraud provisions.
- ☐ I can list the Administrator's powers and their limits, including

the grounds for denial, summary orders, rescission, civil liability, criminal penalties and appeals.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **Uniform Securities Act of 1956, with NASAA updates and commentary**: Free PDF from NASAA — the very act, in the version NASAA says is tested on its examinations. Skim the table of contents with Lesson 9.2 and look up one section per lesson after that; reading the real text makes the exam's wording familiar. Ages 15 and up.
- **Investor.gov: The Laws That Govern the Securities Industry**: Free from the SEC. One page summarizing the 1933, 1934 and 1940 acts and their later amendments, in the government's own words. Read it alongside Lesson 9.1. Ages 14 and up.
- **SEC v. W. J. Howey Co., 328 U.S. 293 (1946) — the full opinion**: Free at Cornell's Legal Information Institute. Only a few pages long, and the facts section reads like a short story about orange groves and hotel guests. Read it with Lesson 9.4. Ages 15 and up.
- **Lowe v. SEC, 472 U.S. 181 (1985) — the full opinion**: Free at Cornell. The newsletter-publisher case behind the publisher's exclusion in Lesson 9.2. Read the first few pages of facts; the reasoning is for older students who want more. Ages 16 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

9.1 The Federal Acts: 1933, 1934 and the Two Acts of 1940 — 3 sessions of 50 minutes

9.2 Who Must Register: Advisers, Representatives, Broker-Dealers and Agents

3 sessions of 50 minutes

9.3 Registration in Practice: Form ADV, Records and Renewals

3 sessions of 50 minutes

9.4 What Is a Security: The Howey Test and Registration of Issues

3 sessions of 50 minutes

Unit 9 test

Closed book. Allow about 28 minutes for the 20 questions — roughly 83 seconds each, the real exam's pace — and answer every question; there is no penalty for guessing. Where a question supplies dollar figures or rates, use the figures given ("in this example") even if a rule-set amount differs in your state today. Each question is worth 5 points; 100 points possible.

1. **5 pts**

   Which act created the Securities and Exchange Commission?

   A. The Securities Act of 1933

   B. The Securities Exchange Act of 1934

   C. The Investment Advisers Act of 1940

   D. The Uniform Securities Act of 1956

2. **5 pts**

   An investment adviser reports $112 million of assets under management on its annual updating amendment. It must be registered with:

   A. Its home state

   B. The SEC

   C. Both the SEC and its home state

   D. Either, at its option

3. **5 pts**

   Which is a federal covered security?

   A. Shares of a registered open-end investment company

   B. Stock of a local diner sold to town residents

   C. A limited partnership interest sold intrastate

   D. A promissory note between neighbors

4. 5 pts

After NSMIA, which power do the states retain over a federal covered adviser doing business in the state?

A. Requiring the adviser to register

B. Approving its advertising

C. Antifraud enforcement and a notice filing with a fee

D. Setting its minimum net worth

5. 5 pts

First Federal Bank's investment department charges fees for portfolio advice. Under the Uniform Securities Act, the bank:

A. Must register as an investment adviser

B. Is exempt from registration

C. Is excluded from the definition of investment adviser

D. Must register as a broker-dealer

6. 5 pts

Which person is an investment adviser in State W?

A. A CPA answering investment questions incidentally during tax work, no separate fee

B. A firm with no State W office advising 9 retail residents there for fees over the past year

C. The publisher of a monthly financial magazine of general circulation

D. An engineer evaluating a factory bond issue as part of a construction report

7. 5 pts

A teacher of economics accepts $2,000 to deliver a weekend seminar titled "Choosing Stocks for Retirement," recommending specific securities. She is:

A. Excluded as a teacher

B. An investment adviser: specific securities advice, as a business activity, for special compensation

C. Exempt under the snowbird rule

D. An IAR of the school

8. **5 pts**

An individual takes a job with a broker-dealer selling only U.S. government bonds to retail investors. She must:

A. Register as an agent

B. Not register, because government bonds are exempt securities

C. Register as an IAR

D. Register only if she earns commissions

9. **5 pts**

A sales assistant at a broker-dealer, paid a salary only, accepts customer buy orders by phone when her boss travels. Under the USA she is:

A. A clerical employee, excluded

B. An agent who must be registered

C. An agent only if she solicits the orders

D. An IAR

10. **5 pts**

An IAR of a federal covered adviser has offices in States A and B and clients (but no office and no more than five of them) in State C. He must register as an IAR in:

A. A, B and C

B. A and B only

C. C only

D. None of them

11. **5 pts**

Under the USA, a complete initial application for registration as an investment adviser, with fee and consent to service of process and no Administrator action, becomes effective:

A. Immediately upon filing

B. At noon on the 30th day after filing

C. On the following December 31

D. When IARD assigns a CRD number

12. 5 pts

A state-registered adviser with a fiscal year ending September 30 must file its annual updating amendment to Form ADV by:

A. December 29 (90 days after fiscal year end)

B. December 31

C. September 30 of the next year

D. January 30

13. 5 pts

In this example, rule-set minimums are $35,000 net worth for custody and $10,000 for discretion. An adviser with discretionary authority but no custody discovers its net worth is $8,000. It must:

A. Do nothing; it exceeds half the requirement

B. Notify the Administrator by the close of the next business day and cure the deficiency (bond or capital)

C. Convert all accounts to non-discretionary within a year

D. Register with the SEC instead

14. 5 pts

An investment adviser must keep its books and records for ___ years, and a broker-dealer for ___ years.

A. 3; 5

B. 5; 3

C. 5; 5

D. 3; 3

15. 5 pts

An IAR quits a FEDERAL covered adviser to join a STATE-registered adviser. The Administrator must be notified of the departure and the hire, respectively, by:

A. The old firm; the new firm

B. The IAR; the new firm

C. The IAR; the IAR

D. The old firm; the IAR

16. 5 pts

Hotel guests buy one-acre strips of a citrus grove together with a mandatory 10-year service contract under which the seller farms the trees, pools the fruit and remits profits. Under SEC v. W. J. Howey Co., the package is:

A. A real estate sale

B. An investment contract, and therefore a security

C. A commodity transaction

D. A fixed annuity

17. 5 pts

Which of the following IS a security?

A. A fixed annuity

B. A whole life insurance policy

C. A variable annuity

D. A wheat futures contract

18. 5 pts

Which transaction is exempt under the Uniform Securities Act?

A. A broker-dealer's recommended (solicited) sale of unlisted stock to a retail client

B. An unsolicited retail order executed through a broker-dealer

C. An issuer's registered public offering

D. A solicited sale of a nonprofit's bonds to a retail client

19. 5 pts

The Administrator may do all of the following EXCEPT:

A. Issue a cease and desist order without a prior hearing

B. Subpoena witnesses and records relating to another state's investigation

C. Deny a registration solely because denial is in the public interest

D. Summarily suspend a registration pending final determination

20. 5 pts

Eighteen months ago a client paid $8,000 for stock sold in violation of the act and has collected $300 in dividends. At a 6% legal rate (simple interest), a proper rescission offer equals — and the client must respond within:

A. $8,720; 30 days

B. $8,420; 30 days

C. $8,720; 60 days

D. $8,000; 2 years

ANSWER KEY

1. B. The 1934 act created the SEC and governs the secondary market; the 1933 act (new issues and prospectuses) predates the Commission itself.
2. B. At $110 million and above, SEC registration is required. “Both” is never correct after NSMIA, and the either/or option belongs to the $100–110 million buffer.
3. A. Registered investment company shares (with exchange-listed securities) are the classic federal covered category — states may require only a notice filing and fee.
4. C. Registration, books-and-records and net-worth rules follow the SEC for federal covered advisers, but notice filings, IAR registration and antifraud jurisdiction remain with the states.
5. C. Banks, savings institutions and trust companies are excluded from the IA definition entirely — the correct word is excluded, not exempt, and the exam grades the vocabulary.
6. B. Nine retail clients breaks the five-or-fewer de minimis ceiling, and no exclusion applies. A and D are LATE professionals acting incidentally; C is the Lowe publisher’s exclusion.
7. B. The LATE exclusion requires advice solely incidental to teaching with no special compensation; a paid stock-picking seminar fails both conditions.
8. A. Representing a broker-dealer in securities business always requires agent registration; the exempt-security escape belongs only to issuers’ representatives.
9. B. Accepting orders is effecting securities transactions — agent activity regardless of title, salary or solicitation. The clerical exclusion covers typing and filing, not order-taking.
10. B. IARs of federal covered advisers register where they have a place of business — offices in A and B; mere clients in C do not require registration there.
11. B. Noon of the 30th day is the USA’s automatic effective date; December 31 is when every registration expires, not when it begins.
12. A. The annual updating amendment is due within 90 days of the FISCAL year end — here, late December. B is the renewal-fee date, a different obligation that merely falls nearby this time.
13. B. Below-minimum net worth triggers next-business-day notice to the Administrator and a prompt cure, typically a surety bond for the shortfall against the $10,000 discretion standard.

14. B. Advisers five years (the first two in the principal office); broker-dealers three. The reversed pair in choice A is the exam's favorite decoy.
15. B. Leaving a federal covered adviser, the IAR himself notifies (his firm is not state-registered); joining a state-registered adviser, the firm carries the duty.
16. B. Money invested in a common enterprise with profits expected from the efforts of others — the Court looked through the land-sale form to the investment substance.
17. C. In a variable annuity the owner bears the investment risk through a securities-funded separate account. Fixed annuities and whole life shift the risk to the insurer, and futures are commodities law's territory.
18. B. The unsolicited brokerage transaction is the textbook exempt transaction. D involves an exempt SECURITY (the nonprofit's bond) — the transaction itself is ordinary, which is exactly the distinction tested.
19. C. Public interest alone is never sufficient — a listed cause must accompany it. A, B and D are all genuine powers, each with its procedural strings attached.
20. B. Interest: $\$8{,}000 \times 6\% \times 1.5 = \$720$; price plus interest minus income: $\$8{,}000 + \$720 - \$300 = \$8{,}420$. Silence for 30 days after receiving the offer ends the claim; A forgets the dividend subtraction and C borrows the appeal period.

PORTFOLIO PIECE: MY LAW BOOK

Assemble, by hand, the four exhibits a future investment adviser representative should be able to produce from memory: (1) the four-roles grid — investment adviser, IAR, broker-dealer and agent across the top; definition, exclusions, exemptions and when registration is required down the side — filled in with the hinge words that decide real exam questions; (2) the two-column securities chart, at least ten entries per side, with the swap-pairs (fixed/variable annuity, whole/variable life) starred; (3) the three registration methods compared — coordination, qualification, notice filing — with who uses each and when each becomes effective; and (4) the Administrator's powers one-pager: the CAN and CANNOT columns, the two-part key for discipline, and the number wall (15/30/60 days, 1 year, 10 years, 2-or-3 years, $5,000/3 years). Write every page yourself — the hand remembers what the eye merely visits — and bind them into your exam notebook as the law section you will review the night before the real Series 65.

LOOK FOR	WHAT IT MEANS
Accuracy	Every definition, exclusion, exemption, dollar figure and deadline matches the USA/NASAA conventions taught in the unit; rule-set amounts are labeled as conventions.
Completeness	All four exhibits are present: the full four-roles grid, ten-plus entries per column on the securities chart, all three registration methods with effective dates, and both CAN and CANNOT columns with the number wall.
Exam readiness	The pages surface the tested traps — excluded vs. exempt, the BD's agent selling exempt securities, offerees vs. purchasers, public-interest-plus-cause — where the eye lands first.
Craftsmanship	Handwritten, ruled, legible at arm's length, with color or stars used purposefully; a page a younger sibling could study from.
Understanding	In a ten-minute oral review, the student explains any exhibit entry in his or her own words and answers two cold scenario questions per exhibit correctly.

9.1 The Federal Acts: 1933, 1934 and the Two Acts of 1940

OBJECTIVES

- Name the major federal securities acts and state precisely what each one governs.
- Explain how NSMIA (1996) split regulation between the SEC and the states, and define federal covered adviser and federal covered security.
- Apply the Dodd-Frank assets-under-management thresholds to decide whether an adviser registers with the SEC or a state.
- Explain which powers the states keep over every adviser and security: antifraud authority and notice filings.
- Place the acts on a timeline from the Kansas blue-sky law of 1911 to Dodd-Frank in 2010.

> **Warm-up.** Down the margin of a page write these years: 1911, 1929, 1933, 1934, 1940, 1996, 2010. From memory (Unit 1 will help with the early ones), write one phrase beside each for what happened in American securities law that year. Leave blanks where you are stuck; you will fill them all in by the end of the lesson.

WATCH

Investment Advisers Act of 1940 Explained for the Series 65 Exam!

Business with Mr. G · 15:53

https://www.youtube.com/watch?v=nyRac0aTYbE

> **WHEN TO WATCH**
> After the story, before the worked examples; as you watch, list each act he names next to its year and its one-sentence job.

BACKUP VIDEO

Investment Company Act of 1940 Definition

Simple Explain · 3:42

https://www.youtube.com/watch?v=Aw7u3DXvor4

A short second pass on the Investment Company Act after the core ideas; name the three company types it governs as you listen.

KEY TERMS

Securities Act of 1933

The federal "paper act": new issues sold to the public must be registered with the SEC and sold with a prospectus, and fraud in any securities sale is forbidden.

Securities Exchange Act of 1934

The federal "people and places act": it created the SEC and regulates the secondary market — exchanges, broker-dealers, manipulation, margin and corporate reports.

Investment Company Act of 1940

The federal act regulating pooled investments — mutual funds, closed-end funds, unit investment trusts and face-amount certificate companies — and requiring them to register with the SEC.

Investment Advisers Act of 1940

The federal act defining investment advisers and requiring the larger ones to register with the SEC; the Supreme Court later read a fiduciary duty into it.

NSMIA (1996)

The National Securities Markets Improvement Act, which ended double regulation by assigning each adviser and many securities to either federal or state oversight, never both.

federal covered adviser

An investment adviser registered (or required to be registered) with the SEC, or excepted from state registration by federal law; states may require only a notice filing and a fee.

federal covered security

A security exempt from state registration under NSMIA — chiefly securities listed on a national exchange such as the NYSE or Nasdaq, and investment company shares registered under the Investment Company Act.

Dodd-Frank Act (2010)

The post-2008 reform law that, among much else, raised the line for SEC adviser registration from $25 million to about $100 million of assets under management.

assets under management (AUM)

The total market value of the client portfolios an adviser continuously and regularly manages; the measuring stick for SEC versus state registration.

notice filing

The paperwork and fee a state may require from a federal covered adviser or the issuer of a federal covered security, without any power to approve or deny.

CORE IDEAS

The story. In the late 1930s a team of SEC lawyers and accountants was deep in a mountain of questionnaires. Congress, in the Public Utility Holding Company Act of 1935, had ordered the Commission to study the investment trusts that had collapsed so spectacularly after 1929, and the study kept growing. One supplemental volume, transmitted to Congress on August 13, 1939, carried the unwieldy title *Investment Counsel, Investment Management, Investment Supervisory, and Investment Advisory Services* — the first serious federal survey of the people who sold investment advice for a living. The study found a young profession with honest practitioners and no fence around it: anyone at all could hang out a shingle as an "investment counselor." The honest firms themselves, organized as the Investment Counsel Association, supported a federal law, because their own code of practice could not stop a rascal from borrowing the title. On August 22, 1940, Congress passed two acts on the same day: the Investment Company Act, regulating the funds, and the Investment Advisers Act, regulating the advisers. Your future license descends directly from that 1939 study.

How they figured it out. The lawmakers of the 1930s worked like builders raising a house one story at a time. The 1933 act answered the first scandal — worthless paper sold to the public — by forcing **disclosure**: register the new issue, hand every buyer a prospectus, and answer in court for any lie. The 1934 act answered the second scandal — manipulated markets — by creating a permanent policeman, the **SEC**, and putting exchanges, broker-dealers and listed companies under its eye. The twin acts of 1940 extended the same pattern to pooled funds and to advisers. Notice the method: Congress did not forbid risky investments; it required honest dealing and sunlight, and left judgment to the investor. The states had been at this even longer — Kansas since 1911 — so from 1933 to 1996 nearly everything was regulated twice, once in Washington and once in each state capital.

The big idea. Keep a one-line map of each act. **1933** — the paper: new issues, registration, prospectus, antifraud in every sale. **1934** — the people and places: the SEC itself, exchanges, broker-dealers and their agents, margin (set by the Federal Reserve), manipulation, insider reporting, and the regular public reports of listed companies. **Investment Company Act of 1940** — the funds: face-amount certificate companies, unit investment trusts and management companies must register with the SEC and follow rules about their boards, capital and dealings. **Investment Advisers Act of 1940** — the advisers: who counts as one, who must register federally, and how they must deal with clients. Beneath all of these stand the state blue-sky laws, harmonized since 1956 by the **Uniform Securities Act**, which is the law this exam actually tests; the federal acts are the frame around it.

Then came 1996. Sixty years of double regulation meant a national adviser might register in Washington and in forty state capitals besides. The National Securities Markets Improvement Act — **NSMIA** — untangled it with a clean rule: every adviser answers to one registration authority, never both. Large advisers became **federal covered advisers**, registered with the SEC and merely *notice filing* in the states; smaller advisers register with the states and not the SEC. NSMIA did the same for much paper: a **federal covered security** — chiefly anything listed on the NYSE or Nasdaq, and registered investment company shares — cannot be required to register in any state, though a state may require a notice filing and a fee (mutual funds are the classic case). Two state powers survived untouched, and the exam loves them: a state may still demand notice filings with fees, and the Administrator keeps **antifraud jurisdiction over everyone** — a federal covered adviser who defrauds a client in Ohio will meet the Ohio Administrator, registration or no registration.

Dodd-Frank moved the line. NSMIA first drew the SEC/state boundary at $25 million of assets under management; the Dodd-Frank Act of 2010 pushed it up so the SEC could concentrate on large firms. The figures the exam expects: an adviser with less than $100 million of AUM registers with the **states**; from $100 million up to $110 million sits a **buffer zone** where the adviser may choose either; at $110 million and above, SEC registration is **required.** Once registered with the SEC, a firm need not leave until its AUM falls below $90 million — a cushion so firms do not flip back and forth with every market swing, measured once a year on the annual updating amendment. A few special doors into the SEC exist at any size: an adviser to a registered investment company always registers with the SEC, an adviser required to

register in fifteen or more states may choose the SEC, and pension consultants above a rule-set level (in this example, $200 million of plan assets) may elect it. The exam tests the big numbers far more than the fine print.

Mid-size advisers, briefly. Dodd-Frank calls the $25-to-$100-million firms "mid-size advisers" and sends them to the states — but only where the state actually registers and examines advisers. In a state that does not subject advisers to examination (New York has long been the example), a mid-size adviser registers with the SEC instead. That is as deep as the exam goes; if a question mentions a mid-size adviser in New York, think SEC.

On the exam today. The Series 65 asks this material three ways. First, match the act: "Which act requires a prospectus?" (1933); "Under which act was the SEC created?" (1934); "Mutual funds are regulated primarily under…" (the Investment Company Act of 1940). Second, place the adviser: give yourself the AUM number and answer in one breath — under $100 million, state; $110 million or more, SEC; between, either; below $90 million an SEC-registered firm must finally switch. The trap answer is always "both" — after NSMIA an adviser is never registered with both the SEC and a state. Third, the surviving state powers: whatever the question says about a federal covered adviser or security, the state may still collect a notice filing and may always pursue fraud. If an answer choice strips the states of antifraud power, it is wrong.

PICTURE STUDY

The United States Capitol, National Photo Company, 1920 · Photograph from a glass negative · National Photo Company Collection, Library of Congress, Washington, D.C.

Image: Wikimedia Commons, public domain

A National Photo Company cameraman set his tripod in the snow one winter night in 1920 and caught the Capitol dome shining between bare branches. Within the next twenty years the men and women working under that dome would write every federal act in this lesson — 1933, 1934 and the twin acts of 1940. The building glows because the work inside it went on after dark; so, in the crisis years, did the lawmaking.

Look closely

- Find the dome. Why do you think the photographer chose to frame it between dark branches instead of standing in the open?
- Notice the lamps along the walk and the light on the snow. What time of night does this feel like?
- Find the statue and the stone wall in the foreground. How do they make the distant building feel farther away?
- The picture is from 1920 — before the crash of 1929. What securities laws existed in America then, and where were they made?

Talk about it

1. Congress built the securities laws one story at a time — 1933, 1934, 1940. Why might slow, layered lawmaking serve better than one law written in a panic?
2. The Capitol here is lit but far away. How close did federal law actually come to an ordinary investor in Kansas before 1933?
3. Romans 13 calls rulers 'ministers of God… for good.' What good, specifically, did the acts of 1933–1940 aim to do for the widow buying a bond?

PROJECT

The Map of the Laws

You will build the one-page map of American securities law that you will use for the rest of the course: a timeline poster from Kansas in 1911 to Dodd-Frank in 2010, with each law's trigger, territory and tools.

You will need

- A large sheet of paper or poster board, ruler and fine markers
- Your exam notebook
- The Investor.gov page "The Laws That Govern the Securities Industry" from the kit list
- This lesson's core ideas for checking dates

Steps

1. Draw a horizontal timeline and mark 1911, 1929, 1933, 1934, 1940 (twice), 1956, 1996 and 2010.
2. Above each mark, write the law's name; below it, three short lines: the scandal or need that triggered it, what it governs, and its chief tool (prospectus, SEC oversight, fund rules, adviser registration, uniformity, preemption, new AUM lines).
3. Draw one vertical band for the states (1911 onward, refreshed 1956) and one for the federal government (1933 onward) so the two layers are visible at a glance.
4. Add the NSMIA split as a fork: federal covered advisers and securities to the SEC side; everyone else to the state side; write "antifraud: states always" across both.
5. Add the Dodd-Frank numbers in a box: under $100M state, $100–$110M either, $110M+ SEC, below $90M switch back.
6. Check every date against the lesson and the Investor.gov page; correct in ink only when verified.
7. Explain the whole poster to a parent in under five minutes, then hang it where you study.

Tips

- Use one color for federal acts and another for state law so the two layers never blur.
- Keep each description to three short lines; a map you cannot read at arm's length is a map you will not use.

Check your work

- ☐ Every act has the correct year and a one-line description of what it governs.
- ☐ The NSMIA fork and the Dodd-Frank dollar lines are drawn and correct.
- ☐ I explained the poster aloud without reading it word for word.

EXAM NOTEBOOK

1. Make a five-row table in your exam notebook: act, year, nickname ("paper act," "people act," "funds act," "advisers act"), what it governs, one exam trap.
2. Draw the AUM number line from $0 to $150 million and shade the state zone, the buffer, the SEC zone and the $90 million switch-back line.
3. Write ten flashcards: five "Which act?" prompts on one side with answers on the back, and five AUM scenarios with the correct regulator on the back.

> **From history.** The two acts of 1940 were signed the same day, August 22, 1940, and for years the Advisers Act was the quieter twin — barely forty advisers' worth of staff attention at the SEC. It grew teeth in 1963, when the Supreme Court in SEC v. Capital Gains Research Bureau read into it a broad fiduciary duty, the duty you studied earlier in this course. A statute written from a dusty 1939 study became the charter of a profession.

Example 1. Granite Ridge Advisers manages client portfolios of $87 million. Two years later AUM has grown to $104 million, and the year after that to $126 million. Where must the firm be registered at each stage?

Show solution

1. At $87 million the firm is below $100 million: it registers with the state (it is a mid-size adviser, assuming its state examines advisers).
2. At $104 million the firm is inside the $100–$110 million buffer: it may remain state-registered or switch to the SEC — its choice.
3. At $126 million the firm exceeds $110 million: SEC registration is required, and the states where it does business may require only notice filings.
4. If AUM later slips to $95 million, the firm may stay with the SEC; only below $90 million must it return to the states.

Answer: State at $87M; either in the buffer at $104M; SEC required at $126M — and no switching back until AUM falls below $90M.

Example 2. Which of the following is NOT a federal covered security?

A. Common stock listed on the New York Stock Exchange

B. Shares of an open-end investment company registered under the Investment Company Act of 1940

C. Common stock listed on the Nasdaq Stock Market

D. Common stock of a local manufacturer quoted only in over-the-counter markets

Show solution

1. A and C: securities listed on a national exchange — NYSE or Nasdaq — are federal covered by definition. Eliminate both.
2. B: registered investment company shares (mutual funds are the classic example) are federal covered. Eliminate.
3. D: an unlisted local stock enjoys no NSMIA preemption; the state can require full registration before it is sold there.

Answer: D. The other three are the exam's standard federal covered securities; the unlisted local issue is the one the state Administrator can still make register.

Example 3. An investment adviser with $47 million under management serves as the adviser to a mutual fund registered under the Investment Company Act of 1940. The adviser registers with:

A. The state, because AUM is below $100 million

B. The SEC, because advisers to registered investment companies are federal covered regardless of AUM

C. Both the SEC and the state

D. Neither, because the fund itself is already registered

Show solution

1. The AUM rule would say state — but the investment-company door overrides it: an adviser to a registered investment company always registers with the SEC. So B over A.
2. C is the eternal wrong answer: after NSMIA an adviser never registers with both.
3. D confuses the fund's registration with the adviser's; they are separate persons with separate registrations.

Answer: B. Advising a registered investment company makes the firm a federal covered adviser at any size; "both" and "neither" are the planted traps.

PRACTICE

1. Easy Which act requires that a new issue of securities offered to the public be sold with a prospectus?

   A. Securities Act of 1933

   B. Securities Exchange Act of 1934

   C. Investment Company Act of 1940

   D. Uniform Securities Act

   Show answer

   A. The 1933 act is the "paper act" governing new issues and their disclosure. B regulates the secondary market and its people; it created the SEC but does not impose the prospectus requirement on new issues.

2. Easy Under which act was the Securities and Exchange Commission created, and in what year?

Show answer

The Securities Exchange Act of 1934. The 1933 act came first but was administered initially by the Federal Trade Commission; the SEC arrived with the 1934 act.

3. Easy Which TWO of the following are federal covered securities?

A. Stock listed on the Nasdaq Stock Market

B. Stock of a local bakery sold only within one state

C. Shares of a registered open-end investment company

D. A promissory note from a neighbor

Show answer

A and C. Exchange-listed securities and registered investment company shares are the two classic federal covered categories; the state cannot require them to register, though it may require a notice filing.

4. Medium An investment adviser manages $50 million for clients in its home state, which registers and examines advisers. The adviser registers with:

A. The SEC

B. The state Administrator

C. Both

D. Neither, because of the de minimis exemption

Show answer

B. Under $100 million of AUM means state registration for a mid-size adviser in an examining state. C is never right after NSMIA, and de minimis concerns the number of clients in an outside state, not a firm's home registration.

5. **Medium** An adviser's AUM reaches $106 million on its annual updating amendment. Which statement is TRUE?

   A. It must register with the SEC immediately

   B. It must remain state-registered until it reaches $110 million

   C. It may choose SEC or state registration

   D. It must register in every state where it has clients

   Show answer

   C. From $100 million to $110 million is the buffer zone where the adviser chooses. A states the rule for $110 million and up; B wrongly forbids the choice the buffer exists to give.

6. **Medium** Which of the following did NSMIA (1996) NOT do?

   A. Create the category of federal covered adviser

   B. Preempt state registration of exchange-listed securities

   C. Abolish the states' antifraud authority over federal covered advisers

   D. Permit states to collect notice filings and fees

   Show answer

   C. The states keep antifraud power over everyone — that is the point the exam tests hardest. A, B and D are exactly what NSMIA did.

7. **Medium** What did the SEC's 1939 study examine, and which law grew out of it?

   Show answer

   It surveyed the investment counsel and advisory business — part of the larger investment-trust study Congress ordered in 1935 — and it led to the Investment Advisers Act of 1940, passed the same day as the Investment Company Act, August 22, 1940.

8. Hard An SEC-registered adviser reports AUM of $95 million on its annual updating amendment. It must:
   A. Withdraw from SEC registration and register with the states at once
   B. Do nothing; it may remain SEC-registered until AUM falls below $90 million
   C. Register with both regulators during the transition
   D. Stop taking new clients until AUM recovers
   Show answer

   B. The $90 million floor keeps firms from flipping registrations with every market dip. A applies only below $90 million, and C is the standing "never both" trap.

9. Hard Which adviser must register with the SEC regardless of its assets under management?
   A. An adviser with 4 clients and no place of business outside its state
   B. An adviser to a registered investment company
   C. A pension consultant to one small plan
   D. An adviser with $60 million of AUM in an examining state
   Show answer

   B. Advising a registered investment company is an automatic door to SEC registration at any size. The pension-consultant election requires large plan assets (for example $200 million), and A and D are state registrants.

10. Hard A federal covered adviser opens an office in your state. List everything the state Administrator may still require or do.
    Show answer

    Require a notice filing with a filing fee and a consent to service of process, require registration of the adviser's IARs who have a place of business in the state — and investigate and punish any fraud. The Administrator may not require the firm itself to register.

11. **Challenge** A mid-size adviser with $40 million of AUM has its principal office in a state that does not subject advisers to examination. It must register with:

    A. Its home state

    B. The SEC

    C. Whichever regulator it prefers

    D. No one, because it is below $100 million

    Show answer

    B. Mid-size advisers go to the states only where the state actually registers and examines advisers; where it does not (New York is the textbook example), the SEC takes them. A recites the general rule while missing the exception the question is built on.

COMMON MISTAKES

- Answering "both the SEC and the state" — after NSMIA an adviser registers with one or the other, never both.
- Thinking NSMIA stripped the states of antifraud power over federal covered advisers; antifraud jurisdiction always survives.
- Confusing the $110 million must-register line with the $100 million may-choose line, and forgetting the $90 million switch-back floor.
- Assigning the prospectus requirement to the 1934 act or the SEC's creation to the 1933 act — keep the paper act and the people act straight.
- Forgetting that a mutual fund share is a federal covered security, so a state can require a notice filing and fee but never full registration.

> **Make it a game · Act Attack.** Write the six names — 1933, 1934, Investment Company Act, Advisers Act, NSMIA, Dodd-Frank — on six cards laid face up between you and a parent or sibling. The caller reads a provision aloud ("created the SEC," "prospectus for new issues," "$110 million line," "mutual funds must register," "ended dual registration," "federal covered security"). First player to slap the correct card keeps it; wrong slap returns a card to the table. Play to ten points, then trade roles. Three rounds, and write down any provision you missed twice.

> **Scripture.** “Let every soul be subject unto the higher powers. For there is no power but of God: the powers that be are ordained of God.” (Romans 13:1, KJV)
>
> Paul wrote this about a government far harsher than the SEC. The Christian adviser obeys securities law not grudgingly but as part of honoring the order God has ordained — and is free to note, honestly, that these particular laws were built to protect the weak from fraud.

9.2 Who Must Register: Advisers, Representatives, Broker-Dealers and Agents

OBJECTIVES

- Apply the three-prong definition of an investment adviser and every exclusion from it.
- Distinguish an exclusion (not in the definition) from an exemption (in the definition but excused from registering).
- Apply the de minimis, institutional-client and snowbird exemptions to advisers and broker-dealers.
- Define investment adviser representative, broker-dealer and agent, with their exclusions, and state when each must register.
- Work scenario questions — banks, lawyers, teachers, publishers, secretaries, issuers' clerks — quickly and correctly.

> **Warm-up.** In five minutes, list every person or business you can think of who gave someone advice about money this month — a banker, a newspaper columnist, an uncle, a teacher, a stockbroker, a radio host. Circle the ones you suspect the law calls an "investment adviser." Keep the list; by the end of the lesson you will re-grade it with the actual test.

WATCH

Definitions of Investment Advisers - Series 65 Exam Prep

CertFuel · 8:49

https://www.youtube.com/watch?v=FAh7_J9WTAw

> **WHEN TO WATCH**
> After the big idea. Pause at each exclusion the teacher names and write it in your four-roles grid before he moves on.

BACKUP VIDEO

Investment adviser definition (FINRA SIE, Series 63, 65, 66)

Achievable · 13:12

https://www.youtube.com/watch?v=mu3tqWpYmJo

A second pass at the three prongs and the exclusions if the scenarios are still slippery — watch with your four-roles grid open and tick each rule as it appears.

investment adviser (IA)

A person who, for compensation, is in the business of advising others about securities — all three prongs (advice, business, compensation) must be present.

exemption

Being within the definition but excused from registration by the act; exempt persons are still subject to the antifraud provisions.

investment adviser representative (IAR)

An individual associated with an adviser who gives advice, manages accounts, solicits advisory business or supervises those who do; clerical and ministerial staff are not IARs.

agent

An individual, other than a broker-dealer, who represents a broker-dealer or an issuer in effecting or attempting to effect purchases or sales of securities.

snowbird exemption

A registered firm with no place of business in a state need not register there to serve an existing customer who is only temporarily in the state.

exclusion

Being outside the definition altogether (a bank is not an investment adviser at all); an excluded person needs no exemption because the law never reaches him.

LATE professionals

Lawyers, Accountants, Teachers and Engineers, excluded from the IA definition when their advice is solely incidental to their profession and carries no special compensation.

broker-dealer (BD)

A person engaged in the business of effecting securities transactions for the accounts of others (broker) or its own account (dealer); agents, issuers and banks are excluded.

de minimis exemption

An adviser with no place of business in a state need not register there if it has had no more than five non-institutional clients in the state in the past twelve months.

institutional investor

Banks, savings institutions, trust companies, insurance companies, investment companies, broker-dealers and other large professional investors — dealings limited to them often support an exemption.

CORE IDEAS

The story. Christopher Lowe had been an investment adviser in New York — a registered one, until he was convicted of misappropriating a client's funds and other offenses, and the SEC revoked his firm's registration and barred him from the business. Lowe did not go quietly. He kept publishing: the *Lowe Investment and Financial Letter*, mailed to paying subscribers, full of market commentary, forecasts and specific securities he liked. The SEC sued to shut the newsletter down — an unregistered (indeed unregistrable) man was selling investment advice, was he not? The case climbed to the Supreme Court, and in June 1985 the Court ruled for Lowe. The Advisers Act, Justice Stevens wrote for the majority, excludes the publisher of a *bona fide* newspaper or financial publication of general and regular circulation; Congress had aimed the act at the personal, fiduciary, client-by-client relationship, not at the printing press. Lowe's newsletter — impersonal commentary offered alike to anyone who paid the subscription — was publishing, not advising, and the Court would not read a licensing scheme to silence a publisher.

How they figured it out. The Court dug into the same 1939 SEC study you met in Lesson 9.1 and found that the drafters themselves meant to leave publishers out, and it heard the First Amendment rumbling in the background: in America, prior restraint of the press is the most suspect of remedies. The line the case draws is the line you will use on the exam: *bona fide*, general, regular circulation — excluded; but a "publication" that gives personalized advice, or times its issues to market events as a tout sheet does, loses the exclusion. Substance over label, always: calling a tip-sheet a newspaper no more makes it one than calling an orange grove a land sale makes it real estate (as you will see in Lesson 9.4).

The big idea. An **investment adviser** is anyone who meets all three prongs: (1) gives **advice** about securities, (2) as a regular **business**, (3) for **compensation**. Miss any prong and the person is simply not an adviser. Then come the **exclusions** — persons the definition expressly leaves out even when all three prongs fit: **banks, savings institutions and trust companies** (note well: credit unions are not on the list); the **LATE professionals** — lawyers, accountants, teachers, engineers — when the advice is *solely incidental* to the profession and earns no special compensation; **broker-dealers** whose advice is incidental to their brokerage and who receive no special compensation for it; **publishers** of bona fide, general, regular publications (that is Lowe); **IARs** themselves (the firm is the adviser; its people are representatives); and

— under state law — **federal covered advisers**, who are excluded from the state definition because NSMIA sent them to the SEC.

Exemptions are a different animal. An exempt adviser fits the definition but is excused from registering in a particular state. The Uniform Securities Act gives three you must know. First, the **institutional exemption**: an adviser with *no place of business in the state* whose only clients there are institutions — banks, insurance companies, investment companies, broker-dealers, other advisers, large pension plans — need not register there. Second, **de minimis**: no place of business in the state and *five or fewer* non-institutional clients in the state within the past twelve months. Third, the **snowbird** convention: serving an existing client who is merely wintering in Florida does not force a registration in Florida. Watch the hinge in every one: *no place of business in the state*. Open one office — or walk in to meet even a single client regularly — and every exemption collapses; and remember that exemption from registration is never exemption from the antifraud provisions.

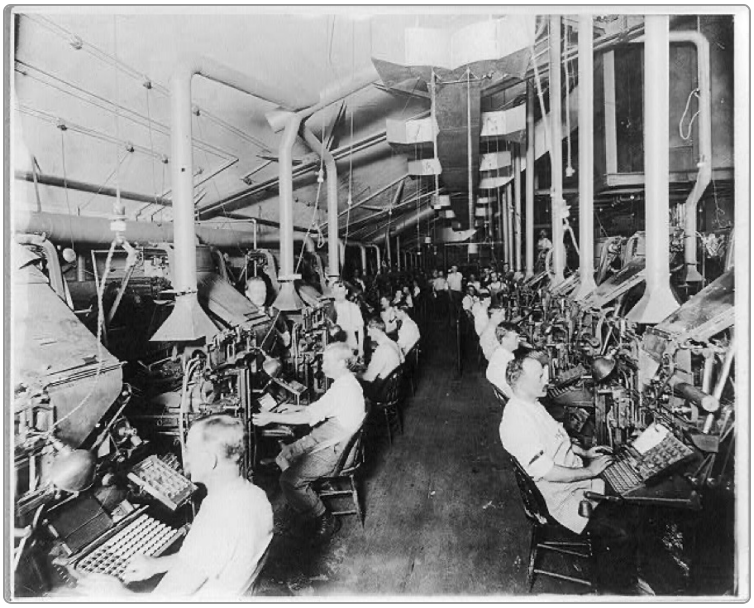
The individuals: IARs. An **investment adviser representative** is any partner, officer, director or other individual employed by or associated with an adviser who makes recommendations or renders advice, manages accounts or portfolios, determines which advice should be given, solicits or negotiates for the sale of advisory services, or supervises people who do any of these. Clerical and ministerial employees — the receptionist, the bookkeeper, the IT staff — are not IARs. An IAR of a **state-registered** adviser registers in each state where he has a place of business or clients as state rules require; an IAR of a **federal covered** adviser registers only in states where he actually has a *place of business*. One more convention: there is no de minimis for an IAR with a place of business in the state — the individual with a desk in the state registers, full stop.

Broker-dealers and agents. A **broker-dealer** effects securities transactions for others or for its own account, as a business. Excluded: agents (they are a separate category), issuers (selling your own stock does not make you a broker-dealer), banks, savings institutions and trust companies — and, in a given state, a firm with *no place of business there* whose only business is with institutions, other broker-dealers or issuers, or with existing customers temporarily in the state (the BD snowbird). An **agent** is an individual who represents a broker-dealer or an issuer in effecting securities transactions. Here memorize an asymmetry the exam adores: an individual representing a **broker-dealer** in securities business must register as an

agent *always* — even if every security sold is exempt and every transaction is exempt. The agent exclusions belong to **issuers' people**: an individual representing an issuer is not an agent when the transactions are exempt transactions, when the securities are certain exempt securities (the classics: U.S. government and municipal securities, obligations of banks and savings institutions, top-grade commercial paper, investment contracts connected with employee benefit plans), or when he deals only with the issuer's own employees, partners or directors and earns **no commission** for it. And one quiet rule with sharp edges: a secretary who takes customer orders is effecting securities transactions and must be registered as an agent; registration attaches to the activity, never the job title.

On the exam today. Expect a parade of little scenarios, each one sentence long. "First Federal Bank charges customers for portfolio advice" — a bank is excluded; never an adviser. "An economics teacher gives a paid seminar called Which Stocks to Buy Now" — the special compensation and non-incidental purpose destroy the LATE exclusion; she is an adviser. "A CPA answers a client's question about municipal bonds during tax preparation, for no extra fee" — solely incidental; excluded. "A publisher mails a monthly market letter to all subscribers" — Lowe; excluded. "The same publisher sells subscribers individual portfolio reviews" — personalized; adviser. "An agent sells Treasury bonds for her broker-dealer" — still registers; exempt securities never excuse a BD's agent. "An issuer's employee, paid no commission, enrolls coworkers in the stock-purchase plan" — not an agent. Read for the hinge words: *bank*, *solely incidental*, *special compensation*, *no place of business*, *five or fewer*, *existing client passing through*, *no commission*. And keep the vocabulary straight — the exam will offer "exempt" when the truth is "excluded," and graders count the difference.

PICTURE STUDY



Composing Room of the New York Herald, George Grantham Bain Collection, 1902 · Photographic print · Prints and Photographs Division, Library of Congress, Washington, D.C.

Image: Wikimedia Commons, public domain

In 1902 the New York Herald set its pages on these Linotype machines, row upon row of them, each operator casting lines of type in hot metal. A newspaper was an industrial product — and in American law, a specially protected one. When the Supreme Court decided Lowe v. SEC in 1985, the question was exactly where the free press ends and the regulated profession of advising begins; the Court drew the line at the door of rooms like this one.

Look closely

- Count the Linotype machines you can see. What does the sheer number say about how much text a daily paper needed every night?
- Find the belts and shafts on the ceiling. What is driving these machines in 1902?
- Look at the operators' posture — seated, each at a keyboard. How is this both like and unlike a modern newsroom?
- Every man here helps publish opinions and facts to strangers. Which of them, under the Advisers Act, is giving investment advice?

Talk about it

1. Why did Congress — and the Court in Lowe — treat impersonal publishing differently from person-to-person advising?
2. A tout sheet timed to market moves loses the publisher's exclusion. Why does regularity of circulation matter so much to the definition?
3. What would be lost if a license were required to print financial opinions for the general public?

PROJECT

The Registration Court

You will write the scenario cards yourself — the best way to learn this material is to set the traps, not just dodge them — and then hold court with a parent as opposing counsel.

You will need

- Twenty index cards and a pen
- Your four-roles grid from the sketchbook work
- The Uniform Securities Act PDF from the kit list, for citations
- A parent or sibling with fifteen minutes and a skeptical face

Steps

1. Write 16 scenario cards, four for each role (IA, IAR, BD, agent). Each card is one sentence: a person, an activity, a detail that decides the case (a bank, a fee, an office, a commission, a client count).
2. Make at least 5 of the 16 turn on an exclusion, at least 5 on an exemption, and at least 3 on the difference between the two.
3. Write 4 more cards that are deliberate near-misses — scenarios that look registrable but are not, or look excluded but are not.
4. On the back of each card write the ruling — register / excluded / exempt — and the reason in one line, with the section of the act if you can find it in the kit PDF.
5. Shuffle and hold court: the parent reads a card, you rule from the bench within ten seconds and give the reason; the parent may argue once, and you must answer the argument.
6. Mark every card you missed or hesitated on; re-try those the next day.
7. File the deck in your exam notebook pocket — it is now your review set for Unit 12.

Tips

- Steal shamelessly from the exam's favorite furniture: First Federal Bank, the CPA at tax time, the teacher's paid seminar, the snowbird in Florida, the

secretary at lunch hour.

- A good near-miss card changes exactly one word of a clear case — that is also how the real exam builds wrong answers.

Check your work

- ☐ All 20 cards have a correct ruling and a one-line reason on the back.
- ☐ I ruled on at least 16 of 20 correctly under the ten-second clock.
- ☐ I can state the exclusion/exemption distinction without notes.

EXAM NOTEBOOK

1. Build the four-roles grid across a double page: rows IA / IAR / BD / agent; columns definition / exclusions / exemptions / when registration is required. Fill it from this lesson and leave room to refine it for the portfolio.
2. Write the three prongs — Advice, Business, Compensation — as a big "ABC" and under each prong list one scenario that fails it.
3. Make a trap list titled "Sounds exempt, isn't": the BD's agent selling Treasuries, the teacher's paid seminar, the publisher selling personal reviews, the sixth retail client, the secretary taking orders.

> **From history.** Two years after Lowe, the SEC answered a different boundary question with Release IA-1092 (1987): financial planners, pension consultants and sports and entertainment advisers who recommend securities as part of a business, for compensation, are investment advisers even when advice is only one service among many. Between Lowe and IA-1092 the modern shape of the definition was set — the printing press outside it, the planner inside it.

Example 1. Which of the following is an investment adviser under the Uniform Securities Act?

A. First Federal Savings Bank, which charges customers for investment advice

B. An attorney who recommends tax-free bonds as part of estate planning, with no separate fee

C. A firm with no office in the state advising seven retail clients there over the past 12 months for fees

D. The publisher of a weekly financial newspaper of general circulation

Show solution

1. A: banks, savings institutions and trust companies are excluded no matter what they charge. Out.
2. B: a lawyer giving solely incidental advice with no special compensation is a LATE exclusion. Out.
3. D: bona fide publication, general and regular circulation — the Lowe exclusion. Out.
4. C: all three prongs are met, no exclusion applies, and seven retail clients in 12 months breaks the five-client de minimis ceiling, so the exemption fails too. C must register.

Answer: C. Six or more non-institutional clients in twelve months ends the de minimis exemption; the other three choices are classic exclusions (bank, LATE, publisher).

Example 2. Carolina Counsel, an adviser registered in State A with no place of business in State B, has these State B clients: two insurance companies, one broker-dealer, and retail clients served as follows — 3 in the last 12 months, with 2 more retail households asking to sign up. May it take the new households without registering in State B?

Show solution

1. Institutional clients (the insurers and the BD) never count against de minimis; ignore them.
2. Current retail count in the trailing 12 months: 3. The ceiling with no place of business in the state is 5.
3. Adding 2 more makes 5 retail clients — at the ceiling, not over it.
4. A sixth retail client within 12 months, or opening any office in State B, would require registration before acting.

Answer: Yes — 5 retail clients in 12 months with no in-state place of business still fits the de minimis exemption; client number 6 (or a new office) ends it.

Example 3. Which individual must register as an agent in the state?

