



CFA Institute

Guide to 2022 CFA[®] Program Curriculum Changes



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Foreword

A key CFA Institute strategy is to ensure that the CFA® Program curriculum equips candidates with current, relevant knowledge and skills that reflect investment management practice. To deliver on this strategy, we keep our learners at the center of everything we do.



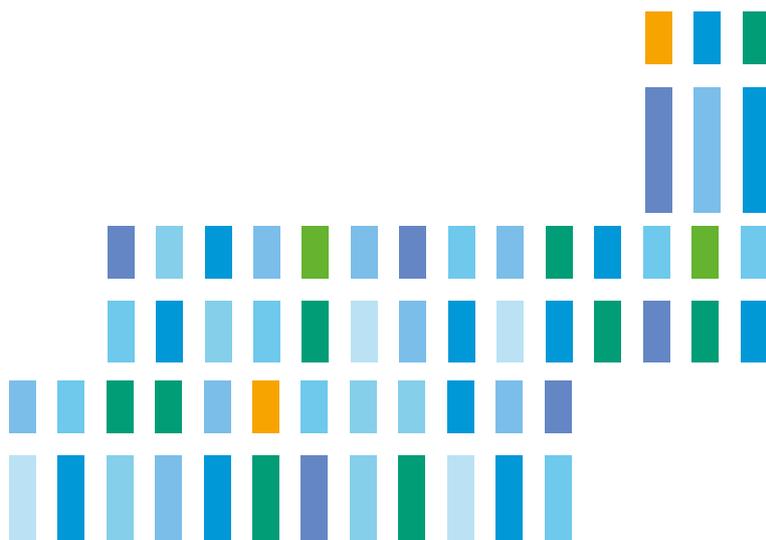
As part of our commitment to prioritizing the interests of our candidates, CFA Institute reduced the impact of pandemic-related exam disruptions by freezing the 2020 CFA Program curriculum for 2021 exam administrations. This meant that all candidates who took exams in 2021 were tested on the 2020 CFA Program curriculum.

Despite this freeze for candidates, the curriculum continued to evolve. Extensive work through practice analysis and curriculum development has resulted in virtually all levels of the curriculum being updated or revised within the past four years. We have updated data exhibits, added new cases, streamlined readings to be better learning experiences, and improved end-of-reading questions. All of these efforts better align the CFA Program curriculum with what CFA charterholders do daily on the job. We can safely say that the CFA Program curriculum today is the most up-to-date curriculum since it was established in 1963.

CFA Program Level I curriculum was updated broadly in 2020 and the Level II curriculum was updated in 2022. Significant changes between the 2020 curriculum and the new 2022 curriculum are as follows:

- The Ethical and Professional Standards topic area has moved to the end of each level and an Applications reading has been added to each level that explicitly shows the Code and Standards in operation on topics and material covered in curriculum content for that level.
- Environmental, social, and governance (ESG) coverage at Level I was updated and expanded to cover the most recent developments and their impact on investment management.
- The Level I Quantitative Methods topic area was revised to be more engaging and digital-friendly and now includes code snippets as well as Excel commands to support the data presentation. Level I now ends with a new Introduction to Regression reading that focuses on investment applications. At Level II, Machine Learning has been updated to apply several data cases to investment problems. In addition, a new Backtesting & Simulation reading provides a sophisticated but accessible introduction to explain how these tools are used in evaluating investment strategies and to compare their strengths and weaknesses.

- The Corporate Finance topic area has transformed into Corporate Issuers at Levels I and II. The focus of the new Corporate Issuers topic area is on understanding the motivations, interactions, and impacts on investors of securities issued by corporations. Corporate Issuers brings together foundation areas like economics and financial statement analysis to provide a jumping off point for equity and fixed-income valuation.
- The Fixed Income readings across Levels I, II, and III have been revised and aligned for consistency. This includes notation simplification and alignment, elimination of duplication, and updating of concepts such as LIBOR to Market Reference Rates, as well as a complete revision of the challenging Yield Curve Strategies and Credit Strategies readings at Level III for clarity and relevance.
- The Alternative Investments readings have been updated at Levels I and II, including a new introductory reading at Level I, and revisions to Private Equity and a single reading on real estate at Level II.
- The Level III readings have been extensively revised, replacing old content and refocusing on new content that captures current practice. The majority of readings at Level III are less than four years old. The significant changes and revisions to Private Wealth Management, Institutional Investors, and Performance Evaluation reflect the new 2020 Global Investment Performance Standards (GIPS® Standards).



As the investment profession evolves, we have evolved our learning environment to keep pace between 2020 and 2022. Our Learning Ecosystem (LES)—a cutting-edge digital platform that consolidates the entire curriculum and all study tools including practice question bank and mock exams—features a personalized study plan that can adjust the learning path to suit individual strengths and weaknesses. The LES is the primary method by which we offer candidates access to all levels of the CFA Program. Moving to digital-first delivery of the CFA Program curriculum increases the accessibility of our programs globally, modernizes the learning experience, aligns with our move to computer-based testing (CBT), and supports us in maintaining fidelity to practice.

We understand that our candidates faced deferrals and other circumstances that may have prevented them from completing the CFA Program on the timeline they would have liked and acknowledge that these updates to the curriculum mean they will be tested on new content. We trust you will agree that the adjustments made to the curriculum reflect current practice and will prepare you well for what you will encounter in the industry.

This guide highlights changes to the curriculum over the past two years. As you revisit the curriculum, you will better understand and feel prepared to take on your next CFA Program exam.



John Veitch, CFA

Head, Learning Content
and Experience



Key Changes in Level I At a Glance

	# of unchanged readings	# of updated readings	# of revised reading	# of new, extensively revised, or added readings
Quantitative Methods	1	0	2	4
Economics	5	2	0	0
Financial Statement Analysis	11	0	1	0
Corporate Issuers	1	0	2	3
Equity Investments	4	0	2	0
Fixed Income	0	0	6	0
Derivatives	2	0	0	0
Alternative Investments	0	0	0	1
Portfolio Management	5	0	0	3
Ethical and Professional Standards	2	0	2	1

[Visit our website](#) for more information about changes to the 2022 Level I curriculum.



