

2020 CFA[®]

PROGRAM EXAM PREP

SchweserNotes[™]

Level III

Ethical and Professional Standards
and Behavioral Finance

eBook 1

KAPLAN[®] **SCHWESER**

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Kaplan Schweser's Path to Success

Level III CFA[®] Exam

Welcome

As the head of Advanced Designations at Kaplan Schweser, I am pleased to have the opportunity to help you prepare for the CFA[®] exam. Kaplan Schweser has decades of experience in delivering the most effective CFA exam prep products in the market and I know you will find them to be invaluable in your studies.

Our products are designed to be an integrated study solution across print and digital media to provide you the best learning experience, whether you are studying with a physical book, online, or on your mobile device.

Our core product, the SchweserNotes[™], addresses all of the Topics, Study Sessions, Readings, and LOS in the CFA curriculum. Each reading in the SchweserNotes has been broken into smaller, bite-sized modules with Module Quizzes interspersed throughout to help you continually assess your comprehension. Topic Assessments appear at the end of each Topic to help you assess your knowledge of the material before you move on to the next section.

All purchasers of the SchweserNotes receive online access to the Kaplan Schweser online platform (our learning management system or LMS) at www.Schweser.com. In the LMS, you will see a dashboard that tracks your overall progress and performance and also includes an Activity Feed, which provides structure and organization to the tasks required to prepare for the CFA exam. You also have access to the SchweserNotes, Module Quizzes, and Topic Assessments content as well as the Video Lectures (if purchased), which contain a short video that complements each module in the SchweserNotes. Look for the icons indicating where video content, Module Quizzes, and Topic Assessments are available online. I strongly encourage you to enter your Module Quiz and Topic Assessment answers online and use the dashboard to track your progress and stay motivated.

Again, thank you for trusting Kaplan Schweser with your CFA exam preparation. We're here to help you throughout your journey to become a CFA charterholder.

Regards,
Derek Burkett, CFA, FRM, CAIA
Vice President (Advanced Designations)

Contact us for questions about your study package, upgrading your package, purchasing additional study materials, or for additional information:

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WELCOME TO THE 2020 LEVEL III SCHWESERNOTES™

Thank you for trusting Kaplan Schweser to help you reach your goals. Our goal is to increase your chances of correctly understanding the Level III material and passing the exam. Unfortunately, candidates who assume Level III will be the same as Levels I and II often do poorly. The solution is to work smarter, not harder. Working smarter, as you will see, does not mean doing more of what you did at Levels I and II.

The Level III exam is half constructed response questions. The purpose of constructed response questions is to test higher level thinking, judgment, and the ability to organize a response. Constructed response questions differentiate how well candidates know the material. A good constructed response question is one that a high percentage of candidates could answer if shown answer choices A, B, and C but are unable to answer the same question in constructed response form. The exam is also highly integrated across subjects. If you check the fine print from CFA Institute, it will tell you that 85%–90% is portfolio management. The other 10%–15% is ethics, with the focus of ethics being portfolio management.

Your previous study skills are useful but generally insufficient for Level III. To pass Level III, there are three related things you will need to do. First, **finish all the readings, classes, and basic question practice a month before the exam** integrating these three tasks. Second, **spend the last month focusing on taking and reviewing practice exams**. Third, spend a lot of time writing. Buy three new blue- or black-ink ballpoint pens and a wide-rule spiral notebook. Use them only for writing out answers to practice questions with the goal to wear them out before the exam. We'll return to these three requirements in our material, particularly in the classes.

Basic Preparation

The SchweserNotes™ are the base of our material. Five volumes cover all 16 Study Sessions and every Learning Outcome Statement (LOS). There are examples, Key Concepts, and Module Quizzes for every reading. These SchweserNotes™ provide the base for your preparation and initial practice. **Basic preparation should be completed a month before the exam.**

Study Planning

To be successful, you need a study plan. The simplest approach is to divide the material so you read and practice each week, finishing the material and allowing a month for intense review. Our classes are a good way to provide structure to your plan. A good study plan includes the following.

- **Complete initial reading and question practice approximately a month before the exam.**
 - **Initial reading of SchweserNotes™ and/or CFA readings.**

- Complete practice questions in our SchweserNotes™, discussion questions in our ClassNotes, and SchweserPro™ QBank questions. **Work questions every week** or time can get away from you.
- Complete additional end-of-chapter questions in the CFA readings as time allows.
- Periodically review previous sessions.
- **Use your last month of study** for final prep and performance.
 - Alternate your practice between a Schweser practice exam and an old CFA morning exam. There is no specific number that results in passing however the equivalent of seven full exams has been associated with success at Level III. That number is higher than for Levels I and II.
 - What you do after taking a practice exam is equally important. When you discover an area that appears more than once and you do poorly, review that material, identify your mistakes, and correct them.
- **Use the last seven days to** solidify skills by finishing up your last practice exam, continuing practicing constructed response answers, and doing some final review. My favorite is to read through the Secret Sauce® in the final days leading up to the exam.

We also have a wide range of other resources available, some of which are highlighted next. All products and details can be found at Schweser.com.

Weekly Classes

Live Weekly Classroom Programs

We offer weekly classroom programs around the world. Please check Schweser.com for locations, dates, and availability. The classes can save you time by directing you where to focus in each reading and provide additional questions to work during and after class. The class material includes class discussion questions so you can practice solving and writing exam-like questions with the instructor's guidance.

Both the live and online class candidates receive a **weekly class letter** that highlights important issues, specific study hints, and possible pitfalls for that week's material. It regularly addresses that key stumbling block: the constructed response questions.

15-Week Online Classes

Our Live Online Weekly Classes can be watched live and are archived after each class for viewing and review at any time. Our online (and most of our in-person) classes follow the study session order. Before the first class, we recommend you read the SchweserNotes™ for Study Sessions 1 through 3 covering Ethics and Behavioral Finance.

Class time focuses on key issues in each topic area and applied problem solving of questions. Candidates who wish for more background also have our **Video Lectures** that provide more basic LOS-by-LOS coverage.

Late Season Preparation

The material discussed previously is intended for basic preparation and initial practice. The last month should focus on practice exams with intense review, practice, and performance.

Multi-Day Review Workshops

These pull together the material and focus on problem solving with additional questions. Our most complete late-season review courses are residence programs in Windsor, Ontario (WindsorWeek), Dallas/Fort Worth, Texas (DFW five-day program), and the New York five-day program. We also offer three-day Exam Workshops in many cities (and online) that combine curriculum review and hands-on practice with hundreds of questions plus problem-solving techniques. Please check Schweser.com for locations, dates, and availability.

Mock Exams and Multimedia Tutorial

A live mock exam is offered in many cities around the world and online as well. An accompanying multimedia tutorial provides extended explanation and topic tutorials to get you exam-ready in areas where you missed questions on the live mock exam. Please check Schweser.com for locations, dates, and availability. A second online mock exam is also available with multimedia tutorials.

We also have two additional volumes of mock exams with two, full six-hour exams in each volume. In addition to the answers, we discuss how points are allocated for each constructed response question.

Past Exam Questions

The CFA old exam questions for the morning session of the exam should be part of your final review. In the Resource Library, we provide videos that work through how to solve each past exam question. But remember to work smart—the old exams are only a sample of what may be asked, so combine them with the Schweser mock exams.

Schweser's Secret Sauce®

One brief volume highlights key material. It will not replace the full SchweserNotes™ and classes, but it is a great final review tool.

How to Succeed

There are no shortcuts with most Level III candidates studying more than 350 hours for the exam. Count on CFA Institute to ask questions in a way you've never seen before. Begin studying early by creating a study plan. Read the SchweserNotes™, attend a live or online class each week, and work on practice questions. Take quizzes often using the **SchweserPro™ QBank**. At the end of each topic area, take the Topic Assessment questions to check your progress. Review previous topics periodically. Use the CFA texts to supplement weak areas and for additional end-of-chapter questions. Finish this initial study a month before the exam so you have sufficient time to take and review the mock exams and the CFA old exam questions.

I would like to thank my many colleagues throughout multiple departments here at Kaplan for all their help in putting together the Level III SchweserNotes™ for the 2020 CFA Exam.

Kurt Schuldes, MBA, CFA, CAIA

Kaplan Professional

Exam Topic Weights

CFA Institute has indicated that these are guidelines only and not specific rules they will follow. They are also subject to change. At Level III, **all topics except ethics can be integrated into portfolio management questions.** The guidelines provide a rough indication of how to allocate your initial study time. The most accurate interpretation of Level III is that it is 100% portfolio management.

1. Ethical and Professional Standards	10%–15%
2. Economics	5%–10%
3. Fixed Income	15%–20%
4. Equity	10%–15%
5. Alternative Investments	5%–10%
6. Derivatives	5%–10%
7. Portfolio Management and Wealth Planning	35%–40%

(This covers all topics not listed above and includes Behavioral Finance, Private Wealth Management, Institutional Investors, Asset Allocation, Trading, Performance Evaluation, and Manager Selection.)

Exam Format

The morning and afternoon sessions of the exam use different formats, with each half-exam being three hours long. Each half-exam has a maximum score of 180 points for a total maximum exam score of 360 points.

The morning exam is three hours of constructed response questions. Usually, there are 9–11 questions, with each question having multiple parts. For each question part, you will be directed to answer on a specific page in the exam booklet. If you do not answer on that page as directed, you will not receive any points for that question part. Every question in the morning exam will state a specified number of minutes. The minutes are the maximum score you can receive for that question. Most questions do not have one specific right answer, but instead a range of acceptable answers. Receiving partial credit for an answer is normal.

The afternoon exam is the multiple-choice item set style of questions seen on the Level II exam. The 2019 exam was the first year that CFA Institute changed the afternoon exam format to eight 6-question vignettes plus three 4-question vignettes for a total of 60 individual questions, with each having a score of three points. For each question, there is one correct answer of A, B, or C.