A. A receptionist at a broker-dealer who accepts unsolicited customer orders when agents are at lunch

B. An issuer's payroll clerk who, without commission, explains the employee stock-purchase plan to coworkers

C. An individual representing an issuer solely in sales of its securities to existing employees, earning no commission

D. A broker-dealer firm itself

Show solution

1. A: accepting orders is effecting securities transactions; doing it for a broker-dealer makes her an agent regardless of her title. She must register.
2. B and C: issuer representatives dealing with the issuer's own employees with no commission are excluded from the agent definition.
3. D: a broker-dealer is excluded from the definition of agent — agent means an individual other than a broker-dealer.

Answer: A. Taking orders — even unsolicited ones — is agent activity, and registration follows the activity, not the job title. The no-commission issuer staff in B and C are the planted look-alikes.

PRACTICE

1. Easy The three-prong test for an investment adviser requires advice about securities, compensation, and:

   A. Discretionary authority

   B. Being in the business of giving the advice

   C. Custody of client funds

   D. At least six clients

   Show answer

   B. Advice, business, compensation — all three together. Discretion and custody matter for net-worth rules later, not for the definition, and client counts belong to the de minimis exemption.

2. Easy First Federal Bank's trust department charges customers for investment advice. Under the Uniform Securities Act the bank is:

A. An investment adviser that must register

B. An investment adviser that is exempt

C. Excluded from the definition of investment adviser

D. A broker-dealer

Show answer

C. Banks, savings institutions and trust companies are excluded from the definition itself — not "exempt," which would mean they fit the definition. The vocabulary is the point of the question.

3. Easy In one sentence each, define exclusion and exemption, and name the provision from which no one is ever exempt.

Show answer

An exclusion means the person is outside the definition altogether; an exemption means the person fits the definition but is excused from registering. No person is ever exempt from the antifraud provisions.

4. Medium An attorney charges clients a separately billed fee for designing securities portfolios alongside her law practice. She is:

A. Excluded as a LATE professional

B. An investment adviser, because the advice is not solely incidental and is specially compensated

C. Exempt under de minimis

D. An IAR of her law firm

Show answer

B. The LATE exclusion dies the moment the advice stops being solely incidental or earns special compensation — and here both happened. A recites the exclusion she just lost.

5. **Medium** An adviser with no place of business in State X served 4 non-institutional State X clients in the past 12 months. Then a fifth and a sixth retail client sign on within the same 12 months. Registration in State X is required:
A. Never, because it has no office there
B. Upon taking the fifth client
C. Upon taking the sixth client
D. Only if it also advertises in State X

Show answer

C. De minimis allows five or fewer retail clients in 12 months with no in-state place of business; the sixth breaks it. B miscounts the ceiling — five is still inside it.

6. **Medium** An agent of a broker-dealer sells only municipal bonds — an exempt security — to retail customers in her state. She must:
A. Register as an agent
B. Not register, because the securities are exempt
C. Register only if she also sells corporate stock
D. Register as an investment adviser representative

Show answer

A. Exempt securities excuse an ISSUER'S representative from the agent definition, never a broker-dealer's. Anyone representing a BD in securities business registers, whatever the product.

7. **Medium** An issuer's human-resources employee, receiving no commission or other sales-based pay, explains the company's employee stock-purchase plan and processes coworkers' enrollments. Under the USA she is:
A. An agent who must register
B. Not an agent, because she represents the issuer in employee-plan transactions without commission
C. A broker-dealer
D. An IAR

Show answer

B. Issuer representatives dealing with the issuer's own employees for no commission are excluded from the agent definition. Add a commission — or a broker-dealer employer — and A becomes correct.

8. Hard An IAR works for a federal covered adviser. He has an office in State A and, from that office, telephones clients in States B and C, where he has no office. He must register as an IAR in:
A. States A, B and C
B. State A only
C. States B and C only
D. No state, because his firm is SEC-registered
Show answer

B. IARs of federal covered advisers register only where they have a place of business. A is the rule for an IAR of a STATE-registered adviser (where required by those states), and D forgets that NSMIA left IAR registration to the states.

9. Hard Which publisher is an investment adviser under the Lowe standard?
A. A monthly market letter mailed to all subscribers on the first of each month
B. A daily financial newspaper of general circulation
C. A service that sells each subscriber a written analysis of the subscriber's own portfolio
D. A textbook author whose book discusses securities analysis
Show answer

C. Personalized advice to individual subscribers is advising, not bona fide publishing. A and B are general, regular circulation — the exclusion holds; D is neither in the business nor personalized.

10. Hard A broker-dealer headquartered in State Y has no office in State Z. Its only State Z business is executing trades for three insurance companies and for one longtime retail customer who spends every January in State Z. In State Z the firm is:
Show answer

Not a broker-dealer under State Z's definition — no place of business in the state, and its business there is only with institutions and an existing customer temporarily in the state (the snowbird). Opening an office or taking a resident retail customer would change the answer.

11. **Challenge** A famous economics professor writes a syndicated column recommending sectors, gives a free university lecture series on markets, and privately manages portfolios for 40 families for a percentage fee. Which activity makes him an investment adviser?

    A. The column

    B. The lectures

    C. The portfolio management

    D. All three

    Show answer

    C. The column is bona fide publishing (Lowe) and the free lectures are a teacher's incidental, uncompensated instruction; but managing 40 portfolios for fees is advice, as a business, for compensation — the full three prongs with no exclusion left standing.

12. **Challenge** Who was Christopher Lowe, and what precisely did the Supreme Court hold in his case in 1985?

    Show answer

    A barred former adviser who kept publishing a subscription investment newsletter. The Court held the newsletter fell within the Advisers Act's exclusion for bona fide publications of general and regular circulation, so Lowe was not an investment adviser and could not be enjoined from publishing impersonal advice — the publisher's exclusion at full strength.

COMMON MISTAKES

- Calling an excluded person "exempt" — banks and LATE professionals are excluded from the definition; exemptions excuse people who are inside it.
- Letting an exempt security excuse a broker-dealer's agent from registering; the exempt-security escape belongs only to issuers' representatives.
- Counting institutional clients against the five-client de minimis ceiling — only non-institutional clients count.
- Forgetting that every exemption hinges on having no place of business in the state; one office kills them all.
- Treating clerical staff as safe in every case — the title is safe, but a secretary who takes orders is performing agent activity and must register.

Make it a game · Register or Not. Use the 20 scenario cards from this lesson's project (or improvise aloud). The caller reads a scenario; you have five seconds to call one of five words — ADVISER, IAR, BROKER-DEALER, AGENT or NOBODY — then five more to say why in one sentence. Correct call: 1 point; correct reason: 1 more. First to 15 points wins, then swap. House rule for siblings: a wrong "NOBODY" costs 2 points, because missing a required registration is the costliest mistake in real life too.

Scripture. "Providing for honest things, not only in the sight of the Lord, but also in the sight of men." (2 Corinthians 8:21, KJV)

Paul was handling a large collection of money and insisted on visible accountability, not just a clear conscience. Registration is exactly that: the adviser who intends honesty submits to being seen — named, filed, examined — because stewardship invites the light rather than dodging it.

9.3 Registration in Practice: Form ADV, Records and Renewals

OBJECTIVES

- Describe the parts of Form ADV and what each is for, and the role of IARD and the consent to service of process.
- State the registration timeline: effective at noon on the 30th day, December 31 expiration, renewals, and the annual updating amendment.
- Apply the net worth, net capital and surety bond conventions for advisers with custody or discretion.
- Compare adviser and broker-dealer recordkeeping periods and apply the U4/U5 rules for individuals, including who notifies when an IAR changes firms.
- Walk a new firm's registration from first filing to first renewal.

> **Warm-up.** Imagine your family opens Shoemaker & Daughter Advisers next month. In five minutes, list every fact a stranger deciding whether to trust the firm would want written down somewhere public: who owns it, what it charges, how it is paid, who gives the advice, any past trouble. Keep the list — you are about to meet the form that asks for every item on it.

WATCH

Form ADV Part I Breakdown (Series 63, 65, 66)

Basic Wisdom · 9:36

https://www.youtube.com/watch?v=LAvoSZb22LI

> **WHEN TO WATCH**
> After the big idea, before the project. As you watch, note which part of the form each item lives in — regulator data in Part 1, client disclosure in Part 2.

BACKUP VIDEO

Form ADV Part 2A Real World Example (Series 63, 65, 66)

Basic Wisdom · 11:18

https://www.youtube.com/watch?v=GGHzH1z3fM0

Before writing your mock brochure in the project: the teacher walks through a real firm's Part 2A so you can see the plain-English standard in the wild.

Form ADV

The uniform application for investment adviser registration: Part 1 is data for regulators, Part 2A is the plain-English client brochure, Part 2B covers the individuals, and Part 3 (Form CRS) is the short relationship summary used by SEC registrants with retail investors.

IARD

The Investment Adviser Registration Depository, the electronic system (opened in 2001) through which advisers file Form ADV with the SEC and the states.

consent to service of process

A filing appointing the Administrator as the registrant's attorney to receive legal papers, so an out-of-state firm can always be sued at home; filed once with the initial application, not with renewals.

effective date

Under the USA, a registration becomes effective at noon on the 30th day after a complete application is filed, unless the Administrator acts sooner or a proceeding is pending.

annual updating amendment

The full refresh of Form ADV an adviser must file within 90 days of its fiscal year end.

custody

Holding client funds or securities, or having authority to withdraw them; it triggers the highest net worth requirement (in the standard example, $35,000) or a surety bond.

discretion

Authority to decide the security, the amount, or whether to buy or sell for a client without asking first; with discretion but no custody the conventional minimum net worth is $10,000.

surety bond

An insurance-like guarantee the Administrator may require of registrants whose net worth or net capital falls short of the required minimum.

Form U4

The uniform application that registers an individual — agent or IAR — through a firm, carrying personal history and disclosure questions.

Form U5

The uniform termination notice filed when an individual leaves a firm, due within 30 days of termination.

CORE IDEAS

The story. Walk through it as if it were yours. Shoemaker & Daughter Advisers — a father with twenty years of bookkeeping behind him, a daughter with a fresh Series 65 — rents one office on Main Street and intends to manage perhaps nine million dollars for neighbors and church families. Nine million is a long way under one hundred, so this is a state registration. The daughter creates the firm's account on **IARD**, the electronic depository, and begins **Form ADV Part 1**: owners, officers, office address, how the firm is paid, other business interests, and a page of blunt disclosure questions — felonies? securities violations? unpaid judgments? Then **Part 2A**, the brochure, written not in checkboxes but in plain English: services, the fee schedule, conflicts of interest, how to complain — the document every client gets. **Part 2B** is the supplement about the humans: the daughter's education, business background and discipline history. (Her father keeps the books and answers the phone — clerical, so no IAR registration for him; the daughter files her **U4**.) The firm attaches the **consent to service of process**, pays the filing fee, and the state's examiners go quiet for a while. Nothing comes back. At noon on the thirtieth day after the complete filing, Shoemaker & Daughter Advisers is a registered investment adviser.

How they figured it out. Every piece of that paperwork answers an old failure. Disclosure questions exist because rascals moved from state to state ahead of their records; the consent to service of process exists because a defrauded widow once had to chase a promoter across three state lines to hand him a summons — now the Administrator stands in as his agent for legal papers, permanently. The brochure exists because fine print defeated ordinary readers; regulators pushed it into plain English (the modern narrative brochure rule dates from 2010, and Form CRS, the even shorter relationship summary for SEC firms with retail investors, from 2019 — know their names, not their history, for the exam). And IARD exists because one adviser might answer to several states; since 2001, one electronic filing reaches them all.

The big idea — the calendar. Registration becomes effective **at noon on the 30th day** after a complete application is filed, unless the Administrator accelerates it, demands more, or opens a proceeding. Every registration — adviser, BD, IAR, agent — **expires December 31** and renews with a fee; there is no proration for registering in October and no refund for quitting in March. The **annual updating amendment** refreshes the whole ADV within **90 days of the firm's fiscal year end**; material changes in between are filed promptly. A **successor firm** — new entity, same business, as when Shoemaker & Daughter incorporates — files for the unexpired portion of the year *without* a new fee. Filing fees, note well, accompany applications and renewals, and a withdrawn or denied application does not return the fee.

Money behind the promises. The Administrator may require minimum **net worth** (advisers) or **net capital** (broker-dealers) and **surety bonds**, in amounts set by rule — so treat the dollars as conventions, the way the exam does. The NASAA convention: an adviser with **custody** of client funds or securities maintains net worth of $35,000; an adviser with **discretion but not custody**, $10,000; an adviser who merely accepts prepaid fees of more than $500 for six months or more must keep a positive net worth (and include a balance sheet with its brochure). Shortfalls can be covered by a surety bond. Two companion rules: a state cannot pile on — if the adviser meets the net worth, bonding and recordkeeping requirements of its *home* state, other states where it registers must accept them; and an adviser whose net worth slips below the minimum must notify the Administrator by the close of the next business day — a favorite detail.

The paper trail. Advisers keep their books and records — journals, ledgers, client communications, advertising, powers of attorney, the ADV itself — for **five years**, the first **two** in the principal office. Broker-dealers, for contrast the exam loves, keep most records **three years**. Records may live on any storage the rules allow so long as they can be produced promptly; what matters is that the Administrator can read yesterday whenever he asks.

The individuals, coming and going. A new IAR or agent registers on **Form U4** through the firm; when one leaves, **Form U5** is due within **30 days**. An individual may be registered with two firms — dual registration — only where the Administrator permits it and the firms consent. And when an IAR changes firms, learn the convention carefully, because the exam asks it straight: if the adviser is **state-registered**, the **firm** notifies the Administrator — the old firm of the departure,

the new firm of the hire; if the adviser is **federal covered**, the **IAR himself** must notify the Administrator promptly, because his firm is not registered with the state at all. For agents of broker-dealers, everybody files: the agent, the old BD and the new BD all notify.

On the exam today. The Series 65 tests this lesson with dates and dollars. Memorize the clock: noon of the 30th day; December 31, every year, no proration; 90 days after fiscal year end for the annual amendment; 30 days for a U5; next business day for a net worth deficiency. Memorize the ladder: custody $35,000, discretion $10,000 — and say "amounts set by rule" to yourself, because a question may stipulate different figures and the stipulation wins. Keep the record periods paired — advisers five years (two in the office), broker-dealers three — because the exam will swap them in the wrong answers. And when the question says an IAR "of a federal covered adviser" changed firms, the answer naming the IAR as the notifier is the credited one.

PICTURE STUDY

The Village Lawyer, Pieter Brueghel the Younger, 1621 · Oil on panel · Museum of Fine Arts, Ghent

Image: Wikimedia Commons, public domain

Pieter Brueghel the Younger painted this village lawyer's office many times, and audiences loved it: the man of papers behind his drifts of documents, and the farmers paying him in eggs and chickens. Every regulated profession becomes, in part, an office like this one — and that is not all bad. The heaps of paper are the price of being accountable; the ADV, the ledgers and the U4s are this scene with better handwriting.

Look closely

- Find the papers — on the table, the walls, the floor. How does the painter make sheer quantity into a joke?
- Find the payments: the basket of eggs, the birds. What does payment in kind tell you about these clients?
- Look at the faces of the waiting villagers. Who seems anxious, who resigned, who shrewd?
- Find the clerk writing by the window. What would his job be called at a modern advisory firm — and must he register?

Talk about it

1. Recordkeeping feels like a burden until a dispute comes. Whom do the adviser's five years of records actually protect — firm, client, or both?

2. The villagers cannot read the lawyer's papers. How does Form ADV Part 2A — the plain-English brochure — answer exactly that old problem?
3. What is the difference between an office that keeps papers to hide behind and one that keeps them to be examined?

PROJECT

Registering Shoemaker & Daughter: A Mock Form ADV

You will draft a miniature Form ADV for the family firm from this lesson's story — Part 1 data, a one-page Part 2A brochure in honest plain English, and the registration calendar for its first year — so the paperwork stops being abstract.

You will need

- Four sheets of paper or a document file
- This lesson's core ideas and your exam notebook
- Optional, with a parent: the real Form ADV Part 2A instructions on the SEC's site, to see the actual headings

Steps

1. Invent the firm honestly: owners, one-office address, services, a fee schedule (for example 1% of assets per year, billed quarterly), whether it takes discretion or custody (choose discretion, no custody), and planned AUM of $9 million.
2. Draft mini Part 1 as a regulator's fact sheet: ownership, officers, location, compensation methods, disciplinary answers (all "no"), and which individuals will be IARs.
3. Draft a one-page Part 2A brochure in plain English under five headings: Services, Fees and How We Are Paid, Conflicts of Interest, Our People, How to Reach the Administrator. No sentence over 25 words.
4. Write the Part 2B supplement for the daughter: education, business background, exams passed, discipline (none).
5. Build the first-year calendar: filing date, effective date at noon on day 30, December 31 renewal, fiscal-year-end plus 90 days for the annual updating amendment, and the U5 deadline if the daughter ever left.
6. Apply the money rules: discretion but no custody — state the conventional $10,000 net worth figure and what the firm must do the day it discovers a shortfall.

7. Have a parent play a prospective client: hand them only the brochure and let them ask three questions. Rewrite any paragraph that failed them.

Tips

- Write fees the way you would want them explained to your grandmother — a percentage, a dollar example, and when the bill arrives.
- The disciplinary questions are the heart of Part 1; answer them as questions about the kind of firm you intend to be.

Check your work

- ☐ My Part 1 and Part 2A contain different kinds of information, and I can say why.
- ☐ My calendar shows the correct effective date, renewal date and amendment deadline.
- ☐ A parent understood the fee paragraph without my help.

EXAM NOTEBOOK

1. Make a dates table: event in the left column (effective date, expiration, annual amendment, U5, net worth deficiency notice), deadline in the right (noon day 30; December 31; 90 days after FYE; 30 days; next business day).
2. Draw the ADV as a filing cabinet: four drawers labeled Part 1 (regulators), Part 2A (clients), Part 2B (people), Part 3/Form CRS (retail summary), with two contents listed per drawer.
3. Write the records contrast as a flashcard: front "IA vs BD records"; back "IA: 5 years, first 2 in principal office. BD: 3 years."

> **From history.** IARD went live in 2001, built for the SEC and the states with NASD Regulation as the operator, and it quietly changed the public's position: anyone can now read any adviser's ADV, free, at the SEC's Investment Adviser Public Disclosure site. The daughter in our story will be investigated by her own prospective clients before the Administrator ever schedules an exam — which is exactly what the drafters of 1940 hoped disclosure would someday mean.

Example 1. Shoemaker & Daughter Advisers files a complete application, fee and consent to service of process on March 3. The Administrator takes no action of any kind. When is the registration effective, and when does it first expire?

Show solution

1. The USA makes a registration effective at noon on the 30th day after a complete filing absent any Administrator action.
2. Count 30 days from March 3: March has 31 days, so day 28 lands on March 31 and day 30 is April 2.
3. Effective: noon, April 2.
4. All registrations expire December 31 of the same year, regardless of the start date — the renewal fee that December is not prorated.

Answer: Effective at noon on April 2; the registration runs to December 31 of that year, when the full renewal fee is due.

Example 2. An IAR employed by a federal covered adviser resigns on June 1 to join a state-registered adviser in the same state on June 15. Which filings and notices does the exam expect?

A. The federal covered adviser notifies the Administrator of the departure; the IAR does nothing

B. The IAR notifies the Administrator of the departure; the new state-registered firm notifies the Administrator of the hire

C. Only the new firm files anything

D. The SEC handles all notices

Show solution

1. Leaving a federal covered adviser: the firm is not state-registered, so the duty falls on the individual — the IAR notifies the Administrator promptly. That eliminates A and D.
2. Joining a state-registered adviser: the firm carries the duty — it notifies the Administrator (and files the U4 registering him).
3. C misses the departure side entirely.

Answer: B. Federal covered firm: the IAR notifies. State-registered firm: the firm notifies. The exam asks this exact pairing.

Example 3. In this example, the Administrator sets minimum net worth by rule at $35,000 for custody and $10,000 for discretion. Pine Advisory has discretionary authority over client accounts, never holds client assets, and its net worth is $7,200. What are its obligations?

Show solution

1. Discretion without custody: the $10,000 standard applies, not $35,000.
2. Shortfall: $10,000 − $7,200 = $2,800.
3. The firm must notify the Administrator of the deficiency by the close of the next business day, and cover the gap — in practice by posting a surety bond or adding capital.
4. If it later takes custody of client funds, the requirement steps up to $35,000.

Answer: Pine is $2,800 short of the $10,000 discretion standard: it must report the deficiency by the next business day and restore compliance (bond or capital). The figures are rule-set conventions — a question that supplies different numbers controls.

PRACTICE

1. Easy Which part of Form ADV is the plain-English brochure delivered to clients?

   A. Part 1

   B. Part 2A

   C. Part 2B

   D. Part 3 (Form CRS)

   Show answer

   B. Part 2A is the narrative client brochure; Part 1 is checkbox data for regulators, Part 2B covers the individual supplements, and Form CRS is the short retail relationship summary used by SEC registrants.

2. Easy What is a consent to service of process, and how often must it be filed?

   Show answer

   It appoints the Administrator as the registrant's attorney to receive legal papers, so the registrant can always be served in the state. It is filed once, with the initial application — not with renewals.

3. Easy Every registration under the Uniform Securities Act expires:

A. One year after its effective date

B. December 31, unless renewed

C. Only when withdrawn

D. June 30 of each year

Show answer

B. All registrations run to December 31 and renew with a fee — no proration for a mid-year start. A is the tempting anniversary-date answer the act does not use.

4. Medium A complete application is filed on June 1 and the Administrator takes no action. The registration becomes effective:

A. Immediately

B. At noon on July 1

C. At noon on June 30

D. On December 31

Show answer

B. Noon of the 30th day after filing: June has 30 days, so day 30 after June 1 is July 1. C miscounts by a day — count days after the filing date, not including it.

5. Medium A state-registered adviser's fiscal year ends June 30. Its annual updating amendment to Form ADV is due by:

A. December 31

B. September 28 (90 days after fiscal year end)

C. July 30

D. The next renewal date

Show answer

B. The annual updating amendment is due within 90 days of the FISCAL year end — not the calendar year end, which is answer A's trap.

6. Medium Under NASAA conventions, an investment adviser must keep its books and records for:

A. 3 years, the first 2 in the principal office

B. 5 years, the first 2 in the principal office

C. 5 years, all in the principal office

D. 10 years

Show answer

B. Five years with the first two readily available in the principal office. A borrows the broker-dealer period (3 years) — the swap the exam plays most often.

7. Medium In this example the Administrator's rule sets net worth at $35,000 for custody and $10,000 for discretion. An adviser that holds client securities in its vault must maintain:

A. $10,000

B. $35,000 or a surety bond covering the shortfall

C. Positive net worth only

D. No minimum, if it is bonded personally by its owner

Show answer

B. Holding client assets is custody — the top requirement, satisfiable by net worth or bond. A is the discretion-only figure; C is the standard for merely accepting substantial prepaid fees.

8. Hard An IAR of a STATE-registered adviser quits on May 1 and joins another state-registered adviser on May 20. Who must notify the Administrator?

A. The IAR only

B. The former firm of the termination and the new firm of the hire

C. No one, if the IAR stays in the same state

D. The SEC

Show answer

B. For state-registered advisers the firms carry the notice duty. A is the rule for an IAR leaving a FEDERAL covered adviser — keep the pair straight, because the exam tests both directions.

9. Hard Shoemaker & Daughter Advisers, a sole proprietorship, incorporates mid-year as Shoemaker Advisory Inc. with the same owners and business. Under the USA the new corporation:
A. Must file a new application and pay a new fee
B. Files as a successor for the unexpired portion of the year, with no additional fee
C. Operates unregistered until December 31
D. Must wait 30 days to do business
Show answer

B. A successor firm steps into the unexpired registration year without a new fee; the filing is still made, so C is wrong, and the 30-day clock in D belongs to brand-new applications.

10. Hard An agent is terminated for cause on April 10. State the form and deadline for reporting it, and whether the agent may simply begin selling at a new broker-dealer the next week.
Show answer

Form U5 within 30 days of termination. No — the agent's registration does not travel: the new firm must file a U4 and the agent may not act as its agent until registered through it (and for agents of BDs, the agent and both firms all notify the Administrator).

11. Challenge An adviser registers effective October 2, pays the full fee, and withdraws the following February. Which statement is TRUE?
A. The October fee was prorated and the February withdrawal earns a refund
B. The firm paid a full fee in October, owed a full renewal fee by December 31, and receives no refund in February
C. Registration lasted one year from October 2
D. The December renewal was optional because the firm registered so late
Show answer

B. Fees are never prorated and never refunded, and every registration — however recent — expires December 31 and needs the full renewal to continue. The anniversary theory in C is the classic wrong model.

COMMON MISTAKES

- Counting the effective date from the wrong day — noon of the 30th day AFTER the complete filing, and only if the Administrator has not acted.
- Using the calendar year end instead of the firm's fiscal year end for the 90-day annual updating amendment.
- Swapping the record periods: advisers five years (first two in the office), broker-dealers three.
- Treating the $35,000/$10,000 figures as statutory absolutes — they are rule-set conventions, and a question that supplies its own numbers controls.
- Mixing up the moving-IAR notices: state-registered adviser — the firm notifies; federal covered adviser — the IAR notifies.

Make it a game · Paper Race. Make nine slips: Part 1, Part 2A, Part 2B, Form CRS, U4, U5, consent to service of process, annual updating amendment, renewal fee. The caller reads a situation ("a client asks what the firm charges," "an IAR quits," "a new agent is hired," "fiscal year ended 89 days ago," "it is December 30") and both players race to slap the slip that answers it. Wrong slap sits out one round. First to seven, then swap caller. Final round, play it blind: slips face down, and you must name the paper from memory before turning it over.

Scripture. "And he called him, and said unto him, How is it that I hear this of thee? give an account of thy stewardship; for thou mayest be no longer steward." (Luke 16:2, KJV)

The steward in the parable is summoned to produce his books — stewardship and accounting are one idea in Scripture. Form ADV, the ledgers and the five years of records are simply the adviser keeping his account ready before anyone demands it.

9.4 What Is a Security: The Howey Test and Registration of Issues

OBJECTIVES

- State the four prongs of the Howey test and apply them to unfamiliar schemes.
- Sort the exam's list of securities from its list of non-securities without hesitation.
- Distinguish issuer from non-issuer transactions.
- Compare registration by coordination, qualification and notice filing, including their effective dates.
- Distinguish exempt securities from exempt transactions and state what an exemption never covers.

> **Warm-up.** Write two column heads: SECURITY and NOT. Now place these from instinct: a share of stock, a fixed annuity, a bag of gold coins, a variable annuity, a whole life policy, an option on a stock, your family's house, a corporate bond, a stake in an orange grove managed entirely by someone else for profit. Keep the sheet — you will grade it after the big idea, and the last item has a Supreme Court case all its own.

WATCH

Defining a Security: The Howey Test | Blockchain and Cryptocurrency: What You Need to Know | 2019

Stanford Online · 3:22

https://www.youtube.com/watch?v=ot-8X2YzZoc

> **WHEN TO WATCH**
> Right after the story. A Stanford law teacher states the four prongs in three minutes; write them down as he says them, then test them on the warm-up list. (He mentions digital coins only as the modern thing courts must test — the test, not the coins, is your subject.)

BACKUP VIDEO

SEC vs W.J. Howey Co. - Investment Contracts and the Modern Definition of a Security

George Roberts III, PhD · 4:47

https://www.youtube.com/watch?v=b6FpIofbozo

After the story, if you want the case told once more with the facts and holding in five minutes before you try the worked examples.

KEY TERMS

security

Under the USA's long list: notes, stocks, bonds, debentures, investment contracts, options, warrants, variable annuities, interests in oil and gas programs, and more — anything fitting the list or the Howey test.

investment contract

The catch-all category defined by Howey: an investment of money in a common enterprise with an expectation of profits from the efforts of others.

Howey test

The Supreme Court's four-prong test (1946) for an investment contract: (1) investment of money, (2) common enterprise, (3) expectation of profit, (4) from the efforts of others.

issuer transaction

A sale whose proceeds go to the issuer — a new issue; a non-issuer transaction is one between investors, where the issuer receives nothing (ordinary market trading).

registration by coordination

State registration filed alongside a federal 1933 Act registration; it becomes effective at the same moment as the federal registration if the state filing has been on file the required period (10 days in the convention) with pricing on file two business days.

registration by qualification

The full state registration, used for purely intrastate offerings and anything else; effective only when the Administrator so orders.

notice filing

The documents-and-fee filing a state may require for federal covered securities, chiefly investment company shares; the state cannot pass on the offering's merits.

exempt security

A security excused from registration and advertising-filing requirements because of what it IS (government, municipal, bank, insurance company, public utility, nonprofit, top-grade commercial paper and the rest of the list).

exempt transaction

A sale excused because of HOW it occurs (isolated non-issuer sale, unsolicited order, institutional sale, private placement, fiduciary or pledgee sale), judged transaction by transaction.

private placement (USA)

An offering directed to no more than 10 non-institutional persons in the state in 12 months, with no commissions for soliciting retail buyers, who purchase for investment — an exempt transaction.

CORE IDEAS

The story. In the lake country of central Florida, the W. J. Howey Company owned mile upon mile of orange groves — and, conveniently, a resort hotel beside them. Guests came south for the winter sun; the hotel's brochures mentioned the fine groves; and when a guest admired the trees from the touring car, he was told, pleasantly, that they were for sale. The deal came in two papers: a land contract for a strip of grove — most buyers took less than five acres, and the average holding was 1.33 acres, narrow slices of a vast planting — and a service contract, usually with Howey-in-the-Hills Service, Inc., for ten years without right of cancellation, under which the company kept full possession, tended the trees, picked the fruit, pooled the whole crop and remitted the buyer's share of the profits. The buyers were

doctors, merchants, professionals from the North — the Court noted they lacked the knowledge, skill and equipment to farm citrus and never intended to; they were buying an income, not an orchard. The SEC called the package an unregistered security. Howey called it real estate. The lower courts sided with Howey — and on May 27, 1946, the Supreme Court, through Justice Murphy, reversed: this was an **investment contract**, and the securities laws reached it.

How they figured it out. Murphy distilled the old state blue-sky cases into one sentence the exam still tests: an investment contract is "a contract, transaction or scheme whereby a person invests his money in a common enterprise and is led to expect profits solely from the efforts of the promoter or a third party." Four prongs: **an investment of money**; **a common enterprise** (the pooled crop); **an expectation of profits**; **from the efforts of others** (Howey's men did every lick of work). The deed made it look like land; the substance made it an investment in a citrus business run by promoters. **Substance over form** is the whole method — the law looks at what a scheme *is*, not what its papers call it. Courts have since applied the same four questions to whisky warehouse receipts, chinchilla farms, payphone programs and digital coins; the test was built for things its authors never imagined, which is why it is still the law.

The big idea — what is a security. The USA answers first with a **laundry list**: notes, stocks, treasury stock, bonds, debentures, evidences of indebtedness, certificates of interest in profit-sharing agreements, collateral trust certificates, preorganization certificates, transferable shares, **investment contracts**, voting trust certificates, puts, calls, straddles, options, interests in oil, gas and mining programs — and **variable annuities**, because their value rides on a securities portfolio. Then the famous NON-securities, which you must know cold: a **fixed annuity** and traditional **whole, term and universal life insurance** (the insurance company bears the investment risk); **commodity futures contracts** and the commodities themselves; **collectibles**, precious metals and **currency**; **retirement plans** as such (an IRA or Keogh is a basket, not a security — though securities live inside it); and a **house you live in** (Mr. Howey's buyers were not moving to Florida to farm — a condominium bought with a rental pool and management contract can flunk back into being a security). When a strange scheme appears on the exam, run Howey's four questions and ignore the packaging.

Issuers and the three doors into a state. An **issuer transaction** sends the proceeds to the issuer — a new issue. A **non-issuer transaction** is trading between investors; the issuer gets nothing. Registering a new issue in a state happens through one of three doors. **Coordination:** the offering is also registering federally under the 1933 Act; the state filing mirrors the federal one and becomes effective *at the same moment* as the federal registration — provided it has been on file the required period (ten days in the NASAA convention) and a statement of maximum and minimum offering prices has been on file two full business days, with no stop order pending. This is the common door for interstate offerings. **Qualification:** the full state examination, used for purely **intrastate** offerings that never touch federal registration; it becomes effective only *when the Administrator so orders*. **Notice filing:** not really registration at all — for **federal covered securities**, chiefly investment company shares, the state may require copies of the federal documents, a consent to service of process and a fee, but may not pass on the merits.

The two kinds of exemption. An **exempt security** is excused by what it IS, and the classic list should recite itself: U.S. government and municipal securities; securities of foreign governments with which the U.S. maintains diplomatic relations (Canadian provinces included); securities issued by **banks, savings institutions and trust companies**; **insurance company** securities; **public utility and railroad** securities under regulation; **federal covered securities**; securities of **nonprofit** religious, educational and charitable organizations; and **commercial paper** in the top three rating grades, maturing in **nine months or less**, in denominations of at least $50,000. An exempt security keeps its exemption in every transaction. An **exempt transaction** is excused by HOW the sale happens, one sale at a time: the **isolated non-issuer** sale (one neighbor selling shares to another); **unsolicited brokerage** orders — the customer calls the broker unprompted, the commonest exempt transaction on the exam; **institutional** sales; **fiduciary** sales by executors, administrators, sheriffs, marshals, receivers, trustees in bankruptcy, guardians and conservators; **pledgee** sales (the bank selling collateral after a default); underwriter transactions; and the **private placement** — offers to no more than **10 non-institutional persons** in the state in **12 months**, no commissions for soliciting the retail buyers, who buy for investment and not quick resale (institutional offerees are unlimited).

What an exemption is not. Here is the sentence to carve into the notebook: an exemption excuses a security or transaction from the act's **registration** and **advertising-filing** requirements — **never from the antifraud provisions.** Lie about a municipal bond, defraud a bank in a private placement, cheat a widow on an unsolicited order: every one is fully actionable. The Administrator may also, by order, revoke certain exemptions in a particular case (the nonprofit exemption is the classic revocable one) — but no Administrator and no exemption anywhere can bless a fraud.

On the exam today. Three question families, every sitting. Family one: "Which of the following is NOT a security?" — the answer lives on the short list: fixed annuity, whole life, futures, collectibles, currency, the home. Watch the annuity pair especially; the exam swaps fixed and variable in adjacent choices. Family two: classify the exemption — read whether the thing or the sale is doing the work. A bank's own stock sold to anyone: exempt *security*. A customer's unprompted order for an unlisted stock: exempt *transaction*. The same facts will appear with both labels among the choices. Family three: the registration doors — coordination goes with a federal registration and turns effective *with* it; qualification is the intrastate door and waits for the *Administrator's order*; notice filing belongs to mutual funds and other federal covered securities. And once per exam, some scheme in sheep's clothing — ostrich farm, rental program, coin offering — wants to know if you remember four questions from an orange grove.

PICTURE STUDY

Orange Trees and Gate, Winslow Homer, 1885 · Watercolor on paper · Private collection

Image: Wikimedia Commons, public domain

Winslow Homer, America's great watercolorist, painted these laden orange trees on his travels in the semi-tropics in 1885 — the same sun-struck world of sand, citrus and winter visitors in which W. J. Howey would later plant his groves and his hotel. Sixty years after this picture, the Supreme Court looked past deeds and gates like these to ask what was really being sold among the orange rows.

Look closely

- Count the oranges you can find — on the branches and dropped in the sand. How does Homer make ripeness feel almost heavy?
- Find the gate and fence. What do they say about ownership of these trees?
- Notice the light on the sandy ground. What time of day and what climate has Homer given you?
- No person appears in the picture. Who, then, is doing the work of this grove — and why did that question decide a Supreme Court case?

Talk about it

1. A buyer of Howey's grove strips owned real trees like these yet never touched them. Why did the Court say he had bought a security rather than an orchard?

2. “Ye shall know them by their fruits”: how is the Howey test a legal version of judging by fruits instead of labels?
3. What honest uses does the investment-contract form have — when is pooling land and labor under a promoter good for everyone?

PROJECT

The Howey Hearing

You will put three invented schemes on trial under the Howey test, write a one-paragraph opinion for each, and build the two-column securities chart you will keep for the exam.

You will need

- Your exam notebook and a ruler
- The Howey opinion from the kit list (the facts section, a few pages)
- Three scheme cards you will write yourself
- A parent to play opposing counsel for ten minutes

Steps

1. Read the facts section of the real Howey opinion and list the five facts you think decided the case.
2. Write three one-paragraph schemes: one plainly a security (passive investors, pooled profits, promoter does the work), one plainly not (a buyer who takes possession and does the work), and one genuinely close (part use, part investment).
3. For each scheme, write the four prongs as questions and answer each with a sentence of evidence from your own paragraph.
4. Deliver a one-paragraph opinion per scheme: held, security or not, and the prong that decided it.
5. Argue the close case with your parent taking the other side for five minutes; then revise your opinion if they landed a real blow.
6. Build the two-column chart — SECURITIES / NOT SECURITIES — from this lesson's lists, at least ten entries per side, and star the pairs the exam swaps (fixed vs. variable annuity, whole life vs. variable life).
7. File the chart where your portfolio pieces gather; it is one of the four exhibits of My Law Book.

Tips

- The close case is the valuable one — real exam questions live exactly on that edge, so spend your effort there.
- In your opinions, quote the prong language itself ("from the efforts of others"); exam answers reward the exact words.

Check your work

- ☐ My three opinions each turn on named prongs, not on vibes.
- ☐ My chart has ten or more correct entries per column with the swap-pairs starred.
- ☐ I can recite the four prongs in order without looking.

EXAM NOTEBOOK

1. Write the Howey test as a four-rung ladder with one word per rung — money, common, profit, others — and a one-line example beside each rung.
2. Make the three-doors table: coordination / qualification / notice filing, with columns for which offerings use it and when it becomes effective.
3. Flashcards: eight exempt securities on one card set, eight exempt transactions on another, and one bold card reading "No exemption ever covers fraud."

> **From history.** The groves won their own kind of immortality: Howey-in-the-Hills is still a town in Lake County, Florida, and Mr. Howey's mansion still stands among the citrus. And the test outlived the oranges — in SEC v. Edwards (2004) the Supreme Court applied Howey to payphone sale-leasebacks promising fixed returns, holding unanimously that a guaranteed return is still an expected profit. Orange groves to payphones to whatever comes next: four questions, eighty years young.

Example 1. A promoter sells investors individual rows of grapevines in his vineyard, together with a mandatory 10-year contract under which his crew tends the vines, harvests the grapes, pools every vintage and pays each investor a share of wine profits. Investors may not enter the vineyard without permission. Is this a security?

Show solution

1. Investment of money: yes — the purchase price of the rows.
2. Common enterprise: yes — all grapes are pooled; each investor's fortune rises and falls with the whole venture.
3. Expectation of profits: yes — buyers are promised a share of the proceeds, and no one is buying grapes for the table.
4. From the efforts of others: yes — the promoter's crew does all the work; the mandatory contract and the no-entry rule prove the buyers are passive.
5. All four Howey prongs are met; the deed to the rows is form, the pooled wine business is substance.

Answer: Yes — an investment contract, and therefore a security, on all fours with Howey's orange groves. Calling it a land sale changes nothing.

Example 2. Which of the following is an exempt TRANSACTION under the Uniform Securities Act?

A. The sale of a city's general obligation bond

B. A customer's unsolicited order to buy an unlisted stock, executed by a broker-dealer

C. The sale of a bank's own common stock

D. The sale of shares of a registered mutual fund

Show solution

1. A and C are exempt SECURITIES — municipal and bank issues are excused by what they are, in every sale. Wrong category, so eliminate.
2. D is a federal covered security — handled by notice filing, again a property of the security.
3. B is excused by HOW the sale occurred: the customer initiated it. That is the unsolicited brokerage transaction — the most commonly cited exempt transaction.

Answer: B. The question tests the category, not the safety: A, C and D name exempt securities, and only the unsolicited order is a property of the transaction itself.

Example 3. During March, an issuer's officers personally offer unregistered shares to 14 State Q residents: 4 insurance companies and 10 individuals. No commissions are paid, and the individuals sign letters of investment intent. In July — within the same 12 months — they offer the same deal to one more individual. Does the private placement exemption survive?

Show solution

1. Institutional offerees never count: subtract the 4 insurance companies.
2. Retail offerees in March: 10 — exactly at the USA's ceiling of 10 non-institutional offerees in 12 months. Still exempt.
3. No commissions and investment intent: the other conditions hold.
4. July adds an 11th retail offeree inside the same 12 months: the ceiling is breached — and note it counts OFFEREES, not purchasers; the offer alone spends the quota.

Answer: It survives March exactly at the limit and dies in July with the 11th retail offeree. Count offers, not sales — the exam plants the difference.

Example 4. An issuer is registering a new interstate offering with the SEC under the Securities Act of 1933 and files in State Q by coordination, with all required papers. The federal registration becomes effective at 4:00 p.m. Tuesday. The state registration is effective:

A. At noon on the 30th day after the state filing

B. When the Administrator so orders

C. At 4:00 p.m. Tuesday, simultaneously with the federal registration

D. Two business days after Tuesday

Show solution

1. Coordination exists to synchronize: if the filing has been on file the required period (10 days in the convention), pricing has been on file two business days, and no stop order is pending, the state registration turns effective the instant the federal one does.
2. A is the clock for registering PEOPLE (advisers, agents), not coordinated securities.
3. B is qualification's rule. D misuses the pricing-statement condition as a waiting period after effectiveness.

Answer: C. Coordination means simultaneous effectiveness with the federal registration — that synchronization is the entire point of the method.

PRACTICE

1. Easy List the four prongs of the Howey test in order.

Show answer

(1) An investment of money, (2) in a common enterprise, (3) with an expectation of profits, (4) derived from the efforts of others (the promoter or a third party).

2. Easy Which of the following is NOT a security?

A. A variable annuity

B. A fixed annuity

C. A put option on a listed stock

D. A corporate debenture

Show answer

B. In a fixed annuity the insurance company bears the investment risk, so it is insurance, not a security. The variable annuity in A — where the owner bears the risk through a separate account — is the planted twin.

3. Easy Define issuer transaction and non-issuer transaction in one sentence each.

Show answer

An issuer transaction is a sale whose proceeds benefit the issuer (a new issue); a non-issuer transaction is a trade between investors in which the issuer receives nothing — everyday market trading.

4. Medium Which group consists entirely of NON-securities?

A. Whole life insurance, commodity futures, rare coins, U.S. currency

B. Whole life insurance, variable life insurance, gold bars, futures

C. Fixed annuities, options, collectibles, currency

D. Futures, fixed annuities, oil and gas program interests, a personal residence

Show answer

A. Every item is on the non-security list. B smuggles in variable life (a security), C smuggles in options, and D smuggles in oil and gas program interests — one contaminant per wrong choice, which is how the exam builds these.

5. **Medium** Registration by coordination becomes effective:

A. At noon on the 30th day after filing in the state

B. Simultaneously with the related federal registration, if the filing has been on file the required period and pricing for two business days

C. When the Administrator issues an order

D. On December 31

Show answer

B. Coordination synchronizes state effectiveness with the federal registration. A is the clock for registering persons; C is registration by qualification.

6. **Medium** A family bakery wants to sell shares only to residents of its own state, with no federal registration of any kind. The proper method of state registration is:

A. Coordination

B. Notice filing

C. Qualification

D. None; intrastate offerings are exempt

Show answer

C. Qualification is the door for purely intrastate offerings, effective when the Administrator so orders. Coordination requires a federal filing to coordinate with, and intrastate offerings are federally exempt but NOT automatically state-exempt — the state is exactly who regulates them.

7. **Medium** A registered open-end investment company offers its shares in your state. The state may require:

A. Registration by qualification

B. Registration by coordination

C. A notice filing with copies of federal documents and a fee

D. Nothing whatsoever

Show answer

C. Mutual fund shares are federal covered securities: no state registration, but notice filing with a fee is allowed. D overreads NSMIA — the fee and filing power survived.

8. Hard Which is an exempt transaction?

A. A sale of commercial paper rated in the top three grades

B. An executor's sale of estate securities

C. A sale of public utility bonds

D. A sale of a nonprofit college's bonds

Show answer

B. Fiduciary sales — executor, administrator, sheriff, trustee in bankruptcy, guardian — are exempt TRANSACTIONS. A, C and D are exempt SECURITIES; the question is sorting categories, not safety.

9. Hard To keep the USA's private placement exemption, an issuer's offering must observe all of the following EXCEPT:

A. No more than 10 non-institutional offerees in the state in 12 months

B. No commissions for soliciting the retail buyers

C. Retail buyers purchasing with investment intent

D. No more than 10 institutional purchasers in the state in 12 months

Show answer

D. Institutions are unlimited — the 10-person ceiling counts only non-institutional OFFEREES. A, B and C are the actual conditions, and remember the quota is spent by offers, not completed sales.

10. Hard An agent sells a municipal bond to a retail client using deliberately false statements about its credit. The agent argues the bond is an exempt security. What result?

Show answer

Liable in full. Exemptions excuse registration and advertising filings only — never the antifraud provisions. Fraud in the sale of ANY security, exempt or not, is actionable by the Administrator and the client alike.

11. **Challenge** A company sells payphone units to the public for $7,000 each, leases them back, manages them entirely, and promises a fixed 14% annual return. Buyers never see their phones. Under Howey (as extended by SEC v. Edwards), this is:

    A. Not a security, because the return is fixed rather than variable

    B. Not a security, because the buyer holds title to tangible equipment

    C. An investment contract — money, common enterprise, expected profit, promoter's efforts

    D. A commodity

    Show answer

    C. The Supreme Court in Edwards (2004) held that a promised FIXED return still satisfies the profit prong, and title to the hardware is form, not substance — exactly the Howey analysis. A and B recite the promoter's own failed arguments.

12. **Challenge** Describe how the Howey Company actually sold its groves — the hotel, the two contracts, the service company — and state why each of the four prongs was satisfied.