Quantitative Methods

The Time Value of Money	No Changes
Statistical Concepts and Market Returns	Dropped
Organizing, Visualizing, and Describing Data	New
Probability Concepts	Revision
Common Probability Distributions	Major Revision
Sampling and Estimation	Revision
Hypothesis Testing	Complete Revision
Introduction to Linear Regression	Complete Revision

Investment firms are increasingly using technology across the investment management value chain—from improving their understanding of clients, to uncovering new sources of alpha and executing trades more efficiently. A data-rich environment offers tremendous opportunities for investors, but turning data into useable information is not straightforward.

Organizing, cleaning, and analyzing data are crucial to the development of successful investment strategies: otherwise, analysts risk a "garbage in, garbage out" scenario in which expected outcomes do not materialize in the real world. The new "**Organizing, Visualizing, and Describing Data**" reading provides the foundation for data-driven quantitative methods, such as backtesting, simulation, machine learning, and big data projects. This reading covers a number of visualization techniques, such as tree maps, word clouds, and heat maps, which are key to understanding the inputs and outputs of investment analyses and strategies. The reading also contains a wealth of visuals and graphics to aid understanding of the application of technology in the investment industry.

Updated and streamlined coverage of key probability concepts, supported by new engaging visuals, graphics, and flowcharts are key elements of the revised "**Probability Concepts**" reading. The tools that allow us to make decisions with consistency and logic in an investment landscape loaded with risk are based on probability concepts. The revised reading presents the essential probability tools needed to frame and address many real-world problems. These tools can be applied to a variety of issues, such as predicting investment manager performance, forecasting financial variables, and pricing bonds so they fairly compensate bondholders for default risk. The reading features plenty of theory, but the focus is resolutely on the practical applications.

A revised "**Common Probability Distributions**" reading consolidates discussion of a range of key probability distributions. Also included are engaging visuals, graphics, and flowcharts to aid understanding of concepts.

Analysts are accustomed to using sample information to assess, for example, how stock markets around the world are performing. In addition to updating and streamlining coverage of existing key sampling and estimation concepts, a revised "**Sampling and Estimation**" reading introduces important new sampling techniques. The central limit theorem and estimation, the core method presented in the reading, may be used for many investment applications. The reading helps with the interpretation of statistical results based on financial data as well as with the possible pitfalls of this process.

The many engaging visuals, graphics, and flowcharts in the new "**Hypothesis Testing**" reading will aid in the selection of appropriate test statistics and in a better understanding of concepts. The six-step framework and other new content make this reading important for any future analyst or investment professional who may use hypothesis testing in their decision-making processes. This framework will now be used throughout the CFA Program curriculum for hypothesis testing in other topic areas.

An introduction to indicator variables and the presentation of different functional forms for simple linear regression models form an important part of the new "**Introduction to Linear Regression**" reading. This reading also includes code snippets for calculating simple linear regression models. The reading will aid in determining if data and regression results adhere to the assumptions underlying simple linear regression as well as creating and interpreting prediction intervals.

Economics

Topics in Demand and Supply Analysis	No Changes
The Firm and Market Structures	No Changes
Aggregate Output, Prices, and Economic Growth	Updated
Understanding Business Cycles	Updated
Monetary and Fiscal Policy	No Changes
International Trade and Capital Flows	No Changes
Currency Exchange Rates	No Changes

Five of seven readings in the Level I Economics topic area of the 2022 CFA Program curriculum remain unchanged from 2020. "**Aggregate Output, Prices, and Economic Growth**" contains new material on quantitative easing, and "**Understanding Business Cycles**" features new material on credit cycles.

Financial Statement Analysis

Introduction to Financial Statement Analysis	No Changes
Financial Reporting Standards	No Changes
Understanding Income Statements	No Changes
Understanding Balance Sheets	No Changes
Understanding Cash Flow Statements	No Changes
Financial Analysis Techniques	No Changes
Inventories	No Changes
Long-Lived Assets	No Changes
Income Taxes	No Changes
Non-Current (Long-Term) Liabilities	Revision
Financial Reporting Quality	No Changes
Applications of Financial Statement Analysis	No Changes

Only 1 of the 12 readings in the Financial Statement Analysis topic area has been revised for 2022. The "**Non-Current (Long-Term) Liabilities**" reading now includes revised material on leases and lease accounting to reflect new treatment and new examples as well as new end-of-reading questions.

Corporate Issuers (Formerly Corporate Finance)

Introduction to Corporate Governance and Other ESG Considerations	Major Revision
Uses of Capital	Revision
Sources of Capital	Major Revision
Cost of Capital—Foundational Topics	Revision
Capital Structure	Major Revision
Measures of Leverage	No Changes

The Level I curriculum was revised with an enhanced focus on capital and corporate issuers.

The updated **"Introduction to Corporate Governance and Other ESG Considerations"** reading has substantial new content, including another useful framework to guide analysts in their everyday work. This framework incorporates and explains six key ESG investment approaches: negative screening, positive screening, ESG integration, thematic investing, engagement/active ownership, and impact investing. New material on environmental and social aspects of ESG is provided in the reading as well as a discussion of ESG issues from micro- and macro perspectives.

The strategic process for determining long-term capital investment is explored in a major revision of the **"Uses of Capital"** reading. The reading now contains less detail on individual project cash flow evaluation from a company perspective. The aim is rather to equip learners with the main methods used by companies to allocate capital. The reading explains how and why sound capital allocation decisions ultimately decide the future success of many corporations. Candidates learn how analysts may assess a company's capital investment strategy and, in doing so, better evaluate corporate decisions.