LEARNING OUTCOME STATEMENTS (LOS)

STUDY SESSION 1

The topical coverage corresponds with the following CFA Institute assigned reading:

1. & 2. Code of Ethics and Standards of Professional Conduct, Guidance for Standards I–VII

The candidate should be able to:

- 1.a. describe the structure of the CFA Institute Professional Conduct Program and the disciplinary review process for the enforcement of the CFA Institute Code of Ethics and Standards of Professional Conduct. (page 2)
- 1.b. explain the ethical responsibilities required by the Code and Standards, including the sub-sections of each standard. (page 3)
- 2.a. demonstrate a thorough knowledge of the CFA Institute Code of Ethics and Standards of Professional Conduct by interpreting the Code and Standards in various situations involving issues of professional integrity. (page 8)
- 2.b. recommend practices and procedures designed to prevent violations of the Code and Standards. (page 8)

The topical coverage corresponds with the following CFA Institute assigned reading:

3. Application of the Code and Standards: Level III

The candidate should be able to:

- a. evaluate practices, policies, and conduct relative to the CFA Institute Code of Ethics and Standards of Professional Conduct. (page 41)
- b. explain how the practices, policies, or conduct does or does not violate the CFA Institute Code of Ethics and Standards of Professional Conduct. (page 41)

STUDY SESSION 2

The topical coverage corresponds with the following CFA Institute assigned reading:

4. Professionalism in the Investment Industry

The candidate should be able to:

- a. describe how professions establish trust. (page 61)
- b. explain professionalism in investment management. (page 62)
- c. describe expectations of investment professionals. (page 63)
- d. describe a framework for ethical decision making. (page 64)

The topical coverage corresponds with the following CFA Institute assigned reading:

5. Asset Manager Code of Professional Conduct

The candidate should be able to:

- a. explain the purpose of the Asset Manager Code and the benefits that may accrue to a firm that adopts the Code. (page 69)
- b. explain the ethical and professional responsibilities required by the six General Principles of Conduct of the Asset Manager Code. (page 70)
- c. determine whether an asset manager's practices and procedures are consistent with the Asset Manager Code. (page 70)
- d. recommend practices and procedures designed to prevent violations of the Asset Manager Code. (page 70)

The topical coverage corresponds with the following CFA Institute assigned reading:

6. Overview of the Global Investment Performance Standards

The candidate should be able to:

- a. discuss the objectives, key characteristics, and scope of the GIPS standards and their benefits to prospective clients and investment managers. (page 83)
- b. explain the fundamentals of compliance with the GIPS standards, including the definition of the firm and the firm's definition of discretion. (page 85)
- c. explain the requirements and recommendations of the GIPS standards with respect to input data, including accounting policies related to valuation and performance measurement. (page 86)
- d. discuss the requirements of the GIPS standards with respect to return calculation methodologies, including the treatment of external cash flows, cash and cash equivalents, and expenses and fees. (page 88)
- e. explain the requirements and recommendations of the GIPS standards with respect to composite return calculations, including methods for asset-weighting portfolio returns. (page 93)
- f. explain the meaning of "discretionary" in the context of composite construction and, given a description of the relevant facts, determine whether a portfolio is likely to be considered discretionary. (page 95)
- g. explain the role of investment mandates, objectives, or strategies in the construction of composites. (page 96)
- h. explain the requirements and recommendations of the GIPS standards with respect to composite construction, including switching portfolios among composites, the timing of the inclusion of new portfolios in composites, and the timing of the exclusion of terminated portfolios from composites. (page 97)
- i. explain the requirements of the GIPS standards for asset class segments carved out of multi-class portfolios. (page 99)

- j. explain the requirements and recommendations of the GIPS standards with respect to disclosure, including fees, the use of leverage and derivatives, conformity with laws and regulations that conflict with the GIPS standards, and noncompliant performance periods. (page 103)
- k. explain the requirements and recommendations of the GIPS standards with respect to presentation and reporting, including the required timeframe of compliant performance periods, annual returns, composite assets, and benchmarks. (page 107)
- l. explain the conditions under which the performance of a past firm or affiliation must be linked to or used to represent the historical performance of a new or acquiring firm. (page 107)
- m. evaluate the relative merits of high/low, range, interquartile range, and equal-weighted or asset-weighted standard deviation as measures of the internal dispersion of portfolio returns within a composite for annual periods. (page 107)
- n. identify the types of investments that are subject to the GIPS standards for real estate and private equity. (page 112)
- o. explain the provisions of the GIPS standards for real estate and private equity. (page 113)
- p. explain the provisions of the GIPS standards for Wrap fee/Separately Managed Accounts. (page 120)
- q. explain the requirements and recommended valuation hierarchy of the GIPS Valuation Principles. (page 121)
- r. determine whether advertisements comply with the GIPS Advertising Guidelines. (page 123)
- s. discuss the purpose, scope, and process of verification. (page 125)
- t. discuss challenges related to the calculation of after-tax returns. (page 126)
- u. identify and explain errors and omissions in given performance presentations and recommend changes that would bring them into compliance with GIPS standards. (page 128)

STUDY SESSION 3

The topical coverage corresponds with the following CFA Institute assigned reading:

7. The Behavioral Finance Perspective

The candidate should be able to:

- a. contrast traditional and behavioral finance perspectives on investor decision making. (page 179)
- b. contrast expected utility and prospect theories of investment decision making. (page 185)
- c. discuss the effect that cognitive limitations and bounded rationality may have on investment decision making. (page 189)
- d. compare traditional and behavioral finance perspectives on portfolio construction and the behavior of capital markets. (page 196)

The topical coverage corresponds with the following CFA Institute assigned reading:

8. The Behavioral Biases of Individuals

The candidate should be able to:

- a. distinguish between cognitive errors and emotional biases. (page 210)
- b. discuss commonly recognized behavioral biases and their implications for financial decision making. (page 210)
- c. identify and evaluate an individual's behavioral biases. (page 210)
- d. evaluate how behavioral biases affect investment policy and asset allocation decisions and recommend approaches to mitigate their effects. (page 210)

The topical coverage corresponds with the following CFA Institute assigned reading:

9. Behavioral Finance and Investment Processes

The candidate should be able to:

- a. explain the uses and limitations of classifying investors into personality types. (page 239)
- b. discuss how behavioral factors affect adviser–client interactions. (page 244)
- c. discuss how behavioral factors influence portfolio construction. (page 246)
- d. explain how behavioral finance can be applied to the process of portfolio construction. (page 247)
- e. discuss how behavioral factors affect analyst forecasts and recommend remedial actions for analyst biases. (page 249)
- f. discuss how behavioral factors affect investment committee decision making and recommend techniques for mitigating their effects. (page 253)
- g. describe how behavioral biases of investors can lead to market characteristics that may not be explained by traditional finance. (page 254)

The following is a review of the Ethical and Professional Standards (1) principles designed to address the learning outcome statements set forth by CFA Institute. Cross-Reference to CFA Institute Assigned Readings #1 and #2.

READINGS 1 & 2: CODE OF ETHICS AND STANDARDS OF PROFESSIONAL CONDUCT, GUIDANCE FOR STANDARDS I–VII

Study Session 1

EXAM FOCUS

Ethics will most likely be 10%–15% of the exam with two or three item set questions. While the CFA Institute has never specifically said they will not use constructed responses for ethics, they have not done so for over 10 years. The content and what you need to know will be the same regardless of the question format.

Level III questions tend to focus on compliance, portfolio management issues, and questions on the Asset Manager Code. Prepare properly and ethics can be an easier section of the exam. That is a big advantage when you move to the questions in other topic areas.

Just like Level I and Level II, ethics requires that you know the principles and be able to apply them to specific situations to make the expected decision. Some ethics questions can be vague with unclear facts so be prepared to make a “best guess” on a few of the questions. As you read the material, pay particular attention to the numerous examples (the application). As soon as you read, work the Schweser and CFA end of chapter questions. Reading principles without practice questions for application or vice versa will not be sufficient. You need both.

Be prepared and make this an easier part of the exam.

MODULE 1.1: CODE AND STANDARDS



Video covering this content is available online.

LOS 1.a: Describe the structure of the CFA Institute Professional Conduct Program and the disciplinary review process for the enforcement of the CFA Institute Code of Ethics and Standards of Professional Conduct.

CFA® Program Curriculum, Volume 1, page 9

The CFA Institute Professional Conduct Program is covered by the CFA Institute Bylaws and the Rules of Procedure for Proceedings Related to Professional Conduct. The Program is based on the principles of fairness of the process to members and candidates and maintaining the confidentiality of the proceedings. The Disciplinary Review Committee of the CFA Institute Board of Governors has overall responsibility for the Professional Conduct Program and enforcement of the Code and Standards.

The CFA Institute Professional Conduct staff conducts inquiries related to professional conduct. Several circumstances can prompt such an inquiry:

1. Self-disclosure by members or candidates on their annual Professional Conduct Statements of involvement in civil litigation or a criminal investigation, or that the member or candidate is the subject of a written complaint.
2. Written complaints about a member or candidate's professional conduct that are received by the Professional Conduct staff.
3. Evidence of misconduct by a member or candidate that the Professional Conduct staff received through public sources, such as a media article or broadcast.
4. A report by a CFA exam proctor of a possible violation during the examination.
5. Analysis of exam materials and monitoring of social media by CFA Institute.

Once an inquiry has begun, the Professional Conduct staff may request (in writing) an explanation from the subject member or candidate and may: (1) interview the subject member or candidate, (2) interview the complainant or other third parties, and/or (3) collect documents and records relevant to the investigation.

The Professional Conduct staff may decide: (1) that no disciplinary sanctions are appropriate, (2) to issue a cautionary letter, or (3) to discipline the member or candidate. In a case where the Professional Conduct staff finds a violation has occurred and proposes a disciplinary sanction, the member or candidate may accept or reject the sanction. If the member or candidate chooses to reject the sanction, the matter will be referred to a disciplinary review panel of CFA Institute members for a hearing. Sanctions imposed may include condemnation by the member's peers or suspension of candidate's continued participation in the CFA Program.

LOS 1.b: Explain the ethical responsibilities required by the Code and Standards, including the sub-sections of each standard.

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CODE OF ETHICS

Members of CFA Institute [including Chartered Financial Analyst® (CFA®) charterholders] and candidates for the CFA designation ("Members and Candidates") must:¹

- Act with integrity, competence, diligence, respect, and in an ethical manner with the public, clients, prospective clients, employers, employees, colleagues in the investment profession, and other participants in the global capital markets.
- Place the integrity of the investment profession and the interests of clients above their own personal interests.
- Use reasonable care and exercise independent professional judgment when conducting investment analysis, making investment recommendations, taking investment actions, and engaging in other professional activities.
- Practice and encourage others to practice in a professional and ethical manner that will reflect credit on themselves and the profession.
- Promote the integrity and viability of the global capital markets for the ultimate benefit of society.
- Maintain and improve their professional competence and strive to maintain and improve the competence of other investment professionals.

THE STANDARDS OF PROFESSIONAL CONDUCT

- I. Professionalism
- II. Integrity of Capital Markets
- III. Duties to Clients
- IV. Duties to Employers
- V. Investment Analysis, Recommendations, and Actions
- VI. Conflicts of Interest
- VII. Responsibilities as a CFA Institute Member or CFA Candidate

STANDARDS OF PROFESSIONAL CONDUCT²

I. PROFESSIONALISM

- A. **Knowledge of the Law.** Members and Candidates must understand and comply with all applicable laws, rules, and regulations (including the CFA Institute *Code of Ethics* and *Standards of Professional Conduct*) of any government, regulatory organization, licensing agency, or professional association governing their professional activities. In the event of conflict, Members and Candidates must comply with the more strict law, rule, or regulation. Members and Candidates must not knowingly participate or assist in any violation of laws, rules, or regulations and must disassociate themselves from any such violation.
- B. **Independence and Objectivity.** Members and Candidates must use reasonable care and judgment to achieve and maintain independence and objectivity in their professional activities. Members and Candidates must not offer, solicit, or accept any gift, benefit, compensation, or consideration that reasonably could be expected to compromise their own or another's independence and objectivity.
- C. **Misrepresentation.** Members and Candidates must not knowingly make any misrepresentations relating to investment analysis, recommendations, actions, or other professional activities.
- D. **Misconduct.** Members and Candidates must not engage in any professional conduct involving dishonesty, fraud, or deceit or commit any act that reflects adversely on their professional reputation, integrity, or competence.

II. INTEGRITY OF CAPITAL MARKETS

- A. **Material Nonpublic Information.** Members and Candidates who possess material nonpublic information that could affect the value of an investment must not act or cause others to act on the information.
- B. **Market Manipulation.** Members and Candidates must not engage in practices that distort prices or artificially inflate trading volume with the intent to mislead market participants.

III. DUTIES TO CLIENTS

- A. **Loyalty, Prudence, and Care.** Members and Candidates have a duty of loyalty to their clients and must act with reasonable care and exercise prudent judgment.

Members and Candidates must act for the benefit of their clients and place their clients' interests before their employer's or their own interests.

B. **Fair Dealing.** Members and Candidates must deal fairly and objectively with all clients when providing investment analysis, making investment recommendations, taking investment action, or engaging in other professional activities.