    Show answer

    Hotel guests were shown the groves and offered small strips of land (averaging 1.33 acres) with a 10-year, non-cancelable service contract under which Howey-in-the-Hills Service, Inc. kept possession, farmed the trees, pooled the fruit and paid profits. Money: the land price. Common enterprise: the pooled crop. Expected profit: the promised income from the harvests. Efforts of others: the company did all the work and buyers could not even enter without consent.

COMMON MISTAKES

- Marking a fixed annuity or whole life policy as a security — if the insurance company bears the investment risk, it is not one; variable products are.
- Confusing exempt securities (what it is) with exempt transactions (how it is sold) — read which one the question is testing before touching the choices.
- Assuming an exemption shields against fraud charges; no exemption ever touches the antifraud provisions.

- Giving qualification's effective date (the Administrator's order) to coordination, which turns effective simultaneously with the federal registration.
- Counting purchasers instead of offerees in the private placement — the 10-person ceiling is spent by offers.

Make it a game · Security or Not. The caller fires items in rapid succession — share of stock, fixed annuity, bushel of wheat, wheat future, variable annuity, baseball card collection, church bond, whisky warehouse receipt with a management contract, your house, an option on your house's street? — and you answer SECURITY or NOT inside three seconds, with the reason in five more when challenged. One point per correct call, two for a correct reason under challenge; first to 12. Then reverse roles, and each player must invent two brand-new schemes that force the Howey test on the other.

Scripture. "Ye shall know them by their fruits. Do men gather grapes of thorns, or figs of thistles?" (Matthew 7:16, KJV)

Christ teaches judgment by substance, not label — the very method of Howey. A scheme is known by what it actually bears for its buyers, not by the name on its papers; and the adviser, too, will be known by fruits rather than titles.

9.5 The Administrator: Powers, Penalties and Remedies

OBJECTIVES

- Define the Administrator and the reach of his jurisdiction, including the publishing and broadcast carve-outs.
- List the Administrator's powers — rules, orders, investigations, subpoenas, cease and desist, denial, suspension, revocation and summary orders — with their procedural limits.
- Distinguish cancellation from withdrawal and apply the one-year reach-back.
- Compute a rescission payment and state the civil liability rules, time limits and the 30-day rescission offer.
- State the criminal penalties, the willfulness requirement and the 60-day appeal rule.

> **Warm-up.** With pencil and paper, write the job description you would give a referee for the securities business of your state: list five powers he needs to do the job and two powers you would deliberately deny him. Keep the list — at the end of the lesson, compare it with what the Uniform Securities Act actually grants and withholds.

WATCH

Authority of the State Securities Administrator - Series 65 Exam Prep

CertFuel · 10:00

https://www.youtube.com/watch?v=1-kdc3fve_4

> **WHEN TO WATCH**
> After the big idea. Keep a two-column page — CAN and CANNOT — and sort every power the teacher mentions as he goes.

BACKUP VIDEO

State Securities Acts (Blue Sky Laws) Explained for the Series 65 Exam!

Business with Mr. G · 13:13

https://www.youtube.com/watch?v=9J2uDs-6vOY

A second voice on the whole state-law architecture — watch it as review after the practice set and note any power he lists that your CAN/CANNOT page is missing.

KEY TERMS

Administrator

The state official (commissioner, secretary of state's division, or agency) charged with administering the Uniform Securities Act in that state.

cease and desist order

An Administrator's order to stop a practice, issuable with or without a prior hearing when he sees a violation brewing or underway; it needs a court's help (an injunction) to be forced on a defiant party.

stop order

An order denying, suspending or revoking the effectiveness of a securities registration statement.

summary order

An order effective immediately and before any hearing — postponing or suspending a registration pending final determination; the respondent gets notice and, on written request, a hearing within 15 days.

withdrawal

A registrant's voluntary exit, effective 30 days after filing if no proceeding is pending; the Administrator keeps jurisdiction to institute proceedings for one year afterward.

cancellation

The nonpunitive erasure of a registration when a registrant dies, is judged mentally incompetent, ceases business, or cannot be located after reasonable search.

rescission

Undoing an unlawful sale: the buyer recovers the price paid plus interest at the legal rate, minus any income received on the security, upon tendering it back.

right of rescission (offer)

A seller discovering its own violation may offer to repurchase on rescission terms; a buyer who lets 30 days pass after receiving the written offer loses the right to sue on that sale.

statute of limitations (civil, USA)

Suit must be brought within three years of the sale or two years after discovery of the violation, whichever comes first — the 1956 USA convention the exam uses.

criminal penalties (USA)

Willful violations are punishable by a fine of up to $5,000 and/or imprisonment up to 3 years under the 1956 act's convention — imposed by courts, never by the Administrator.

CORE IDEAS

The story. Return to Topeka, where this course began. Joseph Norman Dolley — storekeeper, banker, Kansas Republican — became state bank commissioner in 1909 and began hearing the same story from farm towns across the state: the harvest money was leaving, siphoned off by glittering certificates in mining ventures and oil companies that existed mostly on paper. Dolley pushed the legislature for a weapon, and is credited with writing the bill himself — introduced February 6, 1911, signed by Governor Stubbs on March 10, in force five days later: the first blue-sky law in America. Now no investment company could sell securities in Kansas without filing with the bank commissioner — and the commissioner could say no. Dolley said no with relish. Of the first seven-hundred-odd applications he scrutinized, he approved about four dozen, and he told the newspapers that most of the rest were fraudulent mining, oil and stock schemes backed by nothing but Kansas sky (his figures were his own advertising, historians caution — but the housecleaning was real). Within twenty-two years, forty-seven states had copied Kansas. The office Dolley invented is the office this lesson studies: the **Administrator**.

How they figured it out. The wildcatters did not surrender; they sued, arguing states had no business obstructing interstate commerce in paper. In 1917 the Supreme Court upheld the blue-sky laws (Hall v. Geiger-Jones Co.), and the states kept building. But forty-eight separate statutes made a crazy quilt, so in 1956 the National Conference of Commissioners on Uniform State Laws promulgated the **Uniform Securities Act** — drafted under Professor Louis Loss, the century's great securities scholar — a model act states could adopt and NASAA could keep polished. It is the version of that act, with NASAA's updates, that your exam tests. The design holds two ideas in balance: a strong referee with real weapons, and hard procedural walls — notice, hearings, findings, appeals — so the referee never becomes a czar.

The big idea — jurisdiction and everyday powers. The Administrator reaches any offer or sale that **originated in** his state, was **directed into** it, or was **accepted in** it —

so one phone call can light up two or three states at once. The carve-outs: no offer is "made in" the state merely because a newspaper or periodical was **published outside** it (or published inside it but with more than two-thirds of its circulation outside), or because a **radio or television broadcast originated outside** the state. Day to day, the Administrator may make, amend and rescind **rules and orders** (rules bind everyone, orders bind their parties; neither can contradict the act, and no rule can be applied retroactively); conduct **investigations**, public *or private*, inside *or outside* the state; **subpoena** witnesses and records, even for a sister state's case; and issue **cease and desist** orders — with or without a prior hearing — the moment a violation threatens. Two things he can never do: he cannot sentence anyone (prison is a court's power), and a contested cease and desist is enforced by asking a court for an **injunction**.

Acting against a registration. To **deny, suspend or revoke**, the Administrator needs both halves of a two-part key: the action must be **in the public interest** AND rest on a **listed cause** — a false or misleading filing; willful violation of the act; conviction of any felony, or a securities or money-related misdemeanor, within the past **10 years**; an injunction from securities business; another Administrator's or the SEC's order against the person; **insolvency**; unethical or dishonest practices; failure to supervise; failure to pay the filing fee; or lack of qualification. The exam's favorite trap sits right there: **"in the public interest" alone is never enough** — and neither is lack of *experience* by itself. Final orders require notice, opportunity for a hearing, and written findings of fact and conclusions of law. When speed matters, a **summary order** may postpone or suspend a registration pending final determination — effective immediately, but the respondent gets prompt notice and, upon written request, a **hearing within 15 days** of the request. And keep the **nonpunitive endings** separate, because the exam does: **cancellation** (death, adjudicated mental incompetence, ceasing business, or vanishing — mail returned, no forwarding address) punishes no one; **withdrawal** is the registrant's own exit, effective on the **30th day** after filing if no proceeding is pending — with the Administrator keeping a **one-year reach-back** to institute proceedings for conduct predating the exit.

Civil liability — making the buyer whole. A buyer sold securities in violation of the act (unregistered non-exempt paper, an unregistered agent, material misstatements) may sue for **rescission**: tender the security back and recover the **price paid, plus interest** at the state's legal rate, **less any income received** (dividends and interest collected), plus costs and reasonable attorney's fees; a buyer who no longer owns the

security sues for the equivalent damages. A seller who discovers its own foot-fault may move first with an **offer of rescission** on those same terms: a buyer who receives the written offer and does nothing for **30 days** loses the right to sue on that sale. The clock on suits is the 1956 convention: **three years from the sale or two years from discovery of the violation, whichever comes first.** Advisory clients have their own remedy, and note its different shape: a client advised in violation of the act recovers the **consideration paid for the advice** — the fees — plus interest, costs and attorney's fees, and damages where fraud caused losses; what he does not get is rescission of the securities trades themselves, because the adviser was never the other side of those trades. Two garnishes the exam likes: the rights survive the buyer and pass to his estate, and **waivers are void** — no client agreement can sign away the act's protections.

Criminal penalties and appeals. For **willful** violations the act's convention sets the criminal ceiling at a **$5,000 fine and/or 3 years' imprisonment** per violation — sought by prosecutors in court, never imposed by the Administrator, and no one may be imprisoned who proves he had no knowledge of the rule or order he violated. (Where statutes differ from state to state, the exam wants the 1956 numbers.) Any person aggrieved by a final order may appeal to the appropriate court within **60 days** — and filing the appeal does **not** stay the order unless the court says so; the order stands while the fight goes on.

On the exam today. The Administrator questions are power-sorting questions. CAN: rule-making, private or public investigations in or out of state, subpoenas for other states' cases, cease and desist without a hearing, summary suspension pending determination, denial or revocation on public interest plus a listed cause, and keeping one year of jurisdiction after a withdrawal. CANNOT: imprison anyone, act on public interest alone, deny for inexperience alone, make retroactive rules, or enforce his own cease and desist without a court. Memorize the number wall and recite it before the test: **15** days (hearing after written request on a summary order), **30** days (withdrawal effective; rescission offer response; U5 while we are counting), **60** days (appeal), **1** year (post-withdrawal reach-back), **10** years (convictions as grounds), **2/3** years (discovery/sale limitation clocks), $5,000/3 years (criminal). When two choices differ only in a number, the number IS the question.

PICTURE STUDY

The Jury, John Morgan, 1861 · Oil on canvas · Discover Bucks Museum, Aylesbury, England

Image: Wikimedia Commons, public domain

John Morgan painted twelve ordinary Englishmen wrestling with a verdict — farmers and tradesmen, listening, doubting, persuading. The Uniform Securities Act trusts its referee, the Administrator, with real power, but it hedges that power with the world this painting shows: notice, hearings, evidence weighed by fallible people, findings in writing, and appeal. Due process is slower than a decree, and that is its virtue.

Look closely

- Find the juror taking notes and the one cupping his ear. What does each tell you about how judgment is supposed to work?
- Count the different expressions — persuaded, doubtful, bored, troubled. Why paint disagreement instead of unanimity?
- Notice that no judge or defendant is visible. Why might the painter keep only the twelve in frame?
- The jurors are ordinary men, not experts. What does the law gain, and risk, by trusting ordinary judgment?

Talk about it

1. A summary order acts first and hears later — within 15 days of a written request. When is that speed justice, and when is it a danger?

2. Why does the act demand public interest PLUS a listed cause before a license dies, instead of trusting the Administrator's judgment alone?
3. Ecclesiastes warns that slow sentences embolden evil. How does the act try to be both fast against fraud and fair to the accused?

PROJECT

The Administrator's Desk

For one session, you are the Administrator. Four case files land on your desk; for each you must choose the correct power, draft the order in three sentences, and cite the limit that disciplines you.

You will need

- Four case files you will write from the prompts below
- Your CAN/CANNOT two-column page from the video
- The USA PDF from the kit list for section-hunting
- A parent to play the aggrieved respondent

Steps

1. Write the four files, one short paragraph each: (1) a registered agent convicted of felony fraud 4 years ago, just discovered; (2) an unregistered promoter cold-calling residents about a gold-mine program; (3) a registered adviser whose mail returns marked undeliverable, office abandoned; (4) a BD filing withdrawal while a churning complaint sits unresolved.
2. For each, choose the weapon: revocation proceedings, cease and desist (hearing or not?), cancellation, or the rules for withdrawal with proceedings pending.
3. Draft each order in three sentences: what you order, the listed cause plus the public-interest finding where required, and the respondent's procedural rights (hearing, findings, 60-day appeal).
4. Compute one rescission: in file 2, a resident paid $5,000 six months ago and received no income; at 6% legal interest, write the offer amount and the buyer's 30-day deadline.
5. Let your parent appeal one order: they get two minutes to argue; you must answer with the act, not with volume.
6. File the four orders behind your powers one-pager — they are evidence for the portfolio rubric.

Tips

- Match the weapon to the wrong: cancellation is housekeeping, not punishment — using it punitively is the classic misfire.
- Write the public-interest-plus-cause sentence in every disciplinary order; the habit is exactly what the exam rewards.

Check your work

- ☐ Each order names a listed cause (or correctly needs none) and the respondent's rights.
- ☐ My rescission arithmetic is correct ($5,000 + $150 = $5,150)
- ☐ I used cancellation only for the vanished adviser, and I handled the pending-complaint withdrawal correctly.

EXAM NOTEBOOK

1. Build the number wall on one page, large: 15 / 30 / 60 days, 1 year, 10 years, 2-or-3 years, $5,000/3 years — each with a four-word label.
2. Make the CAN/CANNOT table for the Administrator: at least seven entries per column from this lesson.
3. Write the rescission formula at the top of a page and work two invented examples beneath it, one with income received and one without.

KEY FORMULAS

$$\text{Rescission payment} = \text{price paid} + \text{interest at the legal rate} - \text{income received}$$

From history. Where did "blue sky" come from? The phrase was in the air in Kansas — promoters, it was said, would sell building lots in the blue sky itself — and Justice McKenna fixed it in the law in Hall v. Geiger-Jones Co. (1917), describing schemes with no more basis than "so many feet of blue sky." Dolley's nickname for fraud became the permanent name of an entire body of American law — and of the exam you are preparing to pass.

WORKED EXAMPLES

Example 1. An agent unlawfully sold a client $20,000 of unregistered, non-exempt stock 15 months ago. The client has received $900 in dividends. The state's legal rate of interest is 6%. Compute the rescission payment the firm must offer.

Show solution

1. Interest on the price for 15 months: $\$20{,}000 \times 6\% \times \frac{15}{12} = \$1{,}500$.
2. Add to the price paid: $\$20{,}000 + \$1{,}500 = \$21{,}500$.
3. Subtract income received on the security: $\$21{,}500 - \$900 = \$20{,}600$.
4. The client tenders the shares back and receives $20,600 (plus costs and reasonable attorney's fees if suit was required).

Answer: $20,600 — price plus interest minus income received. If the client ignores a proper written rescission offer for 30 days, the right to sue on this sale is gone.

Example 2. The Administrator may deny an investment adviser's registration for which of the following reasons, by itself?
A. The applicant has never worked in the securities business
B. Denial would be in the public interest
C. The applicant was convicted of a felony 6 years ago, and denial is in the public interest
D. The applicant's brochure is longer than the Administrator prefers

Show solution

1. The two-part key: public interest AND a listed cause. B offers public interest alone — never sufficient. Out.
2. A is lack of experience, which the act says cannot by itself be the basis. Out.
3. D is no listed cause at all.
4. C supplies both halves: a felony within 10 years (listed cause) plus the public-interest finding.

Answer: C. The exam plants B every time; public interest is necessary but never sufficient, and inexperience alone (A) is expressly not enough.

Example 3. A broker-dealer files to withdraw its registration on March 1 while no proceedings are pending. In the following months the Administrator learns the firm had churned accounts in February. Which is TRUE?

A. The withdrawal was effective March 1 and the Administrator lost jurisdiction that day

B. The withdrawal became effective March 31, and the Administrator may institute proceedings about the February conduct until March 31 of NEXT year

C. Withdrawal is impossible once violations exist

D. Only the SEC may act after a withdrawal

Show solution

1. Withdrawal is effective 30 days after filing when nothing is pending: March 31, not March 1. A is out on both halves.
2. The one-year reach-back: for one year after effectiveness the Administrator may institute proceedings for conduct while registered — the February churning qualifies.
3. C overstates (withdrawal is merely delayed or conditioned if proceedings are pending), and D forgets state jurisdiction entirely.

Answer: B. Thirty days to take effect; one year of retained jurisdiction after that. Leaving the state is not the same as escaping it.

PRACTICE

1. Easy Which penalty may the Administrator himself impose?

   A. Three years' imprisonment

   B. Revocation of a registration after notice, hearing and findings

   C. A $5,000 criminal fine

   D. Treble damages

   Show answer

   B. Administrative weapons — denial, suspension, revocation, cease and desist — are his; prison and criminal fines belong to courts after prosecution. A and C are the criminal ceiling a COURT may impose for willful violations.

2. Easy True or false, and why: the Administrator must hold a hearing before issuing a cease and desist order.

Show answer

False. Cease and desist may issue with or without a prior hearing — speed is its purpose. Final disciplinary orders (denial, suspension, revocation) are the ones requiring notice, opportunity for hearing and written findings.

3. Easy An adviser's mail is returned undeliverable and a reasonable search cannot locate the firm. The Administrator should:
A. Revoke the registration
B. Cancel the registration
C. Suspend it summarily
D. Refer the firm for prosecution

Show answer

B. Cancellation is the nonpunitive ending for death, mental incompetence, ceasing business or disappearance. Revocation (A) is discipline and needs a listed cause — vanishing is not misconduct.

4. Medium The Administrator may revoke a broker-dealer's registration if revocation is in the public interest and the firm:
A. Has become insolvent
B. Lost money for clients in a market decline
C. Is unpopular with local banks
D. Hired an inexperienced new agent

Show answer

A. Insolvency is a listed cause; paired with the public-interest finding, it completes the two-part key. Market losses, unpopularity and inexperience are not listed causes — and inexperience alone is expressly insufficient.

5. **Medium** A client paid $10,000 for stock sold in violation of the act one year ago and has received $400 of dividends. At a 6% legal rate, the rescission payment is:
   A. $10,000
   B. $10,600
   C. $10,200
   D. $11,000
   Show answer

   C. $\$10{,}000 + \$600$ interest $- \$400$ income $= \$10{,}200$. B forgets to subtract the dividends — the planted near-miss.

6. **Medium** A seller discovers it sold securities through an unregistered agent and mails every affected client a proper written offer of rescission. A client who wishes to preserve a claim on the sale must act within:
   A. 30 days of receiving the offer
   B. 60 days
   C. 2 years
   D. No deadline applies
   Show answer

   A. Thirty days of silence after receiving a valid rescission offer extinguishes the right to sue on that sale. B borrows the appeal period; C borrows the discovery limitation.

7. **Medium** Under the 1956 USA convention, a civil suit over an unlawful sale must be filed within:
   A. 3 years of the sale or 2 years of discovering the violation, whichever comes first
   B. 5 years of the sale
   C. 2 years of the sale or 3 of discovery, whichever is later
   D. 1 year of the sale
   Show answer

   A. Three from the event, two from discovery, earlier wins. C reverses the numbers and the direction — read limitation answers twice.

8. Hard A radio program originating in State A recommends a security and is heard across the border in State B, where a listener buys. Which Administrator(s) have jurisdiction over the offer?
   A. Both A and B
   B. State A only, because the broadcast originated there (and B, only through the acceptance there if the sale was directed into B by other means)
   C. State B only
   D. Neither
   Show answer

   B captures the broadcast carve-out: a broadcast originating in State A is not an offer "made in" State B, so the broadcast itself gives B no jurisdiction — A has it as the originating state. (Any later offer directed specifically into B, or accepted there apart from the broadcast, is a separate analysis.)

9. Hard The Administrator summarily suspends an agent's registration pending final determination. The agent's procedural rights are:
   A. A hearing before the order can take effect
   B. Prompt notice, and a hearing within 15 days after a written request
   C. Only an appeal after final revocation
   D. Automatic dissolution of the order in 30 days
   Show answer

   B. Summary orders bite first — but notice follows at once, and a written request obligates a hearing within 15 days. A describes final orders, not summary ones.

10. Hard State the criminal penalty convention under the 1956 USA, the mental state it requires, and who imposes it. Then state the appeal deadline from a final order and its effect on the order.
    Show answer

    Up to a $5,000 fine and/or 3 years' imprisonment per willful violation, imposed by a court on prosecution — never by the Administrator; a person proving no knowledge of the particular rule or order may escape prison though not the fine. Appeals go to court within 60 days, and filing does not stay the order unless the court orders otherwise.

11. **Challenge** An adviser's client paid $6,000 in fees during a year in which the adviser was willfully unregistered, and the portfolio lost $9,000 in a general market decline no advice caused. Under the USA the client's recovery is best described as:
A. $15,000 — fees plus all losses
B. The $6,000 of fees, plus interest, costs and attorney's fees; losses only to the extent caused by the violative advice
C. Rescission of every trade the client made that year
D. Nothing, because advice is not a security
Show answer

B. The advisory remedy returns the consideration paid for the advice with interest, costs and fees, plus damages the unlawful advice actually caused — not market losses it did not cause, and not rescission of trades the adviser was never a party to (C). D confuses the adviser's remedy section with the security definition.

12. **Challenge** Tell the Dolley story in four sentences: office, year, what the law required, and what he did with the applications — and name the 1917 Supreme Court case that let the blue-sky laws stand.
Show answer

J. N. Dolley, Kansas bank commissioner from 1909, drove through the nation's first blue-sky law, signed March 10, 1911. It required investment companies to file with his office before selling securities in Kansas, and let him refuse the unsound. He scrutinized hundreds of applications and approved only a few dozen, publicizing the fraudulent mining and oil schemes he rejected. In Hall v. Geiger-Jones Co. (1917) the Supreme Court upheld such laws, and within two decades nearly every state had one.

COMMON MISTAKES

- Letting the Administrator imprison or fine criminally — courts impose criminal penalties; the Administrator's weapons are administrative.
- Accepting "in the public interest" alone as grounds for denial or revocation — it always needs a listed cause beside it (and inexperience alone is never enough).
- Confusing cancellation (nonpunitive: death, incompetence, disappearance) with revocation (discipline requiring cause).

- Forgetting the withdrawal arithmetic: effective in 30 days, but one full year of retained jurisdiction afterward.
- Botching rescission by forgetting to subtract income received, or missing that silence for 30 days after a valid offer kills the claim.

Make it a game · Administrator Says. Simon-says with the law. The caller announces actions in a stern voice — "issue a cease and desist without a hearing!", "sentence the agent to prison!", "subpoena records for Nebraska's case!", "deny this application because it's in the public interest!", "cancel the registration of the adviser who died!" If the Administrator CAN do it, you stand and stamp an imaginary order; if he CANNOT, you sit on your hands. React within three seconds; a wrong move or a slow one puts you out for the round. Best of three rounds, 10 calls each — then you become the caller and must invent five lawful and five unlawful commands of your own.

Scripture. "Because sentence against an evil work is not executed speedily, therefore the heart of the sons of men is fully set in them to do evil." (Ecclesiastes 8:11, KJV)

The Preacher diagnoses exactly what summary orders and cease-and-desist powers exist to cure: slow justice teaches the fraudster that crime pays. The act's craft is speed against evil joined to fairness for the accused — both are owed, and the steward of power must render both.

UNIT 9

The Laws

This unit begins the part of the course the Series 65 weighs most heavily: the laws themselves. You will set the five great federal acts in order — 1933, 1934, the two acts of 1940, and the modern amendments of 1996 and 2010 — and then step down to the state level, where the **Uniform Securities Act** gives every state Administrator the power to register, investigate and discipline the people who sell securities and advice. You will meet the four roles the exam never tires of testing — investment adviser, investment adviser representative, broker-dealer and agent — and learn exactly who must register, who is excluded, and who is exempt. You will follow a small firm, Shoemaker & Daughter Advisers, through every page of Form ADV, and you will walk Mr. Howey's Florida orange groves with the Supreme Court in 1946 to learn what a **security** really is.

The stories are true and worth knowing: the SEC's 1939 study of the investment-counsel business that produced the Investment Advisers Act; Christopher Lowe, the barred adviser whose newsletter went all the way to the Supreme Court; and Kansas bank commissioner J. N. Dolley, who in 1911 wrote the first blue-sky law and threw out hundreds of worthless mining and oil schemes. By the end you will answer the exam's favorite questions — "Which of the following must register?" and "Which of the following transactions is exempt?" — quickly, precisely and with reasons.

PREREQUISITES

- Can tell the story of the 1929 crash and the founding of the SEC from Unit 1
- Can define a fiduciary and explain why an adviser is one
- Can read a four-choice exam question carefully and eliminate wrong answers
- Can compute simple interest and percents for the rescission arithmetic in Lesson 9.5

MASTERY CHECKLIST

- ☐ I can name the five major federal securities acts, their dates, and exactly what each one governs.
- ☐ I can explain NSMIA's division of labor: federal covered advisers and securities, state notice filings, and the antifraud power the states always keep.
- ☐ I can apply the assets-under-management lines — under $100 million to the states, $110 million and up to the SEC, and the buffer between — to any adviser scenario.
- ☐ I can apply the three-prong definition of an investment adviser and the exclusions and exemptions for advisers, IARs, broker-dealers and agents to decide who must register.
- ☐ I can describe registration by Form ADV through IARD: the parts of the form, the effective date, renewals, amendments, records and the U4/U5 paperwork for individuals.
- ☐ I can state the Howey test, sort securities from non-securities, and compare registration by coordination, qualification and notice filing.
- ☐ I can distinguish exempt securities from exempt transactions and explain why no exemption ever touches the antifraud provisions.
- ☐ I can list the Administrator's powers and their limits, including

the grounds for denial, summary orders, rescission, civil liability, criminal penalties and appeals.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **Uniform Securities Act of 1956, with NASAA updates and commentary**: Free PDF from NASAA — the very act, in the version NASAA says is tested on its examinations. Skim the table of contents with Lesson 9.2 and look up one section per lesson after that; reading the real text makes the exam's wording familiar. Ages 15 and up.
- **Investor.gov: The Laws That Govern the Securities Industry**: Free from the SEC. One page summarizing the 1933, 1934 and 1940 acts and their later amendments, in the government's own words. Read it alongside Lesson 9.1. Ages 14 and up.
- **SEC v. W. J. Howey Co., 328 U.S. 293 (1946) — the full opinion**: Free at Cornell's Legal Information Institute. Only a few pages long, and the facts section reads like a short story about orange groves and hotel guests. Read it with Lesson 9.4. Ages 15 and up.
- **Lowe v. SEC, 472 U.S. 181 (1985) — the full opinion**: Free at Cornell. The newsletter-publisher case behind the publisher's exclusion in Lesson 9.2. Read the first few pages of facts; the reasoning is for older students who want more. Ages 16 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

9.1 The Federal Acts: 1933, 1934 and the Two Acts of 1940 — 3 sessions of 50 minutes

9.2 Who Must Register: Advisers, Representatives, Broker-Dealers and Agents

3 sessions of 50 minutes

9.3 Registration in Practice: Form ADV, Records and Renewals

3 sessions of 50 minutes

9.4 What Is a Security: The Howey Test and Registration of Issues

3 sessions of 50 minutes

Unit 9 test

Closed book. Allow about 28 minutes for the 20 questions — roughly 83 seconds each, the real exam's pace — and answer every question; there is no penalty for guessing. Where a question supplies dollar figures or rates, use the figures given ("in this example") even if a rule-set amount differs in your state today. Each question is worth 5 points; 100 points possible.

1. **5 pts**

   Which act created the Securities and Exchange Commission?

   A. The Securities Act of 1933

   B. The Securities Exchange Act of 1934

   C. The Investment Advisers Act of 1940

   D. The Uniform Securities Act of 1956

2. **5 pts**

   An investment adviser reports $112 million of assets under management on its annual updating amendment. It must be registered with:

   A. Its home state

   B. The SEC

   C. Both the SEC and its home state

   D. Either, at its option

3. **5 pts**

   Which is a federal covered security?

   A. Shares of a registered open-end investment company

   B. Stock of a local diner sold to town residents

   C. A limited partnership interest sold intrastate

   D. A promissory note between neighbors

4. 5 pts

After NSMIA, which power do the states retain over a federal covered adviser doing business in the state?

A. Requiring the adviser to register

B. Approving its advertising

C. Antifraud enforcement and a notice filing with a fee

D. Setting its minimum net worth

5. 5 pts

First Federal Bank's investment department charges fees for portfolio advice. Under the Uniform Securities Act, the bank:

A. Must register as an investment adviser

B. Is exempt from registration

C. Is excluded from the definition of investment adviser

D. Must register as a broker-dealer

6. 5 pts

Which person is an investment adviser in State W?

A. A CPA answering investment questions incidentally during tax work, no separate fee

B. A firm with no State W office advising 9 retail residents there for fees over the past year

C. The publisher of a monthly financial magazine of general circulation

D. An engineer evaluating a factory bond issue as part of a construction report

7. 5 pts

A teacher of economics accepts $2,000 to deliver a weekend seminar titled "Choosing Stocks for Retirement," recommending specific securities. She is:

A. Excluded as a teacher

B. An investment adviser: specific securities advice, as a business activity, for special compensation

C. Exempt under the snowbird rule

D. An IAR of the school

8. **5 pts**

An individual takes a job with a broker-dealer selling only U.S. government bonds to retail investors. She must:

A. Register as an agent

B. Not register, because government bonds are exempt securities

C. Register as an IAR

D. Register only if she earns commissions

9. **5 pts**

A sales assistant at a broker-dealer, paid a salary only, accepts customer buy orders by phone when her boss travels. Under the USA she is:

A. A clerical employee, excluded

B. An agent who must be registered

C. An agent only if she solicits the orders

D. An IAR

10. **5 pts**

An IAR of a federal covered adviser has offices in States A and B and clients (but no office and no more than five of them) in State C. He must register as an IAR in:

A. A, B and C

B. A and B only

C. C only

D. None of them

11. **5 pts**

Under the USA, a complete initial application for registration as an investment adviser, with fee and consent to service of process and no Administrator action, becomes effective:

A. Immediately upon filing

B. At noon on the 30th day after filing

C. On the following December 31

D. When IARD assigns a CRD number

12. 5 pts

A state-registered adviser with a fiscal year ending September 30 must file its annual updating amendment to Form ADV by:

A. December 29 (90 days after fiscal year end)

B. December 31

C. September 30 of the next year

D. January 30

13. 5 pts

In this example, rule-set minimums are $35,000 net worth for custody and $10,000 for discretion. An adviser with discretionary authority but no custody discovers its net worth is $8,000. It must:

A. Do nothing; it exceeds half the requirement

B. Notify the Administrator by the close of the next business day and cure the deficiency (bond or capital)

C. Convert all accounts to non-discretionary within a year

D. Register with the SEC instead

14. 5 pts

An investment adviser must keep its books and records for ___ years, and a broker-dealer for ___ years.

A. 3; 5

B. 5; 3

C. 5; 5

D. 3; 3

15. 5 pts

An IAR quits a FEDERAL covered adviser to join a STATE-registered adviser. The Administrator must be notified of the departure and the hire, respectively, by:

A. The old firm; the new firm

B. The IAR; the new firm

C. The IAR; the IAR

D. The old firm; the IAR

16. 5 pts

Hotel guests buy one-acre strips of a citrus grove together with a mandatory 10-year service contract under which the seller farms the trees, pools the fruit and remits profits. Under SEC v. W. J. Howey Co., the package is:

A. A real estate sale

B. An investment contract, and therefore a security

C. A commodity transaction

D. A fixed annuity

17. 5 pts

Which of the following IS a security?

A. A fixed annuity

B. A whole life insurance policy

C. A variable annuity

D. A wheat futures contract

18. 5 pts

Which transaction is exempt under the Uniform Securities Act?

A. A broker-dealer's recommended (solicited) sale of unlisted stock to a retail client

B. An unsolicited retail order executed through a broker-dealer

C. An issuer's registered public offering

D. A solicited sale of a nonprofit's bonds to a retail client

19. 5 pts

The Administrator may do all of the following EXCEPT:

A. Issue a cease and desist order without a prior hearing

B. Subpoena witnesses and records relating to another state's investigation

C. Deny a registration solely because denial is in the public interest

D. Summarily suspend a registration pending final determination

20. 5 pts

Eighteen months ago a client paid $8,000 for stock sold in violation of the act and has collected $300 in dividends. At a 6% legal rate (simple interest), a proper rescission offer equals — and the client must respond within:

A. $8,720; 30 days

B. $8,420; 30 days

C. $8,720; 60 days

D. $8,000; 2 years

ANSWER KEY

1. B. The 1934 act created the SEC and governs the secondary market; the 1933 act (new issues and prospectuses) predates the Commission itself.
2. B. At $110 million and above, SEC registration is required. “Both” is never correct after NSMIA, and the either/or option belongs to the $100–110 million buffer.
3. A. Registered investment company shares (with exchange-listed securities) are the classic federal covered category — states may require only a notice filing and fee.
4. C. Registration, books-and-records and net-worth rules follow the SEC for federal covered advisers, but notice filings, IAR registration and antifraud jurisdiction remain with the states.
5. C. Banks, savings institutions and trust companies are excluded from the IA definition entirely — the correct word is excluded, not exempt, and the exam grades the vocabulary.
6. B. Nine retail clients breaks the five-or-fewer de minimis ceiling, and no exclusion applies. A and D are LATE professionals acting incidentally; C is the Lowe publisher’s exclusion.
7. B. The LATE exclusion requires advice solely incidental to teaching with no special compensation; a paid stock-picking seminar fails both conditions.
8. A. Representing a broker-dealer in securities business always requires agent registration; the exempt-security escape belongs only to issuers’ representatives.
9. B. Accepting orders is effecting securities transactions — agent activity regardless of title, salary or solicitation. The clerical exclusion covers typing and filing, not order-taking.
10. B. IARs of federal covered advisers register where they have a place of business — offices in A and B; mere clients in C do not require registration there.
11. B. Noon of the 30th day is the USA’s automatic effective date; December 31 is when every registration expires, not when it begins.
12. A. The annual updating amendment is due within 90 days of the FISCAL year end — here, late December. B is the renewal-fee date, a different obligation that merely falls nearby this time.
13. B. Below-minimum net worth triggers next-business-day notice to the Administrator and a prompt cure, typically a surety bond for the shortfall against the $10,000 discretion standard.

14. B. Advisers five years (the first two in the principal office); broker-dealers three. The reversed pair in choice A is the exam's favorite decoy.
15. B. Leaving a federal covered adviser, the IAR himself notifies (his firm is not state-registered); joining a state-registered adviser, the firm carries the duty.
16. B. Money invested in a common enterprise with profits expected from the efforts of others — the Court looked through the land-sale form to the investment substance.
17. C. In a variable annuity the owner bears the investment risk through a securities-funded separate account. Fixed annuities and whole life shift the risk to the insurer, and futures are commodities law's territory.
18. B. The unsolicited brokerage transaction is the textbook exempt transaction. D involves an exempt SECURITY (the nonprofit's bond) — the transaction itself is ordinary, which is exactly the distinction tested.
19. C. Public interest alone is never sufficient — a listed cause must accompany it. A, B and D are all genuine powers, each with its procedural strings attached.
20. B. Interest: $\$8{,}000 \times 6\% \times 1.5 = \$720$; price plus interest minus income: $\$8{,}000 + \$720 - \$300 = \$8{,}420$. Silence for 30 days after receiving the offer ends the claim; A forgets the dividend subtraction and C borrows the appeal period.

PORTFOLIO PIECE: MY LAW BOOK

Assemble, by hand, the four exhibits a future investment adviser representative should be able to produce from memory: (1) the four-roles grid — investment adviser, IAR, broker-dealer and agent across the top; definition, exclusions, exemptions and when registration is required down the side — filled in with the hinge words that decide real exam questions; (2) the two-column securities chart, at least ten entries per side, with the swap-pairs (fixed/variable annuity, whole/variable life) starred; (3) the three registration methods compared — coordination, qualification, notice filing — with who uses each and when each becomes effective; and (4) the Administrator's powers one-pager: the CAN and CANNOT columns, the two-part key for discipline, and the number wall (15/30/60 days, 1 year, 10 years, 2-or-3 years, $5,000/3 years). Write every page yourself — the hand remembers what the eye merely visits — and bind them into your exam notebook as the law section you will review the night before the real Series 65.

LOOK FOR	WHAT IT MEANS
Accuracy	Every definition, exclusion, exemption, dollar figure and deadline matches the USA/NASAA conventions taught in the unit; rule-set amounts are labeled as conventions.
Completeness	All four exhibits are present: the full four-roles grid, ten-plus entries per column on the securities chart, all three registration methods with effective dates, and both CAN and CANNOT columns with the number wall.
Exam readiness	The pages surface the tested traps — excluded vs. exempt, the BD's agent selling exempt securities, offerees vs. purchasers, public-interest-plus-cause — where the eye lands first.
Craftsmanship	Handwritten, ruled, legible at arm's length, with color or stars used purposefully; a page a younger sibling could study from.
Understanding	In a ten-minute oral review, the student explains any exhibit entry in his or her own words and answers two cold scenario questions per exhibit correctly.

UNIT 10

Ethics and the Capstone

This is the unit the whole course has been climbing toward. The law you have learned says what an adviser *may* do; ethics says what a fiduciary *must* do, and NASAA has written it down in model rules that the exam tests line by line. You will learn how an adviser must speak — disclosures, advertising and written contracts, with the 1920s tipster sheets and the Supreme Court's *Capital Gains* case showing why; how an adviser must charge — fees, performance fees, soft dollars and the strange economics born on May Day 1975; and how an adviser must guard what is not his — custody, discretion and anti-money-laundering rules, taught gravely through the fall of Bernard Madoff, the man who was his own custodian.

Then comes the catalog of prohibited practices — churning, front running, selling away and the insider trading born in a Canadian drill core in 1963 — and finally the capstone itself: cybersecurity, business continuity, and a complete exam-day playbook for the morning you sit the real Series 65. You will write your own **Fiduciary's Charter**, a one-page code of practice signed and dated, and a real-world plan for the test. The steward's question from 1 Corinthians 4:2 has stood behind every unit: it is required in stewards, that a man be found faithful. This unit is where you answer it.

PREREQUISITES

- Can explain the registration framework of the Uniform Securities Act: who the Administrator is, and who counts as an investment adviser, IAR, broker-dealer and agent
- Can state the fiduciary duty of an investment adviser and contrast it with a broker-dealer's suitability obligation
- Can work with percents and simple proration (find 1% of an amount, split a yearly fee into quarters)
- Can read a scenario question slowly and sort who the parties are before answering

MASTERY CHECKLIST

- ☐ I can list the disclosures an adviser owes a client — conflicts, fees, third-party compensation, disciplinary history — and state the brochure rule's delivery conventions.
- ☐ I can apply the advertising rules: registration stated as fact but never as approval, no guarantees, performance shown fairly, and testimonials handled under both the classic ban and the modern disclosure rule.
- ☐ I can name what a written advisory contract must contain and when client consent is required for assignment.
- ☐ I can explain how advisers are paid, when a performance-based fee is allowed, and sort soft-dollar items into and out of the Section 28(e) safe harbor.
- ☐ I can define custody, list the model-rule safeguards (notice, qualified custodian, statements, surprise exam), and tell custody apart from discretion.
- ☐ I can identify churning, front running, insider trading, selling away, commingling and market manipulation in scenario questions, and state the penalties for insider trading.
- ☐ I can say what Regulation S-P requires and what a business

continuity plan must cover.

- ☐ I can lay out my own exam-day plan: pacing at about 83 seconds a question, the retake waits, the two-year validity convention and the path to registration.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **NASAA Model Rules (official index)**: Free. The actual model rules this unit teaches — unethical business practices of advisers, dishonest practices of broker-dealers, custody, and more. Skim the adviser conduct rule with Lessons 10.1–10.4; it reads like a trap list. Ages 15 and up.
- **Investor.gov: Ponzi Schemes**: Free, from the SEC. A plain-language page on how Ponzi schemes work and their red flags — steady returns, unregistered investments, secretive strategies. Read it after the Madoff story in Lesson 10.3. Ages 13 and up.
- **Investor.gov: How to Avoid Fraud**: Free, from the SEC. The investor-side view of the prohibited practices in Lesson 10.4 — what the salesman of a fraud sounds like and the questions that unmask him. Ages 13 and up.
- **FINRA: On the Day of Your Exam**: Free. The official page on test-center check-in: identification, what you may and may not bring, and testing rules. Read it with the capstone in Lesson 10.5 and again the week before your real exam. Ages 15 and up.
- **NASAA: Exam Validity Extension Program**: Free. NASAA's official page on how long a passed exam stays valid and how continuing education can extend it — the facts behind your exam plan in Lesson 10.5. Ages 15 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

10.1 Speaking the Truth: Disclosures, Advertising and Client Contracts

3 sessions of 50 minutes

10.2 Honest Compensation: Fees, Commissions and Soft Dollars

3 sessions of 50 minutes

10.3 Guarding Client Property: Custody, Discretion and Madoff's Warning
3 sessions of 50 minutes

10.4 Prohibited Practices: Churning, Front Running and Insider Trading
3 sessions of 50 minutes

10.5 The Capstone: Cybersecurity, Continuity and Exam Day 3 sessions of 50 minutes

Unit 10 test

Closed book, closed notes. Set a timer for 28 minutes — about 83 seconds a question, the real exam's pace. Answer every question; there is no penalty for guessing, and a blank is the only guaranteed zero. Where a question says "in this example" or "under the convention," use the figures given in this unit, not whatever current law may say the year you read this. Each question is worth 5 points; the test is worth 100.

1. **5 pts**
   An adviser's brochure states: "Registered with the Administrator — your assurance that our methods have been examined and approved by the state." Which portion violates the Uniform Securities Act?
   A. Claiming registration, which may never be publicized
   B. The implication that registration constitutes the Administrator's approval
   C. Nothing — the statement is factual
   D. Using the word Administrator without naming the state

2. **5 pts**
   Under the brochure rule convention, a new client who receives the brochure at the moment of signing must be allowed to:
   A. Terminate within 5 business days without penalty
   B. Terminate within 48 hours with a pro-rata fee
   C. Renegotiate the fee within 10 business days
   D. Nothing further — delivery at signing is sufficient by itself

3. **5 pts**

An IAR may post which of the following on a public social-media page without violating the advertising rules?

A. “Clients: tell your friends how I doubled your money!”

B. “We guarantee your principal is safe with us”

C. “Our firm is registered as an investment adviser in this state”

D. A chart of the model portfolio’s best year, gross of fees

4. **5 pts**

An advisory firm organized as a partnership loses a partner holding a 10% interest to retirement. The firm must:

A. Obtain every client’s written consent to continue

B. Notify its clients of the change within a reasonable time

C. File a new Form U10

D. Treat all contracts as assigned and void

5. **5 pts**

A client prepays $3,600 for a year of advice; the written contract promises pro-rata refunds. She terminates after 5 months. The refund owed is:

A. $1,500

B. $2,100

C. $3,600

D. Nothing — prepaid fees are earned on receipt

6. **5 pts**

An adviser may charge a performance-based fee to which client, using this example’s thresholds ($1.1 million AUM with the adviser or $2.2 million net worth excluding the home)?

A. A teacher with $300,000 invested who signs a waiver

B. A business owner with $2.5 million net worth excluding her home

C. Any client whose fee is disclosed in the brochure

D. No client, under any circumstances

7. 5 pts

Which soft-dollar item falls OUTSIDE the Section 28(e) safe harbor?

A. Third-party equity research reports

B. A market-data terminal used to manage client portfolios

C. Portfolio-analytics software

D. The adviser's office rent

8. 5 pts

In an agency cross transaction, the adviser may do all of the following EXCEPT:

A. Obtain the client's blanket written consent after full disclosure

B. Send written confirmation of each cross and an annual summary

C. Recommend the transaction to both the advisory client and the other party

D. Receive compensation from both sides with disclosure

9. 5 pts

An adviser charges a fully disclosed advisory fee roughly triple the local market rate for identical services in this example. A client signs anyway. Under the NASAA model rule the fee is:

A. Permitted — disclosure cures all

B. Permitted — fees are freely negotiable

C. An unethical practice, because advisory fees must be reasonable regardless of disclosure

D. Permitted if billed quarterly

10. 5 pts

Under the model-rule convention, which arrangement does NOT give an adviser custody?

A. Deducting advisory fees from client accounts

B. Holding a general power of attorney

C. Receiving a client's misdelivered stock certificates and returning them within 3 business days

D. Serving as trustee over a client's trust

11. 5 pts

An adviser with custody must, under the model-rule conventions, do all of the following EXCEPT:

A. Keep client assets with a qualified custodian

B. See that clients receive account statements at least quarterly

C. Undergo an annual surprise examination by an independent accountant

D. Obtain the Administrator's prior written approval of each withdrawal

12. 5 pts

On June 1 a client orally grants her IAR full discretion, and the first discretionary trade occurs that day. On June 3 a broker-dealer customer orally grants his agent the same authority. Which statement is correct under the conventions?