A variety of debt and equity claims that companies rely on for their sources of capital are assessed in the new **"Sources of Capital"** reading. The reading also considers sources of liquidity and how to judge the liquidity positions of companies. The range of financing options (short- and long-term, internal and external) that are open to companies is discussed, along with the practical considerations of these options. The reading focuses on working capital management to assess corporate liquidity, as opposed to the management of working capital items from a company perspective (which was the previous focus of this topic).

The **"Cost of Capital—Foundational Topics"** reading was revised for 2022. The revised reading dropped material on project cost of capital analysis reflecting a corporate insider's perspective, and material on country risk premiums was moved to Level II. Finally, the reading removed content that duplicated information in the Level II **"Return Concepts"** reading.

Practical examples and explanations as to why companies' debt use varies over their lifecycles are found in a major revision to the **"Capital Structure"** reading. Conflicts that arise between company stakeholders and equity- and debtholders in particular are addressed, alongside a detailed example of why management may choose to support the former over the latter.

The case for debt in the capital structure is also assessed—with reference to the Modigliani–Miller propositions. The reading explains how capital structure is the result of factors, such as company size and maturity, which influence the financing options available to a company. The reading explains how capital structure can be significantly affected by mergers and acquisitions (M&A) as well as by the proceeds of divestments and asset sales. How capital structure is affected over time by a company's operations and dividend policies is explored.

Equity Investments

Market Organization and Structure	No Changes
Security Market Indexes	No Changes
Market Efficiency	Revision
Overview of Equity Securities	No Changes
Introduction to Industry and Company Analysis	Revision
Equity Valuation: Concepts and Basic Tools	No Changes

Two readings in the Equity Investments topic area were revised for 2022. The behavioral finance and market anomalies sections of the "Market Efficiency" reading were revised. The "Introduction to Industry and Company Analysis" reading was streamlined and includes updated approaches to the industry classification section.

Fixed Income

Fixed-Income Securities: Defining Elements	Revision
Fixed-Income Markets: Issuance, Trading, and Funding	Revision
Introduction to Fixed-Income Valuation	Revision
Introduction to Asset-Backed Securities	Revision
Understanding Fixed-Income Risk and Return	Revision
Fundamentals of Credit Analysis	Revision

All readings in the Fixed Income topic were revised for the 2022 curriculum. Some content was added in each of the six readings, which were refined to eliminate duplication and overlap. Additionally, all notations were made consistent. The content has not been overhauled, but rather, the accuracy and clarity of the existing material has been improved.

Derivatives

Derivative Markets and Instruments	No Changes
Basics of Derivative Pricing and Valuation	No Changes

Material in the Derivatives topic area of the 2022 curriculum remains unchanged from 2020.

Alternative Investments

Introduction to Alternative Investments	Major Revision
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The growing focus on the Alternative Investments topic area has been further expanded with a number of new readings across all three levels of the curriculum. This major revision broadens the coverage of alternatives and provides more detail on how to use them as part of an investment strategy. The resulting streamlined learner experience combines foundational knowledge with in-depth examination of alternative asset classes, risk management, and alternative investment structures.

"Introduction to Alternative Investments" provides the learner with foundational knowledge of five major alternative investments: hedge funds, private capital, natural resources, real estate, and infrastructure. It also covers other types of alternative investment, such as private debt and farmland. The natural resources section features a new case study (Investing Responsibly in Timberland Assets) to provide a real-life example of how investing in timberland can mitigate climate change.

The new reading provides in-depth coverage of two areas that are key for successful investing in alternatives: investment and compensation structures (general partnerships versus limited partnerships) and investment approaches (direct investment, co-investment, and investment through funds).

The reading covers areas that are essential when considering an allocation to alternative investments: general partnerships versus limited partnerships, and direct investment versus fund investment. The reading also prepares learners to conduct risk-return evaluations, fee calculations, and performance appraisal of alternative investments.

Portfolio Management

Portfolio Management: An Overview	No Changes
Portfolio Risk and Return: Part I	No Changes
Portfolio Risk and Return: Part II	No Changes
Basics of Portfolio Planning and Construction	Major Revision
The Behavioral Biases of Individuals	Added
Introduction to Risk Management	No Changes
Technical Analysis	Major Revision
Fintech in Investment Management	No Changes

Behavioral Finance is introduced now at Level I in **"The Behavioral Biases of Individuals"** reading. This reading sets out commonly recognized cognitive errors and behavioral biases in financial decision making. It explores the implications of these behaviors for aspects of financial markets not explained by the traditional efficient markets view of finance, including market anomalies and investment underperformance. The reading is a valuable addition for candidates to understand the importance of investor psychology and behavioral biases in the investment management industry.

The revised **"Technical Analysis"** reading takes a pragmatic approach to technical analysis, highlighting the main tools that can be used, and examines how technical analysis, which aims to measure market behavior, can be employed as a complement to fundamental analysis in portfolio management. Fundamental analysis may help us decide what asset to buy, but technical analysis can help us to decide when to buy it. In this sense, technical analysis becomes an integral part of the trading process.

The 50-plus technical analysis charts in the reading illustrate a range of real-life scenarios, allowing readers to develop a practical understanding of how technical analysis can help professionals in their work. A deeper dive into a (fictionalized) scenario invites readers into the offices of a Sovereign Wealth Fund, where a portfolio analyst is about to make a critical allocation decision about an existing investment in gold. How will technical analysis guide the decision and inform the execution strategy?

Investment analysis is always evolving, but never more so than today. Academic work and practices in the investment industry are constantly changing to meet the challenges of structural changes in markets. New additions to the CFA Program curriculum on investment analysis reflect these shifts and offer investment professionals up-to-date guidance based on workplace experience.

How investment professionals integrate ESG into portfolio construction is explored in an updated **"Basics of Portfolio Planning and Construction"** reading. The integration of ESG factors changes the portfolio construction process. Because ESG analysis affects both strategic asset allocation and implementation, it requires rethinking by investment managers in terms of issues such as the selection of securities, the exercise of shareholder rights, and the devising of investment strategies. The reading serves as a guide for the integration of ESG and focuses on key factors, including scarcity of natural resources, physical impacts of climate change, global economic and demographic trends, diversity and inclusion, and the rise of social media.