C. **Suitability.**

1. When Members and Candidates are in an advisory relationship with a client, they must:
 - a. Make a reasonable inquiry into a client's or prospective clients' investment experience, risk and return objectives, and financial constraints prior to making any investment recommendation or taking investment action and must reassess and update this information regularly.
 - b. Determine that an investment is suitable to the client's financial situation and consistent with the client's written objectives, mandates, and constraints before making an investment recommendation or taking investment action.
 - c. Judge the suitability of investments in the context of the client's total portfolio.
2. When Members and Candidates are responsible for managing a portfolio to a specific mandate, strategy, or style, they must make only investment recommendations or take investment actions that are consistent with the stated objectives and constraints of the portfolio.

D. **Performance Presentation.** When communicating investment performance information, Members or Candidates must make reasonable efforts to ensure that it is fair, accurate, and complete.

E. **Preservation of Confidentiality.** Members and Candidates must keep information about current, former, and prospective clients confidential unless:

1. The information concerns illegal activities on the part of the client or prospective client,
2. Disclosure is required by law, or
3. The client or prospective client permits disclosure of the information.

IV. DUTIES TO EMPLOYERS

A. **Loyalty.** In matters related to their employment, Members and Candidates must act for the benefit of their employer and not deprive their employer of the advantage of their skills and abilities, divulge confidential information, or otherwise cause harm to their employer.

B. **Additional Compensation Arrangements.** Members and Candidates must not accept gifts, benefits, compensation, or consideration that competes with, or might reasonably be expected to create a conflict of interest with, their employer's interest unless they obtain written consent from all parties involved.

- C. **Responsibilities of Supervisors.** Members and Candidates must make reasonable efforts to ensure that anyone subject to their supervision or authority complies with applicable laws, rules, regulations, and the Code and Standards.

V. INVESTMENT ANALYSIS, RECOMMENDATIONS, AND ACTIONS

- A. **Diligence and Reasonable Basis.** Members and Candidates must:

1. Exercise diligence, independence, and thoroughness in analyzing investments, making investment recommendations, and taking investment actions.
2. Have a reasonable and adequate basis, supported by appropriate research and investigation, for any investment analysis, recommendation, or action.

- B. **Communication with Clients and Prospective Clients.** Members and Candidates must:

1. Disclose to clients and prospective clients the basic format and general principles of the investment processes used to analyze investments, select securities, and construct portfolios and must promptly disclose any changes that might materially affect those processes.
2. Disclose to clients and prospective clients significant limitations and risks associated with the investment process.
3. Use reasonable judgment in identifying which factors are important to their investment analyses, recommendations, or actions and include those factors in communications with clients and prospective clients.
4. Distinguish between fact and opinion in the presentation of investment analysis and recommendations.

- C. **Record Retention.** Members and Candidates must develop and maintain appropriate records to support their investment analysis, recommendations, actions, and other investment-related communications with clients and prospective clients.

VI. CONFLICTS OF INTEREST

- A. **Disclosure of Conflicts.** Members and Candidates must make full and fair disclosure of all matters that could reasonably be expected to impair their independence and objectivity or interfere with respective duties to their clients, prospective clients, and employer. Members and Candidates must ensure that such disclosures are prominent, are delivered in plain language, and communicate the relevant information effectively.
- B. **Priority of Transactions.** Investment transactions for clients and employers must have priority over investment transactions in which a Member or Candidate is the beneficial owner.
- C. **Referral Fees.** Members and Candidates must disclose to their employer, clients, and prospective clients, as appropriate, any compensation, consideration, or benefit received from, or paid to, others for the recommendation of products or services.

VII. RESPONSIBILITIES AS A CFA INSTITUTE MEMBER OR CFA CANDIDATE

- A. **Conduct as Participants in CFA Institute Programs.** Members and Candidates must not engage in any conduct that compromises the reputation or integrity of CFA Institute or the CFA designation or the integrity, validity, or security of CFA Institute programs.
- B. **Reference to CFA Institute, the CFA Designation, and the CFA Program.** When referring to CFA Institute, CFA Institute membership, the CFA designation, or candidacy in the CFA Program, Members and Candidates must not misrepresent or exaggerate the meaning or implications of membership in CFA Institute, holding the CFA designation, or candidacy in the CFA Program.



MODULE QUIZ 1.1

To best evaluate your performance, enter your quiz answers online.

1. In the case of a complaint about a member's professional conduct, CFA Institute Professional Conduct Program staff are *least likely* to:
 - A. review documents and records related to the complaint.
 - B. request an interview with the member or with the party making the complaint.
 - C. suspend the member's right to use the CFA designation while an investigation is in progress.
2. Which of the following requirements for members and candidates is one of the six components of the Code of Ethics?
 - A. Maintain and improve their professional competence.
 - B. Do not act or cause others to act on material nonpublic information.
 - C. Distinguish between fact and opinion when presenting investment analysis.
3. If a member or candidate is offered an additional compensation arrangement by a client, which of the seven Standards of Professional Conduct states the requirements the member or candidate must follow?
 - A. Duties to Clients.
 - B. Conflicts of Interest.
 - C. Duties to Employers.

LOS 2.a: Demonstrate a thorough knowledge of the CFA Institute Code of Ethics and Standards of Professional Conduct by interpreting the Code and Standards in various situations involving issues of professional integrity.

LOS 2.b: Recommend practices and procedures designed to prevent violations of the Code and Standards.

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PROFESSOR'S NOTE

You should be prepared for questions that require you to apply the Standards in specific case situations. In such questions, you must recognize the case facts described and then decide which Standards are directly relevant. This is primarily a test of critical thinking, not of memorization. To prepare you, we will in this section focus on a review of the key points for each Standard and the recommended procedures. If you know the main issues, you are more likely to successfully apply them. You should review the recommended procedures several times between now and exam day because they fit the Level III emphasis on the bigger picture and managing the business as well as portfolios and assets. Once you complete our review and understand the basic principles that you must know, then move to application and practice. For practice, complete our sample questions. The CFA reading includes many examples of applying the Standards, and you should read all the examples as well as complete the CFA end of chapter questions for this reading.

It is important you know the basic principals before you move to the specific examples and questions. Those examples and question can only be a sample of possible applications. When you try to learn by practice only, without first knowing the principals that are being applied, you generally get the wrong ideas. Prepare and practice are two different steps. The combination is what leads to success. Do both.

In many cases the actions that members and candidates must not take are explained using terms open to interpretation, such as “reasonable,” “adequate,” and “token.”

Some examples from the Standards themselves are:

- ...use reasonable care and judgment to achieve...
- ...accept any gift, that reasonably could be expected to compromise...
- ...act with reasonable care and exercise prudent judgment...
- ...deal fairly and objectively with all clients...
- ...make a reasonable inquiry into...
- ...make reasonable efforts to ensure...
- ...might reasonably be expected to create a conflict of interest with...
- ...Have a reasonable and adequate basis...
- ...Use reasonable judgment in...
- ...matters that could be reasonably expected to impair...

The requirement of the LOS is that you know what constitutes a violation, not that you draw a distinction between what is “reasonable” and what is not in a given situation. We believe the exam writers take this into account and that if they intend, for example, to test whether a recommendation has been given without reasonable care and judgment, it will likely be clear either that the care and judgment exhibited by the analyst did not rise to the level of “reasonable,” or that it did.

No monetary value for a “token” gift is given in the Standards, although it is recommended that a firm establish such a monetary value for its employees. Here, again, the correct answer to a question will not likely hinge on candidate’s determination of what is a token gift and what is not. Questions should be clear in this regard. A business dinner is likely a token gift, but a week at a condominium in Aspen or tickets to the Super Bowl are likely not. Always look for clues in the questions that lead you to the question-writer’s preferred answer choice, such as “lavish” entertainment and “luxury” accommodations.

Next, we present a summary of each subsection of the Standards of Professional Conduct. For each one, we first detail actions that violate the Standard and then list actions and behaviors that are recommended within the Standards. We suggest you learn the violations especially well so you understand that the other items are recommended. For the exam, it is not necessary to memorize the Standard number and subsection letter. Knowing that an action violates, for example, Professionalism, rather than Duties to Employers or Duties to Clients, should be sufficient in this regard. Note that some actions may violate more than one Standard.

One way to write questions for this material is to offer a reason that might make one believe a Standard does not apply in a particular situation. In most, if not all, cases the “reason” does

not change the requirement of the Standard. If you are prohibited from some action, the motivations for the action or other circumstances simply do not matter. If the Standard says it's a violation, it's a violation. An exception is when intent is key to the Standard, such as intending to mislead clients or market participants in general.

MODULE 2.1: GUIDANCE FOR STANDARDS I(A) AND I(B)



Video covering this content is available online.

STANDARD I: PROFESSIONALISM³

Standard I(A) Knowledge of the Law

Members and Candidates must understand and comply with all applicable laws, rules, and regulations (including the CFA Institute Code of Ethics and Standards of Professional Conduct) of any government, regulatory organization, licensing agency, or professional association governing their professional activities. In the event of conflict, Members and Candidates must comply with the more strict law, rule, or regulation. Members and Candidates must not knowingly participate or assist in and must dissociate from any violation of such laws, rules, or regulations.

The Standards begin with a straightforward statement: Don't violate any laws, rules, or regulations that apply to your professional activities. This includes the Code and Standards, so any violation of the Code and Standards will also violate this subsection.

A member may be governed by different rules and regulations among the Standards, the country in which the member resides, and the country where the member is doing business. Follow the most strict of these, or, put another way, do not violate any of the three sets of rules and regulations.

If you know that violations of applicable rules or laws are taking place, either by coworkers or clients, you must approach your supervisor or compliance department to remedy the situation. If they will not or cannot, then you must dissociate from the activity (e.g., not working with a trading group you know is not allocating client trades properly according to the Standard on Fair Dealing, or not using marketing materials that you know or should know are misleading or erroneous). If this cannot be accomplished, you may, in an extreme case, have to resign from the firm to be in compliance with this Standard.

Recommendations for members

- Establish, or encourage employer to establish, procedures to keep employees informed of changes in relevant laws, rules, and regulations.
- Review, or encourage employer to review, the firm's written compliance procedures on a regular basis.
- Maintain, or encourage employer to maintain, copies of current laws, rules, and regulations.
- When in doubt about legality, consult compliance personnel or a lawyer.
- When dissociating from violations, keep records documenting the violations, encourage employer to bring an end to the violations.

- There is no requirement in the Standards to report wrongdoers, but local law may require it; members are “strongly encouraged” to report violations to CFA Institute Professional Conduct Program.

Recommendations for firms

- Have a code of ethics.
- Provide employees with information on laws, rules, and regulations governing professional activities.
- Have procedures for reporting suspected violations.

Standard I(B) Independence and Objectivity

Members and Candidates must use reasonable care and judgment to achieve and maintain independence and objectivity in their professional activities. Members and Candidates must not offer, solicit, or accept any gift, benefit, compensation, or consideration that reasonably could be expected to compromise their own or another’s independence and objectivity.

Analysts may face pressure or receive inducements to give a security a specific rating, to select certain outside managers or vendors, or to produce favorable or unfavorable research and conclusions. Members who allow their investment recommendations or analysis to be influenced by such pressure or inducements will have violated the requirement to use reasonable care and to maintain independence and objectivity in their professional activities. Allocating shares in oversubscribed IPOs to personal accounts is a violation.

Normal business entertainment is permitted. Members who accept, solicit, or offer things of value that could be expected to influence the member’s or others’ independence or objectivity are violating the Standard. Gifts from clients are considered less likely to compromise independence and objectivity than gifts from other parties. Client gifts must be disclosed to the member’s employer prior to acceptance, if possible, but after acceptance, if not.