A. Both needed written authority before any trade

B. The IAR must obtain written authority within 10 business days of the June 1 trade; the agent may not trade until written authority is in hand

C. The agent may trade for 10 business days; the IAR needed writing first

D. Oral authority suffices indefinitely for both

13. 5 pts

A customer deposits $9,500 in cash three days running, explaining he wants "no government forms." The firm should:

A. File a CTR for each deposit

B. File a Suspicious Activity Report and not inform the customer

C. Inform the customer a SAR is being considered, as a courtesy

D. Do nothing, since each deposit is under $10,000

14. 5 pts

The mechanism that let Madoff's fraud run for decades was:

A. Excessive trading in client accounts

B. Self-custody at his own broker-dealer with self-generated client statements and no independent verification

C. Performance fees charged to non-qualified clients

D. Failure to deliver brochures

15. 5 pts

A broker-dealer agent and his retired neighbor, a client, agree in writing — signed by both and by the agent's firm — to share profits and losses in the client's account in proportion to the agent's contribution. An IAR proposes the identical arrangement with her advisory client, with her firm's written blessing. Under the conventions:

A. Both arrangements are permitted

B. Neither is permitted

C. The agent's arrangement is permitted; the IAR's is prohibited because advisers may never share in client accounts

D. The IAR's is permitted; the agent's is prohibited

16. 5 pts

A mining-company geologist tells his barber about an unannounced strike; the barber buys the stock and gains $12,000. Under the insider-trading conventions:

A. Only the geologist is liable, as the insider

B. Only the barber is liable, as the trader

C. Both are liable — tipper and tippee — with civil penalties up to $3 \times \$12{,}000 = \$36{,}000$ plus disgorgement

D. Neither, because a barber owes the company no duty

17. 5 pts

An agent arranges for several customers to buy a private placement through him, off his firm's books, without its knowledge. The investments perform well. This is:

A. Permitted, because no one was harmed

B. Selling away — private securities transactions without the firm's knowledge and consent

C. Churning

D. An agency cross transaction

18. 5 pts

Two accounts secretly controlled by one promoter trade a thin stock back and forth at steadily higher prices while he urges strangers online to “catch the momentum,” then he sells his position. Name the practices:

A. Wash/matched trading creating phantom activity, feeding a pump and dump

B. Front running and churning

C. Commingling and structuring

D. Directed brokerage and soft dollars

19. 5 pts

Under Regulation S-P, before sharing a customer’s nonpublic personal information with a nonaffiliated marketing firm, an adviser must have given:

A. A privacy notice and a reasonable opportunity to opt out

B. Nothing, if the data is encrypted

C. Notice to the Administrator

D. The customer a share of the marketing revenue

20. 5 pts

A candidate passes the Series 65 at 18 but will not join a firm until after college, four years later. Under the conventions, her best move is:

A. Nothing — a passed exam never expires

B. Enroll in NASAA’s Exam Validity Extension Program and complete its annual CE, extending validity up to five years in participating states

C. Retake the exam every year to stay fresh

D. Register immediately as her own IAR without a firm, at 18, with no state approval needed

ANSWER KEY

1. B. The fact of registration may be stated; implying that registration means approval or examination of merit may never be. A reverses the rule, and D invents one.
2. A. Delivery at signing works only when paired with the 5-business-day penalty-free termination right; otherwise the brochure must come at least 48 hours before. The figures are model-rule conventions the exam expects exactly.
3. C. The bare fact of registration is lawful. A solicits testimonials that would need full compensation/status disclosures, B is a prohibited guarantee, and D shows cherry-picked gross performance without net.
4. B. A change in partnership membership requires notification within a reasonable time; consent is required only for an assignment, such as a sale of the firm. The exam tests this contrast constantly.
5. B. Monthly rate $\$3{,}600 \div 12 = \$300$; unused months 7; refund $7 \times \$300 = \$2{,}100$. Choice A refunds the used months — the designed near-miss.
6. B. She is a qualified client by net worth. Waivers (A) and disclosure (C) cannot substitute for the thresholds, and D ignores the exception the rule was built around.
7. D. The safe harbor shelters research and brokerage services that benefit clients' advice; rent benefits only the adviser, and paying it with clients' commission dollars breaches fiduciary duty.
8. C. Recommending both sides of the same cross is the unwaivable prohibition; the consent, confirmations, summary and disclosed compensation are the lawful apparatus.
9. C. Charging an unreasonable fee is itself unethical; disclosure and consent do not launder it. The exam plants "but it was disclosed" as the comfortable wrong answer.
10. C. Prompt return within the three-business-day convention avoids custody; fee deduction, general POAs and trusteeship all create it.
11. D. No per-withdrawal approval exists; the safeguards are notification to the Administrator, qualified custodian, notice to clients, quarterly statements and the annual surprise exam.
12. B. Advisers get the ten-business-day window after the first oral-discretion trade; agents need written authority before exercising any discretion. C is the reversal the exam loves.

13. B. The pattern is structuring — a crime even with clean money — and suspicious activity over the $5,000 convention calls for a confidential SAR. Tipping the customer (C) is itself a violation; D ignores structuring.
14. B. With no independent qualified custodian or surprise verification, clients saw only the fiction he printed. The custody safeguards exist precisely to make two independent records of every account.
15. C. Agents may share with written consent of client and firm, proportionately under the convention; advisers and IARs may never share in profits or losses — their only results-linked pay is the qualified-client performance fee.
16. C. The tipper breaches by passing material nonpublic information; the tippee inherits the breach by trading on it. The treble-penalty convention runs to three times the profit gained or loss avoided — Texas Gulf Sulphur's disclose-or-abstain rule in modern dress.
17. B. Outside business in securities without the firm's knowledge and consent is selling away regardless of outcome; the firm cannot supervise what it cannot see.
18. A. Trades with no true change of ownership paint false volume and price (wash trades/matched orders), and selling into the hype completes the pump and dump. The other pairs name real practices that do not fit these facts.
19. A. The privacy notice (initial and annual) plus an opt-out opportunity before sharing with nonaffiliated third parties is the core of Reg S-P; encryption is a safeguard, not a substitute for the opt-out.
20. B. The default validity convention is two years unregistered; EVEP with its CE can stretch it to five in adopting states. A pass does expire (A), serial retakes (C) waste fees, and registration requires a firm's filing and the Administrator's approval (D).

PORTFOLIO PIECE: MY FIDUCIARY'S CHARTER

Assemble the capstone of the whole course. The centerpiece is your **Fiduciary's Charter**: a one-page personal code of practice, written in your own words in the first person, with a numbered article for each duty — full disclosure (conflicts, fees, compensation from anyone but the client), honest advertising, custody and the safeguards you will welcome rather than endure, reasonable and transparent fees, suitability before every recommendation, and the confidentiality of every client's affairs — signed and dated before a parent as witness. Behind it file the unit's working documents: your prohibited-practices trap list from 10.4, your custody-rules flowchart with the Madoff post-mortem from 10.3, and your real-world exam plan from 10.5 with its dates (when you turn 18, your target test date, the two-year lapse date and EVEP option) and the fee envelope's savings line. Close the folder with three sentences on the steward found faithful — what you intend the parable of the talents to mean in your working life.

LOOK FOR	WHAT IT MEANS
The Charter	One page, first person, signed, dated and witnessed; every article states a duty precisely enough that a violation of it could be named (disclosure, advertising, custody, fees, suitability, confidentiality).
Accuracy	The trap list and flowchart state the exam conventions correctly: the discretion and sharing contrasts, the custody triggers and five safeguards, the AML figures, the brochure timings.
The exam plan	Real dates and real money: eligibility, target test date, retake waits, lapse math with the EVEP option, and a named savings amount for the $187 fee (as of 2026).
Craft	Documents are legible, organized and dated; the flowchart can be redrawn from memory; the trap list is drilled to five-second recall.
Reflection	The closing paragraph ties the parable of the talents honestly to the student's own intentions — stewardship stated as practice, not sentiment.

10.1 Speaking the Truth: Disclosures, Advertising and Client Contracts

OBJECTIVES

- List the disclosures an investment adviser must make to clients: material conflicts, extra compensation, fee-plus-commission arrangements, affiliations and disciplinary history.
- State the brochure rule's delivery conventions and what Form ADV Part 2A contains.
- Apply the advertising rules: registration as fact but never as approval, no guarantees, fair performance presentation, and the testimonial rules old and new.
- Name everything a written advisory contract must disclose and when assignment requires client consent.
- Answer scenario questions that ask whether a communication or contract term is permitted.

> **Warm-up.** Write two sentences an adviser might put in an advertisement: one that is strictly true and one that stretches the truth to attract clients. Underline the exact words in the second sentence that do the stretching. Keep both; by the end of the lesson you will be able to name the rule each one breaks or keeps.

WATCH

Required Disclosures to Clients - Series 65 Exam Prep

CertFuel · 8:00

https://www.youtube.com/watch?v=BzpdwItEBns

> **WHEN TO WATCH**
> After the big idea, before the worked examples: a Series 65 teacher walks the required disclosures at exam depth — check each one against the list in your notebook as he names it.

BACKUP VIDEO

Correspondence and Advertising - Series 65 Exam Prep

CertFuel · 7:56

https://www.youtube.com/watch?v=QQ2nqN-3VQs

After the testimonials paragraph: the advertising and correspondence rules at exam depth — list each communication type he names and whether it counts as advertising.

KEY TERMS

brochure (Form ADV Part 2A)

The plain-English disclosure document an adviser gives clients, describing its services, fees, conflicts, disciplinary history and personnel.

brochure rule

The delivery convention: give the brochure at or before entering the advisory contract, and each year deliver (or offer) an updated one.

material conflict of interest

Any interest of the adviser that could reasonably impair unbiased advice — it must be disclosed in writing before advice is rendered.

advertisement

Any communication offering advisory services to more than one person — circulars, websites, social media posts and form letters all count.

testimonial

A statement by a current client about his experience with the adviser; classically banned in adviser advertising, now permitted only with strict disclosures.

endorsement

A statement promoting the adviser made by someone who is not a client — a paid influencer, for example — subject to the same disclosure rules as testimonials.

assignment

A transfer of the advisory contract to another party; it is forbidden without the client's consent.

advisory contract

The written agreement that must disclose services, term, the fee and its formula, prepaid-fee refunds, discretion and the no-assignment promise.

CORE IDEAS

The story. In the 1920s, America was papered with promises. "Tipster sheets" — cheap newsletters sold by self-styled market wizards — told subscribers which stocks were about to soar, and bucket shops let workingmen bet their wages on prices without ever owning a share. The sheets guaranteed profits; the shops guaranteed ruin; and when the whole paper empire burned down in the Crash of 1929, Congress built its answer on one word: **disclosure**. The Securities Act of 1933 was nicknamed the "truth in securities" law, and the Investment Advisers Act of 1940 carried the same idea to the men who sell advice. Thirty years later the Supreme Court made the point unforgettable in *SEC v. Capital Gains Research Bureau* (1963): a newsletter publisher had quietly bought stocks, recommended them to his subscribers, and sold into the rise they created — a trick called scalping. The Court held that an adviser is a fiduciary, and the Advisers Act demands he disclose every conflict, because advice given with a hidden interest is not advice at all.

How they figured it out. The regulators' insight was that they could not referee every opinion — markets are full of honest disagreement — but they could demand the whole truth about the adviser himself. So the rules do not tell an adviser what to recommend; they tell him what to reveal. NASAA's model rule on unethical practices makes it a violation to fail to disclose, **in writing and before any advice is rendered**, any material conflict of interest: compensation the adviser receives from anyone besides the client, and especially the double-dip of charging an advisory fee while

also earning commissions on the trades the advice produces. Disciplinary history, affiliations with broker-dealers or issuers, and the true nature of services and fees must all be stated plainly. The container for all this truth-telling is the **brochure**, Form ADV Part 2A, written in plain English.

The big idea. Learn the brochure rule as the exam tests it. The adviser delivers the brochure to the client **at or before entering the advisory contract**; under the NASAA model-rule convention, it comes at least 48 hours before signing, or at signing itself if the client may cancel within five business days without penalty — the figures are model-rule conventions, so a question will supply or expect exactly these. Then, every year, within 120 days of the adviser's fiscal year end, the client receives the updated brochure or a summary of material changes with an offer of the full document. Alongside the brochure stands the advertising law of the Uniform Securities Act, and its most famous line: an adviser or representative **may state the fact that it is registered**, but may **never** represent or imply that registration means the Administrator has approved, recommended or passed on its qualifications. "Registered with the Administrator" is lawful; "approved by the state" never is.

Guarantees and performance. No adviser may guarantee a client a specific result — not a gain, and not protection against loss. "You cannot lose money in this program" is a violation even if the program never loses money. Past performance may be shown, but only with all material facts: under the modern convention, an advertisement showing gross performance must show **net** performance (after fees) with at least equal prominence, over fair standardized periods, and may never cherry-pick the winning accounts or the lucky years. And no advertisement may claim that the Administrator or the SEC has approved or reviewed its performance figures — the registration trap wearing a different hat.

Testimonials, then and now. For eighty years the rule was simple: adviser advertising could contain **no testimonials, ever** — the happy client's praise was thought too selective to be anything but misleading, even when true. The SEC's marketing rule changed federal practice in 2021, and NASAA's updated model rule now follows it: a testimonial (from a client) or endorsement (from a non-client) is permitted **only** with clear and prominent disclosure of whether the speaker is a client, whether he was paid, and any material conflicts — and a paid promoter requires a written agreement. On the exam, the traditional prohibition is still the safe instinct: an undisclosed or paid testimonial without those disclosures is *always* a

violation, and if an answer choice permits a testimonial, it must be the one dressed in full disclosure.

Every channel, same standard. The rules do not care about the medium. A website, a social-media post, a podcast appearance, a mass email — all are advertising if they offer advisory services to more than one person, and all are held to the same standards of truth. An IAR's personal account posting "my clients made 30% last year — message me" is a firm advertisement with a performance claim, and compliance must treat it as one. Correspondence to a single client is not an advertisement, but it may still never be deceptive; fraud needs no audience.

The contract. Under the model-rule convention the advisory contract must be **in writing**, and it must disclose: the services to be provided; the term of the contract; the advisory fee and the formula for computing it; how much of a prepaid fee is refunded if the contract ends early; whether the adviser has discretionary power; and that **no assignment may be made without the client's consent.** If the adviser is a partnership, clients must be notified of any change in the membership of the partnership within a reasonable time — notified, not asked. And no contract may base compensation on a share of capital gains or appreciation except as the law specifically allows; that exception is the door into the next lesson.

On the exam today. This territory fills several questions, and the traps are old friends to graders. "Registered" stated as a fact is fine; any flavor of "approved," "endorsed" or "vetted by the state" is a violation — watch for the soft version, "registration means we met the Administrator's standards of skill." Guarantees against loss are forbidden no matter how rich or sophisticated the client. The brochure's timing figures (48 hours, 5 business days, 120 days) are model-rule conventions the exam expects exactly. Assignment questions hide in corporate clothes: an adviser selling its business to another firm is an assignment and needs consent; a partnership admitting one new minority partner is not an assignment — it needs only notice. And when a question offers "may state that it is registered" next to "may state that the Administrator has approved its registration," the first is the answer, every time.

PICTURE STUDY

War News from Mexico, Richard Caton Woodville, 1848 · Oil on canvas · Crystal Bridges Museum of American Art, Bentonville, Arkansas

Image: Wikimedia Commons, public domain

Richard Caton Woodville was a Baltimore painter who died at thirty, leaving only a handful of pictures — and this one became among the most famous images of news in American art. Word of the Mexican War has just arrived by paper, and a whole town hangs on one man's reading of it. It sits in this lesson because it shows what printed words do to a crowd: they move people, all at once, who have no way to check them. Every rule in this lesson — disclosure, honest advertising, the whole truth — exists because the reader cannot see behind the page.

Look closely

- Find the newspaper. Only one man holds it — how many people are acting on words they cannot themselves see?
- Find the faces. Which listeners look eager, which doubtful? Who has already made up his mind?
- Notice the figures on the steps, placed outside the porch. What might the painter be saying about who gets the news first and who gets it last?
- Look at the porch as a stage. How does the painter make one sheet of paper the center of so much energy?

Talk about it

1. The crowd must trust the paper and the reader. What protects a modern investor who must trust an adviser's brochure and advertisements?
2. Why does the law demand disclosure of the adviser's conflicts rather than simply forbidding the adviser to publish at all?
3. A tipster sheet of the 1920s looked as official as this newspaper. What questions would unmask it?

PROJECT

The Brochure Audit: Grade a Real Form ADV Part 2A

Investment adviser brochures are public documents. With a parent, you will pull a real one from the SEC's public database, audit it against the disclosure rules of this lesson, and then draft the one-page "Item 4 and Item 5" (services and fees) of the brochure for your own imaginary future firm.

You will need

- Internet access with a parent (adviserinfo.sec.gov, the SEC's free public database)
- Your exam notebook and two highlighters
- The disclosure checklist you will build in step 1

Steps

1. From this lesson, build a checklist of what a brochure must reveal: services, fees and formulas, conflicts of interest, extra compensation, disciplinary history, affiliations.
2. With a parent, open adviserinfo.sec.gov, search any advisory firm in your state, and download its Form ADV Part 2A brochure (a free PDF).
3. Audit it: highlight where the brochure discloses each checklist item, and write the item and page number in your notebook.
4. Hunt the conflicts: find at least two places where the firm admits it can earn money in ways that could bias its advice, and restate each conflict in one plain sentence of your own.
5. Grade the plain English: pick the clearest paragraph and the muddiest paragraph, and rewrite the muddy one in half the words.
6. Now draft your own: write the services-and-fees page for an imaginary firm you might someday found — what you would do, what you would charge, and every conflict you would disclose.
7. Read your draft aloud to a parent and ask: after hearing this, what would you still want to know before hiring me? Add whatever they name.

Tips

- Real brochures are long; audit with the checklist rather than reading cover to cover, exactly as an examiner would.
- If the firm's disciplinary section says "none," check the firm on the same site's search results — the database shows disclosures the brochure must match.

Check your work

- ☐ My checklist covers conflicts, fees, extra compensation, discipline and affiliations.
- ☐ I found and restated two real conflicts in plain words.
- ☐ My own draft brochure page discloses its fee formula and at least one honest conflict.
- ☐ I can say from memory when a brochure must be delivered and what comes annually.

EXAM NOTEBOOK

1. Make a two-column table titled "Fact vs. Approval": five lawful statements about registration on the left, the unlawful twin of each on the right, with the poisoned word circled.
2. Write the advisory-contract checklist as a numbered list — writing, services, term, fee and formula, refund of prepaid fees, discretion, no assignment without consent — and beside it the partnership rule: membership change = notify, sale of firm = consent.
3. Draw a timeline of the brochure rule: 48 hours before, at signing with 5-business-day cancel, and the annual 120-day update — label each figure "model-rule convention."

> **From history.** The Securities Act of 1933 — the "truth in securities" law — did not invent disclosure. It borrowed the idea from the state blue-sky laws that began in Kansas in 1911 and from the English Companies Acts, which had required honest prospectuses since the Victorian railway manias. Congress's wager in 1933 was the same one NASAA's model rules still make: that sunlight, compelled in writing, does what no army of censors could.

Example 1. A client signs a 12-month advisory contract on January 1 and prepays the full fee of $1,800. The contract promises a pro-rata refund of prepaid fees on termination. The client terminates at the end of April. What refund does the contract owe?

Show solution

1. Months used: January through April = 4 of 12. Months unused: 8.
2. Monthly rate: $\$1{,}800 \div 12 = \$150$.
3. Refund: $8 \times \$150 = \$1{,}200$.

Answer: $1,200 refunded. The contract must disclose this refund formula up front — that is one of the required contract terms.

Example 2. Exam style — reason through every choice. An investment adviser's website states: "XYZ Advisers is registered as an investment adviser with the state Administrator." This statement is:

A. Prohibited, because registration may never be mentioned to the public

B. Permitted, because it is a statement of fact

C. Prohibited, because it implies the Administrator has approved the firm

D. Permitted only if the firm adds that the Administrator has verified its qualifications

Show solution

1. A — too strong. The fact of registration may always be stated; the law forbids only the implication of approval. Eliminate.
2. B — exactly the rule: fact yes, endorsement no. Keep.
3. C — the statement as written claims nothing about approval; it only states the fact. Eliminate.
4. D — adding "verified its qualifications" would *create* the violation, not cure it. Eliminate.
5. The exam loves this pairing: the bare fact is lawful; any gloss of approval is not.

Answer: B. Registration may be stated as fact, never as endorsement — and choice D is the trap that turns a lawful sentence into an unlawful one.

Example 3. An IAR records a video for the firm's social-media page in which a longtime client says, "She doubled my retirement account — trust her with yours." The client was given a $500 gift card for appearing. Under the current NASAA model-rule convention, the firm may post this video:

A. Freely, because the statement is true

B. Never, because testimonials are always prohibited in adviser advertising

C. Only with clear and prominent disclosure that the speaker is a client, that he was compensated, and of any material conflicts

D. Only if the client signs a statement that he expects no particular future performance

Show solution

1. A — truth is necessary but not sufficient; a paid, undisclosed testimonial misleads by its selectivity and hidden compensation. Eliminate.
2. B — the classic rule, and for decades the right answer; but the SEC's 2021 marketing rule and NASAA's updated model rule now permit testimonials with strict disclosures. "Always" makes it wrong today. Eliminate.
3. C — the modern rule exactly: client status, compensation and conflicts disclosed clearly and prominently, with a written agreement for a compensated promoter. Keep.
4. D — invented paperwork; no such cure exists. Also, "doubled my account" is a performance claim that must not mislead. Eliminate.

Answer: C. The old flat ban has become a disclosure rule: a testimonial without the disclosures remains a violation, and the $500 compensation is precisely what must be revealed.

Example 4. Granite Advisory Partners, a general partnership, is bought outright by a national firm, which plans to keep serving Granite's clients under the same contracts. Which statement is correct?

A. Clients must be notified of the sale within a reasonable time, but their consent is not required

B. The contracts may not be assigned to the buyer without each client's consent

C. The sale is permitted because advisory contracts follow the business automatically

D. The Administrator's approval substitutes for client consent

Show solution

1. First name the event: the sale of the firm transfers its contracts — that is an assignment.
2. A — notice-only is the rule for a *change in partnership membership* (a partner retires, a new partner admitted), not for a transfer of the contract itself. Tempting because both involve partnerships. Eliminate.
3. B — the contract must provide, and the law requires, that no assignment occurs without the client's consent. Keep.
4. C — contracts for personal advisory services never follow the business automatically. Eliminate.
5. D — the Administrator approves nothing of the kind; consent belongs to the client alone. Eliminate.

Answer: B. Sale of the adviser = assignment = client consent required; a mere change in the partnership's membership would need only notification within a reasonable time. The exam tests this contrast relentlessly.

PRACTICE

1. Easy An adviser's advertisement states: "We are registered with the Administrator, which assures you of our qualifications." Which part of the sentence violates the law?

   Show answer

   The second clause. Registration may be stated as fact; "assures you of our qualifications" implies the Administrator vouches for the firm, which may never be stated or implied.

2. Easy Under the brochure rule convention, an adviser must deliver Form ADV Part 2A to a new client:

A. Within 48 hours after the contract is signed

B. At or before entering the advisory contract

C. Only if the client requests it in writing

D. Within 120 days of the firm's fiscal year end

Show answer

B. Delivery comes at or before the contract (48 hours before, or at signing with a 5-business-day penalty-free exit, under the model-rule convention). D is the annual update deadline, not initial delivery; A reverses the timing; C ignores that delivery is automatic.

3. Easy An IAR tells a cautious retiree, "With our bond ladder you cannot lose principal — I guarantee it." The ladder holds insured U.S. Treasuries. The statement is:

A. Permitted, because Treasuries are backed by the government

B. Permitted if the client acknowledges the risk disclosure in writing

C. Prohibited — guaranteeing a client against loss is never allowed, whatever the investment

D. Prohibited only if the ladder later loses money

Show answer

C. Guarantees of a result or against loss are prohibited no matter how safe the investment or how sincere the adviser. The backing of Treasuries (A) does not launder the guarantee, acknowledgments (B) cannot waive the rule, and the violation exists when the words are spoken, not when losses arrive (D).

4. **Easy** Which of the following is NOT required to be disclosed in a written advisory contract?

   A. The formula for computing the advisory fee

   B. Whether the adviser has discretionary authority

   C. The names of all other clients of the adviser

   D. The refund of prepaid fees upon early termination

   Show answer

   C. Other clients' identities are confidential — disclosing them would itself be a violation. A, B and D are all required contract terms under the model-rule convention.

5. **Medium** An adviser charges clients an annual fee and also receives commissions from a broker-dealer when clients' trades are executed there. Under the NASAA model rule the adviser must:

   A. Refund the commissions to clients

   B. Choose one form of compensation and give up the other

   C. Disclose the arrangement to clients in writing before rendering advice

   D. Obtain the Administrator's approval of the arrangement

   Show answer

   C. Earning both an advisory fee and transaction commissions is a material conflict that must be disclosed in writing before advice is rendered — it is not forbidden, and the Administrator approves no such arrangements. B is the tempting over-answer: disclosure, not divestiture, is the rule.

6. **Medium** A client prepays $\$2{,}400$ for a one-year contract that promises pro-rata refunds and terminates after 7 months. Compute the refund.

   Show answer

   Unused months: 5. Monthly: $\$2{,}400 \div 12 = \$200$. Refund: $5 \times \$200 = \$1{,}000$.

7. Medium An advisory firm organized as a partnership admits two new junior partners, each with a 5% interest. With respect to its clients, the firm must:
A. Obtain each client's written consent to continue the contracts
B. Notify clients of the change in partnership membership within a reasonable time
C. Do nothing, because minority partners do not affect the contract
D. Terminate and rewrite all advisory contracts
Show answer

B. A change in the membership of a partnership requires notification within a reasonable time — not consent. Consent (choice A) is required for an assignment, such as the sale of the firm; the exam lives on this contrast.

8. Medium In the 1963 *Capital Gains Research Bureau* case, what had the adviser done, and what did the Supreme Court hold?
Show answer

The publisher bought stocks, recommended them to subscribers, and sold into the price rise his own recommendations produced — scalping — without telling subscribers. The Court held an adviser is a fiduciary under the Advisers Act and must disclose such conflicts; hidden self-interest makes the advice itself a fraud.

9. Hard An adviser's website shows a chart of a model portfolio's gross returns for the best 3-year stretch of the last decade, with a footnote: "Past performance does not guarantee future results." Under the modern advertising convention this is:
A. Permitted — the footnote cures any defect
B. Prohibited — performance may never appear in advertising
C. Prohibited — gross performance shown without equally prominent net performance, over cherry-picked periods, is misleading
D. Permitted if the Administrator reviews the chart first
Show answer

C. Performance may be advertised, but gross must be paired with net at equal prominence over fair standardized periods, and selecting only the best stretch misleads regardless of footnotes. A footnote never cures a misleading presentation; the Administrator reviews nothing in advance.

10. Hard An IAR posts from her personal social-media account: “Blessed to serve 200 families. Our balanced clients averaged 11% last year. DM me to get started.” Which statement is MOST accurate?
A. Personal accounts are outside the securities laws
B. The post is advertising subject to the performance and anti-fraud rules, and the firm must treat it as such
C. The post is permitted because it names no specific security
D. The post is prohibited solely because it states the number of clients
Show answer

B. A communication offering advisory services to more than one person is an advertisement wherever it appears, and “averaged 11%” is a performance claim that must meet the presentation standards. Naming no security (C) does not exempt an offer of services; client counts (D) are not themselves unlawful.

11. Hard Under the classic NASAA convention tested for decades, adviser advertisements could never contain testimonials. State the one-sentence modern qualification an exam answer might now expect.
Show answer

Since the SEC’s 2021 marketing rule, followed by NASAA’s updated model rule, testimonials and endorsements are permitted only with clear and prominent disclosure of the speaker’s client status, any compensation, and material conflicts — an undisclosed or paid-but-undisclosed testimonial remains a violation.

12. Challenge An adviser mails one letter to one prospective client containing an untrue claim about the adviser’s credentials. The adviser argues the letter is not an “advertisement” because it went to a single person. Is the adviser safe?
Show answer

No. The letter may escape the definition of advertisement, but misrepresenting qualifications to any client or prospect is itself an unethical practice and fraud under the model rule. The advertising rules add standards for mass communication; they do not license lying in private.

COMMON MISTAKES

- Treating “we are registered” as a violation — the fact is lawful; only the implication of approval or endorsement is prohibited.

- Thinking disclosure of a conflict may come at any time — the model rule requires written disclosure before advice is rendered.
- Confusing the partnership rules: a membership change needs notification; an assignment (sale of the firm) needs client consent.
- Believing a true testimonial needs no disclosures — compensation and client status must be revealed under the modern rule, and the classic convention banned testimonials outright.
- Assuming a "past performance" footnote cures a misleading chart — gross without net, or cherry-picked periods, stays misleading with or without the footnote.

Make it a game · Clean or Foul. Your parent is the Administrator. In ten minutes, the parent reads adviser statements one at a time — invent them freely: "We're state-approved," "Registered since 2019," "You can't lose," "Our fees are described in Item 5," "A client says we doubled his money" — and you have five seconds to call CLEAN or FOUL and name the rule. One point per correct call, one bonus for naming the rule exactly (approval implication, guarantee, undisclosed testimonial). Ten statements per round; swap roles for round two and try to stump the new Administrator.

Scripture. "Lying lips are abomination to the LORD: but they that deal truly are his delight." (Proverbs 12:22, KJV)

The whole apparatus of this lesson — brochures, disclosures, advertising rules — is law built to compel what this proverb says God delights in. An adviser who deals truly needs very little of the rulebook; it was written for the other kind.

10.2 Honest Compensation: Fees, Commissions and Soft Dollars

OBJECTIVES

- Describe how advisers charge: AUM percentage, hourly, flat, subscription, and wrap fee programs with their special brochure.
- State when a performance-based fee is prohibited and the qualified-client exception that allows it.
- Explain the disclosures required for fee-plus-commission compensation and agency cross transactions.
- Sort soft-dollar items into and out of the Section 28(e) safe harbor.
- Compute advisory fees and identify the conflicts in 12b-1 fees, revenue sharing and directed brokerage.

> **Warm-up.** A carpenter can charge you three ways: by the hour, by the job, or by a share of your house's value when you sell it. In five minutes, write one sentence on what each arrangement tempts the carpenter to do. Keep the page — every temptation you name has a twin in this lesson.

WATCH

Compensation - Series 65 Exam Prep

CertFuel · 9:48

https://www.youtube.com/watch?v=b8r47KiwxIE

> **WHEN TO WATCH**
> After the big idea, before the worked examples: a Series 65 teacher covers adviser compensation at exam depth — pause at performance fees and write the qualified-client conditions before he gives them.

BACKUP VIDEO

Do I Need A Financial Advisor?

Two Cents · 5:07

https://www.youtube.com/watch?v=GcnCuzSzEWM

At the end of the lesson: PBS's Two Cents explains advice and its costs from the client's chair — note every fee type they mention and match it to your flashcards.

KEY TERMS

assets under management (AUM) fee

The most common advisory fee: a percentage of the client's account value, typically billed quarterly.

performance-based fee

Compensation calculated as a share of capital gains or appreciation in the client's account — prohibited except for qualified clients.

soft dollars

Research and brokerage services an adviser receives from a broker-dealer in exchange for directing clients' trades there, instead of paying cash.

agency cross transaction

A trade in which the adviser (or an affiliate) acts for both its advisory client and the party on the other side — allowed only with disclosure and consent, and the adviser may not recommend the trade to both sides.

12b-1 fee

An ongoing distribution and marketing fee paid out of a mutual fund's assets, named for the SEC rule allowing it; receiving it creates a conflict an adviser must disclose.

wrap fee program

A program charging one bundled fee for both advice and trade execution; it requires its own disclosure document, the wrap fee brochure.

qualified client

A client wealthy enough to be charged a performance fee under the rule's thresholds of assets managed with the adviser or net worth, figures set and adjusted by rule.

Section 28(e) safe harbor

The 1975 provision protecting an adviser who pays a higher commission in exchange for research and brokerage services that benefit clients.

directed brokerage

A client's instruction that trades be executed through a particular broker-dealer; the adviser must warn that best execution may be lost.

fee-only adviser

An adviser compensated solely by client fees, accepting no commissions or third-party payments.

CORE IDEAS

The story. On May 1, 1975 — Wall Street called it May Day — the oldest price-fixing arrangement in American finance died. Since the Buttonwood Agreement of 1792, brokers had charged fixed minimum commissions: every firm charged the same, competition on price was forbidden, and a big trade cost a fortune because the rate was the rate. Congress and the SEC abolished fixed commissions in the Securities Acts Amendments of 1975, and the economics of advice was reborn overnight. Commissions collapsed; discount brokers like Charles Schwab appeared within months to execute trades for a fraction of the old rates; and a new kind of adviser emerged who sold advice itself, for a stated fee, rather than giving advice away to harvest commissions. Almost everything in this lesson — the AUM fee, the fee-only adviser, even the term "soft dollars" — descends from that single morning.

How they figured it out. Under fixed commissions, brokers could not cut prices, so they competed by giving big customers free extras — above all, research. When rates were deregulated, money managers faced a question of conscience: may I pay a broker *more* than the cheapest rate because he gives me research, when the commission money belongs to my clients? Congress answered in the same 1975 law with **Section 28(e)** of the Securities Exchange Act: a safe harbor protecting a manager who pays a reasonable higher commission in good faith for **research and brokerage services**. The test that survives on your exam is who benefits: research reports, analytics, market data terminals — things that sharpen advice for *clients* — sit inside the harbor; office rent, furniture, marketing, salaries and travel — things that comfort the *adviser* — sit outside it, and paying for them with clients' commission dollars is a breach.

The big idea. Advisers charge in a handful of lawful shapes: a percentage of **assets under management** (the workhorse — in this example, 1% per year billed quarterly), hourly rates, flat fees for a financial plan, subscription retainers, and **wrap fee programs** that bundle advice and execution into one fee and must hand the client a special wrap fee brochure. Whatever the shape, the model rule demands that the fee be **disclosed**, with its formula, in the written contract — and that it be **reasonable**: charging an unreasonable advisory fee is itself an unethical practice, even with a willing client. Competitors' rates and the services rendered are the measuring sticks.

The forbidden fee and its exception. One shape is presumed poisonous: compensation based on a share of **capital gains or appreciation** in the client's account. A performance fee tempts the adviser to gamble with the client's money — he shares the wins and walks away from the losses. So the law prohibits it, with a famous exception: **qualified clients**, who are considered able to watch out for themselves. In this example, a qualified client has at least $1.1 million under the adviser's management or a net worth above $2.2 million excluding the primary residence — the figures are set by rule and adjusted for inflation, so learn the structure, not the digits. Note what is always lawful: a fee that grows with assets under management grows when the account grows, and that is *not* a performance fee — the exam loves to dress the ordinary AUM fee in performance-fee clothing.

Both sides of the counter. Some advisers are also broker-dealers or their representatives, and the conflicts multiply. Charging an advisory fee *and* earning commissions on the recommended trades is permitted only with written disclosure before advice is rendered — you met this in 10.1. An **agency cross transaction** — the adviser's firm acting for its advisory client and for the other side of the same trade — requires blanket written consent after full disclosure, a written confirmation of each such trade, an annual summary, and one bright line the exam adores: the adviser may not have **recommended the transaction to both sides.** Where the adviser merely executes for one side and advises the other without recommending to both, the rule can be satisfied; recommend to both, and no paperwork saves it.

Other people's money, other people's fees. A client may direct brokerage to a favorite firm; the adviser must warn in plain terms that directed trades may lose volume discounts and best execution. Mutual funds pay **12b-1 fees** — ongoing distribution charges out of fund assets — and fund sponsors sometimes pay advisers **revenue sharing** for shelf space; an adviser who pockets either while recommending those funds is standing in a conflict that must be disclosed, and recommending the share class that pays the adviser more when a cheaper class exists is a suitability violation regulators have punished by name. The honest architecture is always the same: every stream of compensation named, every conflict on the table, and the client able to see what the advice truly costs.

On the exam today. Expect a soft-dollar sort: Bloomberg-style market data terminals, research reports and analytical software are inside the 28(e) safe harbor; office rent, computers for the back office, marketing dinners, seminar junkets and vacations are

outside — when in doubt, ask whether the item improves advice to clients or the adviser's lifestyle. Expect a performance-fee scenario where the client is enthusiastic but not qualified: enthusiasm never substitutes for the thresholds. Expect the agency-cross trap "with consent, the adviser may recommend the trade to both parties" — false, always. And expect the quiet word *reasonable*: a question may describe a lawful fee type at triple the going rate and ask what is wrong; the answer is that unreasonable fees are unethical even when fully disclosed.

PICTURE STUDY

The Parable of the Rich Fool, Rembrandt van Rijn, 1627 · Oil on panel · Gemäldegalerie, Berlin

Image: Wikimedia Commons, public domain

Rembrandt painted this at twenty-one, taking his subject from Luke 12: the rich man who filled his barns and lost his soul the same night. The old man examines one coin by candlelight, surrounded by the paperwork of money — ledgers, notes, weights. He sits in this lesson because fees, commissions and soft dollars are exactly this: the counting of money late at night, where no client sees. The question the painting asks is the question the model rules ask — for whom is all this counting done?

Look closely

- Find the candle. Rembrandt hides the flame behind the man's hand — what does that single light source do to the room?
- Count the account books. How many ledgers and papers can you find, and what do they say about how this man spends his hours?
- Look at the coin held up to the light. Why examine one coin so closely amid such piles of paper wealth?
- Find the man's face. Is he happy? What has the painter left out of the room entirely? (Hint: there are no other people.)

Talk about it

1. An adviser counts money that belongs to others. What practices from this lesson keep that counting honest when no one is watching?
2. The rich fool's error was not owning barns but living for them. How can a lawful fee structure still tempt an adviser toward this error?
3. Jesus asks, "whose shall those things be, which thou hast provided?" How does that question reframe a career spent managing wealth?

PROJECT

The Fee Laboratory: What Does Advice Really Cost?

You will build a spreadsheet that compares three ways the same family could pay for advice over twenty years — an AUM fee, a flat annual fee, and commissions — and discover why May Day 1975 changed who could afford to be honest.

You will need

- Free spreadsheet (Google Sheets or LibreOffice Calc)
- Your exam notebook and calculator
- The soft-dollar sort list from the sketchbook

Steps

1. Set up a pretend family portfolio starting at $200,000, growing 6% a year before fees, for 20 years (all figures invented to teach the method).
2. Model Adviser A: 1% AUM fee each year, deducted from the account. Column by column, compute the balance year by year.
3. Model Adviser B: a flat $2,500 annual fee paid from the account, same growth.
4. Model Adviser C: no fee, but commission-driven trading costs 1.5% of the account each year in this example.
5. Chart the three ending balances and compute the total paid to each adviser over 20 years.
6. Write one paragraph: which arrangement aligned the adviser's incentive with the family's, and what temptation does each create? Connect commissions to churning (you will meet it formally in 10.4).
7. Finish with a one-page "fee disclosure" for the adviser you would want to be: your fee, its formula, and every conflict named — written so a 16-year-old could understand it.

Tips

- Bill the AUM fee on each year's beginning balance to keep the arithmetic clean.

- Percentage costs compound invisibly; the chart, not the yearly numbers, shows the real difference.

Check your work

- ☐ My spreadsheet computes all three paths year by year without manual retyping.
- ☐ I can state the 20-year total cost of each arrangement.
- ☐ My fee disclosure names the formula and at least one honest conflict.
- ☐ I can explain in one sentence why the AUM fee is not a performance fee.

EXAM NOTEBOOK

1. Make the soft-dollar sort: a two-column table, INSIDE the 28(e) safe harbor (research reports, market-data terminals, analytical software) and OUTSIDE (rent, furniture, marketing, travel, salaries, vacations) — ten items minimum.
2. Write a flashcard set for fee types: AUM, hourly, flat, subscription, wrap (with its special brochure), performance (qualified clients only, thresholds "set by rule").
3. Draw the agency cross transaction as a diagram: adviser in the middle, client A and party B on the sides, with the four requirements written around it and "NEVER recommend to both" in capitals across the top.

KEY FORMULAS

$$\text{Annual AUM fee} = \text{assets} \times \text{rate}$$

$$\text{Quarterly bill} = \frac{\text{assets} \times \text{rate}}{4}$$

From history. The Buttonwood Agreement, signed by twenty-four brokers under a buttonwood tree on Wall Street in May 1792, fixed a minimum commission and pledged the signers to prefer one another in trading. It founded what became the New York Stock Exchange — and its minimum commission survived for 183 years, until May Day 1975 ended the fix and made the modern fee-only adviser economically possible.

WORKED EXAMPLES

Example 1. An adviser charges 1.2% of assets under management per year, billed quarterly in advance on the account's value at the start of each quarter. A client's account begins the quarter at $350,000. Find the quarterly bill and the full-year cost if the account value stayed level.

Show solution

1. Annual fee at this value: $\$350{,}000 \times 0.012 = \$4{,}200$.
2. Quarterly bill: $\$4{,}200 \div 4 = \$1{,}050$.
3. Level for the year: $4 \times \$1{,}050 = \$4{,}200$.

Answer: $1,050 per quarter, $4,200 for the year. Notice the honest alignment: the fee rises and falls with the client's account — but it is not a performance fee, because it is a percentage of assets, not a share of gains.

Example 2. Exam style — reason through every choice. An investment adviser may charge a fee based on a share of the capital gains in a client's account:
A. Never, under any circumstances
B. For any client who signs a written waiver
C. For a qualified client meeting the rule's assets-under-management or net-worth thresholds
D. Whenever the fee is disclosed in the brochure

Show solution

1. A — too absolute; the law prohibits performance fees *except* as allowed, and the qualified-client exception is the one the exam tests. Eliminate.
2. B — clients cannot waive the securities laws; a waiver clause is itself void and unethical. Eliminate.
3. C — the exception exactly: thresholds of assets managed with the adviser or net worth, set by rule (in this example $1.1 million / $2.2 million). Keep.
4. D — disclosure never converts a prohibited fee into a permitted one. Eliminate.

Answer: C. Performance fees are prohibited except for qualified clients — and neither waivers nor disclosure can substitute for the thresholds.

Example 3. A portfolio manager directs client trades to Broker X, which charges 5 cents per share where Broker Y charges 4, because Broker X provides the manager with (1) equity research reports, (2) a market-data terminal, and (3) payment of the firm's office rent. Which items can the Section 28(e) safe harbor protect?

Show solution

1. The safe harbor covers research and brokerage services that benefit clients when the manager pays up in good faith.
2. (1) Research reports — the classic protected item. Inside.
3. (2) Market-data terminal — analytics and data used to make investment decisions for clients. Inside.
4. (3) Office rent — an overhead expense of the adviser, no benefit to clients' advice. Outside: paying rent with clients' commission dollars is a breach of fiduciary duty, not soft dollars.

Answer: Items 1 and 2 are protected; item 3 is outside the safe harbor and unlawful. The exam's sorting test is always: does it improve the advice, or the adviser's life?

Example 4. An advisory firm that is also a broker-dealer wants to cross a block of a thinly traded stock between advisory client A, who wants to sell, and brokerage customer B, who wants to buy. Which condition would VIOLATE the agency cross rules?

A. Obtaining A's prior written consent after full disclosure of the conflict

B. Sending written confirmation of the transaction and an annual summary of crosses

C. Recommending the transaction to both A and B

D. Receiving commissions from both sides with disclosure

Show solution

1. A — this is required, not a violation. Eliminate.
2. B — also required housekeeping. Eliminate.
3. C — the bright line: the adviser may not have recommended the transaction to both sides; acting for both after recommending to both puts the adviser's interests in the middle of the price. Keep.
4. D — compensation from both sides is the disclosed conflict the consent covers; it is permitted with the full apparatus. Eliminate.

Answer: C. All the paperwork in the world cannot cure recommending both sides of the same cross — that is the violation.

PRACTICE

1. Easy An adviser charges 0.9% of assets annually, billed quarterly. Compute the quarterly bill on a $300,000 account.

   Show answer

   $\$300{,}000 \times 0.009 = \$2{,}700$ per year; $\$2{,}700 \div 4 = \$675$ per quarter.

2. Easy A wrap fee program differs from ordinary advisory billing because:
A. It charges one bundled fee covering both advice and trade execution
B. It is free of all disclosure requirements
C. It may only be offered to qualified clients
D. Its fee must be based on capital gains

Show answer

A. One bundled fee for advice plus execution — and it requires its own wrap fee brochure, so B is backwards. Wrap programs are not restricted to qualified clients (C), and a gains-based fee (D) would be a prohibited performance fee for ordinary clients.

3. Easy What happened on May 1, 1975, and name one consequence for how advice is sold.

Show answer

Fixed minimum brokerage commissions, dating to the Buttonwood Agreement of 1792, were abolished. Commissions fell, discount brokers appeared, and advice increasingly became a service sold for a stated fee — the fee-only adviser — rather than given away to earn commissions.

4. Easy An adviser's fee is 1% of assets under management. The account grows from $100,000 to $130,000, raising the fee from $1,000 to $1,300. This fee is:
A. A prohibited performance fee, because it grew with the account's gains
B. Permitted only for a qualified client
C. A lawful AUM fee — a percentage of assets, not a share of appreciation
D. Lawful only if capped at the original $1,000

Show answer

C. An AUM fee naturally rises and falls with the account's value; a performance fee is a share of the gains themselves, which this is not. The exam loves this disguise — A and B treat the ordinary fee as the forbidden one, and no cap (D) is required.

5. **Medium** Which client could lawfully be charged a performance-based fee, using this example's thresholds of $1.1 million under management or $2.2 million net worth?

A. A retiree with $400,000 under management who signs an informed-consent letter

B. A surgeon with $1.3 million managed by the adviser

C. A college student whose parents are wealthy

D. Any client, if the fee is capped at 10% of gains

Show answer

B. She exceeds the assets-under-management threshold in this example. Consent letters (A) cannot waive the rule, the client's own finances govern (C), and no cap legalizes a performance fee for a non-qualified client (D).

6. **Medium** A broker provides an adviser with soft-dollar benefits in exchange for client commission business. Which combination falls entirely INSIDE the Section 28(e) safe harbor?

A. Industry research reports and the adviser's office lease

B. A market-data terminal and airfare to a beach conference

C. Industry research reports, a market-data terminal and portfolio-analytics software

D. Portfolio-analytics software and new office furniture

Show answer

C. Research, data and analytics sharpen the advice clients receive, so all three sit inside the harbor. Every other combination smuggles in adviser overhead — rent, travel, furniture — which benefits the adviser, not the clients whose commissions pay.