Ethical and Professional Standards

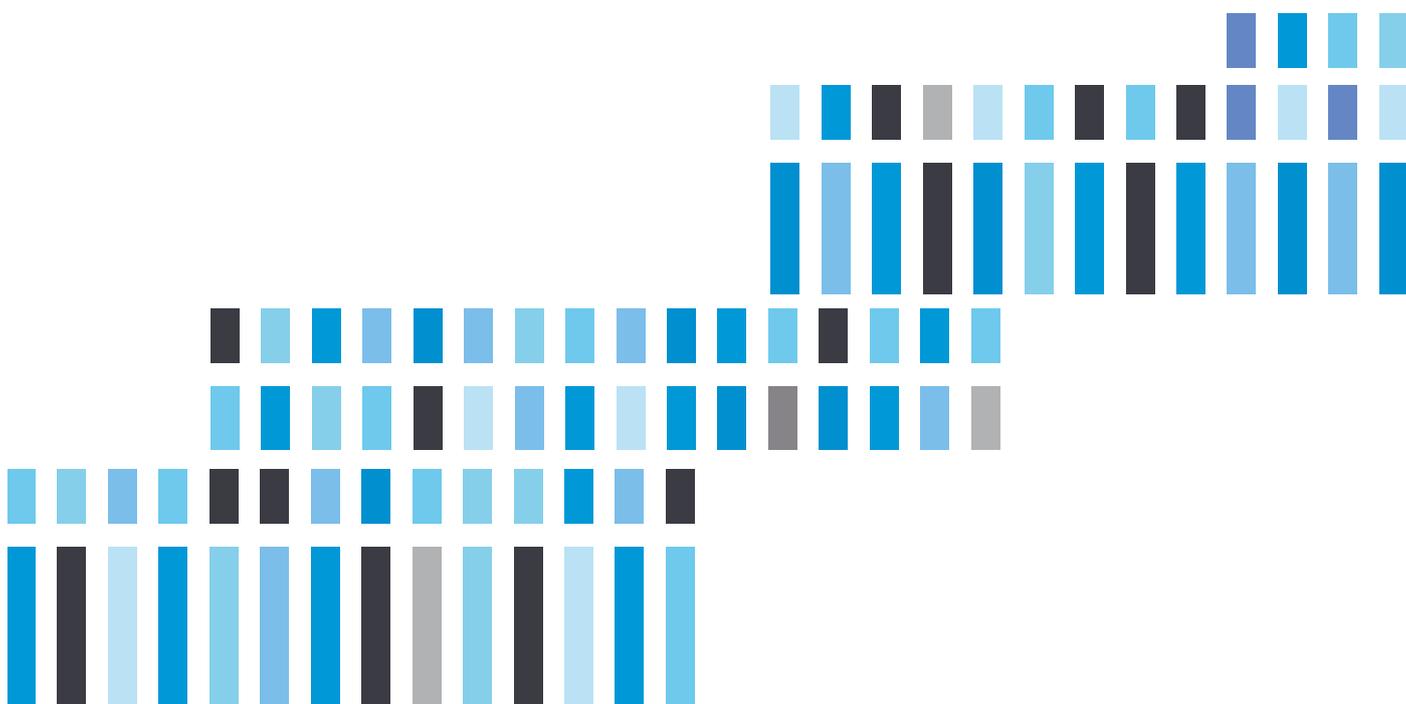
Ethics and Trust in the Investment Profession	Revision
Code of Ethics and Standards of Professional Conduct	No Changes
Guidance for Standards I-VII	No Changes
Introduction to the Global Investment Performance Standards (GIPS)	Revision
Global Investment Performance Standards (GIPS)	Dropped
Ethics Application	New

As candidates will discover as they progress through the CFA Program curriculum, ethics is a priority topic. Ethics underpins the work of investment professionals and the investment industry in general. Two readings in the Ethical and Professional Standards topic area were revised for 2022. The **"Ethics and Trust in the Investment Profession"** reading and the **"Introduction to the Global Investment Performance Standards (GIPS)"** reading were updated for accuracy and clarity.

A wholly new Level I reading for 2022 takes ethics theory and tests it in the real world. **"Ethics Application"** presents a number of short vignettes, or scenarios, inspired by real-world situations and events. The vignettes are grouped into categories, corresponding to categories in the CFA Institute Code of Ethics and Standards of Professional Conduct.

The vignettes in the reading reinforce the practices, policies, and conduct that investment professionals are expected to adopt to comply with the CFA Institute Code of Ethics and Standards of Professional Conduct. The scenarios offer learners detailed guidance on professionalism, integrity of capital markets, duties to clients, and duty to your employer.

Each vignette gives learners a chance to solidify their understanding of the Code and Standards by identifying whether, and why, a violation of the Code and Standards has occurred. After reading each scenario, students can use their knowledge of the Code and Standards to choose the best response to the multiple-choice questions. After making a choice, students can review the correct response and analysis to further broaden knowledge of this important subject.



Key Changes in Level II At a Glance

	# of unchanged readings	# of updated readings	# of revised reading	# of new, extensively revised, or added readings
Quantitative Methods	3	1	0	1
Economics	0	3	0	0
Financial Statement Analysis	6	0	0	0
Corporate Issuers	0	2	0	3
Equity Valuation	0	8	0	0
Fixed Income	0	0	5	0
Derivatives	1	0	0	1
Alternative Investments	0	0	2	1
Portfolio Management	1	3	2	1
Ethical and Professional Standards	2	0	1	0

[Visit our website](#) for more information about changes to the 2022 Level II curriculum.



Quantitative Methods

Introduction to Linear Regression	Complete Revision
Multiple Regression	No Changes
Time-Series Analysis	No Changes
Machine Learning	Updated
Big Data Projects	No Changes
Excerpt from "Probabilistic Approaches: Scenario Analysis, Decision Trees, and Simulations"	Dropped

An introduction to indicator variables and the presentation of different functional forms for simple linear regression models form an important part of the new **"Introduction to Linear Regression"** reading, which is duplicated in Levels I and II for 2022 only.