Members may prepare reports paid for by the subject firm if compensation is a flat rate not tied to the conclusions of the report (and if the fact that the research is issuer-paid is disclosed). Accepting compensation that is dependent on the conclusions, recommendations, or market impact of the report, and failure to disclose that research is issuer-paid, are violations of this Standard.

Recommendations for members

Members or their firms should pay for their own travel to company events or tours when practicable and limit use of corporate aircraft to trips for which commercial travel is not an alternative.

Recommendations for firms

- Establish policies requiring every research report to reflect the unbiased opinion of the analyst and align compensation plans to support this principal.
- Establish and review written policies and procedures to assure research is independent and objective.
- Establish restricted lists of securities for which the firm is not willing to issue adverse opinions. Factual information may still be provided.
- Limit gifts from non-clients to token amounts.

- Limit and require prior approval of employee participation in equity IPOs.
- Establish procedures for supervisory review of employee actions.
- Appoint a senior officer to oversee firm compliance and ethics.

MODULE 2.2: GUIDANCE FOR STANDARDS I(C) AND I(D)



Video covering
this content is
available online.

Standard I(C) Misrepresentation

Members and Candidates must not knowingly make any misrepresentations relating to investment analysis, recommendations, actions, or other professional activities.

Misrepresentation includes knowingly misleading investors, omitting relevant information, presenting selective data to mislead investors, and plagiarism. Plagiarism is using reports, forecasts, models, ideas, charts, graphs, or spreadsheets created by others without crediting the source. Crediting the source is not required when using projections, statistics, and tables from recognized financial and statistical reporting services. When using models developed or research done by other members of the firm, it is permitted to omit the names of those who are no longer with the firm as long as the member does not represent work previously done by others as his alone.

Actions that would violate the Standard include:

- Presenting third-party research as your own, without attribution to the source.
- Guaranteeing a specific return on securities that do not have an explicit guarantee from a government body or financial institution.
- Selecting a valuation service because it puts the highest value on untraded security holdings.
- Selecting a performance benchmark that is not comparable to the investment strategy employed.
- Presenting performance data or attribution analysis that omits accounts or relevant variables.
- Offering false or misleading information about the analyst's or firm's capabilities, expertise, or experience.
- Using marketing materials from a third party (outside adviser) that are misleading.

Recommendations for members

- Understand the scope and limits of the firm's capabilities to avoid inadvertent misrepresentations.
- Summarize your own qualifications and experience.
- Make reasonable efforts to verify information from third parties that is provided to clients.
- Regularly maintain webpages for accuracy.
- Avoid plagiarism by keeping copies of all research reports and supporting documents and attributing direct quotes, paraphrases, and summaries to their source.

Standard I(D) Misconduct

Members and Candidates must not engage in any professional conduct involving dishonesty, fraud, or deceit or commit any act that reflects adversely on their professional reputation, integrity, or competence.

The first part here regarding professional conduct is clear: no dishonesty, fraud, or deceit. The second part, while it applies to all conduct by the member, specifically requires that the act, “reflects adversely on their professional reputation, integrity, or competence.” The guidance states, in fact, that members must not try to use enforcement of this Standard against another member to settle personal, political, or other disputes that are not related to professional ethics or competence.

Recommendations for firms

- Develop and adopt a code of ethics and make clear that unethical behavior will not be tolerated.
- Give employees a list of potential violations and sanctions, including dismissal.
- Check references of potential employees.

MODULE 2.3: GUIDANCE FOR STANDARD II

STANDARD II: INTEGRITY OF CAPITAL MARKETS



Video covering this content is available online.

Standard II(A) Material Nonpublic Information

Members and Candidates who possess material nonpublic information that could affect the value of an investment must not act or cause others to act on the information.

Information is “material” if its disclosure would affect the price of a security or if a reasonable investor would want the information before making an investment decision. Information that is ambiguous as to its likely effect on price may not be considered material.

Information is “nonpublic” until it has been made available to the marketplace. An analyst conference call is not public disclosure. Selective disclosure of information by corporations creates the potential for insider-trading violations.

The prohibition against acting on material nonpublic information extends to mutual funds containing the subject securities as well as related swaps and options contracts. It is the member’s responsibility to determine if information she receives has been publicly disseminated prior to acting or causing others to act on it.

Some members and candidates may be involved in transactions during which they are provided with material nonpublic information by firms (e.g., investment banking transactions). Members and candidates may use this information for its intended purpose, but must not use the information for any other purpose unless it becomes public information.

Under the so-called **mosaic theory**, reaching an investment conclusion through perceptive analysis of public information combined with non-material nonpublic information is not a violation of the Standard.

Recommendations for members

- Make reasonable efforts to achieve public dissemination by the firm of information they possess.
- Encourage their firms to adopt procedures to prevent the misuse of material nonpublic information.

Recommendations for firms

- Issue press releases prior to analyst meetings to assure public dissemination of any new information.
- Adopt procedures for equitable distribution of information to the market place (e.g., new research opinions and reports to clients).
- Establish firewalls within the organization for who may and may not have access to material nonpublic information. Generally, this includes having the legal or compliance department clear interdepartmental communications, reviewing employee trades, documenting procedures to limit information flow, and carefully reviewing or restricting proprietary trading whenever the firm possesses material nonpublic information on the securities involved.
- Ensure that procedures for proprietary trading are appropriate to the strategies used. A blanket prohibition is not required.
- Develop procedures to enforce firewalls with complexity consistent with the complexity of the firm.
- Physically separate departments.
- Have a compliance (or other) officer review and authorize information flows before sharing.
- Maintain records of information shared.
- Limit personal trading, require that it be reported, and establish a restricted list of securities in which personal trading is not allowed.
- Regularly communicate with and train employees to follow procedures.

Standard II(B) Market Manipulation

Members and Candidates must not engage in practices that distort prices or artificially inflate trading volume with the intent to mislead market participants.

Member actions may affect security values and trading volumes without violating this Standard. The key point here is that if there is the *intent to mislead*, then the Standard is violated. Of course, spreading false information to affect prices or volume is a violation of this Standard as is making trades intended to mislead market participants.



MODULE QUIZ 2.1, 2.2, 2.3

To best evaluate your performance, enter your quiz answers online.

1. In situations where the laws of a member or candidate's country of residence, the local laws of regions where the member or candidate does business, and the Code and Standards specify different requirements, the member or candidate must abide by:
 - A. local law or the Code and Standards, whichever is stricter.
 - B. the Code and Standards or his country's laws, whichever are stricter.
 - C. the strictest of local law, his country's laws, or the Code and Standards.

2. According to the Standard on independence and objectivity, members and candidates:
 - A. may accept gifts or bonuses from clients.
 - B. may not accept compensation from an issuer of securities in return for producing research on those securities.
 - C. should consider credit ratings issued by recognized agencies to be objective measures of credit quality.
3. Bill Cooper finds a table of historical bond yields on the website of the U.S. Treasury that supports the work he has done in his analysis and includes the table as part of his report without citing the source. Has Cooper violated the Code and Standards?
 - A. Yes, because he did not cite the source of the table.
 - B. Yes, because he did not verify the accuracy of the information.
 - C. No, because the table is from a recognized source of financial or statistical data.
4. Which of the following statements about the Standard on misconduct is *most accurate*?
 - A. Misconduct applies only to a member or candidate's professional activities.
 - B. Neglecting to perform due diligence when required is an example of misconduct.
 - C. A member or candidate commits misconduct by engaging in any illegal activity, such as a parking ticket offense.
5. Ed Ingus, CFA, visits the headquarters and main plant of Bullitt Company and observes that inventories of unsold goods appear unusually large. From the CFO, he learns that a recent increase in returned items may result in earnings for the current quarter that are below analysts' estimates. Bullitt plans to make this conclusion public next week. Based on his visit, Ingus changes his recommendation on Bullitt to "Sell." Has Ingus violated the Standard concerning material nonpublic information?
 - A. Yes.
 - B. No, because the information he used is not material.
 - C. No, because his actions are consistent with the mosaic theory.
6. Green Brothers, an emerging market fund manager, has two of its subsidiaries simultaneously buy and sell emerging market stocks. In its marketing literature, Green Brothers cites the overall emerging market volume as evidence of the market's liquidity. As a result of its actions, more investors participate in the emerging markets fund. Green Brothers *most likely*:
 - A. did not violate the Code and Standards.
 - B. violated the Standard regarding market manipulation.
 - C. violated the Standard regarding performance presentation.

MODULE 2.4: GUIDANCE FOR STANDARDS III(A) AND III(B)

STANDARD III: DUTIES TO CLIENTS

Standard III(A) Loyalty, Prudence, and Care

Members and Candidates have a duty of loyalty to their clients and must act with reasonable care and exercise prudent judgment. Members and Candidates must act for the benefit of their clients and place their clients' interests before their employer's or their own interests.



Video covering this content is available online.

Client interests always come first. Although this Standard does not impose a fiduciary duty on members or candidates where one did not already exist, it does require members and candidates to act in their clients' best interests and recommend products that are suitable given their clients' investment objectives and risk tolerances. Members and candidates must:

- Exercise the prudence, care, skill, and diligence under the circumstances that a person acting in a like capacity and familiar with such matters would use.

- Manage pools of client assets in accordance with the terms of the governing documents, such as trust documents or investment management agreements.
- Make investment decisions in the context of the total portfolio.
- Inform clients of any limitations in an advisory relationship (e.g., an adviser who may only recommend her own firm's products).
- Vote proxies in an informed and responsible manner. Due to cost-benefit considerations, it may not be necessary to vote all proxies.
- Client brokerage, or "soft dollars" or "soft commissions," must be used to benefit the client.
- The "client" may be the investing public as a whole rather than a specific entity or person.

Recommendations for members

Submit to clients, at least quarterly, itemized statements showing all securities in custody and all debits, credits, and transactions. Disclose where client assets are held and if they are moved. Keep client assets separate from others' assets.

If in doubt as to the appropriate action, what would you do if you were the client? If still in doubt, disclose and seek written client approval.

Encourage firms to address these topics when drafting policies and procedures regarding fiduciary duty:

- Follow applicable rules and laws.
- Establish investment objectives of client.
- Consider suitability of a portfolio relative to the client's needs and circumstances, the investment's basic characteristics, or the basic characteristics of the total portfolio.
- Diversify unless account guidelines dictate otherwise.
- Deal fairly with all clients in regard to investment actions.
- Disclose conflicts of interest.
- Disclose manager compensation arrangements.
- Regularly review actions for consistency with documents.
- Vote proxies in the best interest of clients and ultimate beneficiaries.
- Maintain confidentiality.
- Seek best execution.
- Put client interests first.

Standard III(B) Fair Dealing

Members and Candidates must deal fairly and objectively with all clients when providing investment analysis, making investment recommendations, taking investment action, or engaging in other professional activities.

Do not discriminate against any clients when disseminating recommendations or taking investment action. "Fairly" does not mean "equally." In the normal course of business, there will be differences in the time emails, faxes, and other communications are received by different clients.

Different service levels are acceptable, but they must not negatively affect or disadvantage any clients. Disclose the different service levels to all clients and prospects, and make premium levels of service available to all those willing to pay for them.

Give all clients a fair opportunity to act on every recommendation. Clients who are unaware of a change in the recommendation for a security should be advised of the change before an order for the security is accepted.