7. Medium A client instructs the adviser to run all trades through her brother's brokerage firm. The adviser should:

A. Refuse the account

B. Follow the instruction after disclosing that directed brokerage may cost the client best execution

C. Follow the instruction silently, since the client chose it

D. Accept, provided the brother shares commissions with the adviser

Show answer

B. Directed brokerage is the client's right, but the adviser must warn that it may forfeit volume discounts and best execution. Silence (C) hides a material fact; commission-sharing with the adviser (D) would create a new undisclosed conflict.

8. Medium An adviser recommends a mutual fund share class that pays the adviser an ongoing 12b-1 fee, when an identical class without the fee is available to the client. Name the two problems.

Show answer

An undisclosed (or inadequately disclosed) conflict of interest — the adviser profits from the recommendation — and an unsuitable recommendation, since a cheaper identical share class serves the client better. Regulators have charged advisers for exactly this share-class practice.

9. Hard An adviser fully discloses, in its brochure and contract, an advisory fee of 4% of assets per year — about triple the local going rate for the same services in this example. A client happily signs. Under the NASAA model rule this fee is:

A. Permitted, because it was disclosed and accepted

B. Permitted, because fees are a private matter of contract

C. A violation, because charging an unreasonable advisory fee is an unethical practice regardless of disclosure

D. A violation only if the client later complains

Show answer

C. Reasonableness is an independent requirement; disclosure and consent do not launder an unreasonable fee, and no complaint is needed for a violation to exist. The exam plants "but it was disclosed!" as the comfortable wrong answer.

10. Hard A firm registered as both broker-dealer and investment adviser executes an agency cross between its advisory client (seller) and a brokerage customer (buyer). It obtained the advisory client's blanket written consent after full disclosure, confirms each cross in writing, sends an annual summary — and recommended the purchase to the buyer and the sale to the advisory client. Which element breaks the rules?
A. The blanket written consent
B. Acting for parties on both sides of one trade at all
C. Recommending the transaction to both sides
D. Sending only an annual summary rather than monthly reports
Show answer

C. The consent, confirmations and annual summary satisfy the procedural requirements, and acting for both sides is exactly what the consent permits (B) — but recommending the cross to both parties is the unwaivable line. Monthly reports (D) are not required.

11. Hard Before May Day, brokers competed for institutional business by giving away research, since commission rates were fixed. Explain how Section 28(e) preserved a piece of that old world, and the fiduciary limit it set.
Show answer

After rates floated, 28(e) let a manager pay a higher-than-lowest commission in good faith for research and brokerage services — client commission dollars may still buy research. The limit: the services must benefit the clients whose commissions pay, and the manager must determine the commission is reasonable in relation to the value received; adviser overhead never qualifies.

12. **Challenge** An adviser charges a 1% AUM fee and proposes to add a bonus of 20% of any returns above 8% per year, offered to all clients who opt in, because "it only costs them money when they win." Evaluate the proposal in three sentences.

Show answer

The bonus is a performance-based fee — a share of appreciation — and is prohibited for every client who is not a qualified client under the rule's thresholds; opting in is not an exception. The pitch also hides the real hazard: the adviser shares wins but not losses, an incentive toward risk the client never agreed to bear. The adviser could lawfully offer it only to qualified clients, with the conflict disclosed.

COMMON MISTAKES

- Calling an AUM fee a performance fee because it rises when the account grows — a percentage of assets is lawful; a share of gains is not.
- Believing disclosure or a client's written consent legalizes a performance fee for a non-qualified client — only the thresholds do.
- Sorting soft dollars by price instead of beneficiary — the safe-harbor test is whether the item benefits clients' advice, not whether it is cheap.
- Thinking an agency cross is fully cured by consent and confirmations — recommending the trade to both sides is never permitted.
- Forgetting that an unreasonable fee is unethical even when disclosed, agreed and paid without complaint.

> **Make it a game · Safe Harbor or Shipwreck.** Write fifteen items on slips — research report, Bloomberg-style terminal, office rent, analytics software, beach conference, client dinner, stock-screening data, new carpet, economics journal, staff salaries, and five of your own. A parent draws slips one at a time; you have five seconds to call SAFE HARBOR or SHIPWRECK and say who benefits, clients or adviser. One point per correct call. Then a lightning round: the parent names a fee (1% AUM, 20% of gains, flat $2,000, hourly) and a client (teacher, qualified client, retiree), and you call PERMITTED or PROHIBITED. Best score out of twenty slips wins.

> **Scripture.** “For the scripture saith, Thou shalt not muzzle the ox that treadeth out the corn. And, The labourer is worthy of his reward.” (1 Timothy 5:18, KJV)
>
> Scripture defends honest pay for honest work — an adviser’s fee is no shame. The rules of this lesson do not begrudge the labourer his reward; they insist the reward be named, reasonable, and earned from the client rather than taken behind his back.

10.3 Guarding Client Property: Custody, Discretion and Madoff's Warning

OBJECTIVES

- Define custody — holding funds or securities, authority to withdraw, general power of attorney, fee deduction — and list the model-rule safeguards it triggers.
- Distinguish custody from discretion, and state the written-authority conventions for advisers and for broker-dealer agents, including the time-and-price exception.
- Apply the suitability duty owed on every recommendation and recall the prudent investor standard.
- State the anti-money-laundering framework: BSA, customer identification, SARs and CTRs with their dollar conventions, and structuring.
- Tell the Madoff story accurately and name the safeguard whose absence made it possible.

> **Warm-up.** Your sibling asks you to hold $40 of birthday money until the county fair. In five minutes, write the three promises you would make so your sibling never has to wonder about the money — where it is kept, how he can check on it, who else can verify it. Keep the list: by the end of the lesson you will see that federal and state custody rules make exactly these promises, and that the largest fraud in Wall Street history worked by breaking all three.

WATCH

Custody Definition and Obligations - Series 65 Exam Prep

CertFuel · 8:20

https://www.youtube.com/watch?v=d-68HjeLWP0

> **WHEN TO WATCH**
> After the big idea, before the worked examples: a Series 65 teacher defines custody and its obligations at exam depth — write the safeguard list as he names each item.

BACKUP VIDEO

Bernie Madoff: How he pulled it off

CBS Sunday Morning · 5:13

https://www.youtube.com/watch?v=GHKmmXjCrOA

After the story paragraph: a sober news account of how the fraud worked — listen for the fake statements and the absence of any independent custodian, the two facts your flowchart must catch.

KEY TERMS

custody

Holding client funds or securities, or having any authority to obtain them — including withdrawal authority, acting as trustee, a general power of attorney, or deducting fees from the account.

qualified custodian

A bank, registered broker-dealer or similar institution that holds client assets in separate, identifiable accounts.

surprise examination

The annual unannounced verification of client assets by an independent accountant, required under the custody conventions.

discretion

Authority to decide the asset, the action (buy or sell) or the amount for a client's trade without consulting the client first.

time-and-price exception

Choosing only when or at what price to execute an order the client has fully specified is not discretion and needs no written authority.

trading authorization (power of attorney)

Written authority allowing a third party to direct trading in a client's account; a general power of attorney over assets creates custody.

Bank Secrecy Act (BSA)

The 1970 law requiring financial firms to keep records and file reports that help detect money laundering.

Currency Transaction Report (CTR)

The report filed for cash transactions over $10,000 in a day — and deliberately splitting deposits to dodge it is the crime of structuring.

Suspicious Activity Report (SAR)

The confidential report filed when a transaction of $5,000 or more (under the convention) is suspected to involve illegal funds; the customer must never be told.

Ponzi scheme

A fraud that pays earlier investors with later investors' money while reporting imaginary profits; it dies when withdrawals outrun new deposits.

CORE IDEAS

The story. Bernard Madoff was not a backroom swindler. He was a founder-chairman of the NASDAQ stock market, a pioneer of electronic trading, a man regulators consulted — and the operator of the largest Ponzi scheme in history. For decades his investment advisory business reported steady gains of about one percent a month, in rising markets and falling ones, supposedly from a "split-strike conversion" strategy. In truth there were no trades at all. Client money went into a bank account; client statements — thousands of pages a month, printed in-house on an aging computer on the seventeenth floor — were fiction composed after the fact, with prices copied from old newspapers. The machinery of the fraud was custody: Madoff's own broker-dealer "held" the assets, so no independent custodian existed to notice that the securities on the statements did not exist. A Boston analyst named Harry Markopolos deduced mathematically that the returns were impossible and told the SEC so in 2000, 2001 and again in a 2005 memo bluntly titled "The World's Largest Hedge Fund Is a Fraud." He was not believed. When the panic of 2008 brought a flood of withdrawal requests Madoff could not meet, he confessed to his sons, who reported him; he was arrested on December 11, 2008. Client statements

showed about $65 billion that had never existed; the real cash losses ran to many billions, much of it later clawed back by a court-appointed trustee. Madoff pleaded guilty in March 2009, was sentenced to 150 years, and died in prison in 2021.

How they figured it out. The lesson regulators drew was ancient: **separation of functions protects even against trusted men.** The adviser who decides what to buy must not also be the only keeper of the assets, the only bookkeeper, and the only auditor — because then his say-so is the whole system. After 2008 the SEC tightened the custody rule it already had, and the state model rules carry the same architecture. If assets had sat at an independent qualified custodian mailing its own statements, any client could have compared two pieces of paper and seen the fraud; Markopolos needed only arithmetic. The rules you now learn are Madoff's legacy written as law, and the exam tests them as a checklist.

The big idea: custody. An adviser has **custody** when it holds client funds or securities or can get them: physical possession, authority to withdraw from the account, serving as trustee, a **general power of attorney** — and, under the model-rule convention, even the routine **deduction of advisory fees** from client accounts counts as custody, with lighter safeguards such as sending the client an invoice showing the fee's calculation. Custody triggers the checklist: **notify the Administrator** (on Form ADV) that custody is held; keep assets with a **qualified custodian** in separate, identifiable accounts; give clients **written notice** of where and how their assets are held; see that clients receive account statements at least **quarterly**; and undergo an annual **surprise examination** by an independent accountant. Some states forbid advisers to take custody at all, and a state may require a minimum net worth of the adviser — in this example $35,000 with custody, $10,000 with discretion only, model-rule conventions. An adviser who receives a client's check made out to a third party, or securities by mistake, avoids custody by returning or forwarding them promptly — within three business days under the convention.

The big idea: discretion. Custody is holding; **discretion** is choosing. An adviser exercises discretion when it decides any of the three A's — the **Asset**, the **Action** (buy or sell) or the **Amount** — without asking first. The conventions differ by profession, and the exam loves the contrast: an **investment adviser** may begin trading on *oral* discretionary authority, but must obtain written authority within **ten business days** after the first discretionary transaction; a **broker-dealer agent** must have written

discretionary authority *before* the first discretionary trade — no oral grace period at all. And neither needs any authority for the **time-and-price exception**: when the client names the security, the action and the amount — "sell my 500 shares of XYZ today whenever you think best" — choosing the moment or the price is not discretion. An order from a third party requires written trading authorization from the client first; a kindly phone call from a client's son is not authority.

Every recommendation, suitable; every portfolio, prudent. Custody and discretion concern power over the account; suitability concerns the advice itself. The model rule's first listed violation is recommending any security without reasonable grounds to believe it suits the client's objectives, financial situation and needs, learned by reasonable inquiry. Discretion raises the stakes: an adviser trading without consultation must effectively run the suitability test alone, every time. Behind it stands the prudent investor standard you met earlier in the course — the fiduciary manages the whole portfolio with the care, skill and caution of a prudent investor, judging each holding by its role in the whole, diversifying unless there is good reason not to.

Clean money: the AML framework. Because advisers and broker-dealers stand where money enters the markets, they are drafted into the war on money laundering. The **Bank Secrecy Act** of 1970 is the foundation; the USA PATRIOT Act added the **Customer Identification Program** — verify each new customer's name, date of birth, address and taxpayer identification, and check terrorist lists. Cash transactions over $10,000 in a day require a **Currency Transaction Report**; deliberately splitting $10,000 into smaller deposits to dodge the report is **structuring**, a crime even when the money itself is clean. Transactions of $5,000 or more that smell of illegal origin require a confidential **Suspicious Activity Report** within the filing window — and the firm must never tell the customer a SAR was filed. The dollar figures are statutory conventions; learn them as the exam uses them.

On the exam today. Custody questions are checklists in disguise: expect to identify which arrangement creates custody (fee deduction — yes, under the model-rule convention; a check mistakenly received and returned within three business days — no; general POA — yes) and which safeguard is missing from a scenario (no surprise exam, no qualified custodian, statements less than quarterly). Discretion questions turn on the three A's and the two conventions: adviser — oral allowed, written within

ten business days; agent — written first, always; time and price alone — never discretion. AML questions swap the $5,000 and $10,000 figures or tempt you to warn the customer about a SAR. And at least one question will be Madoff wearing a tie: an adviser with custody, no independent custodian, self-printed statements and returns too smooth to be true. You will recognize him.

PICTURE STUDY

The Parable of the Talents, Willem de Poorter, About 1650 · Oil on panel · Seventeenth-century Dutch school; present collection not recorded on Wikimedia Commons

Image: Wikimedia Commons, public domain

Willem de Poorter, a Haarlem painter of Rembrandt's generation, loved treasure scenes — gold, vessels and the moment accounts are settled. Here he paints the reckoning from Matthew 25: the master returned, the servants called to account for what was entrusted to them. It belongs to this lesson because custody is precisely entrusted property awaiting a reckoning — and because Madoff's clients received no true accounting for decades. The painting shows the moment every steward should expect, and every custody rule exists to guarantee: the day the books are opened.

Look closely

- Find the coins and bags. Whose money is it — the servant's or the master's? How does the painting make that clear?
- Look at the light. What does the painter choose to illuminate, and what does he leave in darkness?
- Find the servant's hands. Is he presenting, pleading or explaining? What would an honest accounting look like in a gesture?
- Notice the vaulted, vault-like room. Why set a story about entrusted money in a space like a strongroom?

Talk about it

1. The master in the parable demanded an accounting. Which custody safeguards — quarterly statements, independent custodian, surprise exam — play the master's part for a modern client?
2. The servant who buried the talent kept it technically safe. Why was safekeeping without stewardship still condemned — and how does that deepen the adviser's duty beyond mere custody?
3. Madoff's clients trusted him for decades without independent verification. What does this parable suggest about trust that is never audited?

PROJECT

The Custody Flowchart and the Madoff Post-Mortem

You will build the custody-rules flowchart that goes in your portfolio, then run history's most expensive test case through it: which gates would have stopped Madoff, and in what year?

You will need

- A large sheet of paper or poster board, ruler, two pen colors
- Your exam notebook
- The Investor.gov Ponzi schemes page from the kit, read with a parent

Steps

1. Across the top of the sheet, write the entry question: "Does the adviser hold client funds/securities or have authority to obtain them (withdrawal power, trustee, general POA, fee deduction)?"
2. Branch NO: write "No custody — but discretion? Written authority: adviser within 10 business days of first oral-discretion trade; BD agent before any discretionary trade; time-and-price excepted."
3. Branch YES: draw the five custody gates in order — notify the Administrator; qualified custodian; written notice to clients; quarterly statements; annual surprise exam — and a side note: "some states forbid adviser custody; minimum net worth conventions apply."
4. Add the escape hatch as a dashed arrow: third-party checks and misdelivered securities forwarded or returned within three business days avoid custody.
5. Now the post-mortem: in your second color, mark each gate Madoff's operation failed, with one sentence of evidence (self-custody at his own broker-dealer; statements printed in-house; no independent surprise verification).
6. Write a half-page verdict: which single gate, honestly enforced, would have exposed the fraud earliest, and why did smart clients not demand it?
7. Date and sign the flowchart — it is a portfolio piece — and file the verdict behind it.

Tips

- Keep every box under ten words; a flowchart you cannot redraw from memory in two minutes is too ornate.
- For the verdict, remember Markopolos needed only public information and arithmetic — your argument may be that simple.

Check your work

- ☐ My flowchart runs from the custody definition through all five safeguards without a gap.
- ☐ The discretion branch shows the adviser/agent contrast and the time-and-price exception.
- ☐ My Madoff marks cite specific facts, not vibes.
- ☐ I can redraw the whole chart from memory.

EXAM NOTEBOOK

1. Make the custody flashcard set: five triggers of custody (holding, withdrawal authority, trustee, general POA, fee deduction) and five safeguards (notify, qualified custodian, notice, quarterly statements, surprise exam), one card each.
2. Write the discretion contrast as a table: adviser vs. BD agent, oral window vs. written-first, and the time-and-price exception across the bottom — add the three A's (Asset, Action, Amount) as the test for discretion.
3. Make the AML page: BSA 1970 → CIP (verify identity) → CTR cash over $10,000 → SAR $5,000 suspicion, confidential → structuring defined in one sentence.

KEY FORMULAS

$$(1 + r_{\text{month}})^{12} - 1 = r_{\text{year}}$$

From history. The scheme bears Charles Ponzi's name, not Madoff's. In 1920 Boston, Ponzi promised 50% in 45 days from arbitrage in international postal reply coupons; the coupons were real but the trade was impossibly small, and he paid old investors with new deposits until the Boston Post's arithmetic brought him down inside a year. Madoff ran the same engine for decades longer — proof that the fraud scales with the trust, which is why the custody rules trust no one.

Example 1. Madoff reported about 1% every month, almost without exception. Compound 1% monthly for a year. Then explain why the *smoothness*, more than the size, was the red flag Markopolos saw.

Show solution

1. Compound twelve months: $(1.01)^{12} - 1 \approx 0.1268$, about 12.7% a year.
2. 12.7% a year is large but not absurd — good years in stocks can beat it.
3. The impossibility is the consistency: real markets fell hard in 2000–2002 and 2008, yet the statements barely flinched. No honest strategy earns a steady 1% through crashes; only a typewriter does.
4. Markopolos also checked volume: the options trades the strategy claimed would have exceeded the entire market's actual volume.

Answer: About 12.7% per year. Returns too smooth for the markets they claim to ride are a classic Ponzi signature — variability is the fingerprint of honesty.

Example 2. Exam style — reason through every choice. Under the model-rule conventions, which investment adviser practice does NOT create custody?
A. Deducting advisory fees directly from client accounts
B. Serving as trustee of a client's trust
C. Receiving a client's check payable to the account's qualified custodian and forwarding it within three business days
D. Holding a general power of attorney over a client's account

Show solution

1. A — fee deduction is custody under the model-rule convention (with lighter safeguards, such as invoicing). It creates custody. Eliminate.
2. B — a trustee controls the assets; custody. Eliminate.
3. C — a check payable to a third party (the custodian), forwarded promptly within the three-business-day convention, avoids custody. Keep.
4. D — a general POA is authority to obtain assets; custody. Eliminate.

Answer: C. Prompt forwarding of a third-party check is the escape hatch; fee deduction, trusteeship and general POAs all create custody.

Example 3. A client calls her investment adviser representative: “I have $20,000 to invest — put it wherever you think best. Paperwork when I’m back from my trip in two weeks.” Separately, a broker-dealer customer tells his agent the same thing. Who may act, and when must the writing arrive?

Show solution

1. Both grants involve choosing the asset — discretion, not time-and-price.
2. The adviser’s IAR may begin trading on this oral authority, but written discretionary authority must arrive within ten business days after the first discretionary transaction. Two weeks is ten business days — tight but workable if the paper is signed on return.
3. The BD agent may NOT act at all: an agent needs written discretionary authority before the first discretionary trade. He must wait for the paperwork.
4. Had each client instead said “sell my 300 shares of XYZ this week when the price looks right,” both could act freely — time and price are not discretion.

Answer: The IAR may invest now and must collect the writing within ten business days of the first trade; the agent must wait for written authority before trading. The adviser/agent contrast and the time-and-price exception are both exam staples.

Example 4. A customer deposits $9,800 in cash on Monday, $9,700 on Tuesday and $9,900 on Wednesday, remarking that he "keeps it under ten thousand so there's no paperwork." What must the firm consider filing, and what is the practice called?

Show solution

1. Each deposit alone is under the $10,000 CTR line, so no single deposit forces a CTR.
2. But deliberately splitting cash to evade the report is structuring — a federal crime regardless of where the money came from.
3. The pattern plus the remark is suspicious activity involving well over $5,000; the firm should file a SAR.
4. The firm must not tell the customer that a SAR is filed or contemplated.

Answer: The conduct is structuring; the firm files a Suspicious Activity Report and says nothing to the customer. Dodging the CTR is itself the crime.

PRACTICE

1. Easy Under the model-rule convention, which of the following gives an investment adviser custody?
   A. Deducting its advisory fee from the client's account
   B. Recommending an allocation the client executes himself
   C. Receiving a quarterly copy of the custodian's statement
   D. Holding limited trading authority with no withdrawal rights

   Show answer

   A. Fee deduction is custody under the convention (with safeguards such as invoices). Recommendations and copies of statements touch no assets; limited trading authority is discretion, not custody — D is the designed trap.

2. Easy List the five custody safeguards under the model-rule convention.

   Show answer

   Notify the Administrator (Form ADV); keep assets with a qualified custodian in separate, identifiable accounts; give clients written notice of how assets are held; client account statements at least quarterly; annual surprise examination by an independent accountant.

3. Easy A client tells her adviser: “Sell my 200 shares of ABC sometime this week, whenever the price looks best to you.” To act on this instruction, the adviser needs:

   A. Written discretionary authority before trading

   B. Oral discretionary authority confirmed in writing within 10 business days

   C. No discretionary authority — the client fixed the asset, action and amount, so choosing time and price is not discretion

   D. A general power of attorney

   Show answer

   C. The time-and-price exception: with asset, action and amount fixed by the client, picking the moment or price is not discretion, so neither writing (A), the 10-day convention (B) nor a POA (D) is needed.

4. Easy A customer makes a $12,000 cash deposit on Monday, and on Friday sends a $6,000 wire the firm suspects involves illegal funds. Which filings do the conventions call for?

   A. A CTR for the cash deposit and a confidential SAR for the suspicious wire

   B. A SAR for both, with a courtesy copy to the customer

   C. A CTR for both transactions

   D. Nothing — only transactions over $25,000 are reportable

   Show answer

   A. Cash over $10,000 in a day triggers the Currency Transaction Report; suspicious activity at or above the $5,000 convention calls for a Suspicious Activity Report, which is confidential — telling the customer (B) is itself a violation. The wire is not cash, so no CTR (C).

5. **Medium** On Tuesday an IAR receives a client's enthusiastic phone call granting full discretion and places the first discretionary trade that afternoon. By when must written discretionary authority be obtained, and what is the rule for a broker-dealer agent in the same position?
A. Written authority within 10 business days; the agent needed writing before trading
B. Written authority within 30 days; same for the agent
C. No writing needed for either if the grant was recorded
D. Writing before trading for the IAR; 10 business days for the agent
Show answer

A. The adviser convention allows oral discretion with writing within ten business days of the first discretionary transaction; a BD agent must have written authority before exercising any discretion. D states the two rules backwards — the exam's favorite reversal.

6. **Medium** An adviser mistakenly receives a client's stock certificates in the mail. Under the model-rule convention, what must it do to avoid having custody?
Show answer

Return them to the sender promptly — within three business days under the convention. Holding them longer creates custody and triggers the full safeguard checklist.

7. **Medium** Which fact pattern most resembles the mechanism of the Madoff fraud?
A. An adviser with discretion executes unsuitable trades at a qualified custodian
B. An adviser holds client assets at its own affiliated broker-dealer and prepares the only account statements clients receive
C. An adviser deducts fees without sending invoices
D. An adviser fails to file a CTR for a large cash deposit
Show answer

B. Self-custody plus self-generated statements means no independent record exists — the client sees only what the fraudster prints, which is how fictitious trades survived for decades. The other choices are violations, but not that machine.

8. Medium Harry Markopolos told the SEC in 2000, 2001 and 2005 that Madoff's returns were impossible. Name two of the quantitative red flags he or the rules would point to.

Show answer

Returns of about 1% a month with almost no down months through crashes — smoothness no real strategy achieves; claimed options volume exceeding the whole market's actual volume; and structurally, no independent custodian or auditor verifying the assets existed.

9. Hard An adviser serves as trustee for a client's family trust, deducts fees from three accounts, and holds a general POA over a fourth. The firm's principal says only the trusteeship creates custody. How many custody triggers are present, and what netting of safeguards follows?

A. One; safeguards apply to the trust only

B. Two; fee deduction is exempt

C. Three; trusteeship, fee deduction and the general POA all create custody, and the safeguard checklist applies

D. None, if the trust names a bank as co-trustee

Show answer

C. All three arrangements are custody under the model-rule convention. Fee deduction carries lighter additional safeguards (such as invoicing) but is still custody; a co-trustee does not erase the adviser's authority.

10. Hard A teller suggests to a customer with $18,000 in honestly earned cash that he “split it into two visits so we skip the report.” The customer does. Who has violated the law?

A. No one, because the money was earned honestly

B. Only the customer, who made the deposits

C. Both — splitting deposits to evade the CTR is structuring, a crime for the customer and for the employee who assists

D. Only the firm, for failing to file two CTRs

Show answer

C. Structuring under the Bank Secrecy Act framework is the evasion itself, criminal even when the cash is clean (A), and assisting it implicates the teller as well as the depositor (B). Deposits under the threshold require no CTR, so D misfires — but the firm should consider a SAR.

11. Hard A state requires advisers with custody to maintain $35,000 net worth and advisers with discretion only $10,000 (model-rule conventions). An adviser with discretion but no custody falls to $8,000 net worth. What does the convention require it to do?

Show answer

Notify the Administrator promptly (by close of the next business day under the reporting convention) that its net worth is deficient, then file the required financial reports. The figures vary by state — learn the structure: custody demands more capital than discretion.

12. Challenge Write the three promises from the warm-up as a regulator would: for each promise you made about your sibling’s $40, name the matching custody safeguard and the Madoff failure it answers.

Show answer

Example: “I’ll keep it somewhere separate that isn’t my pocket” = qualified custodian with separate, identifiable accounts (Madoff: self-custody). “You can check on it any time” = account statements at least quarterly, from the custodian (Madoff: fiction printed in-house). “Someone else can verify I still have it” = annual surprise examination by an independent accountant (Madoff: no independent verification for decades).

COMMON MISTAKES

- Treating fee deduction as harmless housekeeping — under the model-rule convention it is custody, with its own safeguards.
- Reversing the discretion conventions: the adviser gets the ten-business-day oral window; the broker-dealer agent needs written authority before the first discretionary trade.
- Calling time-and-price choices discretion — if the client fixed the asset, action and amount, picking the moment is not discretion.
- Swapping the AML figures: CTR is cash over $10,000; the SAR suspicion convention is $5,000 — and telling the customer about a SAR is itself a violation.
- Assuming big, famous, long-trusted firms do not need the safeguards — Madoff is the standing proof that the checklist exists precisely for trusted men.

Make it a game · Who Holds the Money?. Twenty rapid rounds, five seconds each. A parent reads an arrangement — "adviser deducts fees," "client's son phones in an order," "sell when the price looks good," "adviser is trustee," "check made out to the custodian, forwarded next day," "agent trades on a customer's oral OK" — and you call CUSTODY, DISCRETION, BOTH or NEITHER, plus the fix if one is needed (written authority, forward in three days, full safeguards). One point per correct call, minus one for naming a safeguard that doesn't apply. Fifteen or better and you have beaten the surprise examiner.

Scripture. "Moreover it is required in stewards, that a man be found faithful." (1 Corinthians 4:2, KJV)

This is the course's theme verse, and it lands hardest here. To be found faithful means an accounting is coming — Paul assumes stewards will be examined. Custody rules, quarterly statements and surprise audits are the world's way of arranging what Scripture promises: that stewardship ends in a reckoning.

10.4 Prohibited Practices: Churning, Front Running and Insider Trading

OBJECTIVES

- Identify the NASAA catalog of prohibited practices in scenario form: churning, unauthorized and unsuitable trading, misrepresentation, guarantees, commingling and front running.
- State the sharing and lending contrasts: advisers never share in accounts; agents only with written consent of client and firm; borrowing and lending only with banks, broker-dealers and affiliates.
- Define insider trading — material nonpublic information, tippers and tippees — tell the Texas Gulf Sulphur story accurately, and state the treble-penalty convention.
- Recognize selling away, market manipulation (wash trades, matched orders, pump and dump, rumors) and pay-to-play restrictions.
- Apply the personal-trading reporting conventions for access persons and the confidentiality rule for client information.

> **Warm-up.** In five minutes, list five ways a dishonest person with access to other people's accounts and information could profit unfairly — invent them yourself, no textbook. Keep the list. By the end of the lesson, check how many of your inventions the NASAA catalog already names; most students find they have reinvented at least three prohibited practices, which is exactly why the catalog exists.

WATCH

Ethical or unethical? NASAA Statement of Unethical Business Practices. Performance Opportunities!

Series 7 Guru · 10:51

https://www.youtube.com/watch?v=QYpHlXko8YA

> **WHEN TO WATCH**
> After the big idea: a veteran exam teacher drills the NASAA unethical-practices catalog with exam-style calls — answer each scenario aloud before he does.

BACKUP VIDEO

Insider Trading explained

Yale Law School · 12:09

https://www.youtube.com/watch?v=Iorb71CPj8E

After the Texas Gulf Sulphur paragraphs: a law professor walks through what makes information material and nonpublic and how tippee liability works — note where his definitions match your flashcards word for word.

KEY TERMS

churning

Trading a client's account excessively in size or frequency for its objectives and resources, to generate commissions or activity.

front running

Trading for one's own account ahead of a known client order (or the firm's pending research) to profit from the price move it will cause.

unauthorized trading

Placing an order in a client's account without authority — no discretion granted and no client instruction.

insider trading

Trading a security while in possession of material nonpublic information, or passing that information to others who trade.

material nonpublic information

Facts not yet public that a reasonable investor would consider important — a merger, a drill strike, an earnings surprise.

tipper and tippee

The insider who passes material nonpublic information and the receiver who trades on it — both are liable.

selling away

An agent effecting private securities transactions outside his firm without its knowledge and consent.

commingling

Mixing client funds or securities with the firm's or the representative's own.

matched orders and wash trades

Manipulative trades — coordinated buys and sells, or trades with no real change of ownership — made to paint a false picture of activity or price.

access person

An adviser's personnel with access to client trading information, who must report personal securities holdings and transactions under the reporting conventions.

CORE IDEAS

The story. In November 1963, a crew working for Texas Gulf Sulphur drilled an exploratory hole called K-55-1 near Timmins, Ontario, and pulled up a core glittering with copper, zinc and silver — one of the richest base-metal strikes ever found, the future Kidd Creek mine. The company did the commercially shrewd thing: it camouflaged the drill site, paused drilling, and quietly bought up the surrounding land. But something else happened too. Officers, geologists and their friends — men who had seen the core — began buying Texas Gulf stock and cheap call options. As rumors spread in spring 1964, the company issued a press release on April 12 dismissing them as "without factual basis"; four days later it announced a major ore body, and the stock, which had traded around eighteen dollars before the strike, ran toward sixty. The SEC sued the insiders, and in 1968 the Second Circuit's en banc decision in *SEC v. Texas Gulf Sulphur* laid down the rule American markets live by: anyone in possession of material nonpublic information must **disclose it or abstain** from trading. The drill core was true; the buying was still fraud, because the other side of every trade was a seller who could not know what the insiders knew.

How they figured it out. The court's reasoning gives you the exam's two tests. **Material**: would a reasonable investor consider the fact important — would it move the price? A strike like Kidd Creek obviously would; so would a merger, a dividend cut, an earnings surprise, a government approval. **Nonpublic**: the market as a whole has not yet had it and digested it — a press release alone is not enough until the news has had time to spread. Liability reaches beyond the first insider: the **tipper** who passes the information breaches his duty, and the **tippee** who trades on it inherits the breach; both answer for it, and so can the firm that failed to supervise. Congress later armed the courts: under the Insider Trading Sanctions Act of 1984 the civil penalty runs up to **three times** the profit gained or loss avoided — treble damages — on top of disgorgement, criminal fines and prison, with liability extending to controlling persons under the 1988 act. Advisers must maintain written policies to prevent misuse of material nonpublic information; the model rule makes failing to have them a violation by itself.

The big idea. The NASAA catalogs — unethical practices of advisers and IARs, dishonest practices of broker-dealers and agents — are long, but they are one idea wearing forty costumes: **the professional may not profit from the client's blindness**. Learn the big names as the exam uses them. **Churning**: excessive trading for the account's objectives and resources, measured by turnover and in-and-out trading, motivated by commissions or the appearance of activity. **Unsuitable recommendations**: advice without reasonable grounds after reasonable inquiry. **Unauthorized trading**: any order without discretion or instruction — including the "helpful" trade the client would surely have wanted. **Misrepresentation**: of qualifications, services, fees or returns; also delivering someone else's research as your own without disclosure. **Guarantees**: promising a result or against loss, forbidden to everyone, always. **Commingling**: client assets mixed with the firm's or the representative's own. **Front running**: your order racing ahead of the client's, or ahead of the firm's market-moving research.

The sharing and lending contrasts. Two catalog entries live as exam contrasts. **Sharing in accounts**: an investment adviser may *never* share in the profits or losses of a client's account — the performance-fee rules of 10.2 are the only lawful way an adviser's pay touches results. A broker-dealer **agent** may share, but only with the **written consent of both the client and the employing firm**, and under the FINRA convention only in proportion to the agent's own contribution to the account.

Borrowing and lending: a representative may not borrow from or lend to a client — unless the client is in the lending business or otherwise inside the convention's short list: a bank or financial institution, a broker-dealer, or an affiliate of the firm. Grandma the client with a kind heart is never on the list, no matter how willingly she offers.

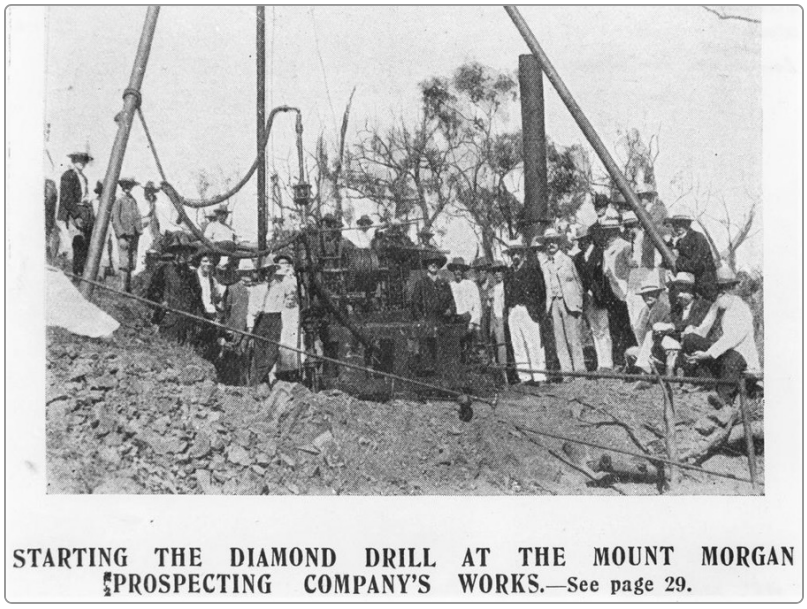
The rest of the rogues' gallery. Selling away: an agent running private securities transactions — a friend's startup shares, a side real-estate note — without his firm's knowledge and consent; the firm cannot supervise what it cannot see. **Market manipulation**: **wash trades** (sales with no real change of ownership) and **matched orders** (coordinated buys and sells between accounts) to paint phantom volume; **pump and dump**, inflating a thin stock with hype and selling into the rise; and **spreading false rumors** to move a price. **Pay-to-play**: under the federal convention, an adviser whose covered personnel make political contributions to officials who can award government advisory business sits out **two years** of compensation from that government client, with small de minimis exceptions — in this example $350 per election where the contributor can vote for the candidate, $150 where he cannot. **Excessive fees** are unethical even when disclosed, and **confidentiality** closes the catalog: client information is disclosed only with the client's consent or when law requires it — a subpoena yes, a curious neighbor never.

Watching the watchmen's own trades. Because advisory personnel see client orders and research before the market does, the reporting conventions put their personal accounts under glass. **Access persons** — those with access to nonpublic client trading information or recommendations — file an **initial holdings report** within ten days of becoming access persons, **quarterly transaction reports** within thirty days of each quarter's end, and an **annual holdings report**, under the federal code-of-ethics convention. The firm's code of ethics must require it; trading ahead of clients or of unpublished research turns up in precisely these reports. None of this presumes guilt — it arranges for honesty to be verifiable, which by now you will recognize as this unit's whole architecture.

On the exam today. Prohibited-practice questions are scenario work: read for *who* the actor is and *what* he knew. The sharing rule is a favorite switch — "an IAR may share in profits with written consent of client and employer" is false (that is the *agent's* rule; advisers never share); the borrowing list is another — a client who happens to be a bank may lend, a client who happens to be rich may not. Texas Gulf

Sulphur appears in costume: a geologist's cousin, a printer who reads a merger document, an analyst's spouse — all tippees once they trade on material nonpublic information, and the penalty hook is "up to three times the profit gained or loss avoided." Watch for the word *excessive* (churning) versus *unauthorized* (no authority at all) versus *unsuitable* (authority, wrong advice) — three different violations the exam loves to blur. And remember the quiet ones: a glowing recommendation delivered while omitting that the firm wrote the research for the issuer, or a "sure to double" promise, fail on misrepresentation and guarantee grounds before any trade occurs.

PICTURE STUDY



Starting the Diamond Drill at Mount Morgan, Unknown photographer, published in The Queenslander, 1908 · Photograph · State Library of Queensland, Brisbane

Image: Wikimedia Commons, public domain

This photograph from the State Library of Queensland shows prospectors starting a diamond drill at Mount Morgan, one of Australia's great gold and copper mines, in 1908. A diamond drill bores a narrow core of rock from deep underground — exactly the kind of core that came up at Kidd Creek in 1963 bearing copper, zinc and silver. It sits in this lesson because everyone in this picture will know what the core says before the world does. What the drill brings up is geology; what the men do with the knowledge before it is public — that is securities law.

Look closely

- Find the drill rig. Why must a company bore a core at all, rather than judge the ground from the surface?
- Count the men. How many people will see or hear what the core contains before any announcement could reach an investor?
- Notice the cleared, remote ground. How would an outsider in 1908 — or 1963 — ever learn what happened here except from the company?
- Look at the posed stillness. The photograph marks a beginning: what are the two futures that depend on what the drill finds?

Talk about it

1. Texas Gulf Sulphur kept its strike quiet while buying land — lawful business secrecy — yet its men could not buy the stock. Where exactly is the line, and why does it fall there?
2. Every man at this rig is a potential tipper. What does the tipper-tippee rule say to the one who merely tells his brother-in-law?
3. "Disclose or abstain" — why are those the only two honest choices for a man holding this kind of knowledge?

PROJECT

The Prohibited-Practices Trap List

You will build the master trap list for your portfolio — every prohibited practice in this lesson as a one-line scenario with its name — and then test it on a parent, because a trap list you can teach is a trap list you know.

You will need

- Your exam notebook (right-hand pages only, per your capstone system)
- Index cards and a timer
- The Investor.gov How to Avoid Fraud page from the kit, read with a parent

Steps

1. List the catalog from this lesson down a notebook page: churning, unsuitable recommendation, unauthorized trading, misrepresentation, guarantees, sharing (adviser vs. agent), borrowing/lending, commingling, front running, trading ahead of research, insider trading (tipper/tippee), selling away, wash trades, matched orders, pump and dump, rumors, pay-to-play, excessive fees, breach of confidentiality.
2. For each entry, write a one-line scenario in exam voice ("An agent buys 200 shares for his own account minutes before entering a customer's large buy order…") with the violation's name at the right margin.
3. Mark the three contrasts with stars: sharing (adviser never / agent with double written consent), borrowing (lending-business clients only), discretion carryover from 10.3 (adviser 10 days / agent written first).
4. Copy the ten scenarios you find hardest onto index cards, scenario on the front, name on the back.
5. Drill with a parent: they read scenarios in random order, you name the violation in five seconds; any miss goes back in the deck twice.
6. Reverse the drill: you read names, the parent invents a scenario, and you judge whether their scenario truly fits — correcting them is the deepest test.

7. Date the list and file it in your portfolio; you will reread it the week before the real exam.

Tips

- Write scenarios about different actors — IAR, agent, adviser firm, customer — because the exam's answer often turns on who is acting.
- Keep each line under twenty words; the exam gives you more detail, but your memory wants the skeleton.

Check your work

- ☐ My list covers at least eighteen named practices with scenarios.
- ☐ The three starred contrasts are word-perfect.
- ☐ I can name any violation from its scenario in five seconds.
- ☐ I can invent a fresh scenario for any named violation.

EXAM NOTEBOOK

1. Make the insider-trading page: material + nonpublic defined, disclose-or-abstain, tipper/tippee chain drawn as arrows, and the treble-penalty formula with one worked number.
2. Write the two contrast cards: SHARING (adviser: never / agent: written consent of client AND firm, proportionate) and BORROWING-LENDING (only banks, broker-dealers, affiliates / lending-business clients).
3. Draw the manipulation zoo in four quick panels: wash trade (one hand sells to the other), matched orders (two accounts in rhythm), pump and dump (megaphone then exit), rumor (whisper moving a price chart).

KEY FORMULAS

$$\text{Maximum civil penalty} = 3 \times (\text{profit gained or loss avoided})$$

From history. In November 1986 the arbitrageur Ivan Boesky settled SEC insider-trading charges for $100 million and cooperated with prosecutors, wearing a wire that helped bring down others — the scandal that fixed the treble-penalty era in the public mind and inspired a decade of compliance departments. The Insider Trading Sanctions Act of 1984 had armed the SEC two years earlier; Boesky proved the weapon would be used against the biggest names on the Street.

WORKED EXAMPLES

Example 1. An executive learns on Tuesday that her company will announce a failed drug trial on Friday. She sells shares on Wednesday at $60; after the announcement the stock falls to $42. She sold 2,000 shares. Compute the loss avoided and the maximum civil treble penalty under the convention.

Show solution

1. Loss avoided per share: $\$60 - \$42 = \$18$.
2. Total loss avoided: $2{,}000 \times \$18 = \$36{,}000$.
3. Maximum civil penalty: $3 \times \$36{,}000 = \$108{,}000$, on top of disgorgement and any criminal consequences.

Answer: Loss avoided $36,000; treble civil penalty up to $108,000. Trading to avoid a loss is insider trading exactly as trading for gain is.

Example 2. Exam style — reason through every choice. An agent's longtime customer proposes: "Let's split profits and losses in my account 50-50 — you do the work, I put up the money." The agent may:
A. Agree, because the customer proposed it
B. Agree with the written consent of the customer and the employing broker-dealer, sharing in proportion to his contribution under the convention
C. Never share in a customer account under any circumstances
D. Agree if the split favors the customer

Show solution

1. A — customer enthusiasm authorizes nothing by itself. Eliminate.
2. B — the agent's rule exactly: written consent of client and firm, proportionate sharing under the FINRA convention. Keep.
3. C — that is the *investment adviser's* rule; for agents, the door opens with the double consent. The exam swaps these constantly. Eliminate for an agent.
4. D — generosity does not cure the missing consents. Eliminate.

Answer: B. Agents may share with written consent of customer and firm (proportionately, under the convention); an IAR in the same scenario could never share at all — know both halves of the contrast.

Example 3. A geologist on the Kidd Creek crew tells his brother-in-law about the core before any announcement; the brother-in-law buys call options and makes $\$25{,}000$. Who is liable, and for what?

Show solution

1. The geologist possesses material nonpublic information and passes it for the family benefit: he is a tipper, liable though he never traded.
2. The brother-in-law trades knowing the tip came from inside: a tippee, liable for insider trading on the $\$25{,}000$ profit.
3. Exposure: disgorgement of the profit, civil penalties up to treble ($3 \times \$25{,}000 = \$75{,}000$), plus potential criminal prosecution; the firm's supervision and policies will also be examined.
4. This is Texas Gulf Sulphur's rule in modern dress: disclose or abstain, and a tip does not launder the information.

Answer: Both are liable — tipper for passing the information, tippee for trading on it — with disgorgement and treble penalties on the table. "I never traded myself" is no defense for the tipper.

Example 4. A broker-dealer receives a customer order to buy 100,000 shares of a thinly traded stock. Before entering it, the agent buys 2,000 shares for his own account, then executes the customer's order, which moves the price up, and sells. Name the violation and explain why it also breaches an agency duty.

Show solution

1. Trading one's own account ahead of a known customer order to profit from its price impact is front running.
2. The agent used knowledge of the customer's order — information belonging to the customer relationship — against the customer's interest: the fill the customer gets is worse because the agent bought first.
3. It would equally be front running to trade ahead of the firm's soon-to-be-published research that will move the price.
4. Distinguish churning (excessive trading in the customer's account) and unauthorized trading (no authority): here the customer's own order was proper; the agent's own trade is the violation.

Answer: Front running — self-dealing on advance knowledge of a customer order, a prohibited practice and a breach of the duty to put the customer first.

PRACTICE

1. Easy A retiree's income account shows 60 in-and-out trades this quarter, each generating commissions for the agent. This pattern is best described as:
   A. Front running
   B. Churning — trading excessive in size or frequency for the account's objectives and resources
   C. Selling away
   D. Commingling

   Show answer

   B. Excessive turnover and in-and-out trading, measured against a conservative account's objectives and driven by commissions, is churning. Front running (A) trades ahead of a known order, selling away (C) is off-book private transactions, commingling (D) mixes client and firm assets.

2. Easy An investment adviser representative may share in the profits of a client's account:

A. With written consent of the client

B. With written consent of the client and the adviser

C. Never

D. If the sharing is proportionate to services rendered

Show answer

C. Advisers and IARs never share in client account profits or losses; lawful performance-based fees for qualified clients are compensation, not sharing. A, B and D describe pieces of the broker-dealer agent's rule — the exam's favorite transplant.