This reading also includes code snippets in Excel, Python, and R for calculating simple linear regression models. The reading should help determine whether data and regression results adhere to the assumptions underlying simple linear regression as well as guide the creation and interpretation of prediction intervals.

Machine learning techniques first appeared in finance in the 1990s and have developed hugely in recent years amid the explosion of data and cheap computing power. The revised **"Machine Learning"** reading adds three case studies using real-world investment data to demonstrate the power of machine learning in everyday practice.

The machine learning reading and the new case studies are designed to provide the generalist investment practitioner with the essential information, including key terminology, needed to interact effectively with machine learning specialists. The reading is designed to equip candidates with a basic understanding of the types of investment problems that machine learning can address, explain how the algorithms work, and provide the vocabulary necessary to interact with machine learning and data science experts.

Although learners need not master the details and mathematics of machine learning, practitioners can play an important role in the implementation of these techniques by sourcing model inputs, helping interpret model outputs, and translating outputs into investment actions which increase the value of portfolios.

Economics

Currency Exchange Rates: Understanding Equilibrium Value	Updated
Economic Growth	Updated
Economics of Regulation	Updated

Minor changes were made to all Level II Economics readings for the 2022 CFA Program curriculum, bringing data, examples, and references up to date. The **"Current Exchange Rates: Understanding Equilibrium Value"** reading was updated for accuracy and clarity. The **"Economic Growth"** reading now includes streamlined, revised conceptual material on economic growth models. The **"Economics of Regulation"** reading was updated to ensure that the content reflects current regulations.

Financial Statement Analysis

Intercorporate Investments	No Changes
Employee Compensation: Post-Employment and Share-Based	No Changes
Multinational Operations	No Changes
Analysis of Financial Institutions	No Changes
Evaluating Quality of Financial Reports	No Changes
Integration of Financial Statement Analysis Techniques	No Changes

The six readings that compose the Financial Statement Analysis topic area remain unchanged for 2022.

Corporate Issuers (Formerly Corporate Finance)

Capital Structure	Updated
Analysis of Dividends and Share Repurchases	Updated
Environmental, Social, and Governance (ESG) Considerations in Investment Analysis	Major Revision
Mergers and Acquisitions	Major Revision
Capital Budgeting	Major Revision

The evolving approach to ESG in the CFA Program curriculum moves away from ESG as an internal corporate governance issue and puts the emphasis squarely on external analysis of companies' ESG activities. This innovation puts CFA Institute and its members at the forefront of investment thinking, in which ESG is a core component.

The revised **"Environmental, Social, and Governance (ESG) Considerations in Investment Analysis"** reading is representative of the refocused approach, and of the current thinking of the CFA Institute ESG Working Group. The reading presents a new case showing how firms can execute climate change scenario planning and incorporates a user-friendly exhibit setting out an ESG Integration Framework. The ESG Integration Framework shows how qualitative and quantitative research are key elements of an ESG strategy. Securities valuation, portfolio construction, asset allocation, scenario analysis, and risk management form the remainder of the framework.

The reading sets out possible approaches used to identify a company's, or an industry's, material ESG factors, using either proprietary methods, ratings, and analysis from ESG data providers, or not-for-profit industry initiatives and sustainability reporting frameworks.

The **"Mergers and Acquisitions"** reading, extensively revised for 2022, includes updated data and examples and drops coverage of the Herfindahl-Hirschman Index and of equity valuation methods covered in the equity domain (e.g., discounted cash flow, comparable company, comparable transaction).

Finally, the **"Capital Budgeting"** reading dropped coverage of individual project analysis reflecting a corporate insider's perspective.

Equity Valuation

Equity Valuation: Applications and Processes	Updated
Return Concepts	Updated
Industry and Company Analysis	Updated
Discounted Dividend Valuation	Updated
Free Cash Flow Valuation	Updated
Market-Based Valuation: Price and Enterprise Value Multiples	Updated
Residual Income Valuation	Updated
Private Company Valuation	Updated

The data, examples, and references in all eight readings in the Equity Valuation topic area have been refreshed, but the readings' content remains unchanged from 2020.

Fixed Income

The Term Structure and Interest Rate Dynamics	Revised
The Arbitrage-Free Valuation Framework	Revised
Valuation and Analysis of Bonds with Embedded Options	Revised
Credit Analysis Models	Revised
Credit Default Swaps	Revised

Minor updates were made to all five Level II Fixed Income readings for the 2022 CFA Program curriculum.

Notably, a new section within the **"Term Structure and Interest Rate Dynamics"** reading introduces bond risk premium drivers and how they translate into yield curve changes, setting the stage for positioning fixed income portfolios. The reading explains how analysts can use key economic factors to establish a view on benchmark rates, spreads, and yield curve changes. The other four readings in the Fixed Income topic area were updated to improve the accuracy and clarity of the existing material.

Derivatives

Pricing and Valuation of Forward Commitments	Major Revision
Valuation of Contingent Claims	No Changes

A streamlined version of the **"Pricing and Valuation of Forward Commitments"** reading creates more clarity for learners through the use of intuitive visuals and graphics, and provides more and better details on the principles for pricing and valuing forwards, futures, and swaps. For example, the arbitrage-free approach and offsetting bond portfolios are used to illustrate the pricing and valuation of forwards.

The **"Pricing and Valuation of Forward Commitments"** reading clarifies a practical approach for specialist professionals who use forwards and swaps to manage a broad range of market risks. The content is useful for anyone wanting to understand the work of, say, a private wealth manager using futures to hedge clients' equity risk, a pension scheme manager using swaps to hedge interest rate risk, or a manager of a university endowment using derivatives for tactical asset allocation and portfolio rebalancing.