Treat clients fairly in light of their investment objectives and circumstances. Treat both individual and institutional clients in a fair and impartial manner. Members and candidates should not take advantage of their position in the industry to disadvantage clients (e.g., taking shares of an oversubscribed IPO).

Recommendations for members

- Encourage firms to establish compliance procedures requiring proper dissemination of investment recommendations and fair treatment of all customers and clients.
- Maintain a list of clients and holdings—use to ensure that all holders are treated fairly.

Recommendations for firms

- Limit the number of people who are aware that a change in recommendation will be made.
- Shorten the time frame between decision and dissemination.
- Publish personnel guidelines for pre-dissemination—have in place guidelines prohibiting personnel who have prior knowledge of a recommendation from discussing it or taking action on the pending recommendation.
- Disseminate new or changed recommendations simultaneously to all clients who have expressed an interest or for whom an investment is suitable.
- Establish systematic account review—ensure that no client is given preferred treatment and that investment actions are consistent with the account's objectives.
- Disclose available levels of service and the associated fees.
- Disclose trade allocation procedures.
- Develop written trade allocation procedures to:
 - Document and time stamp all orders.
 - Bundle orders and then execute on a first come, first fill basis.
 - Allocate partially filled orders.
 - Provide the same net (after costs) execution price to all clients in a block trade.

MODULE 2.5: GUIDANCE FOR STANDARDS III(C), III(D), AND III(E)

Standard III(C) Suitability

1. When Members and Candidates are in an advisory relationship with a client, they must:
 - a. Make a reasonable inquiry into a client's or prospective client's investment experience, risk and return objectives, and financial constraints prior to making



Video covering
this content is
available online.

- any investment recommendation or taking investment action and must reassess and update this information regularly.
 - b. Determine that an investment is suitable to the client's financial situation and consistent with the client's written objectives, mandates, and constraints before making an investment recommendation or taking investment action.
 - c. Judge the suitability of investments in the context of the client's total portfolio.
2. When Members and Candidates are responsible for managing a portfolio to a specific mandate, strategy, or style, they must make only investment recommendations or take only investment actions that are consistent with the stated objectives and constraints of the portfolio.

In advisory relationships, members must gather client information at the beginning of the relationship, in the form of an investment policy statement (IPS). Consider clients' needs and circumstances and, thus, their risk tolerance. Consider whether or not the use of leverage is suitable for the client.

If a member is responsible for managing a fund to an index or other stated mandate, he must select only investments that are consistent with the stated mandate.

Unsolicited trade requests

An investment manager may receive a client request to purchase a security that the manager knows is unsuitable, given the client's investment policy statement. The trade may or may not have a material effect on the risk characteristics of the client's total portfolio and the requirements are different for each case. In either case, however, the manager should not make the trade until he has discussed with the client the reasons (based on the IPS) that the trade is unsuitable for the client's account.

If the manager determines that the *effect on the risk/return profile of the client's total portfolio is minimal*, the manager, after discussing with the client how the trade does not fit the IPS goals and constraints, may follow his firm's policy with regard to unsuitable trades. Regardless of firm policy, the client must acknowledge the discussion and an understanding of why the trade is unsuitable.

If the trade would have a *material impact on the risk/return profile of the client's total portfolio*, one option is to update the IPS so the client accepts a changed risk profile that would permit the trade. If the client will not accept a changed IPS, the manager may follow firm policy, which may allow the trade to be made in a separate client-directed account. In the absence of other options, the manager may need to reconsider whether to maintain the relationship with the client.

Recommendations for members

- Establish a written IPS, considering type of client and account beneficiaries, the objectives, constraints, and the portion of the client's assets managed.
- Review the IPS annually and update for material changes in client and market circumstances.
- Develop policies and procedures to assess suitability of portfolio changes. Consider the impact on diversification, risk, and meeting the client's investment strategy.

Standard III(D) Performance Presentation

When communicating investment performance information, Members and Candidates must make reasonable efforts to ensure that it is fair, accurate, and complete.

Members must not misstate performance or mislead clients or prospects about their investment performance or their firm's investment performance.

Members must not misrepresent past performance or reasonably expected performance, and must not state or imply the ability to achieve a rate of return similar to that achieved in the past.

For brief presentations, members must make detailed information available on request and indicate that the presentation has offered only limited information.

Recommendations for members

- Encourage firms to adhere to Global Investment Performance Standards.
- Consider the sophistication of the audience to whom a performance presentation is addressed.
- Present the performance of a weighted composite of similar portfolios rather than the performance of a single account.
- Include terminated accounts as part of historical performance and clearly state when they were terminated.
- Include all appropriate disclosures to fully explain results (e.g., model results included, gross or net of fees, etc.).
- Maintain data and records used to calculate the performance being presented.

Standard III(E) Preservation of Confidentiality

Members and Candidates must keep information about current, former, and prospective clients confidential unless:

1. The information concerns illegal activities on the part of the client;
2. Disclosure is required by law; or
3. The client or prospective client permits disclosure of the information.

If illegal activities by a client are involved, members may have an obligation to report the activities to authorities.

The confidentiality Standard extends to former clients as well.

The requirements of this Standard are not intended to prevent members and candidates from cooperating with a CFA Institute Professional Conduct Program (PCP) investigation.

Recommendations for members

- Members should avoid disclosing information received from a client except to authorized coworkers who are also working for the client. Consider whether the disclosure is necessary and will benefit the client.
- Members should follow firm procedures for storage of electronic data and recommend adoption of such procedures if they are not in place.
- Assure client information is not accidentally disclosed.

MODULE QUIZ 2.4, 2.5



To best evaluate your performance, enter your quiz answers online.

1. Cobb, Inc., has hired Jude Kasten, CFA, to manage its pension fund. The client(s) to whom Kasten owes her primary duty of loyalty is:
 - A. Cobb's management.
 - B. the shareholders of Cobb, Inc.
 - C. the beneficiaries of the pension fund.
2. Which of the following actions is *most likely* a violation of the Standard on fair dealing?
 - A. A portfolio manager allocates IPO shares to all client accounts where it is suitable, including her brother's fee-based retirement account.
 - B. An investment firm routinely begins trading for its own account immediately after announcing recommendation changes to clients.
 - C. After releasing a general recommendation to all clients, an analyst calls the firm's largest institutional clients to discuss the recommendation in more detail.
3. The Standard regarding suitability *most likely* requires that:
 - A. an adviser must analyze an investment's suitability for the client prior to recommending or acting on the investment.
 - B. a member or candidate must decline to carry out an unsolicited transaction that she believes is unsuitable for the client.
 - C. when managing an index fund, a manager who is evaluating potential investments must consider their suitability for the fund's shareholders.
4. Which of the following is *most likely* a recommended procedure for complying with the Standard on performance presentation?
 - A. Exclude terminated accounts from past performance history.
 - B. Present the performance of a representative account to show how a composite has performed.
 - C. Consider the level of financial knowledge of the audience to whom the performance is presented.
5. The CFA Institute Professional Conduct Program (PCP) has begun an investigation into Chris Jones, a Level II CFA candidate, and a number of his CFA charterholder colleagues. Jones has access to confidential client records that could be useful in clearing his name and wishes to share this information with the PCP. Which of the following *most accurately* describes Jones's duties with regard to preservation of confidentiality?
 - A. Sharing the confidential information with the PCP would violate the Standards.
 - B. The Standards encourage, but do not require, that Jones support the PCP investigation into his colleagues.
 - C. Jones may share confidential information about former clients with the PCP but may not share confidential information about current clients.

MODULE 2.6: GUIDANCE FOR STANDARD IV



STANDARD IV: DUTIES TO EMPLOYERS

Video covering this content is available online.

Standard IV(A) Loyalty

In matters related to their employment, Members and Candidates must act for the benefit of their employer and not deprive their employer of the advantage of their skills and abilities, divulge confidential information, or otherwise cause harm to their employer.

This Standard is applicable to employees. If members are independent contractors, rather than employees, they have a duty to abide by the terms of their agreements.

Members must not engage in any activities that would injure the firm, deprive it of profit, or deprive it of the advantage of employees' skills and abilities.

Members should always place client interests above interests of their employer, but consider the effects of their actions on firm integrity and sustainability.

There is no requirement that the employee put employer interests ahead of family and other personal obligations; it is expected that employers and employees will discuss such matters and balance these obligations with work obligations.

There may be isolated cases where a duty to one's employer may be violated in order to protect clients or the integrity of the market, when the actions are not for personal gain. This may be referred to as whistle-blowing.

Independent practice for compensation is allowed if a notification is provided to the employer fully describing all aspects of the services, including compensation, duration, and the nature of the activities and the employer consents to all terms of the proposed independent practice before it begins.



PROFESSOR'S NOTE

The distinction between an employee and contractor is important in applying this and other standards. Think of it as employee status conveys an implication of an exclusive work relationship with the employer and contractor does not. To engage in outside practice or accept additional compensation requires disclosure and approval from the employer. But consider an individual who directly offers services to various clients. The manager is self-employed. With no inference of exclusivity, there is no need to notify or receive approval to add another client. This still leaves other responsibilities in place. If the clients expected or were told the manager is full time self-employed and goes to part time or also becomes an employee at another firm, that is almost certainly material to any reasonable client and must be disclosed.

When leaving an employer, members must continue to act in their employer's best interests until their resignation is effective. Activities that may constitute a violation include:

- Misappropriation of trade secrets.
- Misuse of confidential information.
- Soliciting employer's clients prior to leaving.
- Self-dealing.
- Misappropriation of client lists.

Employer records on any medium (e.g., home computer, tablet, cell phone) are the property of the firm.

When an employee has left a firm, simple knowledge of names and existence of former clients is generally not confidential. There is also no prohibition on the use of experience or knowledge gained while with a former employer. If an agreement exists among employers (e.g., the U.S. "Protocol for Broker Recruiting") that permits brokers to take certain client information when leaving a firm, a member may act within the terms of the agreement without violating the Standard.

Members and candidates must adhere to their employers' policies concerning social media. When planning to leave an employer, members and candidates must ensure that their social media use complies with their employers' policies for notifying clients about employee separations.

Recommendations for members

- Keep personal and professional social media accounts separate. Business-related accounts approved by the firm constitute employer assets.
- Understand and follow the employer's policies regarding competitive activities, termination of employment, whistleblowing, and whether you are considered a full- or part-time employee, or a contractor.

Recommendations for firms

Employers should not have incentive and compensation systems that encourage unethical behavior.

- Establish codes of conduct and related procedures.

Standard IV(B) Additional Compensation Arrangements

Members and Candidates must not accept gifts, benefits, compensation, or consideration that competes with or might reasonably be expected to create a conflict of interest with their employer's interest unless they obtain written consent from all parties involved.

Compensation includes direct and indirect compensation from a client and other benefits received from third parties.

Written consent from a member's employer includes email communication.

Understand the difference between an additional compensation arrangement and a gift from a client:

- If a client offers a bonus that depends on the *future performance* of her account, this is an additional compensation arrangement that requires written consent in advance.
- If a client offers a bonus to reward a member for her account's *past performance*, this is a gift that requires disclosure to the member's employer to comply with Standard I(B) Independence and Objectivity.

Recommendations for members

Make an immediate written report to the employer detailing any proposed compensation and services, if additional to that provided by the employer. It should disclose the nature, approximate amount, and duration of compensation.

Members and candidates who are hired to work part time should discuss any arrangements that may compete with their employer's interest at the time they are hired and abide by any limitations their employer identifies.

Standard IV(C) Responsibilities of Supervisors

Members and Candidates must make reasonable efforts to ensure that anyone subject to their supervision or authority complies with applicable laws, rules, regulations, and the Code and Standards.