3. Easy An agent borrows $5,000 from a wealthy, willing client who is a retired dentist. Under the conventions, the loan is:

A. Permitted, because the client offered freely

B. Permitted with the firm's written consent

C. Prohibited — clients may lend to their representative only if they are in the lending business, a broker-dealer or an affiliate of the firm

D. Permitted if repaid with interest at market rates

Show answer

C. A retired dentist is on nobody's lending list; wealth and willingness (A) are irrelevant, the firm cannot consent the rule away (B), and fair interest (D) does not cure the borrowing itself.

4. Easy What two features must information have before trading on it becomes insider trading, and what rule did *SEC v. Texas Gulf Sulphur* establish?

Show answer

The information must be material (important enough to move a reasonable investor) and nonpublic (not yet released and absorbed by the market). Texas Gulf Sulphur established disclose or abstain: whoever holds such information must make it public or stay out of the market.

5. **Medium** While rumors swirled in April 1964, Texas Gulf Sulphur issued a press release calling reports of a major strike "without factual basis," then announced the ore body days later. Separate the two wrongs in the episode.

Show answer

Insiders and tippees traded on the material nonpublic drill results — classic insider trading; and the company's misleading press release was itself a deceptive statement to the market. Keeping the strike confidential was lawful; trading on it and speaking falsely about it were not.

6. **Medium** An agent helps college friends buy shares in a private startup, off the books of his employing broker-dealer, earning a finder's fee. The shares are genuine and the friends are happy. Which is correct?

A. No violation, because the investment was real and profitable

B. Selling away — private securities transactions without the firm's knowledge and consent

C. Commingling of client funds

D. Front running the startup's offering

Show answer

B. Securities transactions outside the firm without its knowledge and consent are selling away, however honest the deal — the firm cannot supervise what it cannot see. Happy customers (A) do not cure it; C and D name different practices.

7. **Medium** Two accounts controlled by the same promoter sell a thin stock back and forth at rising prices while a chat room fills with talk of the “surging volume,” after which the promoter sells out. The devices at work are:
A. Churning and unauthorized trading
B. Wash trades or matched orders creating phantom volume, feeding a pump and dump
C. Soft dollars and directed brokerage
D. An agency cross with missing consents

Show answer

B. Trades with no true change of beneficial ownership paint false volume and price, and hyping the painted chart before selling completes the pump and dump. The other choices name practices whose facts — customer accounts, commission arrangements, advisory crosses — are absent here.

8. **Medium** An IAR at a firm managing a state pension gives $600 to a gubernatorial candidate who, if elected, appoints the pension trustees. The IAR cannot vote in that state’s election. Under the pay-to-play convention (de minimis $350 can-vote / $150 cannot-vote, in this example), what follows?

Show answer

The contribution exceeds the $150 de minimis for a candidate the contributor cannot vote for, so the adviser faces the two-year time-out from receiving compensation for advising that government client. The figures are rule conventions; the structure — small gifts excepted, big gifts trigger the time-out — is the testable idea.

9. Hard Which actor commits unauthorized trading?

A. An IAR with oral discretion, five business days old, buys a suitable bond

B. An agent, unable to reach a traveling customer, sells a falling stock “to protect him,” having no discretion

C. An adviser sells 500 shares the client ordered, choosing the moment within the day

D. An agent executes a trade ordered by the client’s spouse who holds written trading authorization

Show answer

B. Good intentions without authority are unauthorized trading — the classic exam scenario. A is lawful inside the adviser’s ten-business-day oral window; C is the time-and-price exception; D rests on valid written third-party authorization.

10. Hard An access person at an advisory firm buys a stock the firm’s research department will recommend publicly next week, then sells after the recommendation moves the price. Name the violation, and the three reports under which his trading should have been visible to compliance.

Show answer

Trading ahead of research — a front-running variant exploiting the firm’s nonpublic recommendation. His personal trading is exposed by the access-person reports: initial holdings report (within 10 days of becoming an access person), quarterly transaction reports (within 30 days of quarter end) and the annual holdings report, required by the firm’s code of ethics under the convention.

11. Hard A client's brother, saying the client is hospitalized, asks the adviser for the account balance and recent trades "so the family can plan." The adviser, moved, provides them. The adviser has:
A. Acted properly, since the request came from immediate family in an emergency
B. Violated the confidentiality rule — client information may be disclosed only with the client's consent or as required by law
C. Acted properly if he notes the disclosure in the file
D. Violated the rule only if the brother misuses the information

Show answer

B. Sympathy is neither consent nor legal compulsion; the adviser needed the client's consent, a valid power of attorney, or something like a subpoena. Family status (A), file notes (C) and the brother's later conduct (D) change nothing — the disclosure itself is the violation.

12. Challenge An insider avoided a $52,000 loss by selling before bad news. Prosecutors seek disgorgement plus the maximum treble civil penalty. Compute the total monetary exposure, then explain in one sentence why the law multiplies rather than merely recovers.

Show answer

Disgorgement $52,000 plus up to $3 \times \$52{,}000 = \$156{,}000$ penalty: total exposure $208,000. Mere recovery would make insider trading a free bet — caught, you break even; uncaught, you win — so the treble penalty makes the bet a losing one.

COMMON MISTAKES

- Transplanting the agent's profit-sharing rule to advisers — an IAR may never share in a client's account, consents or no consents.
- Believing a willing lender cures the borrowing rule — only clients in the lending business, broker-dealers and affiliates qualify.
- Thinking the tipper is safe because he never traded — passing material nonpublic information creates liability for tipper and tippee alike.
- Blurring churning (excessive), unauthorized (no authority) and unsuitable (wrong advice) — the exam separates them by exactly these words.

- Treating business secrecy as the crime in Texas Gulf Sulphur — keeping the strike quiet was lawful; trading on it and the misleading press release were the violations.

Make it a game · Name That Violation. A parent reads scenarios from your trap-list cards — shuffled with three INNOCENT scenarios they invent (a lawful time-and-price order, a disclosed conflict, business secrecy without trading) — and you have five seconds to name the violation or call CLEAN. Two points for the exact name (churning, selling away, matched orders), one for the right family, minus one for condemning the innocent. Fifteen scenarios a round; beat your score across three rounds, then swap seats and invent scenarios that fool the parent.

Scripture. "But if ye will not do so, behold, ye have sinned against the LORD: and be sure your sin will find you out." (Numbers 32:23, KJV)

Insider traders are caught by patterns — trades time-stamped beside the news that explains them. Moses' warning is nearly a description of market surveillance: the sin leaves records, and the records speak. The deeper point is that honesty practiced only where detection reaches is not honesty at all.

10.5 The Capstone: Cybersecurity, Continuity and Exam Day

OBJECTIVES

- State what Regulation S-P requires — privacy notices, opt-out rights and the safeguard rule — and name the identity-theft red-flags duty.
- Summarize NASAA's cybersecurity expectations and list what a business continuity and succession plan must cover.
- Execute an exam-day playbook: pacing at about 83 seconds a question, mark-and-return strategy, and answering every question.
- State the path after a pass: Form U10 results, registration through a firm, the two-year validity convention, the Exam Validity Extension Program and IAR continuing education.
- Write a personal exam plan with real dates: eligibility, target test date, fee saved, and the lapse deadlines.

> **Warm-up.** Compute your own pace: the Series 65 gives 180 minutes for 130 scored questions. Work out the seconds per question, then time yourself answering three practice questions from earlier lessons at that pace with a kitchen timer. Write one sentence on what the time pressure did to your reading.

WATCH

What is the Series 65 Exam? How to PREP for the Series 65 Exam

Tony Denaro · 7:59

https://www.youtube.com/watch?v=wi2QVnyM1ZA

> **WHEN TO WATCH**
> At the start of the capstone session, before the exam-day playbook; compare his preparation advice with the study habits you have kept all year, and note one thing to add in your final week.

BACKUP VIDEO

What Advice do you have for taking the Series 65 Exam Friday? RTFQ!

Series 7 Guru · 3:32

https://www.youtube.com/watch?v=SQb5qp31tWY

With the exam-day playbook: a veteran tutor's last-minute advice — his RTFQ rule (read the full question) is the same discipline your playbook calls reading the stem twice.

KEY TERMS

Regulation S-P

The SEC's privacy rule: initial and annual privacy notices, the right to opt out of information sharing with nonaffiliated third parties, and safeguards for customer records.

opt-out notice

The disclosure giving a customer a reasonable chance to forbid sharing of his nonpublic personal information with nonaffiliated third parties.

safeguard rule

The Regulation S-P requirement of written policies to protect the security and confidentiality of customer records against anticipated threats.

identity-theft red flags

Warning signs of identity theft — suspicious documents, address discrepancies, unusual account use — that firms' programs must detect and answer under the red-flags convention.

business continuity plan (BCP)

The written plan for operating through disruption: backed-up books and records, alternate communications with clients and regulators, office relocation and reassignment of duties.

succession plan

The arrangement for clients' care if a key person dies or is disabled — the continuity rule's answer to the one-planner firm.

Form U10

The form a person without a sponsoring firm uses to register for the exam; the Series 65 requires no sponsor.

Exam Validity Extension Program (EVEP)

NASAA's program letting a passed exam stay valid up to five years instead of two, for those who enroll and complete continuing education, in participating states.

IAR continuing education

The model-rule convention requiring registered IARs in adopting states to complete 12 CE hours a year: 6 of ethics and professional responsibility, 6 of products and practice.

CORE IDEAS

The story. Picture the morning itself, because you will live it. A candidate — perhaps eighteen, perhaps you — arrives early at the testing center with a government ID. Everything else goes into a locker: phone, notes, even the wristwatch. Check-in is fingerprint-or-palm, photograph, signature; the proctor hands over a dry-erase board and marker, and the workstation provides an on-screen calculator. Then 180 minutes and 140 questions — 130 scored and 10 unscored pretest questions scattered invisibly among them. The candidate has trained for this pace: about **83 seconds a question** on the scored count, which leaves time to mark the brutal ones and return. Three hours later the screen goes blank, asks its survey questions, and then — no waiting weeks, no envelope — the result appears, and a printed score report follows at the exit. For one candidate it says the score met the passing standard of **92 of 130**. The proctor who hands over the paper has seen every kind of face; the good ones, one imagines, look less like winners than like stewards who have been found faithful with the first small thing.

How they figured it out — guarding the client's data. Before the capstone, the last two testable topics. First, privacy. **Regulation S-P** requires a firm to give customers a **privacy notice** when the relationship begins and annually after, explaining what nonpublic personal information is collected and shared; to give an **opt-out** — a reasonable chance to forbid sharing with nonaffiliated third parties — before sharing happens; and, under the **safeguard rule**, to maintain written policies protecting customer records against foreseeable threats, with modern amendments adding breach-response and customer-notification duties as of 2026. Beside it stands the **identity-theft red flags** convention: firms with covered accounts must run a written program to spot the warning signs — forged documents, address discrepancies, a sudden flurry of transfers — and respond. NASAA's cybersecurity model rule says in one sentence what all of it means for an adviser: maintain written physical-security and cybersecurity policies — access controls, encryption of devices, vendor due diligence, employee training and a breach-response plan — reasonably designed for the firm's risks.

Continuity: the firm must outlive the bad day. NASAA's business continuity and succession model rule asks every adviser a blunt question: if your office burns, your server dies, or you die, what happens to the clients? The written **BCP** must provide for backup and recovery of **books and records**; **alternate means of communication** with clients, key personnel, employees, vendors, service providers and **regulators**; **office relocation** if the place of business is lost; **reassignment of duties** when key personnel are unavailable; and ways to minimize disruption and client harm — which for a one-adviser shop means a real **succession plan** naming who steps in. The exam asks what a BCP covers: remember it as the four R's — records backed up, reach (communications), relocation, replacement of people.

The big idea — the playbook. Now the capstone. *The week before:* reread only your right-hand notebook pages and the trap lists — the brochure timings, the discretion contrast, the sharing contrast, the custody checklist, the AML figures, the suitability catalog — and take one full timed practice test; cramming new material in the last week trades away the sharpened instincts you need. *The day:* sleep, eat, arrive thirty minutes early with your ID; expect the locker, the scan, the dry-erase board, the on-screen calculator. *The 180 minutes:* set checkpoints — roughly question 47 at the one-hour mark, question 94 at two hours; answer in order, but when a question fights you for ninety seconds, choose your best elimination answer, **mark it**, and move — the

software lets you return. Never leave a blank: there is **no penalty for guessing**, and an unanswered question is the only guaranteed zero on the page. Read the stem twice before the choices; the exam's wrong answers are true sentences attached to the wrong question. *After:* the result is immediate; a pass needs 92 of 130; a miss means waiting 30 days, then 30, then 180 — and the fee, $187 as of 2026, each time, which is why your plan includes a fee envelope.

After the pass: the license's real life. Passing the Series 65 makes no one an adviser; it makes you *registrable*. Without a sponsor you enroll through **Form U10** — the Series 65 needs no firm behind you — and your passing result then waits, under the convention, **two years**: register as an IAR within that window (through an employing firm, with the state's approval, generally at 18 or older) or the result lapses and the exam must be retaken. NASAA's **Exam Validity Extension Program** can stretch the window to **five years** for those who enroll and keep up continuing education, in participating states — built precisely for people like a student who passes at eighteen and finishes college before registering. Once registered, the IAR continuing-education convention in adopting states requires **12 hours every year: 6 of ethics and professional responsibility and 6 of products and practice**. The jobs the license opens are honest first rungs: client service associate, paraplanner, junior adviser — years spent learning households before being trusted with them.

The final word: the steward's calling. This course began with 1 Corinthians 4:2 and ends with the parable the profession has never improved on. A master, traveling, left his goods with his servants — five talents, two, one, each according to ability — and came back to settle accounts. The faithful servants had put the money to work and could show the increase; the fearful one buried his talent and returned it with excuses, and even his excuse condemned him, for if he truly believed his master so hard a man, he should at least have put the money with the exchangers to earn interest. It is the oldest performance review in Western civilization, and it is the adviser's whole job description: other people's wealth, entrusted for a season, deployed with diligence, accounted for to the penny, and returned with increase — not for the steward's glory but because faithfulness in a few things is the apprenticeship for greater ones. The license you are preparing for is a legal permission; the calling underneath it is this parable. Enter the testing center like a steward going to his accounting, and practice afterward like one who expects, at the end of all portfolios, to hear *well done*.

On the exam today. From this lesson the exam asks mechanics, not poetry. Regulation S-P: initial and annual privacy notices, opt-out before sharing with *nonaffiliated* third parties (affiliates are a different, softer regime — the word *nonaffiliated* is the hinge), safeguards for records. BCP coverage is a list question: books-and-records backup, alternate communications with clients *and regulators*, relocation, succession — an answer choice that omits regulators or succession is the designed near-miss. Cybersecurity answers sound like policy, not products: "adopt and test written cybersecurity policies" beats "buy the best antivirus." On exam logistics, the testable conventions are the ones in your plan: no sponsor needed (U10), 130 scored questions in 180 minutes, retake waits of 30, 30, then 180 days, two-year validity extendable under EVEP, and 12 CE hours (6 ethics, 6 products) yearly in adopting states. And on every remaining question in this course, the oldest advice still grades best: read the question — all of it — before you answer it.

PICTURE STUDY

The Voyage of Life: Youth, Thomas Cole, 1842 · Oil on canvas · National Gallery of Art, Washington, D.C.

Image: Wikimedia Commons, public domain

Thomas Cole, founder of the Hudson River School, painted life as a four-canvas river voyage — childhood, youth, manhood, old age. In this second canvas the youth has taken the tiller himself, eyes fixed on a castle in the air, while his guardian angel remains on the bank and the river, if you follow it, bends away from the castle toward rapids he cannot yet see. It closes this course because you stand exactly here: licensed dreams ahead, the real river winding. Cole's honesty is the right commencement gift — the castle is worth steering for, and the bend is real, and the angel has not left.

Look closely

- Find the castle in the clouds. What is it made of — and what does the painter tell you by building it from sky?
- Trace the river with your finger. Does it run to the castle? Where does it actually go?
- Find the angel on the bank. Why does Cole leave her behind at this stage instead of in the boat?
- Look at the youth's grip on the tiller. Confidence is painted into his whole body — what in this unit tempers confidence without killing it?

Talk about it

1. The youth steers toward a vision; the river bends toward trials. How does a written plan — exam dates, lapse deadlines, a fee saved — honor both truths?
2. A career in advice will include markets like the rapids downstream. Which habits from this course are the tiller that works in rough water?
3. Cole's angel watches without controlling. How is that like — and unlike — the Administrator, the custodian and the surprise auditor you have studied?

PROJECT

The Real-World Exam Plan

The capstone project is not pretend. You will write the actual plan for the day you sit the Series 65 — dates, money, logistics and fallbacks — and file it in your portfolio where your future self can execute it.

You will need

- Your exam notebook and a calendar showing the next three years
- The FINRA exam-day page and NASAA EVEP page from the kit, read with a parent
- An envelope or savings-account line labeled “Series 65 fee”

Steps

1. Write your eligibility line: your 18th birthday, your expected graduation, and the earliest season you could realistically sit the exam.
2. Set a target test date and work backward: final full practice test one week out; trap-list review days; the last new-material date a month before.
3. Compute the money: the fee ($187 as of 2026 — verify when you book) plus a retake reserve; set the amount and a monthly savings line to reach it.
4. Write the lapse math: two years from your target pass date, the EVEP option and its CE duty, and the retake waits (30, 30, 180 days) with the dates they would imply if the first attempt misses.
5. Draft the day-of logistics from the FINRA page: ID required, arrival time, what stays in the locker, the on-screen calculator and dry-erase board.
6. Write the week-before protocol: right-hand pages and trap lists only, one timed practice test, sleep.
7. Have a parent sign the plan as witness, date it, and file it as the final page of your portfolio — in front of the Fiduciary’s Charter you will write for the unit portfolio.

Tips

- Plans with dates get executed; plans with “someday” get remembered fondly. Put a real month on everything.

- If your 18th birthday is far off, the plan is still live: the knowledge keeps, the fee accumulates, and EVEP exists precisely for gaps.

Check your work

- ☐ My plan names real dates: eligibility, target test, lapse deadline, retake fallbacks.
- ☐ The fee line has a number and a monthly savings amount.
- ☐ The day-of logistics match the official FINRA page, not hearsay.
- ☐ A parent has signed and dated it.

EXAM NOTEBOOK

1. Make the privacy page: Reg S-P's three pillars (notices initial/annual, opt-out before sharing with nonaffiliated third parties, safeguard rule) plus one line each for red flags and the NASAA cybersecurity rule.
2. Write the BCP as the four R's — Records, Reach, Relocation, Replacement — with the regulator-communication detail starred.
3. Build the exam-day card, small enough to memorize: 130 scored/180 minutes/92 to pass; ~83 seconds; checkpoints 47 and 94; mark-and-return; answer everything; 30/30/180; 2 years → EVEP 5; CE 12 = 6 + 6.

KEY FORMULAS

$$\frac{180 \times 60}{130} \approx 83 \text{ seconds per scored question}$$

$$\frac{92}{130} \approx 70.8\% \text{ to pass}$$

From history. NASAA — the North American Securities Administrators Association, whose model rules filled this unit — was founded in Kansas in 1919, eight years after Kansas passed the first blue-sky law and fourteen years before the federal securities acts existed. It is the oldest international organization devoted to investor protection, and the Series 65 you will sit is simply its membership examination for the profession it has guarded for a century.

Example 1. Build the pacing plan: 140 questions appear on screen (130 scored + 10 unscored pretest, indistinguishable) in 180 minutes. Compute seconds per on-screen question, and set the one-hour and two-hour checkpoints.

Show solution

1. Per on-screen question: $\frac{180 \times 60}{140} \approx 77$ seconds — budget 77, and the 83-second scored figure becomes your cushion.
2. One-hour checkpoint: $60 \div 1.29 \approx 47$ questions done (one third of 140).
3. Two-hour checkpoint: about 94 questions done (two thirds).
4. Running ahead of checkpoints buys review time for marked questions; running behind means switch to best-elimination-and-mark on anything that fights back.

Answer: About 77 seconds per on-screen question; checkpoints of roughly 47 by hour one and 94 by hour two, with every marked question revisited before time expires — and nothing left blank.

Example 2. Exam style — reason through every choice. Under the NASAA business continuity and succession model rule, a state-registered adviser's BCP must provide for all of the following EXCEPT:

A. Backup and recovery of books and records

B. Alternate means of communicating with clients and regulators

C. A guarantee that client accounts will not lose value during a disruption

D. Plans for office relocation and succession of key personnel

Show solution

1. A — core of the rule: records must survive the bad day. Required; eliminate as the answer.
2. B — the rule names communications with clients, key personnel, employees, vendors and regulators. Required; eliminate.
3. C — no rule anywhere guarantees investment results, and 10.1 taught that guarantees are themselves prohibited. This is the EXCEPT. Keep.
4. D — relocation and succession are the rule's distinctive additions. Required; eliminate.

Answer: C. A BCP promises operations, not outcomes — records, reach, relocation, replacement. Any choice guaranteeing account values is wrong twice over.

Example 3. A firm wants to share customer names, balances and transaction histories with an outside marketing company. Walk through what Regulation S-P requires before it may do so.

Show solution

1. The data is nonpublic personal information and the marketer is a nonaffiliated third party — the regulated case.
2. The customer must have received the privacy notice describing the sharing (initially and annually).
3. The customer must receive a clear opt-out notice and a reasonable opportunity to exercise it before any sharing occurs.
4. Customers who opt out are excluded; and the safeguard rule governs how any shared data is protected. Sharing with service providers doing the firm's own processing rides different, narrower exceptions.

Answer: Privacy notice, opt-out offered and honored before sharing with the nonaffiliated marketer, and safeguards throughout. The word *nonaffiliated* is what triggers the opt-out machinery.

Example 4. A student passes the Series 65 in June after graduating at 18, then starts a four-year college program. Using the two-year convention and the EVEP five-year extension, lay out her options for keeping the pass alive until she registers.

Show solution

1. Default convention: an unregistered pass is valid two years — through June of sophomore year. Registering as an IAR through a firm before then preserves it.
2. If she will not register that soon, she may enroll in NASAA's Exam Validity Extension Program (in participating states) and complete the annual continuing-education requirement.
3. EVEP extends validity up to five years from the pass — past her graduation, meeting her first employer with the exam already banked.
4. Her written plan should name the dates: pass date, two-year lapse date, EVEP enrollment deadline, target registration date — and the fee envelope in case of a retake.

Answer: Register within two years, or enroll in EVEP and keep up the CE to stretch validity to five — exactly the student-shaped door NASAA built. Program details are conventions; verify them at nasaa.org when her real dates approach.

PRACTICE

1. Easy Under Regulation S-P, a customer must be given the chance to opt out before the firm shares his nonpublic personal information with:
   A. The firm's clearing broker processing his trades
   B. A nonaffiliated third-party marketer
   C. Regulators serving a lawful request
   D. The firm's own compliance department

   Show answer

   B. The opt-out machinery governs sharing with nonaffiliated third parties for purposes like marketing. Service providers processing the customer's own business, lawful regulatory requests and internal use ride other provisions — the word nonaffiliated is the trigger.

2. Easy Under the NASAA model rule convention, a business continuity plan must cover which set of areas?

A. Backup of books and records; alternate communications with clients and regulators; office relocation; succession of key personnel

B. Investment performance targets during market disruptions

C. Marketing plans for acquiring clients after a disaster

D. Insurance against portfolio losses

Show answer

A. The plan is about operations — records, reach, relocation, replacement of people — never investment results. B and D promise outcomes no rule requires or permits, and C is business strategy, not continuity.

3. Easy Compute the passing percentage of the Series 65 (92 correct of 130 scored) and the time per scored question in 180 minutes.

Show answer

$92 \div 130 \approx 70.8\%$ to pass; $(180 \times 60) \div 130 \approx 83$ seconds per scored question.

4. Easy A candidate with no securities firm behind her wants to sit the Series 65. Which statement is correct?

A. She cannot test until a broker-dealer sponsors her

B. She enrolls with Form U10 — the Series 65 needs no sponsor — and later registers as an IAR through a firm with the Administrator's approval, generally at 18 or older

C. Passing the exam automatically registers her as an IAR

D. She must first pass the Series 7

Show answer

B. The Series 65 is open without sponsorship via Form U10; registration afterward still requires a firm's filing and state approval. A describes sponsored exams, C confuses passing with registering, and D invents a prerequisite.

5. **Medium** With 40 minutes left, a candidate has 30 on-screen questions remaining and five marked for review. Which strategy follows the playbook?

A. Perfect each remaining question in order, leaving blanks if time runs out

B. Pace at about 70 seconds each, best-elimination-and-mark anything stubborn, return to marked questions, and leave nothing blank

C. Answer only questions she is sure of, since wrong answers are penalized

D. Spend the time rechecking the first fifty answers

Show answer

B. Forty minutes over thirty questions is about 80 seconds each — workable with discipline; there is no guessing penalty, so blanks (A) are the only guaranteed zeros, C relies on a penalty that does not exist, and D abandons unanswered questions.

6. **Medium** A candidate fails the exam on March 1 and again on April 15. Under the 30/30/180 convention, the earliest third attempt and the consequence of failing it are:

A. Mid-May (30 days after April 15); a third failure imposes a 180-day wait

B. June 1; a third failure imposes a 30-day wait

C. October (180 days after April 15); then unlimited monthly retakes

D. Any time; the waits apply only to sponsored candidates

Show answer

A. The first two retakes each wait 30 days, so attempt three opens in mid-May — and a third failure triggers the long 180-day wait, which is why each attempt deserves real preparation. The waits bind all candidates, sponsored or not (D).

7. **Medium** Under the IAR continuing-education convention in adopting states, a registered IAR must complete annually:

A. 12 hours: 6 ethics and professional responsibility, 6 products and practice

B. 20 hours, all ethics

C. 6 hours total, any subject

D. CE only in the year of registration

Show answer

A. The model-rule convention is 12 credits a year — 6 ethics and professional responsibility, 6 products and practice — in the states that have adopted the program. It is annual, not one-time, so D fails.

8. Medium An adviser's "cybersecurity program" consists of buying a well-reviewed antivirus product. Under the NASAA cybersecurity model rule convention, what is missing?

Show answer

Nearly everything: written policies and procedures tailored to the firm's risks — access controls, device encryption, vendor due diligence, employee training and a breach-response plan — maintained and tested. The rule demands governance, not a product.

9. Hard A sole practitioner's BCP names his spouse (not in the industry) to "wind things down" if he dies, with records on his office computer only. Name the two failures under the continuity convention and the likely client harm.

Show answer

No qualified succession — clients need a registered professional or an orderly transfer arrangement, not an unlicensed spouse; and no backup of books and records away from the single office machine. Clients could face frozen accounts, lost records and no one authorized to act — precisely the harm the rule exists to prevent.

10. Hard A firm receives an emailed change-of-address request, then days later an emailed request to wire the account's full balance to a new bank, both oddly phrased. The firm's proper response under the identity-theft red-flags convention is to:

A. Process both requests promptly to avoid client complaints

B. Recognize the classic red-flag pattern and verify the client's identity out-of-band before acting

C. File a CTR

D. Freeze the account permanently without contacting anyone

Show answer

B. An address change followed quickly by a transfer request is a textbook identity-theft red flag; the program requires detection and a response such as out-of-band verification. Blind processing (A) is the harm the rule prevents, a CTR (C) concerns cash, and a silent permanent freeze (D) answers nothing.

11. Hard A student passes at 18, enrolls in EVEP, completes the CE each year, and registers through a firm four years later. A rival says her exam lapsed at two years. Who is right, and what single caution belongs in her plan?

Show answer

She is, in participating states: EVEP extends validity up to five years for enrollees who maintain the CE. The caution: EVEP and its deadlines are program conventions that vary by state adoption — verify at nasaa.org before relying on the extension.

12. Challenge Write your own three-sentence answer to the course's final question: why is the parable of the talents the adviser's job description? Include one phrase from the custody unit and one from the ethics catalog.

Show answer

Example: The adviser holds other people's wealth for a season and will give an accounting — the parable's settling of accounts is the surprise examination writ eternal. Faithfulness means deploying the trust diligently, never burying it in excuses or spending it on himself through churning or hidden fees. The reward for being found faithful is not escape from the reckoning but a greater trust — and the words every steward works for: well done.

COMMON MISTAKES

- Confusing the opt-out trigger — it governs sharing with nonaffiliated third parties; internal use, service providers and lawful regulatory requests are different regimes.
- Letting a BCP answer-choice omit regulators or succession — the rule names communications with regulators and replacement of key personnel explicitly.
- Leaving exam questions blank — there is no guessing penalty, so a blank is the only guaranteed zero.
- Treating the two-year validity and EVEP five-year extension as universal law — they are conventions and program rules that vary by state adoption; verify before relying.
- Spending the last week learning new material instead of rehearsing trap lists and one timed test — fresh facts crowd out trained instincts.

Make it a game · The 83-Second Gauntlet. Pull ten multiple-choice problems from anywhere in this unit (a sibling or parent chooses, you don't peek). Set a timer for 14 minutes — ten questions at exam pace with a cushion — and run them under test rules: no notes, answer everything, mark and return allowed. Nine or ten right at pace is a pass with room to spare; seven or eight means drill the trap lists; below that, reread the lesson the misses came from. Then swap: you proctor the parent, grade them mercilessly, and explain every miss — the proctor who can explain the answer owns it.

Scripture. "His lord said unto him, Well done, thou good and faithful servant: thou hast been faithful over a few things, I will make thee ruler over many things: enter thou into the joy of thy lord." (Matthew 25:21, KJV)

The parable of the talents ends not with the audit but with a promotion and a welcome. Faithfulness over a few things — one exam, one notebook, one client someday — is the whole path; the joy at the end belongs to stewards, not owners, which is the best news in the whole curriculum.

UNIT 10

Ethics and the Capstone

This is the unit the whole course has been climbing toward. The law you have learned says what an adviser *may* do; ethics says what a fiduciary *must* do, and NASAA has written it down in model rules that the exam tests line by line. You will learn how an adviser must speak — disclosures, advertising and written contracts, with the 1920s tipster sheets and the Supreme Court's *Capital Gains* case showing why; how an adviser must charge — fees, performance fees, soft dollars and the strange economics born on May Day 1975; and how an adviser must guard what is not his — custody, discretion and anti-money-laundering rules, taught gravely through the fall of Bernard Madoff, the man who was his own custodian.

Then comes the catalog of prohibited practices — churning, front running, selling away and the insider trading born in a Canadian drill core in 1963 — and finally the capstone itself: cybersecurity, business continuity, and a complete exam-day playbook for the morning you sit the real Series 65. You will write your own **Fiduciary's Charter**, a one-page code of practice signed and dated, and a real-world plan for the test. The steward's question from 1 Corinthians 4:2 has stood behind every unit: it is required in stewards, that a man be found faithful. This unit is where you answer it.

PREREQUISITES

- Can explain the registration framework of the Uniform Securities Act: who the Administrator is, and who counts as an investment adviser, IAR, broker-dealer and agent
- Can state the fiduciary duty of an investment adviser and contrast it with a broker-dealer's suitability obligation
- Can work with percents and simple proration (find 1% of an amount, split a yearly fee into quarters)
- Can read a scenario question slowly and sort who the parties are before answering

MASTERY CHECKLIST

- ☐ I can list the disclosures an adviser owes a client — conflicts, fees, third-party compensation, disciplinary history — and state the brochure rule's delivery conventions.
- ☐ I can apply the advertising rules: registration stated as fact but never as approval, no guarantees, performance shown fairly, and testimonials handled under both the classic ban and the modern disclosure rule.
- ☐ I can name what a written advisory contract must contain and when client consent is required for assignment.
- ☐ I can explain how advisers are paid, when a performance-based fee is allowed, and sort soft-dollar items into and out of the Section 28(e) safe harbor.
- ☐ I can define custody, list the model-rule safeguards (notice, qualified custodian, statements, surprise exam), and tell custody apart from discretion.
- ☐ I can identify churning, front running, insider trading, selling away, commingling and market manipulation in scenario questions, and state the penalties for insider trading.
- ☐ I can say what Regulation S-P requires and what a business

continuity plan must cover.

- ☐ I can lay out my own exam-day plan: pacing at about 83 seconds a question, the retake waits, the two-year validity convention and the path to registration.

OPTIONAL BOOKS AND RESOURCES FOR THIS UNIT

- **NASAA Model Rules (official index)**: Free. The actual model rules this unit teaches — unethical business practices of advisers, dishonest practices of broker-dealers, custody, and more. Skim the adviser conduct rule with Lessons 10.1–10.4; it reads like a trap list. Ages 15 and up.
- **Investor.gov: Ponzi Schemes**: Free, from the SEC. A plain-language page on how Ponzi schemes work and their red flags — steady returns, unregistered investments, secretive strategies. Read it after the Madoff story in Lesson 10.3. Ages 13 and up.
- **Investor.gov: How to Avoid Fraud**: Free, from the SEC. The investor-side view of the prohibited practices in Lesson 10.4 — what the salesman of a fraud sounds like and the questions that unmask him. Ages 13 and up.
- **FINRA: On the Day of Your Exam**: Free. The official page on test-center check-in: identification, what you may and may not bring, and testing rules. Read it with the capstone in Lesson 10.5 and again the week before your real exam. Ages 15 and up.
- **NASAA: Exam Validity Extension Program**: Free. NASAA's official page on how long a passed exam stays valid and how continuing education can extend it — the facts behind your exam plan in Lesson 10.5. Ages 15 and up.

Not required. Every project in this unit works without them. School Launch has no ties to these authors, publishers or companies.

LESSONS IN THIS UNIT

10.1 Speaking the Truth: Disclosures, Advertising and Client Contracts

3 sessions of 50 minutes

10.2 Honest Compensation: Fees, Commissions and Soft Dollars

3 sessions of 50 minutes

10.3 Guarding Client Property: Custody, Discretion and Madoff's Warning

3 sessions of 50 minutes

10.4 Prohibited Practices: Churning, Front Running and Insider Trading

3 sessions of 50 minutes

10.5 The Capstone: Cybersecurity, Continuity and Exam Day 3 sessions of 50 minutes

Unit 10 test

Closed book, closed notes. Set a timer for 28 minutes — about 83 seconds a question, the real exam's pace. Answer every question; there is no penalty for guessing, and a blank is the only guaranteed zero. Where a question says "in this example" or "under the convention," use the figures given in this unit, not whatever current law may say the year you read this. Each question is worth 5 points; the test is worth 100.

1. **5 pts**

   An adviser's brochure states: "Registered with the Administrator — your assurance that our methods have been examined and approved by the state." Which portion violates the Uniform Securities Act?

   A. Claiming registration, which may never be publicized

   B. The implication that registration constitutes the Administrator's approval

   C. Nothing — the statement is factual

   D. Using the word Administrator without naming the state

2. **5 pts**

   Under the brochure rule convention, a new client who receives the brochure at the moment of signing must be allowed to:

   A. Terminate within 5 business days without penalty

   B. Terminate within 48 hours with a pro-rata fee

   C. Renegotiate the fee within 10 business days

   D. Nothing further — delivery at signing is sufficient by itself

3. 5 pts

An IAR may post which of the following on a public social-media page without violating the advertising rules?

A. “Clients: tell your friends how I doubled your money!”

B. “We guarantee your principal is safe with us”

C. “Our firm is registered as an investment adviser in this state”

D. A chart of the model portfolio’s best year, gross of fees

4. 5 pts

An advisory firm organized as a partnership loses a partner holding a 10% interest to retirement. The firm must:

A. Obtain every client’s written consent to continue

B. Notify its clients of the change within a reasonable time

C. File a new Form U10

D. Treat all contracts as assigned and void

5. 5 pts

A client prepays $3,600 for a year of advice; the written contract promises pro-rata refunds. She terminates after 5 months. The refund owed is:

A. $1,500

B. $2,100

C. $3,600

D. Nothing — prepaid fees are earned on receipt

6. 5 pts

An adviser may charge a performance-based fee to which client, using this example’s thresholds ($1.1 million AUM with the adviser or $2.2 million net worth excluding the home)?

A. A teacher with $300,000 invested who signs a waiver

B. A business owner with $2.5 million net worth excluding her home

C. Any client whose fee is disclosed in the brochure

D. No client, under any circumstances

7. 5 pts

Which soft-dollar item falls OUTSIDE the Section 28(e) safe harbor?

A. Third-party equity research reports

B. A market-data terminal used to manage client portfolios

C. Portfolio-analytics software

D. The adviser's office rent

8. 5 pts

In an agency cross transaction, the adviser may do all of the following EXCEPT:

A. Obtain the client's blanket written consent after full disclosure

B. Send written confirmation of each cross and an annual summary

C. Recommend the transaction to both the advisory client and the other party

D. Receive compensation from both sides with disclosure

9. 5 pts

An adviser charges a fully disclosed advisory fee roughly triple the local market rate for identical services in this example. A client signs anyway. Under the NASAA model rule the fee is:

A. Permitted — disclosure cures all

B. Permitted — fees are freely negotiable

C. An unethical practice, because advisory fees must be reasonable regardless of disclosure

D. Permitted if billed quarterly

10. 5 pts

Under the model-rule convention, which arrangement does NOT give an adviser custody?

A. Deducting advisory fees from client accounts

B. Holding a general power of attorney

C. Receiving a client's misdelivered stock certificates and returning them within 3 business days

D. Serving as trustee over a client's trust

11. 5 pts

An adviser with custody must, under the model-rule conventions, do all of the following EXCEPT:

A. Keep client assets with a qualified custodian

B. See that clients receive account statements at least quarterly

C. Undergo an annual surprise examination by an independent accountant

D. Obtain the Administrator's prior written approval of each withdrawal

12. 5 pts

On June 1 a client orally grants her IAR full discretion, and the first discretionary trade occurs that day. On June 3 a broker-dealer customer orally grants his agent the same authority. Which statement is correct under the conventions?

A. Both needed written authority before any trade

B. The IAR must obtain written authority within 10 business days of the June 1 trade; the agent may not trade until written authority is in hand

C. The agent may trade for 10 business days; the IAR needed writing first

D. Oral authority suffices indefinitely for both

13. 5 pts

A customer deposits $9,500 in cash three days running, explaining he wants "no government forms." The firm should:

A. File a CTR for each deposit

B. File a Suspicious Activity Report and not inform the customer

C. Inform the customer a SAR is being considered, as a courtesy

D. Do nothing, since each deposit is under $10,000

14. 5 pts

The mechanism that let Madoff's fraud run for decades was:

A. Excessive trading in client accounts

B. Self-custody at his own broker-dealer with self-generated client statements and no independent verification

C. Performance fees charged to non-qualified clients

D. Failure to deliver brochures

15. **5 pts**

A broker-dealer agent and his retired neighbor, a client, agree in writing — signed by both and by the agent's firm — to share profits and losses in the client's account in proportion to the agent's contribution. An IAR proposes the identical arrangement with her advisory client, with her firm's written blessing. Under the conventions:

A. Both arrangements are permitted

B. Neither is permitted

C. The agent's arrangement is permitted; the IAR's is prohibited because advisers may never share in client accounts

D. The IAR's is permitted; the agent's is prohibited

16. **5 pts**

A mining-company geologist tells his barber about an unannounced strike; the barber buys the stock and gains $12,000. Under the insider-trading conventions:

A. Only the geologist is liable, as the insider

B. Only the barber is liable, as the trader

C. Both are liable — tipper and tippee — with civil penalties up to $3 \times \$12{,}000 = \$36{,}000$ plus disgorgement

D. Neither, because a barber owes the company no duty

17. **5 pts**

An agent arranges for several customers to buy a private placement through him, off his firm's books, without its knowledge. The investments perform well. This is:

A. Permitted, because no one was harmed

B. Selling away — private securities transactions without the firm's knowledge and consent

C. Churning

D. An agency cross transaction

18. 5 pts

Two accounts secretly controlled by one promoter trade a thin stock back and forth at steadily higher prices while he urges strangers online to “catch the momentum,” then he sells his position. Name the practices:

A. Wash/matched trading creating phantom activity, feeding a pump and dump

B. Front running and churning

C. Commingling and structuring

D. Directed brokerage and soft dollars

19. 5 pts

Under Regulation S-P, before sharing a customer’s nonpublic personal information with a nonaffiliated marketing firm, an adviser must have given:

A. A privacy notice and a reasonable opportunity to opt out

B. Nothing, if the data is encrypted

C. Notice to the Administrator

D. The customer a share of the marketing revenue

20. 5 pts

A candidate passes the Series 65 at 18 but will not join a firm until after college, four years later. Under the conventions, her best move is:

A. Nothing — a passed exam never expires

B. Enroll in NASAA’s Exam Validity Extension Program and complete its annual CE, extending validity up to five years in participating states

C. Retake the exam every year to stay fresh

D. Register immediately as her own IAR without a firm, at 18, with no state approval needed

ANSWER KEY

1. B. The fact of registration may be stated; implying that registration means approval or examination of merit may never be. A reverses the rule, and D invents one.
2. A. Delivery at signing works only when paired with the 5-business-day penalty-free termination right; otherwise the brochure must come at least 48 hours before. The figures are model-rule conventions the exam expects exactly.
3. C. The bare fact of registration is lawful. A solicits testimonials that would need full compensation/status disclosures, B is a prohibited guarantee, and D shows cherry-picked gross performance without net.
4. B. A change in partnership membership requires notification within a reasonable time; consent is required only for an assignment, such as a sale of the firm. The exam tests this contrast constantly.
5. B. Monthly rate $\$3{,}600 \div 12 = \$300$; unused months 7; refund $7 \times \$300 = \$2{,}100$. Choice A refunds the used months — the designed near-miss.
6. B. She is a qualified client by net worth. Waivers (A) and disclosure (C) cannot substitute for the thresholds, and D ignores the exception the rule was built around.
7. D. The safe harbor shelters research and brokerage services that benefit clients' advice; rent benefits only the adviser, and paying it with clients' commission dollars breaches fiduciary duty.
8. C. Recommending both sides of the same cross is the unwaivable prohibition; the consent, confirmations, summary and disclosed compensation are the lawful apparatus.
9. C. Charging an unreasonable fee is itself unethical; disclosure and consent do not launder it. The exam plants "but it was disclosed" as the comfortable wrong answer.
10. C. Prompt return within the three-business-day convention avoids custody; fee deduction, general POAs and trusteeship all create it.
11. D. No per-withdrawal approval exists; the safeguards are notification to the Administrator, qualified custodian, notice to clients, quarterly statements and the annual surprise exam.
12. B. Advisers get the ten-business-day window after the first oral-discretion trade; agents need written authority before exercising any discretion. C is the reversal the exam loves.

13. B. The pattern is structuring — a crime even with clean money — and suspicious activity over the $5,000 convention calls for a confidential SAR. Tipping the customer (C) is itself a violation; D ignores structuring.
14. B. With no independent qualified custodian or surprise verification, clients saw only the fiction he printed. The custody safeguards exist precisely to make two independent records of every account.
15. C. Agents may share with written consent of client and firm, proportionately under the convention; advisers and IARs may never share in profits or losses — their only results-linked pay is the qualified-client performance fee.
16. C. The tipper breaches by passing material nonpublic information; the tippee inherits the breach by trading on it. The treble-penalty convention runs to three times the profit gained or loss avoided — Texas Gulf Sulphur's disclose-or-abstain rule in modern dress.
17. B. Outside business in securities without the firm's knowledge and consent is selling away regardless of outcome; the firm cannot supervise what it cannot see.
18. A. Trades with no true change of ownership paint false volume and price (wash trades/matched orders), and selling into the hype completes the pump and dump. The other pairs name real practices that do not fit these facts.
19. A. The privacy notice (initial and annual) plus an opt-out opportunity before sharing with nonaffiliated third parties is the core of Reg S-P; encryption is a safeguard, not a substitute for the opt-out.
20. B. The default validity convention is two years unregistered; EVEP with its CE can stretch it to five in adopting states. A pass does expire (A), serial retakes (C) waste fees, and registration requires a firm's filing and the Administrator's approval (D).

PORTFOLIO PIECE: MY FIDUCIARY'S CHARTER

Assemble the capstone of the whole course. The centerpiece is your **Fiduciary's Charter**: a one-page personal code of practice, written in your own words in the first person, with a numbered article for each duty — full disclosure (conflicts, fees, compensation from anyone but the client), honest advertising, custody and the safeguards you will welcome rather than endure, reasonable and transparent fees, suitability before every recommendation, and the confidentiality of every client's affairs — signed and dated before a parent as witness. Behind it file the unit's working documents: your prohibited-practices trap list from 10.4, your custody-rules flowchart with the Madoff post-mortem from 10.3, and your real-world exam plan from 10.5 with its dates (when you turn 18, your target test date, the two-year lapse date and EVEP option) and the fee envelope's savings line. Close the folder with three sentences on the steward found faithful — what you intend the parable of the talents to mean in your working life.

LOOK FOR	WHAT IT MEANS
The Charter	One page, first person, signed, dated and witnessed; every article states a duty precisely enough that a violation of it could be named (disclosure, advertising, custody, fees, suitability, confidentiality).
Accuracy	The trap list and flowchart state the exam conventions correctly: the discretion and sharing contrasts, the custody triggers and five safeguards, the AML figures, the brochure timings.
The exam plan	Real dates and real money: eligibility, target test date, retake waits, lapse math with the EVEP option, and a named savings amount for the $187 fee (as of 2026).
Craft	Documents are legible, organized and dated; the flowchart can be redrawn from memory; the trap list is drilled to five-second recall.
Reflection	The closing paragraph ties the parable of the talents honestly to the student's own intentions — stewardship stated as practice, not sentiment.

COURSE EXAM

Midterm Exam

Covers Units 1–5. Time: 120 minutes.

Closed book, one sitting, with a parent or proctor present. Every question has four choices and one best answer. There is no penalty for guessing, so answer every question — a blank is a guaranteed zero. Budget about 2 minutes per question. A calculator is allowed; the real exam provides one on screen. Dollar figures, rates and limits described as examples ("in this example") are illustrations, not current law — check nasaa.org and irs.gov for today's numbers. Your score is the number correct out of 60; 70% (42 correct) is roughly the real Series 65's passing bar.