Alternative Investments

Real Estate Investments	Major Revision
Publicly Traded Real Estate Securities	Dropped
Private Equity Investments	Revised
Introduction to Commodities and Commodity Derivatives	Revised

Revisions to the Level II curriculum include new content exploring alternative investments. The **"Real Estate Investments"** reading combines and revises two previous readings ("Private Real Estate Investments" and "Publicly Traded Real Estate Securities"). It provides an overview of real estate investments broadly and then explores the relative merits of investing in real estate through private vehicles versus through publicly traded securities. The reading includes 33 examples and two real-life valuations.

It is well known that real estate is an effective diversifier in balanced portfolios, but candidates should be aware of the huge variance in the risk profile of real estate investments depending on the asset type. The **"Real Estate Investments"** reading explains the risk profile of real estate equity versus real estate debt (as a lender or owner of mortgage-backed securities), primarily focusing on commercial property.

A distinguishing feature of venture capital (VC) companies is the substantial uncertainty around their future prospects. Because of this uncertainty, traditional valuation techniques, such as discounted cash flow and earnings multiples, are not appropriate for most VC companies. The uncertainty generally requires VC companies to undertake financing in multiple stages or rounds, and practitioners must be able to understand and measure the ownership dilution that occurs at each stage and who bears the burden of this dilution.

An updated **"Private Equity Investments"** reading introduces the VC Method—a technique that allows more nuanced valuations to be produced for early stage, nonpublic companies. The VC Method acknowledges that early stage companies carry with them greater risk and uncertainty and that they cannot be valued in the same way as more mature companies. The reading discusses the ways private equity firms add value to their portfolio companies, and then contrasts the two main forms of private equity (buyout and venture capital) comparing valuation approaches for each.

The **"Introduction to Commodities and Commodity Derivatives"** reading has been revised and streamlined for clarity.

Portfolio Management

Exchange Traded Funds: Mechanics and Applications	Revised
Using Multifactor Models	Revised
Measuring and Managing Market Risk	Updated
Backtesting & Simulation	New
Economics and Investment Markets	Updated
Analysis of Active Portfolio Management	Updated
Trading Costs and Electronic Markets	No Changes

Understanding the concepts and methods behind backtesting and simulation as well as being capable of interpreting their outputs have become key competencies for investment managers. Without risking the capital of portfolio managers and their clients, backtesting and simulation enable practitioners to simulate the performance of investment strategies using historical data. In a CFA Institute survey of nearly 250 analysts, portfolio managers, and private wealth managers on quantitative investment techniques, 50% of respondents said they had conducted backtesting in the past 12 months.

To reflect this key competency, the new **"Backtesting & Simulation"** reading has been added to the Portfolio Management topic area of the 2022 curriculum. This reading is the first in the CFA Program curriculum to explore the A-Z of backtesting and simulating innovative investment strategies. The essential elements of backtesting and simulation are presented through a portfolio construction exercise using eight well-known equity factors. This model is developed in the revised **"Using Multifactor Models"** reading and then is used as the foundation for constructing and simulating the investment strategies used in the **"Backtesting & Simulation"** reading. The backtesting is presented through clear visuals and graphics, and without complex math.

The **"Trading Costs and Electronic Markets"** reading remains unchanged for 2022. The other revised readings in the Portfolio Management topic area have been updated for clarity and accuracy.

Ethical and Professional Standards

Code of Ethics and Standards of Professional Conduct	No Changes
Guidance for Standards I-VII	No Changes
Application of the Code and Standards: Level II	Revised

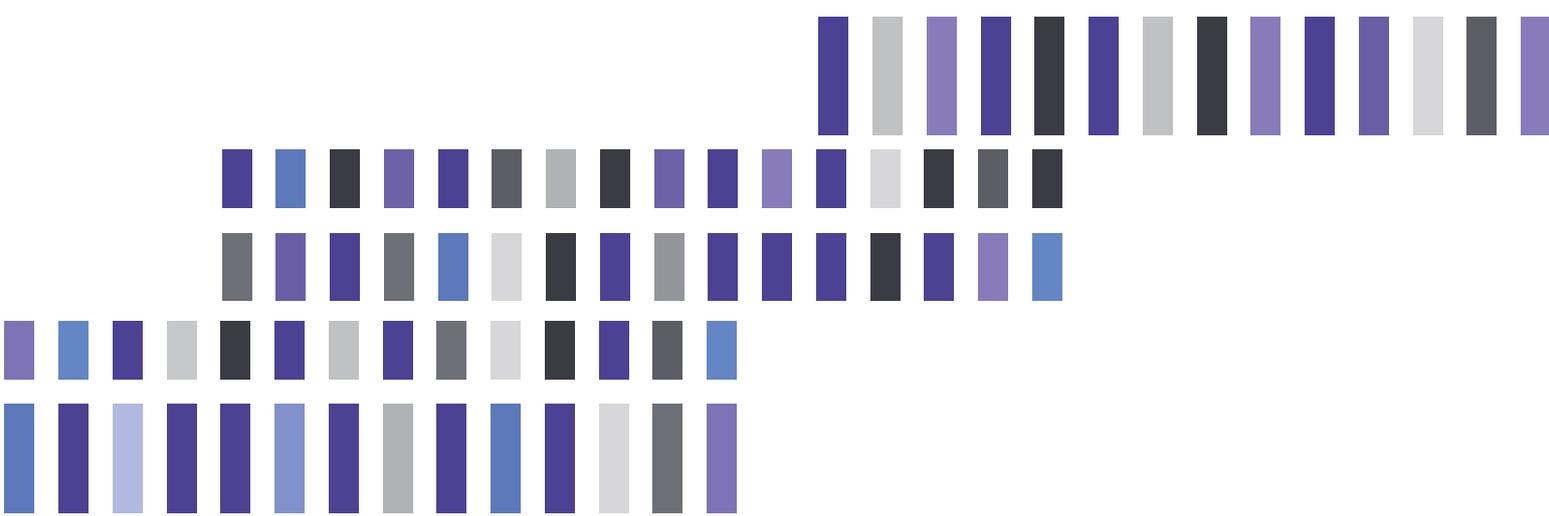
As with Level I, Ethical and Professional Standards was moved to the end of the volume for Level II. In the revised **"Application of the Code and Standards: Level II"** reading, three new case study studies were added that provide color and context for the types of ethical dilemmas that actually occur in the investment industry.