Members with employees subject to her control or influence must have in-depth knowledge of the Code and Standards. Those members must make reasonable efforts to prevent employees from violating laws, rules, regulations, or the Code and Standards, as well as make reasonable efforts to detect violations.

An adequate compliance system must meet industry standards, regulatory requirements, and the requirements of the Code and Standards.

Members with supervisory responsibilities have an obligation to bring an inadequate compliance system to the attention of firm's management and recommend corrective action.

A member or candidate faced with no compliance procedures or with procedures he believes are inadequate must decline supervisory responsibility in writing until adequate procedures are adopted by the firm.

Recommendations for members

A member should recommend that his employer adopt a code of ethics. Members should encourage employers to provide their codes of ethics to clients.

Once the compliance program is instituted, the supervisor should:

- Distribute it to the proper personnel.
- Update it as needed.
- Continually educate staff regarding procedures.
- Issue reminders as necessary.
- Require professional conduct evaluations.
- Review employee actions to monitor compliance and identify violations.
- Respond promptly to violations, investigate thoroughly, increase supervision while investigating the suspected employee, and consider changes to prevent future violations.

Recommendations for firms

Do not confuse the code with compliance. The code is general principles in plain language. Compliance is detailed procedures to meet the code.

Compliance procedures should:

- Be clearly written.
- Be easy to understand.
- Designate a compliance officer with authority clearly defined.
- Have a system of checks and balances.
- Establish a hierarchy of supervisors.
- Outline the scope of procedures.
- Outline what conduct is permitted.
- Contain procedures for reporting violations and sanctions.

The supervisor must then:

- Disseminate the compliance program to appropriate personnel and periodically update the program.
- Continually educate and remind personnel to follow the program.
- Make professional conduct review part of employee review.

- Review employee actions to identify and then correct violations.

When a violation is detected, the supervisor must:

- Respond promptly and investigate thoroughly.
- Supervise the accused closely until the issue is resolved.
- Consider changes to minimize future violations.

Ethics education will not deter fraud, but when combined with regular compliance training, it will establish an ethical culture and alert employees to potential ethical and legal pitfalls.

Incentive compensation plans must reinforce ethical behavior by designing them to align employee incentives with client best interests (e.g., don't incent inappropriate risk taking or other actions detrimental to the client).

MODULE 2.7: GUIDANCE FOR STANDARD V

STANDARD V: INVESTMENT ANALYSIS, RECOMMENDATIONS, AND ACTIONS



Video covering this content is available online.

Standard V(A) Diligence and Reasonable Basis

Members and Candidates must:

1. Exercise diligence, independence, and thoroughness in analyzing investments, making investment recommendations, and taking investment actions.
2. Have a reasonable and adequate basis, supported by appropriate research and investigation, for any investment analysis, recommendation, or action.

The application of this Standard depends on the investment philosophy adhered to, members' and candidates' roles in the investment decision-making process, and the resources and support provided by employers. These factors dictate the degree of diligence, thoroughness of research, and the proper level of investigation required.

The level of research needed to satisfy the requirement for due diligence will differ depending on the product or service offered. A list of things that should be considered prior to making a recommendation or taking investment action includes:

- Global and national economic conditions.
- A firm's financial results and operating history, and the business cycle stage.
- Fees and historical results for a mutual fund.
- Limitations of any quantitative models used.
- A determination of whether peer group comparisons for valuation are appropriate.

Evaluate the quality of third-party research. Examples of criteria to use in judging quality are:

- Review assumptions used.
- Determine how rigorous the analysis was.
- Identify how timely the research is.
- Evaluate objectivity and independence of the recommendations.

When **using** quantitative research such as computer-based models, screens, and rankings, members need not be experts. However, they must understand the basic assumptions and risks and consider a range of input values and the resulting effects on output. When **creating** such models, a higher level of knowledge and understanding is required.

Develop standardized criteria to evaluate external advisers and subadvisers, such as considering:

- The advisers' code of ethics plus their compliance and control procedures.
- The quality of their return information and process to maintain adherence to intended strategy.

When participating in group research or decision-making, members who disagree need not dissent or disassociate from the final conclusion, as long as the conclusion was based on a reasonable and adequate basis and was independently and objectively developed.

Recommendations for members

Members should *encourage their firms to consider* these policies and procedures supporting this Standard:

- Have a policy requiring that research reports and recommendations have a basis that can be substantiated as reasonable and adequate.
- Have detailed, written guidance for proper research, supervision, and due diligence.
- Have measurable criteria for judging the quality of research, and base analyst compensation on such criteria.
- Have written procedures that provide a minimum acceptable level of scenario testing for computer-based models and include standards for the range of scenarios, model accuracy over time, and a measure of the sensitivity of cash flows to model assumptions and inputs.
- Have a policy for evaluating outside providers of information that addresses the reasonableness and accuracy of the information provided and establishes how often the evaluations should be repeated.
- Adopt a set of standards that provides criteria for evaluating external advisers and states how often a review of external advisers will be performed.

Standard V(B) Communication with Clients and Prospective Clients

Members and Candidates must:

1. Disclose to clients and prospective clients the basic format and general principles of the investment processes they use to analyze investments, select securities, and construct portfolios and must promptly disclose any changes that might materially affect those processes.
2. Disclose to clients and prospective clients significant limitations and risks associated with the investment process.
3. Use reasonable judgment in identifying which factors are important to their investment analyses, recommendations, or actions and include those factors in communications with clients and prospective clients.

4. Distinguish between fact and opinion in the presentation of investment analyses and recommendations.

All means and types of communication with clients are covered by this Standard, not just research reports or other written communications.

Members must distinguish between opinions and facts and always include the basic characteristics of the security being analyzed in a research report. Expectations based on statistical modeling and analysis are not facts.

Members must explain to clients and prospects the investment decision-making process used.

In preparing recommendations for structured securities, allocation strategies, or any other nontraditional investment, members must communicate those risk factors specific to such investments.

Members must communicate significant changes in the risk characteristics of an investment or investment strategy.

Members must update clients regularly about any changes in the investment process, including any risks and limitations that have been newly identified.

When using projections from quantitative models and analysis, members may violate the Standard by not explaining the limitations of the model and the assumptions it uses, which provides a context for judging the uncertainty regarding the estimated investment result.

Members and candidates must inform clients about limitations inherent to an investment. Two examples of such limitations are liquidity and capacity. Liquidity refers to the ability to exit an investment readily without experiencing a significant extra cost from doing so. Capacity refers to an investment vehicle's ability to absorb additional investment without reducing the returns it is able to achieve.

Recommendations for members

Selection of relevant factors in a report can be a judgment call so members should maintain records indicating the nature of the research, and be able to supply additional information if it is requested by the client or other users of the report.

Encourage the firm to establish a rigorous method of reviewing research work and results.

Standard V(C) Record Retention

Members and Candidates must develop and maintain appropriate records to support their investment analyses, recommendations, actions, and other investment-related communications with clients and prospective clients.

Members must maintain research records that support the reasons for the analyst's conclusions and any investment actions taken. Such records are the property of the firm. All communications with clients through any medium, including emails and text messages, are records that must be retained.

A member who changes firms must re-create the analysis documentation supporting her recommendation using publicly available information or information obtained from the company and must not rely on memory or materials created at her previous firm.

Recommendations for members

Maintain notes and documents to support all investment communications.

Recommendations for firms

If no regulatory standards or firm policies are in place, the Standard recommends a seven-year minimum holding period.



MODULE QUIZ 2.6, 2.7

To best evaluate your performance, enter your quiz answers online.

1. Connie Fletcher, CFA, works for a small money management firm that specializes in pension accounts. Recently, a friend asked her to act as an unpaid volunteer manager for the city's street sweep pension fund. As part of the position, the city would grant Fletcher a free parking space in front of her downtown office. Before Fletcher accepts, she should *most appropriately*:
 - A. do nothing because this is a volunteer position.
 - B. inform her current clients in writing and discuss the offer with her employer.
 - C. disclose the details of the volunteer position to her employer and obtain written permission from her employer.
2. Sarah Johnson, a portfolio manager, is offered a bonus directly by a client if Johnson meets certain performance goals. To comply with the Standard that governs additional compensation arrangements, Johnson should:
 - A. decline to accept a bonus outside of her compensation from her employer.
 - B. disclose this arrangement to her employer in writing and obtain her employer's permission.
 - C. disclose this arrangement to her employer only if she actually meets the performance goals and receives the bonus.
3. A member or candidate who has supervisory responsibility:
 - A. should place particular emphasis on enforcing investment-related compliance policies.
 - B. is responsible for instructing those to whom he has delegated authority about methods to detect and prevent violations of the law and the Code and Standards.
 - C. has complied with the Standards if she reports employee violations to upper management and provides a written warning to the employee to cease such activities.
4. Which of the following actions is a *required*, rather than *recommended*, action under the Standard regarding diligence and a reasonable basis for a firm's research recommendations?
 - A. Compensate analysts based on a measure of the quality of their research.
 - B. Review the assumptions used and evaluate the objectivity of third-party research reports.
 - C. Have a policy requiring that research reports and recommendations have a basis that can be substantiated as reasonable and adequate.
5. Claire Marlin, CFA, manages an investment fund specializing in foreign currency trading. Marlin writes a report to investors based on an expected appreciation of the euro relative to other major currencies. Marlin shows the projected returns from the strategy under three favorable scenarios: if the euro appreciates less than 5%, between 5% and 10%, or more than 10%. She clearly states that these forecasts are her opinion. Has Marlin violated the Standard related to communication with clients?
 - A. Yes.
 - B. No, because she disclosed the basic characteristics of the investment.
 - C. No, because she distinguished fact from opinion and discussed how the strategy may perform under a range of scenarios.

6. If regulations do not specify how long to retain the documents that support an analyst's conclusions, the Code and Standards recommend a period of at least:
- A. 5 years.
 - B. 7 years.
 - C. 10 years.

MODULE 2.8: GUIDANCE FOR STANDARD VI



Video covering
this content is
available online.

STANDARD VI: CONFLICTS OF INTEREST

Standard VI(A) Disclosure of Conflicts

Members and Candidates must make full and fair disclosure of all matters that could reasonably be expected to impair their independence and objectivity or interfere with respective duties to their clients, prospective clients, and employer. Members and Candidates must ensure that such disclosures are prominent, are delivered in plain language, and communicate the relevant information effectively.

Members must fully disclose to clients, prospects, and their employers all actual and potential conflicts of interest in order to protect investors and employers. These disclosures must be clearly stated.

The requirement that all potential areas of conflict be disclosed allows clients and prospects to judge motives and potential biases for themselves. Disclosure of broker-dealer market-making activities would be included here. Board service is another area of potential conflict.

The most common conflict that requires disclosure is actual ownership of stock in companies that the member recommends or that clients hold.

Another common source of conflicts of interest is a member's compensation/bonus structure, which can potentially create incentives to take actions that produce immediate gains for the member with little or no concern for longer-term returns for the client. Such conflicts must be disclosed when the member is acting in an advisory capacity and must be updated in the case of significant change in compensation structure.

Members must give their employers enough information to judge the impact of a conflict, take reasonable steps to avoid conflicts, and report them promptly if they occur.

Recommendations for members

Any special compensation arrangements, bonus programs, commissions, performance-based fees, options on the firm's stock, and other incentives should be disclosed to clients. If the firm refuses to allow this disclosure, document the refusal and consider disassociating from the firm.

Standard VI(B) Priority of Transactions

Investment transactions for clients and employers must have priority over investment transactions in which a Member or Candidate is the beneficial owner.