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1. **1 pt** **Lesson 1.1**

   Under both federal law and the Uniform Securities Act, a person is an investment adviser only when three elements are all present. Which of the following is NOT one of the three?

   A. Giving advice about securities

   B. Being in the business of giving that advice

   C. Receiving compensation for the advice

   D. Holding discretionary authority over client accounts

2. **1 pt** **Lesson 1.1**

   Marta is an investment adviser representative; Daniel is a broker-dealer agent. Each recommends a mutual fund to a retail customer. Which statement best describes the standards that govern them?

   A. Both owe the client a fiduciary duty at all times

   B. Marta owes a fiduciary duty; Daniel's traditional standard is suitability (best interest when recommending to retail customers today)

   C. Both are held only to suitability

   D. Marta is held to suitability; Daniel is the fiduciary

3. 1 pt **Lesson 1.1**

An adviser's newsletter sincerely praises a stock the adviser believes in. Before publishing, the adviser quietly buys shares, planning to sell into the price rise the recommendation will cause, and never tells readers. Under SEC v. Capital Gains Research Bureau (1963), this practice — scalping — is:

A. Lawful, because the recommendation itself was honest

B. Fraud only if the readers lose money

C. Fraud, because concealing the plan deceives clients regardless of the advice's quality

D. Lawful if the adviser waits until all clients have bought

4. 1 pt **Lesson 1.2**

A client buys 300 shares of a NYSE-listed manufacturer through her broker. Who receives the money she pays?

A. The manufacturer, which uses it to fund operations

B. The investor who sold the shares

C. The exchange, which forwards it to the issuer

D. The Securities and Exchange Commission

5. 1 pt **Lesson 1.2**

An investor buys $20,000 of stock in a margin account, depositing $10,000 and borrowing the rest. The stock falls 20%. What is the loss on the investor's own money?

A. 20%

B. 30%

C. 40%

D. 50%

6. 1 pt **Lesson 1.3**

Which statement about the two great federal securities acts is TRUE?

A. The Securities Act of 1933 created the SEC

B. The prospectus requirement for new issues comes from the 1934 Act

C. The Securities Exchange Act of 1934 created the SEC and governs the secondary market

D. Exempt securities are exempt from the antifraud provisions

7. 1 pt **Lesson 1.3**

A salesman knowingly misstates material facts while selling a city's general obligation bonds, then argues he cannot be charged because municipal bonds are exempt securities. He is:

A. Correct — exempt securities are outside the securities laws

B. Wrong — exemption excuses registration only; the antifraud provisions reach every security

C. Correct, as long as the bonds pay as promised

D. Wrong only if the bonds were unrated

8. 1 pt **Lesson 1.3**

Deception occurs in connection with the purchase of shares of a small private company that has never registered any security. Which provision reaches this conduct?

A. None — Rule 10b-5 applies only to listed stocks

B. SEC Rule 10b-5 under the 1934 Act, which covers any security and any person

C. Only the prospectus rules of the 1933 Act

D. Only state blue-sky laws, if the Administrator chooses to act

9. 1 pt **Lesson 1.4**

The Uniform Securities Act of 1956 is best described as:

A. A federal statute enforced by the SEC

B. A model law that states adopt, enforced in each state by its Administrator

C. A registration system run by NASAA

D. The law that created federal covered advisers

10. 1 pt **Lesson 1.4**

Sierra Capital is an investment adviser registered with the SEC under NSMIA. A state in which it has many clients may require Sierra to:

A. Register with the state as well

B. Make a notice filing and pay a fee, and it may always prosecute fraud by the firm

C. Nothing — the state has no authority of any kind over a federal covered adviser

D. Pass a state-administered qualification exam for the firm itself

11. (1 pt) **Lesson 1.5**

Which statement about the real Series 65 exam is TRUE as of 2026?

A. Passing requires 70% of whatever number of questions you attempt

B. Passing is 92 correct out of 130 scored questions, with 10 unscored pretest questions mixed in

C. The 10 pretest questions are marked so candidates can skip them

D. A passing score permanently qualifies the candidate

12. (1 pt) **Lesson 1.5**

Jonah passes the Series 65 without a sponsoring firm. Before he may solicit advisory clients in his state, he must:

A. Do nothing more — the passing score is his license

B. Wait 30 days for the score to become effective

C. Be registered as an investment adviser representative by the state Administrator

D. File Form U10 a second time

13. (1 pt) **Lesson 2.1**

Which of the following correctly orders the phases of the business cycle, and classifies the parts?

A. Expansion, peak, contraction, trough — peaks and troughs are turning points, not periods

B. Peak, expansion, trough, contraction — all four are periods

C. Expansion, trough, contraction, peak — all four are turning points

D. Contraction, peak, expansion, trough — peaks are periods, troughs are points

14. (1 pt) **Lesson 2.1**

The classic exam definition of a recession is:

A. Any quarter in which the stock market falls 20%

B. Two or more consecutive quarters of declining real GDP

C. Two or more consecutive quarters of declining nominal GDP

D. A year in which unemployment rises

15. (1 pt) **Lesson 2.1**

An adviser expects a recession within the year. Which client holding would likely be LEAST affected?

A. A luxury automobile manufacturer

B. A homebuilder

C. An electric utility

D. A defense contractor, since “defensive” stocks resist recessions

16. (1 pt) **Lesson 2.2**

Which of the following is a LEADING economic indicator?

A. Building permits for new homes

B. The average duration of unemployment

C. The Consumer Price Index

D. The prime rate

17. (1 pt) **Lesson 2.2**

The CPI rises from 240.0 to 249.6 over a year. In this example, the inflation rate is:

A. 9.6%

B. 4.0%

C. 3.85%

D. 2.4%

18. (1 pt) **Lesson 2.2**

Inflation runs 6% one year, 3% the next, and 1.5% the year after. Over these years, consumer prices were:

A. Falling — this is deflation

B. Rising more slowly each year — this is disinflation

C. Flat, since the rates declined

D. Rising faster each year — this is hyperinflation

19. (1 pt) **Lesson 2.3**

The FOMC directs the purchase of U.S. government securities in the open market. The expected results are:

A. Interest rates rise, bond prices rise, the money supply grows

B. Interest rates fall, bond prices fall, the money supply shrinks

C. Interest rates fall, bond prices rise, the money supply grows

D. Interest rates rise, bond prices fall, the money supply grows

20. (1 pt) **Lesson 2.3**

Which correctly matches the interest rate to its description?

A. Discount rate — the rate banks charge their best corporate customers

B. Federal funds rate — the rate the Fed charges member banks that borrow from it

C. Prime rate — the rate banks charge one another for overnight loans

D. Federal funds rate — the market rate banks charge one another overnight, which the FOMC targets

21. (1 pt) **Lesson 2.4**

Fiscal policy — deliberately changing taxes and government spending to influence the economy — is set by:

A. The Federal Reserve's Board of Governors

B. Congress and the President

C. The FOMC

D. The Treasury acting alone

22. (1 pt) **Lesson 2.4**

A client holds the ADR of a Japanese company. Tokyo trading leaves the stock's yen price unchanged, but the yen weakens sharply against the dollar. The ADR's price will most likely:

A. Be unchanged, because ADRs are dollar-denominated and eliminate currency risk

B. Fall, because the exchange rate is embedded in the ADR's dollar price

C. Rise, because a weak yen helps the ADR holder

D. Be frozen until the exchange rate recovers

23. 1 pt **Lesson 2.5**

A portfolio returned 7% in a year when inflation was 3%. The approximate real return was:

A. 7%

B. 10%

C. 4%

D. 2.33%

24. 1 pt **Lesson 2.5**

Three-month Treasury yields stand well above 10-year Treasury yields. This describes:

A. A normal yield curve, typical of early expansion

B. An inverted yield curve, which has historically preceded recessions

C. A flat curve, signaling stable growth

D. Widening credit spreads

25. 1 pt **Lesson 3.1**

Which financial statement is a snapshot of a single date rather than a record of a period?

A. The income statement

B. The cash flow statement

C. The balance sheet

D. All three cover a period

26. 1 pt **Lesson 3.1**

A public company agrees to be acquired. Within four business days it must report the event to the SEC on:

A. Form 10-K

B. Form 10-Q

C. Form 8-K

D. Its proxy statement

27. (1 pt) **Lesson 3.1**

A company books revenue in December when it ships and bills an order, though the customer's check arrives in February. This is:

A. Cash-basis accounting

B. Accrual accounting, required of public companies

C. A violation of SEC reporting rules

D. Deferred accounting

28. (1 pt) **Lesson 3.2**

A company shows current assets of $400,000, including $150,000 of inventory, and current liabilities of $200,000. Its quick ratio is:

A. 2.00

B. 1.25

C. 0.75

D. 2.75

29. (1 pt) **Lesson 3.2**

Net income is $2,000,000, preferred dividends are $200,000, and 600,000 common shares are outstanding. The stock trades at $45. The P/E ratio is:

A. 13.5

B. 15

C. 16.9

D. 0.067

30. (1 pt) **Lesson 3.2**

Four companies report (current ratio, quick ratio): W (2.1, 1.9); X (2.0, 0.6); Y (1.5, 1.4); Z (1.2, 1.1). Which depends most on selling its inventory to pay its bills?

A. W

B. X

C. Y

D. Z

31. 1 pt **Lesson 3.3**

Using the rule of 72, money earning 8% a year doubles in approximately:

A. 6 years

B. 8 years

C. 9 years

D. 12.5 years

32. 1 pt **Lesson 3.3**

The internal rate of return of an investment is best defined as:

A. The rate that makes its net present value equal zero

B. The rate that makes its profit equal zero

C. The average of its yearly returns

D. The discount rate the Federal Reserve sets

33. 1 pt **Lesson 3.4**

Yearly returns for a fund were 9%, 2%, 7%, 4% and 38%. Which statement is TRUE?

A. The median is 9%

B. The median is 7%, and the 38% outlier pulls the mean well above it

C. The mean and median are equal

D. The median is 38%, the middle of the list as given

34. 1 pt **Lesson 3.4**

A client asks which of two funds is riskier OVERALL, and separately which moves most with the market. The adviser should compare, respectively:

A. Beta, then standard deviation

B. Standard deviation, then beta

C. Alpha, then correlation

D. Standard deviation for both questions

35. 1 pt **Lesson 3.5**

Even an investor holding 200 stocks across every industry remains exposed to:

A. Business risk

B. Regulatory risk in a single industry

C. Market and interest-rate risk

D. The risk of one issuer’s bankruptcy

36. 1 pt Lesson 3.5

A corporation is liquidated. Which claimant is paid FIRST, and where do subordinated debenture holders stand?

A. Common stockholders first; subordinated debentures last

B. Secured creditors first; subordinated debentures behind other debt but ahead of preferred stock

C. Preferred stockholders first; subordinated debentures just behind them

D. Debenture holders first; subordinated debentures ahead of secured creditors

37. 1 pt Lesson 4.1

Which statement about commercial paper is TRUE?

A. It is secured by the issuer's equipment and matures in up to five years

B. It is an unsecured corporate note, issued at a discount, with a maximum maturity of 270 days so it is exempt from 1933 Act registration

C. It is guaranteed by a bank and used to finance imports

D. It is FDIC-insured up to the legal limit

38. 1 pt Lesson 4.1

A client moves $40,000 from a bank CD into a money market mutual fund and says, "Good — still insured, and the $1.00 price is guaranteed." The adviser should explain that the fund is:

A. FDIC-insured like the CD

B. Guaranteed by the fund sponsor

C. A security — conservative, but neither FDIC-insured nor guaranteed to stay at $1.00

D. Backed by the full faith and credit of the United States

39. 1 pt Lesson 4.2

Which mortgage-market security is backed by the full faith and credit of the United States?

A. FNMA (Fannie Mae) securities

B. FHLMC (Freddie Mac) securities

C. GNMA (Ginnie Mae) pass-throughs

D. All agency securities carry the federal guarantee

40. (1 pt) **Lesson 4.2**

Market interest rates fall sharply. The holder of a GNMA mortgage pass-through should chiefly worry about:

A. Default by the U.S. government

B. Prepayment — homeowners refinance, returning principal early just when it must be reinvested at lower rates

C. The monthly checks ceasing entirely

D. Prepayment risk, which arises mainly when rates rise

41. (1 pt) **Lesson 4.2**

Which two securities force the holder to report taxable income in years when no cash is received, making them best suited to tax-advantaged accounts?

A. Treasury bills and savings bonds

B. STRIPS and TIPS

C. GNMA pass-throughs and Treasury notes

D. Municipal bonds and preferred stock

42. (1 pt) **Lesson 4.3**

A client in a 28% tax bracket (in this example) is offered a municipal bond yielding 3.6%. The taxable-equivalent yield is:

A. 4.61%

B. 5.00%

C. 2.59%

D. 12.86%

43. (1 pt) **Lesson 4.3**

A county issues bonds to build a toll bridge, repayable solely from bridge tolls. If tolls fall short, bondholders:

A. Are paid from county property taxes

B. Have no recourse to the county's taxing power — these are revenue bonds

C. May force a voter referendum to raise taxes

D. Are protected because all municipal bonds are backed by taxes

44. (1 pt) **Lesson 4.3**

An IAR recommends that a client buy municipal bonds inside her traditional IRA. The recommendation is:

A. Sound — tax-free income is always welcome

B. Unsuitable — the IRA already shelters income, so the client trades yield away for an exemption worth nothing there

C. Required for conservative clients

D. Sound only if the client is in the top bracket

45. (1 pt) **Lesson 4.4**

Rondel Corp. issued 8% bonds, callable at par after five years. Market rates have since dropped to 5%. Rondel will most likely:

A. Call the bonds, leaving holders to reinvest at lower rates

B. Call the bonds only if rates rise again

C. Let the bonds run — issuers call when rates rise

D. Raise the coupon to match the market

46. (1 pt) **Lesson 4.4**

The lowest rating that is still investment grade is:

A. Ba3 / BB−

B. Baa3 / BBB−

C. A3 / A−

D. B1 / B+

47. (1 pt) **Lesson 4.5**

A bond with a 6% coupon trades at 80 (that is, $800). Its current yield is:

A. 6.0%

B. 7.5%

C. 4.8%

D. 8.0%

48. (1 pt) **Lesson 4.5**

A callable bond trades at a premium. Which lists its yields from highest to lowest?

A. YTC, YTM, current, nominal

B. Nominal, current, YTM, YTC

C. Current, nominal, YTC, YTM

D. YTM, YTC, nominal, current

49. (1 pt) **Lesson 5.1**

Carmen owns 200 shares. Four board seats are up for election under cumulative voting. She may cast:

A. 200 votes per seat, and no more than 200 for any one candidate

B. 800 votes in total, concentrated on a single candidate if she chooses

C. 800 votes per candidate

D. 200 votes in total, split evenly

50. (1 pt) **Lesson 5.1**

Which correctly contrasts subscription rights with warrants?

A. Rights are long-term; warrants expire within weeks

B. Rights are short-term and priced below the current market; warrants are long-term and priced above the market when issued

C. Both are priced above the market at issuance

D. Warrants are given only to existing shareholders to prevent dilution

51. (1 pt) **Lesson 5.1**

Common shareholders are entitled to vote on:

A. Whether the quarterly dividend is paid

B. The election of directors

C. The setting of the ex-dividend date

D. Daily management decisions

52. 1 pt **Lesson 5.2**

A company's 6% cumulative preferred ($100 par) has paid nothing for two full years. Before any common dividend may be paid this year, each preferred share must receive:

A. $6

B. $12

C. $18

D. Nothing — skipped preferred dividends are simply lost

53. 1 pt **Lesson 5.2**

A retiree holds a large position in straight (nonconvertible) preferred stock. Her portfolio is MOST exposed to:

A. Interest-rate risk — the fixed dividend and lack of maturity make preferred behave like a long-term bond

B. Prepayment risk

C. Business-cycle risk, since preferred dividends rise with earnings

D. Currency risk

54. 1 pt **Lesson 5.2**

A convertible preferred ($100 par) is convertible at $25. The common trades at $27. Parity for the preferred is:

A. $100

B. $108

C. $92.59

D. $675

55. 1 pt **Lesson 5.3**

The CFO of a NYSE-listed company buys 1,000 of its shares on the open market. Under Rule 144, when she sells she faces:

A. A six-month holding period but no volume limits

B. Volume limits but no holding period — this is control stock

C. Both a holding period and volume limits

D. No Rule 144 consequences at all

56. (1 pt) **Lesson 5.3**

Priya exercises a nonqualified stock option with a $20 strike when the stock trades at $32. At exercise she has:

A. No tax consequence until she sells the shares

B. A $12-per-share long-term capital gain

C. $12 per share of ordinary wage income

D. An AMT adjustment only

57. (1 pt) **Lesson 5.4**

A stock just paid a $2.00 dividend ($D_0$), expected to grow 4% a year. An investor requires 9%. The Gordon model price is:

A. $40.00

B. $41.60

C. $16.00

D. $23.11

58. (1 pt) **Lesson 5.4**

A company reinvests all earnings, pays no dividend, grows revenue 30% a year and trades at 55 times earnings. A fundamental analyst would label it a:

A. Value stock

B. Growth stock

C. Income stock

D. Defensive stock

59. (1 pt) **Lesson 5.5**

Short interest in a stock reaches a record high. A technical analyst reads this as:

A. Bearish — many investors expect the stock to fall

B. Bullish — every short position must eventually be bought back, a reservoir of future demand

C. Meaningless noise

D. A signal the company's earnings will fall

60. 1 pt **Lesson 5.5**

Which observation belongs to a TECHNICAL analyst rather than a fundamental one?

A. “The P/E is below the industry average”

B. “Management’s new product line should lift margins”

C. “The stock has bounced three times off $40 — that is strong support”

D. “The balance sheet carries little debt”

ANSWER KEY

1. D. The three prongs are advice about securities, as a business, for compensation — and all three must be present. Discretion is a feature some advisory relationships have, not part of the definition; a fee-only planner with no discretion is still an adviser.
2. B. The classic exam line is adviser: fiduciary; broker-dealer: suitability. Choices A and D swap the standards — the exam's favorite trap — and C sells the advisory profession short.
3. C. Capital Gains holds that the concealment itself is the fraud; the honesty of the recommendation and the clients' results do not matter. A and B are the two classic wrong readings of the case.
4. B. Exchange trades are secondary-market transactions between investors; the issuer receives money only in a primary-market sale such as an IPO. Choice A is the standing trap — the company gets nothing when its shares change hands.
5. C. The position is worth $16,000, the loan is still $10,000, so equity fell from $10,000 to $6,000 — a 40% loss. Choice A measures the whole position, not the investor's equity; leverage doubles the percentage here.
6. C. The 1933 Act is the "truth in securities" law for new issues and prospectuses; the 1934 Act created the SEC and regulates trading. A and B cross the wires exactly the way the exam likes to, and D is never true — no exemption touches antifraud.
7. B. Exemption touches registration, never antifraud. Fraud in the sale of any security — exempt or not, registered or not — is always actionable, whatever the investment's outcome.
8. B. Rule 10b-5 forbids deception in connection with the purchase or sale of ANY security by ANY person — listing and registration do not matter. A is the trap; C addresses new-issue disclosure, not this fraud.
9. B. The USA is a template for STATE law, enforced by state Administrators — it is the version of state law the Series 65 tests. Nobody registers "with NASAA" (it writes the exam), and the federal covered adviser category comes from NSMIA (1996).
10. B. After NSMIA an adviser has one primary regulator, never both; a state may collect a notice filing and fee from a federal covered adviser but cannot require registration. C goes too far — states always keep antifraud jurisdiction.

11. B. The passing score is a question count — 92 of 130 scored — not a percentage, and the 10 pretest questions look identical to scored ones. An unregistered pass lapses after two years, so D is wrong.
12. C. The exam qualifies him; only the Administrator's registration lets him work. Form U10 was his enrollment route (no sponsor is required), and the pass alone never authorizes practice — it lapses in two years if he never registers.
13. A. The cycle runs expansion, peak, contraction, trough, then recovery into the next expansion. Expansions and contractions are periods; peaks and troughs are the turning points between them.
14. B. The definition uses real GDP — output with inflation stripped out — over two consecutive quarters. Choice C is the near-miss: nominal GDP can rise on inflation alone while real output is falling.
15. C. Defensive industries — utilities, food, medicine — sell what people buy regardless of the cycle. D is the planted trap: defense contractors are a different thing entirely from defensive industries; A and B are classic cyclicals.
16. A. Permits, stock prices, new orders, average weekly hours and initial jobless claims lead the cycle. Duration of unemployment, the prime rate and the CPI are all laggards — the CPI is lagging despite its fame, which is exactly why the exam asks.
17. B. $(249.6 - 240.0)/240.0 = 0.04$, or 4%. Choice A mistakes the point change for a percent; C divides by the ending index instead of the starting one.
18. B. Prices rose every year, only more slowly: disinflation. Deflation means the price level itself falls — a falling inflation rate that stays positive is not deflation, a distinction the exam tests directly.
19. C. Buying securities pumps reserves into the banks: money grows, rates fall, and — by the see-saw — bond prices rise. Any choice sending rates and bond prices in the same direction is wrong on its face.
20. D. Discount rate: the Fed charges banks. Federal funds: banks charge each other overnight, and the FOMC targets it. Prime: banks charge their best customers. A, B and C each pin the right name on the wrong rate.
21. B. Taxing and spending belong to Congress and the President; the Federal Reserve conducts monetary policy. Assigning fiscal policy to the Fed is the standard wrong answer.
22. B. An ADR removes the mechanics of foreign trading, never the economics: the dollar price silently embodies the exchange rate, so a falling yen drags the ADR

down even in a flat Tokyo market. The one risk an ADR never eliminates is currency risk.

23. C. Real return ≈ nominal minus inflation: $7\% - 3\% = 4\%$. Choice A is the unsubtracted nominal figure — the exam's favorite near-miss on this question.
24. B. Short rates above long rates is inversion — the classic recession signal, though not a guarantee. D confuses the curve (same credit quality, different maturities) with spreads (different credit quality, same maturity).
25. C. The balance sheet shows assets, liabilities and shareholders' equity on one date; the income statement and cash flow statement each cover a stretch of time. Treating the balance sheet as covering a period is the standing trap.
26. C. The 8-K is the current report for major events — mergers, bankruptcy, auditor changes, officer departures. The 10-K is the audited annual report, the 10-Q the unaudited quarterly, and the proxy statement is where executive compensation lives.
27. B. Recognizing revenue when earned, regardless of when cash arrives, is accrual accounting by definition — and public companies must use it. The mention of the check arriving later is bait for "cash basis."
28. B. The acid test excludes inventory: $(400{,}000 - 150{,}000)/200{,}000 = 1.25$. Choice A is the current ratio — the near-miss for anyone who left the inventory in.
29. B. EPS first: $(2{,}000{,}000 - 200{,}000)/600{,}000 = \$3.00$; then $45/3 = 15$. A forgets to subtract the preferred dividends; D divides EPS by price — a P/E below 1 almost always means the fraction is upside down.
30. B. The gap between the current and quick ratios is inventory's share of current assets, and X's gap (2.0 to 0.6) is by far the widest. The others hold little inventory relative to their liabilities.
31. C. $72/8 = 9$ years, approximately — the rule is an estimate, which is why exam answers say "about." Choice D divides 100 by the rate instead of 72.
32. A. IRR is the discount rate at which NPV is exactly zero — the return the investment itself earns. A bond's yield to maturity is the same idea in bond's clothing: the rate equating the present value of its payments to its price.
33. B. Sort first: 2, 4, 7, 9, 38 — the median is 7%, while the mean is 12%. One outlier moves the mean but barely stirs the median; D takes the middle of the unsorted list, the classic error.
34. B. Standard deviation measures total volatility — risk overall; beta measures volatility relative to the market. The exam asks both versions and grades

whether you kept the two straight.

35. C. Market, interest-rate, inflation, currency and political risk are systematic — they survive any number of holdings. Diversification largely eliminates company-specific risks like A, B and D, which is precisely its job.
36. B. The ladder runs secured creditors, unsecured creditors and debentures, subordinated debentures, preferred stock, common stock. No stockholder of any kind ever collects before a creditor of any kind — the favorite distractor puts preferred ahead of a creditor class.
37. B. Commercial paper is short-term, unsecured and discounted, and 270 days is the ceiling that keeps it registration-exempt. C describes a banker's acceptance; D describes a bank deposit, not a security.
38. C. A money market fund is a security, not a deposit: it seeks a stable $1.00 share price but neither the FDIC nor anyone else guarantees it. The CD-versus-fund confusion is the classic trap in this lesson.
39. C. Only Ginnie Mae carries the full faith and credit of the United States; Fannie Mae and Freddie Mac are government-sponsored enterprises whose securities do not. Granting the guarantee to all three is the tested error.
40. B. Falling rates set off refinancing floods, so principal comes home early into a lower-yield world. D states the right risk in the wrong direction, and A ignores the federal guarantee that is GNMA's defining feature.
41. B. A zero-coupon STRIPS accretes taxable interest yearly, and a TIPS' inflation adjustment to principal is taxed as it accrues — phantom income in both cases. That is why the exam parks both inside IRAs and other sheltered accounts.
42. B. $\text{TEY} = 3.6\% / (1 - 0.28) = 3.6 / 0.72 = 5.0\%$. Choice D divides by the bracket itself instead of (1 − bracket); C multiplies instead of dividing.
43. B. Revenue bonds are repaid only from the earnings of the project they finance; taxes stand behind general obligation bonds, which typically need voter approval. A, C and D all smuggle the GO backing into a revenue issue.
44. B. A muni's lower yield is the price of its tax exemption; inside an IRA the exemption is worthless and the client simply earns less. This planted absurdity is one of the exam's favorite suitability questions.
45. A. Issuers call when rates FALL, refinancing expensive debt cheaply — and the holder's problem is reinvestment risk. Choices B and C reverse the direction, the single most tested error about call features.

46. B. Investment grade runs down to Baa3 on the Moody's scale and BBB− on S&P's; one notch below (Ba/BB) begins high-yield territory. Ratings grade default risk only — never price or liquidity.
47. B. Current yield is annual interest over market price: $60/800 = 7.5\%$. A divides by par instead of price; a discount bond's current yield always sits above its coupon rate.
48. B. For a premium bond the order is nominal > current > YTM > YTC — the holder paid extra, so every yield that counts the slide back to par (or the call price, sooner) is lower. A discount bond reverses the order exactly.
49. B. Cumulative votes = shares × seats = $200 \times 4 = 800$, castable in any mix — which is why cumulative voting helps the small shareholder. A describes statutory voting; cumulative gives the same total, only freedom to concentrate it.
50. B. Rights: short-term, below market, issued to existing holders as antidilution protection. Warrants: long-term, above market at issue, often attached to bonds as a sweetener. A and D cross the traits, exactly as the exam does.
51. B. Shareholders elect directors and vote on matters like mergers; dividends are declared (or not) by the board, and the ex-date is set by the exchange or FINRA. Choice A is the perennial trap.
52. C. Two years of arrears ($12) plus the current year's $6 make $18. Choice B forgets the current year — the error the choices are built to catch; D describes noncumulative preferred.
53. A. A fixed payment with no maturity date is maximally rate-sensitive, like a very long bond. Preferred dividends do not grow with earnings (that is participating preferred's narrow exception), and prepayment belongs to mortgage securities.
54. B. Conversion ratio = par ÷ conversion price = $100/25 = 4$ shares; parity = ratio × market price of common = $4 \times 27 = \$108$. The ratio uses the conversion price; parity uses the market price — mixing them gives the wrong choices.
55. B. Stock an affiliate buys in the open market is control stock: volume limits always, holding period never. Holding periods belong to restricted (unregistered) stock; an affiliate holding restricted stock would face both.
56. C. The NQSO spread — market minus strike — is taxed as ordinary income at exercise. Choices A and D describe the incentive stock option, whose spread escapes regular tax at exercise (with an AMT wrinkle) and can earn capital-gain treatment under the two-year/one-year clocks.

57. B. Grow the dividend first: $D_1 = 2.00 \times 1.04 = 2.08$; then $P = 2.08/(0.09 - 0.04) = \$41.60$. Choice A uses D_0 unchanged — the model's classic trap; C adds g to r in the denominator; and the model only works at all when r exceeds g.
58. B. High P/E, rapid earnings growth and no dividend are the growth-stock signature; value stocks are the out-of-favor, low-P/E opposite, and income stocks are chosen for the cash they pay out.
59. B. The exam wants the contrarian reading: shorts are obligated future buyers, so high short interest is bullish to a technician. Choice A is the intuitive answer the question is built to punish.
60. C. Support levels, trendlines, volume and moving averages are the technician's tools — the market's own data. Earnings, management and balance sheets belong to the fundamentalist; the exam mixes the speakers and asks which is which.

COURSE EXAM

Final Exam: A Full-Length Practice Series 65

Covers Units 1–10. Time: 180 minutes.

This is the dress rehearsal for the real Series 65. Take it in one three-hour sitting: closed book, proctored by a parent, photo ID on the desk as it would be at the testing center, no phone. Every question has four choices and one best answer. There is no penalty for guessing, so answer all 130 — mark the ones you are unsure of and return to them before time runs out, pacing yourself at about 83 seconds a question. A calculator is allowed; the real exam provides one on screen. Figures given as examples ("in this example") are illustrations, not current law. Passing is 92 correct out of 130, mirroring the real exam. A pass earned under honest exam conditions means you are ready to sit down with your parents and discuss enrolling for the real thing.

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1. **1 pt** **Lesson 7.1**

   Four small businesses open advisory accounts. Which one pays federal income tax at the entity level?

   A. A general partnership

   B. An S corporation

   C. A C corporation

   D. A sole proprietorship

2. **1 pt** **Lesson 1.1**

   Which person meets the three-prong definition of an investment adviser?

   A. A blogger who posts free general market commentary

   B. A planner who charges an annual fee to design clients' securities portfolios

   C. A neighbor who gives one friend a stock tip

   D. A clerk who processes trade tickets at an advisory firm

3. **1 pt** **Lesson 4.1**

   A dealer sells a client Treasury securities and promises to buy them back tomorrow at a slightly higher price. This money-market arrangement is:

   A. A banker's acceptance

   B. A repurchase agreement — in substance an overnight collateralized loan

   C. Commercial paper

   D. A negotiable CD

4. 1 pt **Lesson 2.1**

In describing the business cycle, peaks and troughs are best understood as:

A. Periods that typically last several quarters

B. The turning points between expansions and contractions

C. Interchangeable names for recessions

D. Events that recur on a fixed, predictable schedule

5. 1 pt **Lesson 7.1**

Rees, 48, could easily absorb large losses — high income, no debts, a 20-year horizon — but says market drops cost him sleep and he once sold everything in a panic. The adviser should:

A. Build the aggressive portfolio his finances can support

B. Average his financial ability and emotional willingness

C. Honor the more conservative of the two — his low willingness — and address the gap through education

D. Decline the account

6. 1 pt **Lesson 1.1**

An investment adviser's duty to place the client's interest first and disclose every material conflict comes from:

A. The suitability rule all salespeople share

B. The Investment Advisers Act of 1940 as read by the Supreme Court in SEC v. Capital Gains Research Bureau (1963) — the fiduciary standard

C. Exchange listing requirements

D. The Bank Secrecy Act

7. 1 pt **Lesson 4.2**

A U.S. Treasury security issued with a seven-year maturity is a Treasury:

A. Bill

B. Note

C. Bond

D. STRIP

8. 1 pt **Lesson 7.1**

At the first meeting with a new advisory client, which should the IAR determine FIRST?

A. Which mutual fund family to use

B. The client's goals and financial situation

C. The fee schedule for the account

D. Whether to use margin

9. 1 pt **Lesson 1.1**

An IAR receives ongoing 12b-1 payments from a fund family she often recommends. Under the fiduciary standard, the conflict is:

A. Illegal in itself, so she must refuse the payments

B. Permissible if disclosed in writing before advice is rendered, so clients can weigh it

C. Nobody's business but the firm's

D. Cured by recommending the fund only to large accounts

10. 1 pt **Lesson 2.1**

Which of the following is counted in this year's GDP?

A. A Social Security check sent to a retiree

B. The resale of a three-year-old car

C. A newly built house sold to its first owner

D. The purchase of 500 shares of an existing stock

11. 1 pt **Lesson 4.2**

Which statement about TIPS is TRUE?

A. The coupon rate rises and falls with the CPI

B. The principal adjusts with the CPI, and the fixed coupon rate is paid on the adjusted principal

C. The inflation adjustment is tax-free until maturity

D. They are backed by Fannie Mae

12. 1 pt **Lesson 7.1**

An adviser manages a trust. The adult beneficiary telephones, demanding the account be moved into aggressive technology stocks. The adviser should:

A. Follow the beneficiary's instructions — the money is ultimately hers

B. Take instructions only from the trustee, who must follow the trust document and the prudent investor rule

C. Split the portfolio between the two preferences

D. Resign immediately

13. 1 pt **Lesson 1.2**

A company receives the proceeds of a securities sale only when:

A. Its shares trade on the NYSE

B. It sells new securities to investors in the primary market, as in an IPO

C. An investor sells its shares to another investor

D. Its bonds change hands between two funds

14. 1 pt **Lesson 4.2**

A client insists that his Fannie Mae (FNMA) securities are "guaranteed by the U.S. government, same as Ginnie Mae." The adviser should explain that:

A. He is right — all housing agencies carry the guarantee

B. Only GNMA pass-throughs carry the full faith and credit of the United States; FNMA and FHLMC do not

C. None of the three carries any federal connection

D. The FDIC insures all agency securities

15. 1 pt **Lesson 7.2**

This year a client realized $4,000 of long-term capital gains and $10,000 of short-term capital losses. For this year she may:

A. Deduct the full $6,000 net loss against ordinary income

B. Deduct $3,000 against ordinary income and carry $3,000 forward

C. Deduct nothing — losses only offset gains

D. Deduct $10,000 and ignore the gains

16. 1 pt **Lesson 1.3**

A broker tells a customer, “This new issue must be solid — the SEC approved it.” The statement is:

A. Accurate, since the SEC reviewed the registration

B. A violation — the SEC reviews disclosure and never approves or passes on the merits of any security

C. Acceptable sales talk

D. True for exchange-listed issues only

17. 1 pt **Lesson 2.1**

Lena believes the economy has just passed the trough and recovery is beginning. Consistent with that view, she would overweight:

A. Electric utilities

B. Food processors

C. Automakers and homebuilders

D. Discount repair shops

18. 1 pt **Lesson 4.3**

A client in a 30% bracket (in this example) can buy a corporate bond yielding 5.5% or a municipal bond yielding 4.2%. On taxable-equivalent yield, the municipal bond:

A. Loses — its TEY is 5.46%

B. Wins — its TEY is 6.0%

C. Loses — its TEY is 2.94%

D. Ties the corporate exactly

19. 1 pt **Lesson 7.2**

On December 15, Hale sells a stock at a $2,000 loss. On January 5 he buys the same stock back. The result:

A. The loss deducts this year as planned

B. The loss is disallowed as a wash sale and is added to the basis of the replacement shares

C. The loss is gone forever

D. There is no wash sale, because he repurchased in a new calendar year

20. (1 pt) **Lesson 1.4**

State securities laws are called blue-sky laws because:

A. They were drafted by the Federal Aviation Administration

B. Early schemes sold securities backed by nothing more than "so many feet of blue sky," and states — starting with Kansas in 1911 — acted first

C. They apply only to outdoor solicitations

D. Congress passed them in 1933

21. (1 pt) **Lesson 7.2**

Imogen inherits stock her uncle bought for $10 a share; it is worth $50 at his death. She sells soon after at $52. Her taxable gain per share is:

A. $42, short-term

B. $2, long-term — inherited assets take a stepped-up basis and an automatic long-term holding period

C. $42, long-term

D. $2, short-term

22. (1 pt) **Lesson 1.5**

Which is TRUE of Series 65 enrollment and retakes as of 2026?

A. A candidate must be sponsored by a firm

B. A candidate without a firm enrolls by Form U10, and a failed exam requires a 30-day wait after the first and second attempts and 180 days after a third attempt within two years

C. Retakes may be scheduled the next morning

D. The exam fee buys unlimited attempts in a year

23. (1 pt) **Lesson 4.3**

For a U.S. investor, the chief attraction of a Eurodollar bond over a foreign-currency bond is that it:

A. Is exempt from all taxation

B. Is denominated in dollars, removing currency risk for the dollar-based holder

C. Carries a U.S. government guarantee

D. Cannot default

24. (1 pt) **Lesson 2.2**

Which of the following is a LAGGING economic indicator?

A. Building permits

B. Initial jobless claims

C. The average duration of unemployment

D. New manufacturing orders

25. (1 pt) **Lesson 7.2**

A client holds shares bought in many lots at different prices and wants to control the tax result of each sale. Which cost basis method gives the most control?

A. FIFO

B. Average cost

C. Specific identification

D. LIFO is required for securities

26. (1 pt) **Lesson 9.1**

Granite Hill Advisers reports $105 million of assets under management. Under NSMIA and Dodd-Frank, it:

A. Must register with the SEC

B. Must register with the states

C. May choose SEC or state registration — it sits in the buffer between $100 million and $110 million

D. Must register with both

27. (1 pt) **Lesson 4.4**

A corporate bond is quoted at $98\frac{1}{2}$. A buyer of ten bonds pays approximately:

A. $985

B. $9,850

C. $10,000

D. $98,500

28. (1 pt) **Lesson 7.3**

In a defined benefit pension plan, the investment risk is borne by:

A. The employee, since the account balance is the benefit

B. The employer, which must fund the promised formula-based pension whatever the markets do

C. The PBGC in the first instance

D. Neither — qualified plans carry no investment risk

29. (1 pt) **Lesson 9.1**

With respect to a federal covered adviser doing business in the state, the Administrator may:

A. Require full state registration

B. Require a notice filing with a fee, and investigate and prosecute fraud by the firm

C. Nothing whatever

D. Approve or reject the adviser's investment strategies

30. (1 pt) **Lesson 2.2**

The CPI stood at 250.0 a year ago and stands at 260.0 today. In this example, inflation over the year was:

A. 10%

B. 4%

C. 3.85%

D. 2.5%

31. (1 pt) **Lesson 4.4**

A put feature on a bond is most valuable to its holder when:

A. Interest rates fall, so the issuer refinances

B. Interest rates rise, letting the holder sell the bond back at the stated price and reinvest at the new higher rates

C. The bond is called

D. The bond trades at a premium

32. 1 pt **Lesson 7.3**

Which statement about a Roth IRA is TRUE?

A. Contributions are always tax-deductible

B. Lifetime required minimum distributions begin in the owner's early seventies

C. Qualified withdrawals — after age 59½ and a five-year wait — are entirely tax-free, and the owner faces no lifetime RMDs

D. There are no income limits on contributions

33. 1 pt **Lesson 9.2**

First Meridian Bank charges customers for portfolio advice about securities. Under the Uniform Securities Act, the bank is:

A. An investment adviser that must register

B. Exempt from registration as an adviser

C. Excluded from the definition of investment adviser altogether

D. A broker-dealer

34. 1 pt **Lesson 4.5**

A bond with a 5% coupon trades at 110 ($1,100). Its current yield is approximately:

A. 5.0%

B. 4.5%

C. 5.5%

D. 4.0%

35. 1 pt **Lesson 7.3**

Petra, 45, leaves her job. Her $100,000 401(k) distribution is paid to her directly, so she receives a check for $80,000 after 20% withholding. To avoid any current tax, within 60 days she must:

A. Deposit the $80,000 check into an IRA

B. Deposit the full $100,000 into an IRA, making up the withheld $20,000 from her own funds

C. Do nothing — withholding is the only tax

D. Deposit $50,000 and keep the rest penalty-free

36. (1 pt) **Lesson 9.2**

An economics teacher offers a paid weekend seminar titled “Which Stocks to Buy Now.” Under the Uniform Securities Act she is:

A. Excluded as a Teacher under the LATE professional exclusions

B. An investment adviser — special compensation for advice that is not incidental to teaching destroys the exclusion

C. Exempt because education is a public good

D. An agent of the attendees

37. (1 pt) **Lesson 2.3**

To cool inflation, the Federal Reserve sells government securities from its portfolio. The expected results are:

A. Bank reserves grow, rates fall, the dollar weakens

B. Bank reserves shrink, rates rise, bond prices fall, and the dollar tends to strengthen

C. Reserves shrink, rates rise, and bond prices rise with them

D. The national debt is reduced

38. (1 pt) **Lesson 7.3**

Which employer is correctly matched to its retirement plan?

A. A public school district — SEP IRA

B. A self-employed consultant with no employees — 403(b)

C. A public school district — 403(b)

D. A 300-employee corporation — SIMPLE IRA

39. (1 pt) **Lesson 9.2**

Calloway Advisers has no place of business in State B. Over the past 12 months it has advised four individual residents of State B and two insurance companies there. In State B it:

A. Must register — six clients exceed the limit

B. Need not register — the de minimis exemption allows up to five non-institutional clients, and institutional clients do not count

C. Must register because it advertises nationally

D. Must make the insurance companies register instead

40. 1 pt **Lesson 4.5**

A client expects interest rates to fall sharply and wants the bond position that would gain MOST. The adviser should suggest:

A. A 2-year, 9% coupon bond

B. A 20-year, 9% coupon bond

C. A 20-year zero-coupon bond

D. A 2-year zero-coupon bond

41. 1 pt **Lesson 7.3**

Owen can save $400 a month. His employer matches 401(k) deferrals dollar-for-dollar up to 4% of pay, but Owen wants to put everything into an IRA he read about. The adviser should first recommend:

A. The IRA — individual accounts offer more fund choices

B. Deferring at least enough into the 401(k) to collect the full employer match

C. A taxable brokerage account for liquidity

D. Splitting evenly regardless of the match

42. 1 pt **Lesson 9.2**

Delia sells U.S. Treasury bonds to retail customers as a representative of her broker-dealer. As to state registration, Delia:

A. Is exempt — Treasuries are exempt securities

B. Must register as an agent; selling exempt securities for a broker-dealer never excuses its agent from registering

C. Need not register because the federal government is the issuer

D. Registers only if customers complain

43. 1 pt **Lesson 2.3**

The most frequently used tool of monetary policy, and the body that directs it, are:

A. The discount rate, set by Congress

B. Open market operations, directed by the FOMC

C. The reserve requirement, adjusted weekly by the Board of Governors

D. The prime rate, set by the Federal Reserve

44. 1 pt Lesson 5.1

Which voting method most helps a minority shareholder seat one director?

A. Statutory voting, because votes are spread across every seat

B. Cumulative voting, because the shareholder may concentrate all votes on one candidate

C. Proxy voting

D. Preemptive voting

45. 1 pt Lesson 7.4

ERISA's fiduciary and vesting standards apply to which of the following?

A. A state government employee pension fund

B. A church retirement plan

C. A private manufacturer's 401(k) plan

D. An individual's traditional IRA

46. 1 pt Lesson 9.3

A complete investment adviser application is filed with the Administrator on March 1, and the Administrator takes no action. Under the USA the registration becomes effective:

A. Immediately on filing

B. At noon on the 30th day after filing

C. On December 31

D. Only when the Administrator issues an approval order

47. 1 pt Lesson 5.2

Dunmore Mills' 5% cumulative preferred ($100 par) has skipped its dividend for three full years. Before common shareholders may receive anything this year, each preferred share is owed:

A. $5

B. $15

C. $20

D. $25

48. (1 pt) **Lesson 7.4**

A 401(k) sponsor satisfies the Section 404(c) safe harbor — a broad menu of diversified options, at least quarterly switching, and adequate information. The sponsor is relieved of liability for:

A. Everything connected with the plan

B. The participants' own investment choices, but never for selecting and monitoring the menu itself

C. Only the recordkeeping

D. Nothing — 404(c) is advisory only

49. (1 pt) **Lesson 9.3**

Under the NASAA conventions used in this course, a state-registered adviser with discretion but no custody, and one with custody, must maintain minimum net worth of, respectively:

A. $35,000 and $10,000

B. $10,000 and $35,000, with a surety bond available to cover a shortfall

C. $5,000 and $50,000

D. Nothing — net worth rules apply only to broker-dealers

50. (1 pt) **Lesson 2.4**

The dollar weakens substantially against foreign currencies. Which investor most directly benefits?

A. An American tourist traveling in Europe

B. An American importer paying euro invoices

C. An American investor holding euro-denominated bonds

D. A foreign investor holding U.S. Treasury bonds

51. (1 pt) **Lesson 5.2**

A stock's ex-dividend date is Tuesday. An investor who buys the stock on Tuesday:

A. Receives the dividend, since she owns the stock on the payable date

B. Does not receive the dividend — it belongs to the seller

C. Splits the dividend with the seller

D. Receives it only if the board approves

52. 1 pt **Lesson 7.4**

A pension plan buys an office building from the sponsoring employer at a price an independent appraisal calls fair. Under ERISA this is:

A. Permitted, because the price was fair

B. A prohibited transaction — self-dealing between the plan and a party in interest, regardless of the terms

C. Permitted if the plan's lawyer approves

D. Permitted for plans over $100 million

53. 1 pt **Lesson 9.3**

An IAR employed by a FEDERAL covered adviser moves to a new firm. Who must notify the Administrator?