Key Changes in Level III At a Glance

	# of unchanged readings	# of updated readings	# of revised reading	# of new, extensively revised, or added readings
Behavioral Finance	1	0	1	0
Capital Market Expectations	2	0	0	0
Asset Allocation and Related Decisions in Portfolio Management	3	0	0	0
Derivatives and Currency Management	3	0	0	0
Fixed-Income Portfolio Management	0	0	2	2
Equity Portfolio Management	4	0	0	0
Alternative Investments for Portfolio Management	2	0	0	0
Private Wealth Management	2	0	0	1
Portfolio Management for Institutional Investors	1	0	0	0
Trading, Performance Evaluation, and Manager Selection	1	0	0	2
Cases in Portfolio and Risk Management	1	0	1	1
Ethical and Professional Standards	3	0	2	0

[Visit our website](#) for more information about changes to the 2022 Level III curriculum.



Behavioral Finance

The Behavioral Finance Perspective	Dropped
The Behavioral Biases of Individuals	Revised
Behavioral Finance and Investment Processes	No Changes

"The Behavioral Finance Perspective" reading in the Behavioral Finance topic area was dropped. "The Behavioral Biases of Individuals" reading was streamlined and updated with new examples, but the depth and breadth of the coverage did not change. The "Behavioral Finance and Investment Processes" reading remains unchanged for 2022.

Capital Market Expectations

Capital Market Expectations, Part I: Framework and Macro Considerations	No Changes
Capital Market Expectations, Part II: Forecasting Asset Class Returns	No Changes

The two readings in the Capital Market Expectations topic area remain unchanged for 2022.

Asset Allocation and Related Decisions in Portfolio Management

Overview of Asset Allocation	No Changes
Principles of Asset Allocation	No Changes
Asset Allocation with Real-World Constraints	No Changes

The three readings in the Asset Allocation and Related Decisions in Portfolio Management topic area remain unchanged for 2022.

Derivatives and Currency Management

Options Strategies	No Changes
Swaps, Forwards, and Futures Strategies	No Changes
Currency Management: An Introduction	No Changes

The three readings in the Derivatives and Currency Management topic area remain unchanged for 2022.

Fixed-Income Portfolio Management

Overview of Fixed-Income Portfolio Management	Revised
Liability-Driven and Index-Based Strategies	Revised
Yield Curve Strategies	Major Revision
Fixed-Income Active Management: Credit Strategies	Major Revision

The "Overview of Fixed-Income Portfolio Management" and the "Liability-Driven and Index-Based Strategies" readings in the Fixed-Income Portfolio Management topic area were revised for clarity and accuracy.

A comprehensive treatment of fixed-income portfolio positioning is exhibited in the "Yield Curve Strategies" reading. This reading explores how primary yield curve risk factors (such as level, slope, and shape), interest rate volatility, and currencies all influence portfolio positioning. Fixed-income strategies are presented as capitalizing on both static and dynamic yield curve environments as well as an interest rate view that either coincides with or diverges from the market view. Candidates also will learn how fixed-income portfolios are managed to obtain yield in an era of historically low interest rates. The "Yield Curve Strategies" reading incorporates both cash- and derivative-based fixed-income strategies and uses intuitive illustrations and exhibits to promote understanding. It also provides real-world examples such as negative rates and absolute and relative yield curve changes based on specific market scenarios.

In addition, a revised "Fixed-Income Active Management: Credit Strategies" reading builds on what we learn about yield curve strategies through an examination of credit spread curves across the credit spectrum and how they change over the credit cycle. This includes detailed discussion of credit spread measures for fixed rate bonds and floating-rate notes, as well as how changes in those measures translate into expected price changes. The reading explores how credit portfolio positioning strategies aim to capitalize on expected static and dynamic credit spread curve environments, alongside an active credit spread view.

Equity Portfolio Management

Overview of Equity Portfolio Management	No Changes
Passive Equity Investing	No Changes
Active Equity Investing: Strategies	No Changes
Active Equity Investing: Portfolio Construction	No Changes

The four readings in the Equity Portfolio Management topic area remain unchanged for 2022.

Alternative Investments for Portfolio Management

Hedge Fund Strategies	No Changes
Asset Allocation to Alternative Investments	No Changes

The two readings in the Alternative Investments for Portfolio Management topic remain unchanged for 2022.

Private Wealth Management

Overview of Private Wealth Management	No Changes
Topics in Private Wealth Management	Added
Taxes and Private Wealth Management in a Global Context	Dropped
Estate Planning in a Global Context	Dropped
Concentrated Single-Asset Positions	Dropped
Risk Management for Individuals	No Changes

The dynamics of wealth management are changing: client numbers have increased dramatically over the past decade and client needs are evolving. As a consequence, the **"Overview of Private Wealth Management"** reading was added to the 2020 curriculum. For the 2022 curriculum, the three long-standing private wealth management readings have been consolidated and streamlined into a single, all-encompassing reading called **"Topics in Private Wealth Management."** The streamlined reading is segmented into three key areas of technical expertise: the impact of taxes on wealth accumulation; how to manage concentrated positions; and tools and techniques for families to preserve wealth through generations.

The reading takes a close look at tax issues, analyzing the tax efficiency of investments and comparing how income, wealth, and wealth transfers are taxed. It discusses how taxation varies across the globe and across different asset types, and sets out some portfolio tax management strategies.