Client transactions take priority over personal transactions and over transactions made on behalf of the member's firm. Personal transactions include situations where the member is a beneficial owner.

Personal transactions may be undertaken only after clients and the member's employer have had an adequate opportunity to act on a recommendation. Note that family member accounts that are client accounts should be treated just like any client account; they should not be disadvantaged.

Members must not act on information about pending trades for personal gain. The overriding considerations with respect to personal trades are that they do not disadvantage any clients.

When requested, members must fully disclose to investors their firm's personal trading policies.

Recommendations for members

Members should encourage their firms to adopt the procedures listed in the following recommendations for firms and disclose these to clients.

Recommendations for firms

All firms should have basic procedures in place that address conflicts created by personal investing. The following areas should be included:

- Establish limitations on employee participation in equity IPOs and systematically review such participation.
- Establish restrictions on participation in private placements. Strict limits should be placed on employee acquisition of these securities and proper supervisory procedures should be in place. Participation in these investments raises conflict of interest issues similar to those of IPOs.
- Establish blackout/restricted periods. Employees involved in investment decision-making should have blackout periods prior to trading for clients—no front running (i.e., purchase or sale of securities in advance of anticipated client or employer purchases and sales). The size of the firm and the type of security should help dictate how severe the blackout requirement should be.
- Establish reporting procedures, including duplicate trade confirmations, disclosure of personal holdings and beneficial ownership positions, and preclearance procedures.
- Disclose, upon request, the firm's policies regarding personal trading.

Standard VI(C) Referral Fees

Members and Candidates must disclose to their employer, clients, and prospective clients, as appropriate, any compensation, consideration, or benefit received from or paid to others for the recommendation of products or services.

Members must inform employers, clients, and prospects of any benefit received for referrals of customers and clients, allowing them to evaluate the full cost of the service as well as any potential partiality. All types of consideration must be disclosed.

Recommendations for members

Members should encourage their firms to adopt clear procedures regarding compensation for referrals.

Recommendations for firms

Have an investment professional advise the clients at least quarterly on the nature and amount of any such compensation.

MODULE 2.9: GUIDANCE FOR STANDARD VII

STANDARD VII: RESPONSIBILITIES AS A CFA INSTITUTE MEMBER OR CFA CANDIDATE



Video covering this content is available online.

Standard VII(A) Conduct as Participants in CFA Institute Programs

Members and Candidates must not engage in any conduct that compromises the reputation or integrity of CFA Institute or the CFA designation or the integrity, validity, or security of CFA Institute programs.

Members must not engage in any activity that undermines the integrity of the CFA charter. This Standard applies to conduct that includes:

- Cheating on the CFA exam or any exam.
- Revealing anything about either broad or specific topics tested, content of exam questions, or formulas required or not required on the exam.
- Not following rules and policies of the CFA Program.
- Giving confidential information on the CFA Program to candidates or the public.
- Improperly using the designation to further personal and professional goals.
- Misrepresenting information on the Professional Conduct Statement (PCS) or the CFA Institute Professional Development Program.

Members and candidates are not precluded from expressing their opinions regarding the exam program or CFA Institute but must not reveal confidential information about the CFA Program.

Candidates who violate any of the CFA exam policies (e.g., calculator, personal belongings, Candidate Pledge) have violated Standard VII(A).

Members who volunteer in the CFA Program may not solicit or reveal information about questions considered for or included on a CFA exam, about the grading process, or about scoring of questions.

Standard VII(B) Reference to CFA Institute, the CFA Designation, and the CFA Program

When referring to CFA Institute, CFA Institute membership, the CFA designation, or candidacy in the CFA Program, Members and Candidates must not misrepresent or exaggerate the meaning or implications of membership in CFA Institute, holding the CFA designation, or candidacy in the CFA Program.

Members must not make promotional promises or guarantees tied to the CFA designation, such as over-promising individual competence or over-promising investment results in the future (i.e., higher performance, less risk, etc.).

Members must satisfy these requirements to maintain membership:

- Sign the PCS annually.

- Pay CFA Institute membership dues annually.

If they fail to do this, they are no longer active members.

Do not misrepresent or exaggerate the meaning of the CFA designation.

There is no partial CFA designation. It is acceptable to state that a candidate successfully completed the program in three years if, in fact, he did, but claiming superior ability because of this is not permitted.

Recommendations for members

Members should be sure that their firms are aware of the proper references to a member's CFA designation or candidacy, as errors in these references are common.



MODULE QUIZ 2.8, 2.9

To best evaluate your performance, enter your quiz answers online.

1. Daniel Lyons, CFA, is an analyst who covers several stocks, including Horizon Company. Lyons's aunt owns 30,000 shares of Horizon. She informs Lyons that she has created a trust in his name into which she has placed 2,000 shares of Horizon. The trust is structured so that Lyons will not be able to sell the shares until his aunt dies, but may vote the shares. Lyons is due to update his research coverage of Horizon next week. Lyons should *most appropriately*:
 - A. update the report as usual because he is not a beneficial owner of the stock.
 - B. advise his superiors that he is no longer able to issue research recommendations on Horizon.
 - C. disclose the situation to his employer and, if then asked to prepare a report, also disclose his beneficial ownership of the shares in his report.
2. Kate Wilson, CFA, is an equity analyst. Wilson enters two transactions for her personal account. Wilson sells 500 shares of Tibon, Inc., a stock on which she currently has a "Buy" recommendation. Wilson buys 200 shares of Hayfield Co. and the following day issues a research report on Hayfield with a "Buy" recommendation. Has Wilson violated the Code and Standards?
 - A. No.
 - B. Yes, both of her actions violate the Code and Standards.
 - C. Yes, but only one of her actions violates the Code and Standards.
3. Hern Investments provides monthly emerging market research to Baker Brokerage in exchange for prospective client referrals and European equity research from Baker. Clients and prospects of Hern are not made aware of the agreement, but clients unanimously rave about the high quality of the research provided by Baker. As a result of the research, many clients with non-discretionary accounts have earned substantial returns on their portfolios. Managers at Hern have also used the research to earn outstanding returns for the firm's discretionary accounts. Hern has *most likely*:
 - A. not violated the Code and Standards.
 - B. violated the Code and Standards by using third-party research in discretionary accounts.
 - C. violated the Code and Standards by failing to disclose the referral agreement with Baker.
4. After writing the Level III CFA exam, Cynthia White goes to internet discussion site *CFA Haven* to express her frustration. White writes, "CFA Institute is not doing a competent job of evaluating candidates because none of the questions in the June exam touched on Alternative Investments." White *most likely* violated the Standard related to conduct as a candidate in the CFA program by:
 - A. publicly disputing CFA Institute policies and procedures.
 - B. disclosing subject matter covered or not covered on a CFA exam.
 - C. participating in an internet forum that is directed toward CFA Program participants.

5. After passing all three levels of the CFA exams on her first attempts and being awarded her CFA charter, Paula Osgood is promoting her new money management firm by issuing an advertisement. Which of these statements would *most likely* violate the Standard related to use of the CFA designation?
- A. "To earn the right to use the CFA designation, Paula passed three exams covering ethics, financial statement analysis, asset valuation, and portfolio management."
 - B. "Paula passed three 6-hour exams on her first attempts and is a member of her local investment analyst society."
 - C. "Because of her extensive training, Paula will be able to achieve better investment results than managers who have not been awarded the CFA designation."

ANSWER KEY FOR MODULE QUIZZES

Module Quiz 1.1

1. **C** The process for enforcing the Code and Standards does not include suspending a member or candidate while an inquiry is in progress. If CFA Institute Professional Conduct staff receive information that prompts an inquiry, the staff may request information from the member or candidate, interview parties who initiated a complaint, or review relevant records and documents. (LOS 1.a)
2. **A** One of the six components of the Code of Ethics requires members and candidates to “maintain and improve their professional competence and strive to maintain and improve the competence of other investment professionals.” The other two answer choices are required by the Standards of Professional Conduct but are not components of the Code of Ethics. (LOS 1.b)
3. **C** The Standard related to additional compensation arrangements is a subsection of Standard IV Duties to Employers. (LOS 1.b)

Module Quiz 2.1, 2.2, 2.3

1. **C** To comply with Standard I(A) Knowledge of the Law, a member must always abide by the strictest applicable law, regulation, or standard. (Module 2.1, LOS 2.a, 2.b)
2. **A** Gifts from clients are acceptable under Standard I(B) Independence and Objectivity, but the Standard requires members and candidates to disclose such gifts to their employers. Standard I(B) allows issuer-paid research as long as the analysis is thorough, independent, unbiased, and has a reasonable and adequate basis for its conclusions, and the compensation from the issuer is disclosed. Members and candidates should consider the potential for conflicts of interest inherent in credit ratings and may need to do independent research to evaluate the soundness of these ratings. (Module 2.1, LOS 2.a, 2.b)
3. **C** According to Standard I(C) Misrepresentation, members and candidates must cite the sources of the information they use in their analysis, unless the information is factual data (as opposed to analysis or opinion) from a recognized financial or statistical reporting service. The U.S. Treasury is one example of a recognized source of factual data. (Module 2.2, LOS 2.a, 2.b)
4. **B** Failing to act when required by one’s professional obligations, such as neglecting to perform due diligence related to an investment recommendation, violates Standard I(D) Misconduct. Acts a member commits outside his professional capacity are misconduct if they reflect poorly on the member or candidate’s honesty, integrity, or competence (e.g., theft or fraud). Violations of the law that do not reflect on the member or candidate’s honesty, integrity, or competence (e.g., an act related to civil disobedience or minor civil offenses) are not necessarily regarded as misconduct. (Module 2.2, LOS 2.a, 2.b)
5. **A** The statement from the CFO about the current quarter’s earnings is material nonpublic information. Ingus violated Standard II(A) Material Nonpublic Information

by acting or causing others to act on it. (Module 2.3, LOS 2.a, 2.b)

6. **B** The intent of Green Brothers' actions is to manipulate the appearance of market liquidity in order to attract investment to its own funds. The increased trading activity was not based on market fundamentals or an actual trading strategy to benefit investors. It was merely an attempt to mislead market participants in order to increase assets under Green Brothers' management. The action violates Standard II(B) Market Manipulation. (Module 2.3, LOS 2.a, 2.b)

Module Quiz 2.4, 2.5

1. **C** Standard III(A) Loyalty, Prudence, and Care specifies that for the manager of a pension or trust, the duty of loyalty is owed to the beneficiaries, not to the individuals who hired the manager. (Module 2.4, LOS 2.a, 2.b)
2. **B** The firm must give its clients an opportunity to act on recommendation changes. Firms can offer different levels of service to clients as long as this is disclosed to all clients. The largest institutional clients would likely be paying higher fees for a greater level of service. The portfolio manager's brother's account should be treated the same as any other client account. (Module 2.4, LOS 2.a, 2.b)
3. **A** According to Standard III(C) Suitability, a member or candidate who is in an advisory relationship with a client is responsible for analyzing the suitability of an investment for the client before taking investment action or making a recommendation. If a member or candidate believes an unsolicited trade is unsuitable for a client, the appropriate action is to discuss the trade with the client. The adviser may follow her firm's policies for obtaining client approval if the requested trade would not affect the risk and return of the client's portfolio materially. If the trade would have a material effect, the adviser should discuss with the client whether the IPS needs to be updated. When managing a fund to an index or stated mandate, the manager is responsible for ensuring that potential investments are consistent with the fund's mandate. Suitability for individuals would be a concern for an adviser who recommends the fund to clients, but not for the manager of the fund. (Module 2.5, LOS 2.a, 2.b)
4. **C** Recommendations stated in Standard III(D) Performance Presentation include considering the sophistication and knowledge of the audience when presenting performance data. Other recommendations are to include terminated accounts in past performance history; to present the performance of a composite as a weighted average of the performance of similar portfolios, rather than using a single representative account; and to maintain the records and data that were used to calculate performance. (Module 2.5, LOS 2.a, 2.b)
5. **B** Members and candidates are required to cooperate with PCP investigations into their own conduct and encouraged to cooperate with PCP investigations into the conduct of others. Sharing confidential information with the PCP is not a violation of Standard III(E) Preservation of Confidentiality. Any client information shared with the PCP will be kept in strict confidence. Standard III(E) states that members and candidates are required to maintain confidentiality of client records even after the end of the client relationship. (Module 2.5, LOS 2.a, 2.b)