A. The old firm

B. The new firm

C. The IAR himself

D. The SEC

54. 1 pt **Lesson 5.2**

An investor holds 200 shares at $90. The company declares a 2-for-1 split. Afterward the investor has:

A. 400 shares at about $45 — total value unchanged, and no tax due on the split

B. 400 shares at $90 — twice the value

C. 100 shares at $180

D. 400 shares at $45, taxable as a $9,000 gain

55. 1 pt **Lesson 7.5**

Grandparents want to fund a grandchild's education with large contributions, keep control of the money, and front-load five years of gifts at once. The account that fits is:

A. A Coverdell ESA

B. A 529 plan

C. An UTMA account

D. A joint account with the child

56. 1 pt **Lesson 9.4**

Sunrise Groves sells investors small plots of an orange grove together with a contract under which Sunrise cultivates, harvests and sells the fruit, remitting "profits" to the buyers. Under the Howey test, the package is:

A. A real estate sale outside the securities laws

B. An investment contract — money invested in a common enterprise with profits expected from the efforts of others — and therefore a security

C. A farming partnership exempt from registration

D. A commodity, regulated as futures

57. 1 pt **Lesson 2.5**

A bond fund returned 6% in a year when inflation ran 2.5%. The approximate real return was:

A. 6%

B. 8.5%

C. 3.5%

D. 2.4%

58. 1 pt **Lesson 7.5**

A father funds an UTMA account for his daughter, then asks to take the money back for a kitchen remodel. The adviser must explain that:

A. He may withdraw it — he is the custodian

B. The gift was irrevocable: the money is the child's, managed by the custodian for her benefit until the age of majority

C. Half the account is his

D. He may reclaim it if his daughter consents

59. 1 pt **Lesson 9.4**

Which of the following is NOT a security under the Uniform Securities Act?

A. A variable annuity

B. A fixed annuity

C. An interest in an oil and gas program

D. An investment contract

60. 1 pt **Lesson 5.3**

Eight months ago Nora — who is not an officer, director or large holder — bought shares of an SEC-reporting company in a private placement. Under Rule 144 she may now:

A. Not sell for another four months

B. Sell publicly without volume limits — the six-month holding period for reporting companies has run, and she is not an affiliate

C. Sell only within volume limits for life

D. Sell only back to the issuer

61. 1 pt **Lesson 7.5**

Two brothers own a brokerage account as joint tenants with right of survivorship. One dies, and his will leaves everything he owns to his daughter. The account:

A. Passes half to the daughter under the will

B. Passes entirely to the surviving brother, outside probate, whatever the will says

C. Is frozen until the daughter and brother agree

D. Escheats to the state

62. 1 pt **Lesson 9.4**

A long-time customer telephones her agent, unprompted, and orders shares of a thinly traded unlisted stock the firm has never recommended. Under the USA this sale is:

A. An exempt security

B. An exempt transaction — an unsolicited order

C. A violation unless the stock is registered in the state

D. A private placement

63. 1 pt **Lesson 2.5**

The yield spread between low-grade corporate bonds and Treasuries of the same maturity widens sharply. This most likely signals that investors:

A. Expect economic trouble and are fleeing toward quality

B. Have grown more confident in corporate borrowers

C. Expect the yield curve to invert

D. Expect inflation to fall

64. (1 pt) **Lesson 5.3**

Tomas exercises a nonqualified stock option: strike $15, market price $24. The immediate tax result is:

A. Nothing until the shares are sold

B. A $9-per-share capital gain

C. $9 per share taxed as ordinary wage income

D. A $9 AMT preference only

65. (1 pt) **Lesson 7.5**

Garrett divorced, remarried, and updated his will — but his IRA still names his ex-wife as beneficiary. At his death the IRA goes to:

A. His new wife, under the will

B. His ex-wife — the beneficiary designation controls, regardless of the will

C. His estate, for the probate court to divide

D. Whoever the custodian chooses

66. (1 pt) **Lesson 9.4**

An issuer files a 1933 Act registration with the SEC and simultaneously files with the state, where the paperwork has been on file the required period. Its state registration becomes effective:

A. When the Administrator issues an order — this is qualification

B. At the same moment the federal registration becomes effective — this is coordination

C. Thirty days after the federal effective date

D. Never — federal filing replaces state filing

67. (1 pt) **Lesson 5.4**

An analyst expects Keller Foods to pay a dividend of $3.00 NEXT year ($D_1$), growing 5% a year thereafter. She requires an 11% return. The constant-growth value is:

A. $27.27

B. $50.00

C. $18.75

D. $52.50

68. (1 pt) **Lesson 3.1**

A client wants to know how much actual cash a company generated and spent last year, sorted into operating, investing and financing activities. She should read the:

A. Balance sheet

B. Income statement

C. Cash flow statement

D. Proxy statement

69. (1 pt) **Lesson 8.1**

The risk-free rate is 3%, the expected market return is 11%, and a stock's beta is 1.25. Under CAPM, the stock's expected return is:

A. 13.75%

B. 13.0%

C. 10.0%

D. 8.75%

70. (1 pt) **Lesson 9.5**

An Administrator wants to revoke an IAR's registration. Which of the following, standing ALONE, is sufficient grounds?

A. Revocation is in the public interest

B. The IAR lacks experience

C. The IAR was convicted of a securities-related felony six years ago — a listed cause, found with the public interest

D. Clients have moved their accounts elsewhere

71. (1 pt) **Lesson 5.4**

A preferred stock pays a fixed $4 annual dividend forever. An investor requiring 8% should value it at:

A. $32

B. $50

C. $80

D. $40

72. (1 pt) **Lesson 8.1**

A portfolio returned 10% with a standard deviation of 16% while the risk-free rate was 2%. Its Sharpe ratio is:

A. 0.625

B. 0.50

C. 8.0

D. 0.80

73. (1 pt) **Lesson 9.5**

A client bought a security in a sale that violated the USA, paying $10,000. Interest at the legal rate comes to $600, and she received $250 in dividends. Upon tendering the security back, she is owed:

A. $10,000

B. $10,600

C. $10,350

D. $10,850

74. (1 pt) **Lesson 3.1**

An investor wants details of the executives' compensation and the candidates standing for the board. These are found in the:

A. Form 10-K

B. Proxy statement

C. Form 8-K

D. Form 10-Q

75. (1 pt) **Lesson 8.1**

If corporate insiders consistently earn excess profits trading on undisclosed information, which form of the efficient market hypothesis is contradicted?

A. The weak form

B. The semi-strong form

C. The strong form

D. All three forms

76. 1 pt **Lesson 9.5**

Under the USA's civil statute of limitations, a buyer must sue within:

A. Three years of the sale or two years after discovering the violation, whichever comes first

B. Five years of the sale, without exception

C. Two years of the sale or three after discovery

D. One year of the sale

77. 1 pt **Lesson 5.5**

Which pair of tools belongs to the technical analyst?

A. The 200-day moving average and the advance-decline line

B. The P/E ratio and the dividend discount model

C. The balance sheet and the proxy statement

D. GDP forecasts and industry selection

78. 1 pt **Lesson 8.1**

A fund with a beta of 0.8 returned 12% in a year when the risk-free rate was 2% and the market returned 12%. Its alpha was:

A. 0% — it merely matched the market

B. +2% — CAPM expected only 10% for its risk

C. −2%

D. +12%

79. 1 pt **Lesson 10.1**

Under the brochure rule convention, an adviser must deliver its Form ADV Part 2A brochure:

A. Within 90 days after the client signs

B. At or before entering the advisory contract, with an updated brochure delivered or offered each year

C. Only when a client asks

D. Only to clients with discretionary accounts

80. (1 pt) **Lesson 6.1**

A fund's NAV is $18.80 and its maximum sales charge is 6%. The public offering price is:

A. $19.93

B. $20.00

C. $19.60

D. $17.67

81. (1 pt) **Lesson 3.2**

Hollis Corp. has current assets of $600,000, including $240,000 of inventory, and current liabilities of $300,000. Its quick ratio is:

A. 2.0

B. 1.2

C. 0.8

D. 2.8

82. (1 pt) **Lesson 8.2**

A manager's long-term policy is 60% stocks and 40% bonds, but convinced a rally is coming, she shifts to 75/25 for the next two quarters. The shift is:

A. Strategic asset allocation

B. Rebalancing

C. Tactical asset allocation — a short-term departure from targets to exploit a forecast

D. Passive management

83. (1 pt) **Lesson 10.1**

An adviser's website says: "Registered with the SEC — your assurance of a government-approved firm." The problem is:

A. Mentioning registration at all is prohibited

B. Implying that registration means approval or endorsement — the fact of registration may be stated, the implication may not

C. Websites may not mention the SEC

D. Nothing — the statement is accurate

84. 1 pt **Lesson 6.1**

A client plans to invest $48,000 in a Class A fund whose sales charge drops at the $50,000 breakpoint. The IAR should:

A. Place the order as given — the client chose the amount

B. Tell the client about the breakpoint and the ways to reach it, such as a letter of intent

C. Split the order into two $24,000 purchases in different funds to diversify

D. Recommend Class B shares to avoid the issue

85. 1 pt **Lesson 8.2**

A portfolio holds 50% stocks returning 10%, 40% bonds returning 5%, and 10% cash returning 2%. Its return for the year was:

A. 5.67%

B. 7.2%

C. 8.5%

D. 17%

86. 1 pt **Lesson 10.1**

Under the modern marketing rules, an adviser may run a paying client's enthusiastic testimonial in its advertising:

A. Never — testimonials are banned absolutely

B. Freely, as long as the statement is true

C. Only with clear and prominent disclosure that the speaker is a client, whether he was compensated, and any material conflicts — with a written agreement for a paid promoter

D. Only on social media

87. 1 pt **Lesson 6.1**

An investor places an order to redeem open-end fund shares at 2 p.m. Eastern. The price she receives is:

A. The NAV computed the previous evening

B. The next NAV to be computed — that day's, after the market closes

C. The midpoint of the day's high and low

D. Whatever price the exchange floor sets at 2 p.m.

88. (1 pt) **Lesson 3.2**

A client bought a stock years ago at $40; it now trades at $50 and pays a $2 annual dividend. Its dividend yield today is:

A. 5.0%

B. 4.0%

C. 2.0%

D. 10.0%

89. (1 pt) **Lesson 8.2**

A fund buys out-of-favor industrial companies at low price-to-earnings and low price-to-book ratios, expecting the market to recognize the bargains. Its style is:

A. Growth

B. Value

C. Income

D. Momentum

90. (1 pt) **Lesson 10.1**

Harbor Advisers is being sold to a larger firm, which will take over its client contracts. Before the advisory contracts transfer, Harbor must:

A. Notify clients within 30 days after the sale

B. Obtain each client's consent — an advisory contract may not be assigned without it

C. Do nothing; contracts follow the firm

D. Refund all prepaid fees

91. (1 pt) **Lesson 6.2**

Which investment company shares may be bought on margin or sold short?

A. Open-end mutual fund shares

B. Closed-end funds and ETFs, which trade on exchanges

C. Only money market funds

D. None — investment company shares never trade on exchanges

92. (1 pt) **Lesson 8.2**

An investor is persuaded that markets are efficient — that public information is already in prices. Logically, she should prefer:

A. Frequent tactical trading

B. A low-cost index fund approach

C. A fund that picks stocks from research reports

D. Technical chart analysis

93. (1 pt) **Lesson 10.2**

A client with a $400,000 account — below the qualified-client thresholds in this example — is eager to pay his adviser 20% of the gains he earns. The adviser:

A. May accept — the client proposed it in writing

B. May not charge a share of capital gains to a non-qualified client, however willing; a percentage-of-assets fee remains lawful

C. May accept if the fee is disclosed in the brochure

D. May accept for one year only

94. (1 pt) **Lesson 3.3**

At an 8% discount rate, $10,000 due in two years is worth approximately how much today?

A. $11,664

B. $9,259

C. $8,573

D. $8,400

95. (1 pt) **Lesson 8.3**

Avery invests $600 a month for three months, buying at $10, $12 and $15. Her average COST per share is:

A. $12.33

B. $12.00

C. $12.50

D. $11.00

96. 1 pt **Lesson 10.2**

An adviser directs client trades to a broker-dealer that charges higher commissions, receiving services in exchange. Which item falls INSIDE the Section 28(e) soft-dollar safe harbor?

A. Research reports and analytical software used to advise clients

B. The adviser's office rent

C. A marketing dinner for prospects

D. The adviser's vacation travel to a "conference" at a resort

97. 1 pt **Lesson 6.2**

An investment company holds a fixed, unmanaged portfolio of municipal bonds, has a trustee but no board of directors or investment adviser, and will terminate on a set date. It is a:

A. Closed-end fund

B. Unit investment trust

C. Exchange-traded fund

D. Mortgage REIT

98. 1 pt **Lesson 8.3**

A 60/40 portfolio has drifted to 70/30 after a long stock rally. Disciplined rebalancing calls for:

A. Buying more stock — the trend is confirmed

B. Selling stocks and buying bonds back to 60/40

C. Moving entirely to cash

D. Waiting for the next drift before acting

99. 1 pt **Lesson 10.2**

In an agency cross transaction — the adviser's affiliate acting for both its advisory client and the other side — the adviser may NEVER:

A. Receive compensation from both sides with disclosure and consent

B. Execute the trade after written consent

C. Recommend the transaction to both parties

D. Send confirmations to both parties

100. (1 pt) **Lesson 6.2**

To keep its favorable tax treatment, a REIT must (among other tests) hold at least:

A. 90% of assets in real estate and distribute 75% of taxable income

B. 75% of assets in real estate and distribute at least 90% of taxable income

C. 50% of assets in mortgages

D. 100% of assets in property and distribute everything

101. (1 pt) **Lesson 3.3**

A bond's yield to maturity is best described as:

A. The coupon rate stated on the bond

B. Annual interest divided by the current market price

C. The single discount rate that makes the present value of all the bond's remaining payments equal its market price

D. The rate the Federal Reserve targets

102. (1 pt) **Lesson 8.3**

Mei holds a stock with a large unrealized gain. She fears a near-term drop but does not want to sell. The classic hedge is to:

A. Write covered calls on the position

B. Buy protective puts, setting a floor under her sale price for the cost of the premium

C. Buy more stock to average up

D. Sell the stock short in another account

103. (1 pt) **Lesson 10.2**

An adviser charges 3% of assets yearly — about triple the going rate — and discloses the fee plainly; clients sign willingly. Under NASAA's ethics conventions the fee is:

A. Acceptable — disclosure plus consent settles it

B. Unethical if unreasonable, even though fully disclosed and agreed to

C. Acceptable if billed quarterly

D. A performance fee

104. (1 pt) **Lesson 6.3**

An index rises 14% over two years, but the exchange-traded NOTE tracking it becomes nearly worthless. The most likely cause:

A. Market risk overwhelmed the index

B. The issuing bank failed — an ETN is its unsecured debt, so the holder bears the issuer's credit risk no matter how the index performs

C. The fund's portfolio manager underperformed

D. Regulators froze the index

105. (1 pt) **Lesson 8.4**

A client enters a sell stop at $55 on a stock trading at $60. Bad news sends the next opening trade to $52. The client's order:

A. Fills at $55, the stop price

B. Is triggered and fills as a market order near $52

C. Is canceled by the gap

D. Becomes a limit order at $55

106. (1 pt) **Lesson 10.3**

Under the NASAA custody conventions, which arrangement gives an adviser custody of client assets?

A. Authority to deduct its advisory fees directly from client accounts

B. Choosing which securities to buy for the account

C. Receiving a client's check made out to the adviser by mistake and returning it within three business days

D. Recommending a qualified custodian

107. (1 pt) **Lesson 3.4**

A fund's yearly returns were 4%, 6%, 5%, 35% and 5%. A client worries the 35% year distorts the picture. Which average is LEAST affected by that outlier?

A. The arithmetic mean

B. The median

C. The range

D. The standard deviation

108. (1 pt) **Lesson 6.3**

A client wants to hold a 2x leveraged index fund for five years to "double the market's return." The IAR should explain that:

A. The plan is sound if the index rises

B. The fund resets daily, so multi-year results drift away from twice the index — it is built for single-day exposure, not long holding

C. Leverage is prohibited in mutual funds

D. The fund guarantees twice the index annually

109. (1 pt) **Lesson 8.4**

Which orders are placed BELOW the current market price?

A. Buy limits and sell stops

B. Buy stops and sell limits

C. All limit orders

D. All stop orders

110. (1 pt) **Lesson 10.3**

On Monday a client orally grants her ADVISER discretion over the account. On Tuesday the adviser buys bonds for her without further contact. Under the NASAA convention this is:

A. A violation — written authority must precede any discretionary trade

B. Permitted — an adviser may act on oral discretion for up to ten business days while obtaining written authority

C. Permitted indefinitely on the oral grant

D. Permitted only for sales, not purchases

111. (1 pt) **Lesson 8.4**

Under Regulation T (50% in this example), a client buying $18,000 of stock on margin must initially deposit:

A. $18,000

B. $4,500

C. $9,000

D. $3,600

112. (1 pt) **Lesson 10.3**

A customer deposits $12,000 in currency, then asks the firm to "keep it quiet." Under the Bank Secrecy Act conventions, the firm:

A. Files a Currency Transaction Report for the cash deposit over $10,000 — and if activity seems designed to involve illegal funds, files a SAR without ever telling the customer

B. Files nothing if the customer objects

C. Warns the customer before filing any report

D. Splits the deposit into two smaller ones to avoid paperwork

113. (1 pt) **Lesson 6.3**

Under Regulation D, which individual qualifies as an accredited investor (in this example, using the standard thresholds)?

A. Maren, whose net worth is $1.3 million including her $600,000 home equity

B. Josef, who earned $210,000 in each of the last two years

C. Tilda, who earned $150,000 once, three years ago

D. Any investor who signs a risk-acknowledgment form

114. (1 pt) **Lesson 3.4**

A portfolio's returns are approximately normally distributed with a mean of 8% and a standard deviation of 12%. In about 68% of years, its return should fall between:

A. −16% and 32%

B. −4% and 20%

C. 0% and 16%

D. 8% and 20%

115. (1 pt) **Lesson 8.4**

A firm fills a customer's buy order out of its own inventory. In this trade the firm acted as:

A. An agent, earning a commission

B. A principal (dealer), earning a markup

C. A fiduciary, earning a management fee

D. An underwriter

116. (1 pt) **Lesson 10.3**

An adviser holds client assets itself, prints its own account statements, and reports returns that never vary, year after year. A prospective client should recognize, as Madoff's investors eventually did, the missing safeguard is:

A. A performance-fee agreement

B. An independent qualified custodian holding the assets, with statements the adviser does not write and a surprise examination

C. A larger advertising budget

D. A longer track record

117. (1 pt) **Lesson 6.4**

A call option with a $50 strike trades at a $6 premium while the stock trades at $54. The option's intrinsic value and time value are:

A. $6 and $0

B. $4 and $2

C. $2 and $4

D. −$4 and $10

118. (1 pt) **Lesson 8.5**

Dara bought a stock at $50, collected $2 in dividends, and sold at $56. Her holding period return was:

A. 12%

B. 16%

C. 4%

D. 10.7%

119. (1 pt) **Lesson 10.4**

"An IAR may share in the profits and losses of a client's account if the client and the employing firm both consent in writing." This statement is:

A. True — that is the standard rule

B. False — that is the AGENT'S rule; an investment adviser representative may never share in a client's account

C. True for family accounts only

D. True if the sharing is proportional to invested capital

120. 1 pt **Lesson 6.4**

Which option position carries UNLIMITED potential loss?

A. Buying a call

B. Buying a put

C. Writing a call without owning the stock

D. Writing a covered call

121. 1 pt **Lesson 3.5**

An adviser tells a client, “No matter how many securities we add, the portfolio will still carry this risk.” The adviser is describing:

A. Business risk

B. Market risk

C. Liquidity risk in a thinly traded stock

D. The risk of poor management at one company

122. 1 pt **Lesson 8.5**

To evaluate a portfolio manager’s skill without distortion from the client’s deposits and withdrawals, use:

A. Dollar-weighted return

B. Time-weighted return

C. Holding period return

D. After-tax return

123. 1 pt **Lesson 10.4**

Match the violation: an agent with full discretion trades a retiree’s small account dozens of times monthly, generating large commissions; a second agent buys a stock in a client’s account with no authority at all. These are, respectively:

A. Churning; unauthorized trading

B. Unauthorized trading; churning

C. Front running; selling away

D. Both are suitability violations only

124. (1 pt) **Lesson 6.5**

Which annuity is a security requiring a prospectus, and why?

A. A fixed annuity, because it pays guaranteed interest

B. A variable annuity, because its value rides on separate-account portfolios and the owner bears the investment risk

C. A traditional equity-indexed annuity, because it references a stock index

D. None — all annuities are insurance products

125. (1 pt) **Lesson 8.5**

An adviser benchmarks a small-cap U.S. stock fund. The appropriate index is:

A. The S&P 500

B. The Dow Jones Industrial Average

C. The Russell 2000

D. The MSCI EAFE

126. (1 pt) **Lesson 10.4**

A print-shop employee reads a confidential merger document, tips his cousin, and the cousin makes a $20,000 profit trading the target's stock. Which is TRUE?

A. Only the cousin is liable, since the printer never traded

B. Both are liable — tipper and tippee alike — and the civil penalty can reach three times the profit, $60,000 in this example

C. Neither is liable, since neither works for the company

D. The trade is legal because the information proved accurate

127. (1 pt) **Lesson 3.5**

In a corporate liquidation, which order of payment is correct?

A. Preferred stock, subordinated debentures, secured creditors, common stock

B. Secured creditors, unsecured creditors and debentures, subordinated debentures, preferred stock, common stock

C. Common stock, preferred stock, debentures, secured creditors

D. Secured creditors, preferred stock, debentures, common stock

128. 1 pt **Lesson 6.5**

Edda, 67, withdraws $15,000 from her nonqualified variable annuity before annuitizing. She invested $60,000; the contract is worth $85,000. The withdrawal is taxed as:

A. A tax-free return of principal

B. $15,000 of ordinary income — earnings come out first, LIFO

C. A long-term capital gain

D. Ordinary income plus a 10% penalty

129. 1 pt **Lesson 8.5**

An analyst assigns a stock a 30% chance of returning +20%, a 50% chance of +8%, and a 20% chance of −10%. The expected return is:

A. 6.0%

B. 8.0%

C. 9.3%

D. 12.0%

130. 1 pt **Lesson 10.5**

Under Regulation S-P, a firm must give customers the chance to opt out of:

A. Receiving account statements

B. The firm sharing their nonpublic personal information with nonaffiliated third parties

C. Internal use of their information by the firm itself

D. Lawful information requests from regulators

ANSWER KEY

1. C. The C corporation is itself a taxpayer — and its shareholders are taxed again on dividends, the "double taxation" the exam names. Partnerships, S corporations and sole proprietorships pass income through to their owners.
2. B. Advice about securities, as a business, for compensation — the planner has all three prongs. The blogger lacks compensation, the neighbor lacks the business element, and purely clerical staff are neither advisers nor IARs.
3. B. A repo is a sale with a promise to repurchase, functioning as a collateralized overnight loan. The banker's acceptance is the trade-finance instrument — the two are the classic swap pair in this lesson.
4. B. Expansions and contractions are periods; peaks and troughs are the turning points between them. Cycles repeat in shape, not on schedule, so D fails too.
5. C. Risk tolerance has two parts, ability and willingness, and when they conflict the adviser follows the more conservative. "Proceed with higher risk because he can afford it" is the planted wrong answer.
6. B. Capital Gains read a fiduciary duty into the Advisers Act: full disclosure and the client's interest ahead of the adviser's own. Suitability is the broker-dealer's traditional, lesser standard — the two must not be swapped.
7. B. Bills run a year or less, notes 2 to 10 years, bonds 20 or 30. Seven years lands squarely in note territory — the maturity match is pure, fast recall on the exam.
8. B. The profile — goals, financial situation, risk tolerance, horizon — comes before any product or strategy. Any choice that picks an investment before completing the profile is wrong by order of operations.
9. B. A conflict of interest is not automatically illegal — the fiduciary breach is the failure to disclose it. The cure is disclosure, not necessarily abstinence; concealment is what turns a conflict into fraud.
10. C. GDP counts final goods and services newly produced within the country's borders. Transfer payments, used goods and trades of existing securities involve no new production, so A, B and D are all excluded.
11. B. TIPS fix the rate and inflate the principal; each payment is the fixed rate on the adjusted amount. The yearly principal adjustment is taxable as it accrues — phantom income — so C is the planted trap.
12. B. Only the trustee instructs on a trust account, and the trustee is bound by the document and the prudent investor rule — managing the portfolio as a whole for the trust's purposes. Beneficiary preferences do not override either.

13. B. Primary-market sales fund the issuer; every exchange trade is secondary, with proceeds going to the selling investor. A, C and D are all secondary-market events in different clothes.
14. B. Ginnie Mae alone is full faith and credit; Fannie Mae and Freddie Mac are government-sponsored enterprises without it. The line between them is tested constantly, and A grants the guarantee one agency too far.
15. B. Net the gains and losses first: a $6,000 net capital loss. Up to $3,000 offsets ordinary income each year, and the rest carries forward indefinitely.
16. B. The SEC judges nothing about an investment's merit, and claiming regulatory approval is itself a violation. The same rule binds state Administrators — clearance is never endorsement.
17. C. Cyclical industries — autos, homebuilding, steel, luxury goods — rise strongly with the cycle, so they are the recovery play. A and B are defensive holdings for downturns, and D is counter-cyclical.
18. B. $\text{TEY} = 4.2\%/(1 - 0.30) = 4.2/0.70 = 6.0\%$, which beats the 5.5% corporate. A multiplies by 1.3 and C multiplies by 0.7 — both built from the wrong operation.
19. B. Buying the same (or a substantially identical) security within 30 days before or after a loss sale is a wash sale: the loss is disallowed but not lost — it raises the new shares' basis. The calendar year is irrelevant; only the 30-day window counts.
20. B. The name mocks promotions backed by nothing but sky; Kansas led in 1911, decades before the federal acts. They are state laws — the Uniform Securities Act of 1956 is their model — not acts of Congress.
21. B. Inheritance steps the basis up to fair market value at death ($50) and makes the holding long-term automatically. Had the uncle GIVEN her the shares in life, she would carry over his $10 basis — the gift/inheritance contrast is the tested pair.
22. B. No sponsor is required — Form U10 is the self-enrollment route (Form U4 for firm-sponsored candidates) — and the waits run 30, 30, then 180 days. Thresholds and fees change, so candidates verify them at nasaa.org and finra.org the month they enroll.
23. B. A Eurodollar bond pays in dollars though issued abroad, so the U.S. holder faces no exchange-rate exposure. On foreign bonds generally, the first risk the exam wants named is currency risk — this is its mirror question.
24. C. Duration of unemployment, the prime rate and the CPI turn only after the economy has. Initial jobless claims — the tempting twin — are leading, because

layoffs rise early in downturns.

25. C. Specific identification lets the client name the exact lot sold and so choose the gain or loss. FIFO is merely the default (oldest shares first, often the largest gain), and average cost is the familiar mutual fund method.
26. C. Under $100 million: states. $110 million and up: SEC. Between the two lines the adviser may choose — and an SEC registrant need not switch back to the states until it falls below $90 million. “Both” is never the answer.
27. B. Quotes are percent of $1,000 par: $98.5\% \times \$1{,}000 = \$985$ per bond, so ten bonds cost $9,850. Choice A prices one bond, not ten.
28. B. Defined benefit: the employer promises an outcome and bears the risk. Defined contribution reverses it — the employee’s balance is the benefit. The PBGC insures failed defined benefit plans only up to limits, a backstop rather than the risk-bearer.
29. B. NSMIA leaves the state two things: notice filings with fees, and antifraud jurisdiction, which survives over everyone. Registration authority over the federal covered adviser belongs to the SEC alone, and no regulator ever approves strategies.
30. B. $(260.0 - 250.0)/250.0 = 4\%$. Choice A reads the 10-point move as a percent, and C divides by the ending index instead of the starting one.
31. B. The put is the holder’s mirror of the issuer’s call: calls serve the issuer when rates fall; puts serve the holder when rates rise. Choice A describes the call feature’s moment, not the put’s.
32. C. The Roth is funded after-tax, grows tax-free, and never forces lifetime RMDs on its owner. A describes the traditional IRA’s possible deduction, B its RMDs, and D is backwards — the Roth is the IRA with contribution income limits.
33. C. Banks are outside the definition — excluded, not exempt. The vocabulary is graded: an excluded person was never reached by the law; an exempt person is inside the definition but excused from registration (and still subject to antifraud).
34. B. $50/1{,}100 \approx 4.5\%$. Dividing by par gives the 5% decoy; a premium bond’s current yield always sits below its coupon, which is also how you sanity-check the answer.
35. B. The rollover must equal the gross distribution; anything short of $100,000 is a taxable (and, at 45, penalized) distribution. A direct trustee-to-trustee transfer would have avoided the withholding entirely — and such transfers are unlimited, unlike the once-per-12-months rollover.

36. B. The LATE exclusions (lawyers, accountants, teachers, engineers) cover advice solely incidental to the profession with no special compensation. A paid stock-picking seminar fails both tests, so she is squarely inside the definition.
37. B. Selling securities drains reserves: money tightens, rates rise, bond prices fall by the see-saw, and tight money tends to strengthen the dollar. C sends rates and bond prices the same direction; D confuses the Fed (which trades Treasuries) with the Treasury (which issues them).
38. C. The 403(b) — the tax-sheltered annuity — belongs to public schools and 501(c)(3) nonprofits. The SEP suits the self-employed, and the SIMPLE is limited to employers with 100 or fewer employees and no other plan.
39. B. The de minimis exemption requires no place of business in the state and no more than five non-institutional clients in 12 months; Calloway has four, and the insurance companies are institutional. One office in the state would kill the exemption regardless of client count.
40. C. Long maturity plus low (here, zero) coupon means the longest duration and the hardest price swings — exactly what a falling-rate forecast wants. The short high-coupon bond in A is the least responsive of the four.
41. B. The match is an instant, guaranteed return on the contribution — nothing an IRA menu offers competes with it. Capture the full match first; other accounts come after.
42. B. The exempt-security escape belongs to representatives of certain ISSUERS, never to a broker-dealer's agents. An individual effecting securities trades for a BD registers, whatever the product.
43. B. Open market operations are the workhorse, and they belong to the Federal Open Market Committee. The reserve requirement is the bluntest and rarest tool, and the prime rate is set by banks, not the Fed.
44. B. Cumulative voting gives the same total votes (shares × seats) but the freedom to pile them on a single candidate — the small holder's one real lever. It never grants MORE votes, a distinction the exam checks; D is not a voting method at all.
45. C. ERISA covers private-sector employer plans. The state pension is the classic wrong answer dressed as right — government and church plans sit outside ERISA, and an IRA is not an employer plan at all.
46. B. The USA convention: effective at noon on the 30th day after a complete filing unless the Administrator acts sooner or a proceeding is pending. D describes

registration by qualification for securities, not persons; all registrations then renew each December 31.

47. C. Three years of arrears ($15) plus the current year's $5 total $20. Choice B is built for those who forget the current year; A pays only this year and forgets the arrears.

48. B. The safe harbor shifts responsibility for the participant's choices to the participant. Choosing and monitoring the menu remains the fiduciary's duty forever — the exam tests exactly that boundary.

49. B. Discretion alone: $10,000; custody: $35,000 — amounts set by rule, so a question that stipulates different figures controls. Remember too the record-keeping pair: advisers five years (first two in the office), broker-dealers three.

50. C. A weak dollar means each euro of interest and principal converts into more dollars, so American holders of foreign securities gain. Tourists and importers pay more, and the foreign holder of dollar bonds watches them shrink in his own currency.

51. B. On or after the ex-date the stock trades without its dividend; the seller keeps it. Note too that the exchange or FINRA sets the ex-date — the board sets declaration, record and payable dates.

52. B. ERISA forbids the transaction itself — selling to, buying from or lending between a plan and a party in interest — however fair the terms. "But the price was fair" is the standing bait.

53. C. For a federal covered adviser, the IAR notifies the Administrator; when the employer is a STATE-registered adviser, the firm gives the notice. The exam swaps the two — read which kind of adviser employs the IAR before answering.

54. A. A split changes share count and price in offsetting proportion: $200 \times \$90 = 400 \times \$45 = \$18{,}000$ either way, with basis adjusted and nothing taxable on receipt. Write "total value unchanged" before touching the choices.

55. B. The 529 has high limits, no contributor income limits, donor control, and the five-year front-load of the annual exclusion. The Coverdell is capped at $2,000 a year with income limits, the UTMA is the child's irrevocable property, and a joint account with a minor does not exist.

56. B. All four Howey prongs are present: investment of money, common enterprise, expectation of profit, from others' efforts. This is SEC v. W.J. Howey itself — and the same four questions unmask every ostrich farm, rental program and coin scheme the exam dresses it in.

57. C. Real return ≈ nominal − inflation: $6\% - 2.5\% = 3.5\%$. The unsubtracted 6% is the planted near-miss, and B adds when it should subtract.

58. B. An UTMA gift is complete and irrevocable, held under the child's Social Security number and spendable only for her benefit. Custodianship is management authority, not ownership.

59. B. In a fixed annuity the insurance company bears the investment risk, so it is insurance, not a security; the variable annuity, where the owner bears the risk, IS one. The exam plants the two annuities in adjacent choices on purpose.

60. B. Restricted stock of a reporting company seasons in six months (one year for non-filers, as of 2026); once seasoned, a non-affiliate sells freely. Volume limits belong to affiliates — the two conditions are sorted by who holds what.

61. B. JTWROS means the survivor automatically takes all, outside probate — survivorship defeats the will. Tenants in common is the form in which a decedent's fractional share would pass by his will.

62. B. Exemption here attaches to HOW the sale occurs, not what is sold: an unsolicited customer order is the classic exempt transaction. Choice A mislabels the same facts — the exam lists both labels and grades whether you read which one is doing the work.

63. A. Credit spreads widen when lenders grow fearful: investors demand extra yield for default risk and crowd into Treasuries. Narrowing spreads are the signature of confidence — the reverse reading is the trap.

64. C. The NQSO spread is ordinary income at exercise — the employer even withholds on it. A and D belong to the incentive stock option, whose spread is only an AMT adjustment at exercise with capital-gain treatment possible later.

65. B. Beneficiary designations on IRAs, life insurance and TOD registrations beat the will — which is why advisers review designations at every life event. (A QDRO, by contrast, is the court order that divides a qualified plan at divorce without the 10% penalty.)

66. B. Registration by coordination rides the federal registration and turns effective with it. Qualification — the purely intrastate door — waits for the Administrator's order, and notice filing is the route for federal covered securities such as mutual fund shares.

67. B. $P = D_1/(r - g) = 3.00/(0.11 - 0.05) = \$50$. The dividend given is already D_1, so it is NOT grown again (D does that); A divides by r alone, and C adds g to r.

68. C. The cash flow statement traces real cash in and out over the period in exactly those three categories. Accrual net income on the income statement can move

opposite to cash in the same year — which is why the statement exists.

69. B. $3\% + 1.25 \times (11\% - 3\%) = 3\% + 10\% = 13\%$. Choice A is the classic trap — multiplying beta by the whole market return without first subtracting the risk-free rate.

70. C. Discipline requires the public interest PLUS a listed cause; "public interest" alone is never enough, and inexperience alone is never grounds. A recent qualifying conviction is the classic listed cause the exam pairs with the trap in choice A.

71. B. A perpetual fixed payment is the zero-growth model: $P = D/r = 4/0.08 = \$50$. This is the Gordon model with g = 0 — the exam dresses the question in preferred stock on purpose.

72. B. $(10\% - 2\%)/16\% = 0.50$ — excess return per unit of TOTAL risk. The denominator is standard deviation, never beta; A forgets to subtract the risk-free rate.

73. C. The civil remedy is price paid plus interest MINUS income received: $10{,}000 + 600 - 250 = \$10{,}350$. Choice B forgets to subtract the dividends; D adds them instead.

74. B. The proxy statement, sent before the shareholder vote, carries board candidates and executive compensation. The 10-K holds the audited annual financials, the 10-Q the unaudited quarterlies, and the 8-K reports major events within four business days.

75. C. Only the strong form claims that even inside information is already in prices. Weak says charts are useless; semi-strong says all public information is useless — neither speaks to insiders, so they survive.

76. A. The 1956 USA convention: three years from the sale, or two years from discovery, whichever comes FIRST. Choice C reverses the two numbers — when two choices differ only in a number, the number is the question.

77. A. Moving averages and market breadth are market-generated data — the technician's material. B and C are fundamental tools, and D describes top-down fundamental analysis.

78. B. CAPM expected $2\% + 0.8 \times (12\% - 2\%) = 10\%$; the fund earned 12%, so alpha is +2%. Choice A compares raw returns and ignores that the fund took only 0.8 of the market's risk — the exam grades risk-adjusted.

79. B. The brochure — services, fees, conflicts, disciplinary history — comes at or before the contract, then annually by delivery or offer. It is the plain-English disclosure document, not an optional courtesy.

80. B. The load is a percent of the OFFERING price, so divide: $POP = 18.80/(1 - 0.06) = 18.80/0.94 = \$20.00$. Choice A multiplies NAV by 1.06 — the standing error this formula exists to catch.

81. B. $(600{,}000 - 240{,}000)/300{,}000 = 1.2$. Choice A is the current ratio, for anyone who left the inventory in — the acid test exists precisely to take it out.

82. C. Deliberately moving AWAY from targets on a market view is tactical allocation, a form of timing. Strategic allocation sets the long-term targets; rebalancing moves the portfolio BACK to them.

83. B. "We are registered" is lawful fact; "approved" is the violation, because no regulator vouches for any adviser or investment. The same line separates lawful from unlawful in every registration-advertising question.

84. B. Staying silent — or steering a purchase just under a breakpoint to earn a bigger commission — is the violation called a breakpoint sale. A letter of intent (13 months, backdatable 90 days) or rights of accumulation can earn the lower charge; C and D would raise the client's costs.

85. B. Weight each return: $0.5 \times 10 + 0.4 \times 5 + 0.1 \times 2 = 5 + 2 + 0.2 = 7.2\%$. Choice A is the simple average of the three returns — the standing error the weighted formula exists to prevent.

86. C. The classic rule banned testimonials outright; the modern SEC and NASAA rules permit them only in full disclosure dress. On the exam, an undisclosed or paid testimonial without those disclosures is always a violation — truth alone never cures it.

87. B. Forward pricing: every open-end purchase or redemption is filled at the NEXT computed NAV, never the last printed one. Open-end shares do not trade intraday at a moving price — payment then follows within seven days.

88. B. Dividend yield uses the CURRENT market price: $2/50 = 4\%$. Choice A divides by the original cost — the planted error — and yield says nothing about the gain since purchase.

89. B. Low P/E, low price-to-book and out-of-favor names are the value signature. Growth is the reverse — high P/E, rapid earnings growth — and income investing chooses securities for the cash they pay.

90. B. Assignment of an advisory contract requires client consent, full stop. The near-miss is the partnership rule — a mere change in a partnership's membership requires notification, but a sale of the book is an assignment.

91. B. Exchange-traded shares — closed-end funds and ETFs — can be margined and shorted like any listed stock. Open-end shares exist only through continuous

issue and redemption with the fund, so they never can.

92. B. If prices already reflect information, efforts to beat the market add cost without edge, so the efficient-markets believer indexes. A, C and D are all forms of active effort her premise says cannot consistently win.

93. B. Performance-based fees are prohibited except for qualified clients, and neither enthusiasm, consent nor disclosure substitutes for the thresholds. An AUM percentage — which grows with the account but is not a share of gains — is the lawful alternative.

94. C. $PV = 10{,}000/(1.08)^2 = 10{,}000/1.1664 \approx \$8{,}573$. Choice A compounds instead of discounting — if your "present value" is bigger than the future sum, you went the wrong way; B discounts only one year.

95. B. She bought $60 + 50 + 40 = 150$ shares for $1,800: average cost $= 1{,}800/150 =$ $12.00. Choice A is the average PRICE — dollar-cost averaging always leaves cost below price when prices vary, and the choices contain both numbers on purpose.

96. A. The safe-harbor test is whether the item benefits CLIENTS through better advice — research, market data, analytics qualify. Rent, marketing and junkets benefit the adviser's lifestyle and fall outside, whatever they cost.

97. B. "Fixed portfolio, supervised but not managed, with a termination date" is the UIT signature — no adviser, no board, redeemable units. Every other choice is managed or perpetual.

98. B. Rebalancing sells what has grown overweight and buys what has fallen behind, restoring the targets. Choice A — adding to the winner — is momentum-chasing, the exact opposite of the discipline, and the answer many students pick.

99. C. Disclosure and consent can permit the cross itself, but recommending the trade to both sides is forbidden without exception — the adviser cannot honestly serve buyer and seller in the same trade. The exam's trap choice says consent cures even that; it does not.

100. B. Memorize the order: 75% assets, 75% income from real estate, 90% of taxable income distributed. Choice A swaps the numbers — exactly the way the exam writes the wrong answer.

101. C. YTM is the bond's internal rate of return — IRR wearing a bond's clothing. A is the nominal yield and B the current yield, the two near-miss definitions the exam places beside it.

102. B. A protective put is insurance on a holding — a guaranteed minimum sale price. A covered call generates income but caps the upside and barely cushions a fall; it hedges nothing below the premium received.

103. B. Reasonableness is its own requirement: an unreasonable fee is unethical no matter how clearly disclosed or cheerfully paid. The quiet word "reasonable" is doing the work in this question, as it often does on the exam.

104. B. An ETN owns nothing; it is one bank's IOU promising an index's return. Credit risk of the issuer is the tested answer, and C fails twice — an ETN has no portfolio and no manager.

105. B. A triggered stop becomes a MARKET order with no price guarantee, so the gap fills it near $52. Choice D describes a stop-limit order, which would have protected price but risked not executing at all in the fall.

106. A. Fee-deduction authority is custody under the model-rule convention, bringing the safeguards with it — qualified custodian, notice to the Administrator, at least quarterly statements, annual surprise exam. Choice B is discretion, a different authority with different rules, and C is the recognized non-custody escape.

107. B. The median — the middle of the sorted values (5%) — barely stirs when one extreme value joins the list, while the mean is dragged up to 11%. The range and standard deviation are measures of spread and are enlarged by the outlier, not resistant to it.

108. B. Daily reset is the phrase to find: compounding day by day, a leveraged or inverse fund's long-period return can land far from the advertised multiple, even losing money while the index gains. That makes it unsuitable for long-term holders.

109. A. A buy limit waits below for a cheaper price; a sell stop waits below as protection on a long position. Buy stops and sell limits sit above the market — including the short seller's protective buy stop.

110. B. The NASAA convention gives the ADVISER a ten-business-day oral window; a broker-dealer AGENT needs written authority before the first discretionary trade. Choice A is the agent's rule transplanted — the exam's favorite swap in this lesson.

111. C. The Reg T initial deposit is 50% of the purchase: $0.50 \times 18{,}000 = \$9{,}000$. Regulation T is the Federal Reserve's rule governing broker-dealer credit.

112. A. Cash over $10,000 in a day triggers a CTR; suspicious activity of $5,000 or more (under the convention) triggers a confidential SAR the customer must

never learn of. Choice D is the crime of structuring — deliberately splitting deposits to dodge the CTR.

113. B. The income test is $200,000 ($300,000 with a spouse) in each of the last two years, which Josef meets. Maren fails because the net worth test EXCLUDES the primary residence — leaving her at $700,000 — and no form substitutes for the thresholds.

114. B. One standard deviation either side of the mean — $8\% \pm 12\%$ — covers about 68% of outcomes. Choice A is the two-sigma band, which covers about 95%; the exam swaps those two constantly.

115. B. Trading from its own inventory makes the firm a principal, compensated by a markup — one trade, one capacity, one form of compensation. Acting as agent (broker) means matching the customer with another party for a commission.

116. B. Madoff's fraud lived on self-custody and self-printed statements; an independent qualified custodian, third-party statements and the annual surprise exam are the checklist that would have exposed it. Returns too smooth to be true complete the warning — trusted names are exactly who the safeguards exist for.

117. B. Call intrinsic value = market − strike = $54 - 50 = \$4$; the rest of the premium, $2, is time value. Intrinsic value is never negative, so D is impossible by definition.

118. B. HPR counts income AND appreciation: $(6 + 2)/50 = 16\%$. Choice A leaves the dividend out of the numerator — the error this question is always built around.

119. B. Profit-sharing with written consents belongs to broker-dealer agents. For IARs the answer is never — the exam loves transplanting the agent's rule onto the adviser's side, and grades the difference.

120. C. The naked call writer must deliver stock at the strike no matter how high the price climbs — unlimited risk, shared only with short stock. Option buyers can lose only the premium, and the covered writer's "risk" is merely the upside surrendered above the strike.

121. B. Market risk — with interest-rate, inflation, currency and political risk — is systematic: it survives any number of holdings. A, C and D are company-specific risks that diversification largely eliminates.

122. B. Time-weighted return measures the portfolio itself, immune to cash-flow timing — the standard for judging managers and funds. Dollar-weighted (IRR) reflects the investor's own deposit timing: it judges the investor's experience, not the manager.

123. A. Excessive trading for the account's objectives and resources is churning; trading with no authority at all is unauthorized trading — and recommending the wrong thing with authority would be unsuitability. The exam separates the three by exactly those words.

124. B. The dividing line is who bears the risk: in a fixed (and traditional indexed) annuity the insurer's general account bears it — insurance; in a variable annuity the owner's separate account bears it — a security sold by prospectus.

125. C. The Russell 2000 measures U.S. small-caps. The S&P 500 (cap-weighted large caps) and DJIA (30 price-weighted giants) are the standing mismatch traps, and EAFE tracks international developed markets.

126. B. Passing material nonpublic information creates liability for the tipper even without a trade, and the tippee who trades is equally caught; the civil penalty runs up to treble the profit gained or loss avoided. Insider status is not limited to employees — the printer scenario is a classic.

127. B. Creditors of every rank are paid before stockholders of any rank: secured first, common last, with subordinated debentures behind other debt but ahead of preferred. D commits the favorite error — a stockholder collecting before a creditor.

128. B. Pre-annuitization withdrawals are LIFO: the $25,000 of earnings comes out first, so the whole $15,000 is ordinary income — deferral never converts earnings into capital gain. No 10% penalty applies because she is past 59½.

129. B. $0.3 \times 20 + 0.5 \times 8 + 0.2 \times (-10) = 6 + 4 - 2 = 8\%$. Forgetting to subtract the probability-weighted loss branch gives 10% — the near-miss these questions plant.

130. B. The opt-out governs sharing with NONaffiliated third parties; internal use, service providers and regulatory requests are different regimes. S-P also requires initial and annual privacy notices and written safeguards for customer records.