An in-depth discussion of concentrated wealth—in which individuals' and families' wealth is concentrated in a narrow group of assets—considers how to deal with the inherent lack of diversification and liquidity risk. The saying, "shirtsleeves to shirtsleeves in three generations" exists in many cultures, meaning that family wealth rarely survives three generations. The reading acknowledges that many wealth management clients need help to create structures that can counter that conventional wisdom. The reading shows how wealth may be managed for future generations, with topics including how to oversee estates and how to efficiently execute bequests and gifts.

The reading is practical in nature, guiding investment professionals through the issues encountered regularly by wealth management specialists and presenting relevant solutions. In particular, it sets out why taxes are an important determinant of most investors' returns and how to address this. Although fees and trading costs receive attention in the press and academic circles, the erosion of returns because of taxes can be significantly larger.

Portfolio Management for Institutional Investors

Portfolio Management for Institutional Investors	No Changes
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The single reading in the Portfolio Management for Institutional Investors topic area remains unchanged for 2022.

Trading, Performance Evaluation, and Manager Selection

Trade Strategy and Execution	No Changes
Portfolio Performance Evaluation	Revised
Investment Manager Selection	Revised

Revisions to readings in this topic area include clarified content on attribution models in the "Portfolio Performance Evaluation" and the elimination of overlapping content with performance evaluation in the "Investment Manager Selection" reading.

Cases in Portfolio Management and Risk Management

Case Study in Portfolio Management: Institutional	Revised
Case Study in Risk Management: Private Wealth	No Changes
Case Study in Risk Management: Institutional	New

The Level III content on alternatives is enhanced through the "Case Study in Risk Management: Institutional" reading, which examines financial risks, enterprise risk management, environmental risks, and social risks. The focus of the reading is a case study based on a theoretical portfolio of a sovereign wealth fund (SWF), examining the risk management of the SWF's long-term investments in infrastructure and private equity, and taking into account risks. The case is developed through a set of engaging investment committee meetings that provide a look into the interplay among the various investment professionals involved in portfolio decisions.

Ethical and Professional Standards

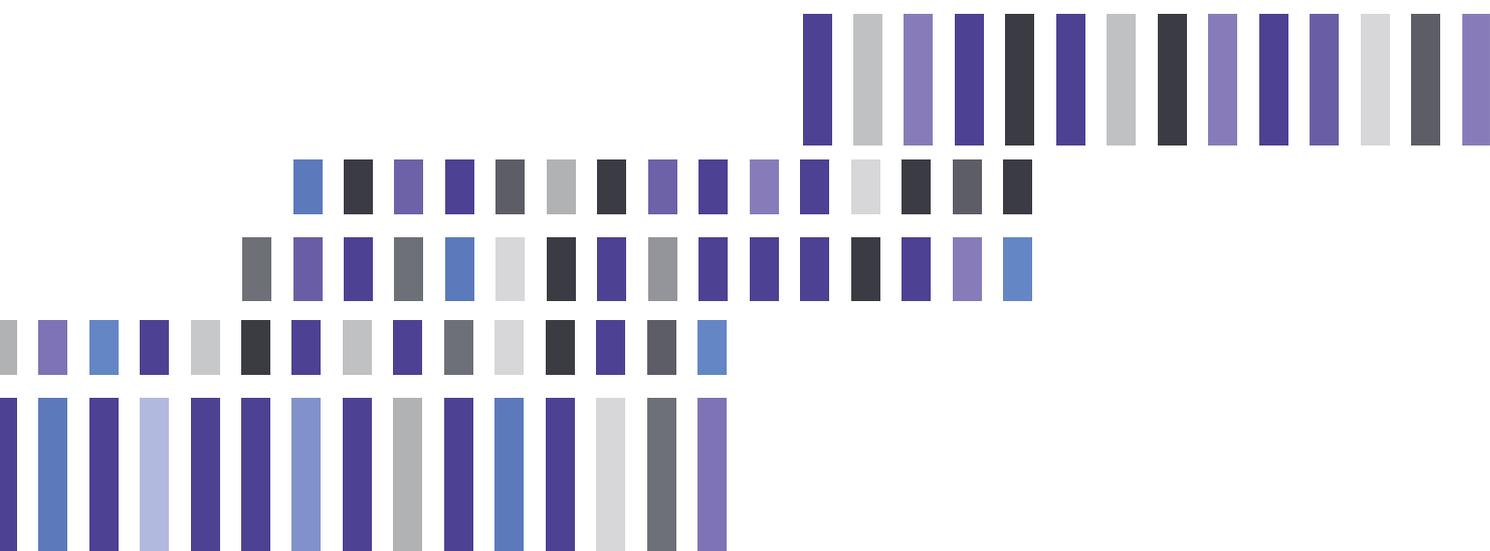
Code of Ethics and Standards of Professional Conduct	No Changes
Guidance for Standards I-VII	No Changes
Application of the Code and Standards: Level III	Revised
Professionalism in the Investment Industry	Dropped
Asset Manager Code of Professional Conduct	No Changes
Overview of the Global Investment Performance Standards	Revised

Ethical dilemmas faced by financial organizations are showcased in the new **"Application of the Code and Standards: Level III"** reading. The reading, which features two new cases, presents a number of ethical dilemmas commonly faced by individuals in private and institutional asset management.

The new case studies provide color and context for the types of ethical dilemma that actually occur in the investment industry. The individual and corporate behavior (and misbehavior) surrounding these two fictional financial institutions is not beyond the realms of possibility. Similar behavior has been identified in real scenarios, leading to censure and punishment. Investment professionals may well come across such behavior at some point during their working careers and will need a benchmark for knowing how to react.

Referencing the Code and Standards can help in identifying applicable ethical principles on which sound decisions and appropriate behavior can be based. These new cases add to existing cases in the reading that focus on identifying why and how violations of the Code and Standards may occur, with discussion and rationale as to why or why not a violation may have occurred. The cases present possible corrective actions, including how to develop a policy statement to prevent future violations by a firm's employees.

By working through these cases, learners can consider how applying the framework for ethical decision making might help them if they find themselves in an unfamiliar, and uncomfortable, situation.



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