Module Quiz 2.6, 2.7

1. **C** According to Standard IV(A) Loyalty, members and candidates are expected to act for the benefit of their employer and not deprive the employer of their skills. Fletcher is performing work similar to the services that her employer provides. Although the position is a volunteer position, Fletcher will receive compensation in the form of a free parking space. In light of the circumstances, Fletcher must disclose the details of the position to her employer and get written permission before accepting the volunteer position. (Module 2.6, LOS 2.a, 2.b)
2. **B** Johnson should disclose her additional compensation arrangement in writing to her employer and obtain her employer's written consent before accepting this offer, in accordance with Standard IV(B) Additional Compensation Arrangements. (Module 2.6, LOS 2.a, 2.b)
3. **B** Members or candidates may delegate supervisory duties to subordinates but remain responsible for instructing and supervising them. Reporting the violation and warning the employee are not sufficient to comply with Standard IV(C) Responsibilities of Supervisors. The supervisor must also take steps to prevent further violations while she conducts an investigation, such as limiting the employee's activity or increasing her monitoring of the employee. Supervisors should enforce investment-related and non-investment related policies equally. (Module 2.6, LOS 2.a, 2.b)
4. **B** Standard V(A) Diligence and Reasonable Basis requires analysts who use third-party research to review its assumptions and evaluate the independence and objectivity of the research. The other choices are recommended procedures for compliance with the Standard. (Module 2.7, LOS 2.a, 2.b)
5. **A** Standard V(B) Communication with Clients and Prospective Clients requires that members and candidates communicate the risk associated with the investment strategy used and how the strategy is expected to perform in a range of scenarios. Marlin should have also discussed how her strategy would perform if the euro depreciates instead of appreciating as she expects. (Module 2.7, LOS 2.a, 2.b)
6. **B** When no other regulatory guidance applies, Standard V(C) Record Retention recommends that records be maintained for a minimum of seven years. (Module 2.7, LOS 2.a, 2.b)

Module Quiz 2.8, 2.9

1. **C** Even though the shares are held in trust, Lyons is considered a beneficial owner under Standard VI(A) Disclosure of Conflicts because he has a pecuniary interest in the shares and because he has the power to vote the shares. Lyons is obligated to inform his employer of the potential conflict. If Lyons's employer permits him to continue issuing investment recommendations on the company, Lyons must disclose the existence of a potential conflict in his reports. (Module 2.8, LOS 2.a, 2.b)
2. **C** Only one of these transactions is a violation. Standard VI(B) Priority of Transactions requires members and candidates to give clients an adequate opportunity to act on a recommendation before trading for accounts in which the member or candidate has a beneficial ownership interest. Members and candidates may trade for their own accounts as long as they do not disadvantage clients, benefit personally from client trades, or violate any regulations that apply. The Standard does not prohibit members and candidates from entering personal transactions that are contrary to what their firms

are recommending for clients, as long as the transaction does not violate any of these criteria. (Module 2.8, LOS 2.a, 2.b)

3. **C** According to Standard VI(C) Referral Fees, Hern must disclose the referral arrangement between itself and Baker so that potential clients can judge the true cost of Hern's services and assess whether there is any partiality inherent in the recommendation of services. (Module 2.8, LOS 2.a, 2.b)
 4. **B** Standard VII(A) Conduct as Participants in CFA Institute Programs prohibits candidates from revealing which portions of the Candidate Body of Knowledge were or were not covered on an exam. Members and candidates are free to disagree with the policies, procedures, or positions taken by the CFA Institute. The Standard does not prohibit participating in CFA Program-related internet blogs, forums, or social networks. (Module 2.9, LOS 2.a, 2.b)
 5. **C** Standard VII(B) Reference to CFA Institute, the CFA designation, and the CFA Program prohibits members and candidates from implying superior performance as a result of being a CFA charterholder. Concise factual descriptions of the requirements to obtain the CFA charter are acceptable. Osgood's statement that she passed the exams on her first attempts is acceptable because it states a fact. (Module 2.9, LOS 2.a, 2.b)
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The following is a review of the Ethical and Professional Standards (1) principles designed to address the learning outcome statements set forth by CFA Institute. Cross-Reference to CFA Institute Assigned Reading #3.

READING 3: APPLICATION OF THE CODE AND STANDARDS: LEVEL III

Study Session 1

EXAM FOCUS

The cases are not intended to teach new material, but to provide additional examples of application of the Standards. There are four cases and within them are included 6, 9, 15, and 10 multiple-choice questions (40 total). Prior to reviewing the summary here, you should read each of the cases contained in the Level III curriculum readings and answer the multiple-choice questions. All 40 multiple-choice questions contain valuable explanations for the correct answer as well as explanations for the incorrect answers.

MODULE 3.1: CASES

LOS 3.a: Evaluate practices, policies, and conduct relative to the CFA Institute Code of Ethics and Standards of Professional Conduct.

LOS 3.b: Explain how the practices, policies, or conduct does or does not violate the CFA Institute Code of Ethics and Standards of Professional Conduct.



Video covering this content is available online.

CFA® Program Curriculum, Volume 1, page 193

CASE OUTLINE: MARCIA LOPEZ

During the same month, Marcia Lopez obtained a master's degree in finance, wrote the Level I CFA exam, and accepted a position in the wealth management department of a large financial institution, BankGlobal. Two months later, upon passing the Level I exam, she begins working at the firm. Her supervisor, David Hockett, CFA, is reviewing Lopez's business card request that states the following: "CFA, Level I." He adds that she should also include the year in which she expects to be granted the CFA charter.

DISCUSSION: Referencing Participation in the CFA Program

According to Standard VII(B) Reference to CFA Institute, the CFA Designation, and the CFA Program, Lopez must be explicit that she is a CFA candidate and may not suggest that she has a partial designation. Furthermore, stating an expected date for receipt of the CFA charter is not acceptable because it is not possible to verify uncertain future events.

Hockett then has Lopez meet other members of his wealth management team. Hockett's team has a very strong rapport with BankGlobal's research department. Due to technical problems with the firm's computer systems, there is about a 45-minute delay between the time when

the research analysts submit their changes in recommendations and the time when they are uploaded to BankGlobal's website and sent to their clients. As a courtesy to Hockett's team, the analysts usually inform them verbally about their changes prior to the information going live on the website. Right after they hear the information, the team uses that information to ensure that their discretionary accounts are not negatively impacted when the changes are made public.

DISCUSSION: Fair Dealing

According to Standard III(B) Fair Dealing, Hockett's team members must not use the information verbally obtained from the analysts for the benefit of their discretionary clients' accounts until the information has been made public. By doing so, they are not treating all of the firm's clients in a fair and impartial manner. In fact, they are giving preferential treatment to the discretionary accounts and in the process, clients who have nondiscretionary accounts may be unfairly disadvantaged.

Although the information may be perceived by the general public to be material, the information was created by external analysts, who are assumed not to be in possession of material nonpublic information (unless otherwise stated). Therefore, there is no violation of Standard II(A) Material Nonpublic Information.

With a few months of work experience, Lopez is given the opportunity to meet with potential new clients, Marty and Mary Kochanski. The Kochanskis were referred to Hockett by Gary White, a business banker at BankGlobal. The only information that White provided to Hockett about the Kochanskis was that they were both 61 years old, retired, and wanted to invest the \$7.4 million of proceeds from the sale of Mary's business. Based solely on the information provided by White, Hockett tells Lopez to devise a "balanced portfolio" investment for the Kochanskis.

In preparing the portfolio, Lopez selects two equity and two fixed income funds. For those four funds, she makes a few simplifying assumptions in presenting the returns. For example, she averages the funds' five-year annualized rates of return and excludes terminated accounts. As well, she provides comparative numbers with five-year annualized rates of return for a "composite portfolio" that includes discretionary accounts of similar size to the Kochanskis' and that have a balanced objective.

DISCUSSION: Know Your Client and Performance Presentation

Hockett and Lopez did not perform sufficient due diligence on their prospective clients *prior* to recommending the balanced portfolio. That is in violation of Standard III(C) Suitability. They should have taken the time to meet with the clients to find out relevant information such as their risk and return objectives and their investment experience prior to recommending any investments.

Lopez excluded the performance of terminated accounts, which violates Standard III(D) Performance Presentation. The requirement to include terminated accounts is meant to prevent an upward bias in reporting returns due to survivorship bias.

The Kochanskis invest their \$7.4 million of funds in a balanced portfolio with BankGlobal. In a conversation with White, Hockett discusses his incentive and quarterly bonus program. Hockett acknowledges that the vast majority of his clients have low risk tolerances and have a long-term approach to investing. However, he has been earning excess returns in those accounts in the short-term by investing portions of their portfolios in high beta stocks. Because those stocks have the appearance of low risk, Hockett does not need to amend the client investment policy statement.

Lopez sends a message to her close friends that she has taken on the Kochanskis as new clients.

DISCUSSION: Suitability and Confidentiality

Hockett violated Standard III(C) Suitability because he has placed his client funds in unsuitable investments (e.g. high beta stocks with a short-term focus) that are inconsistent with their investment objectives (e.g. low risk tolerance with a long-term focus). Clearly, high beta stocks are not low risk. Changing the investment strategy requires the input and approval of the clients, which was not obtained by Hockett.

Lopez violated Standard III(E) Preservation of Confidentiality by revealing their identity as clients to her friends. All information about former, current, or prospective clients must be kept confidential and remain within the firm.

CASE OUTLINE: CASTLE BIOTECHNOLOGY

Castle Biotechnology (Castle) operates a biopharmaceutical company and controls nine other subsidiary biopharmaceutical companies. Last year, Castle acquired a controlling interest in Global Capital Management (Global), an investment banking and asset management firm. Two of Castle's subsidiary companies, Street Pharmaceuticals (STRX) and Appaloosa Biotech (APBC) went public recently although Castle maintains voting control of each of them.

David Plume, PhD, CFA, is a biopharmaceutical analyst for Global. Previously, he was a biochemist at Castle for many years and during that time, he developed close relationships with both the president and the chief executive. Plume's remuneration at Global includes an annual bonus of 0.10% of the gross proceeds raised for each initial public offering (IPO) with which he is involved.

Shortly after STRX's and APBX's respective IPOs, Plume wrote highly favorable research reports on both companies and rated them both a *buy*. Several months after the APBX report was issued, he sold short APBX and did not disclose the transaction given that he had never been a beneficial owner of APBX.

In his research reports, Plume does not disclose that Castle controls Global, STRX, and APBX since that information is already disclosed in STRX's and APBX's offering prospectuses. He also does not disclose that he owns Class A preferred shares of Castle and options on Castle's common stock, both of which he acquired while employed at Castle.

DISCUSSION: Conflicts of Interest and Professionalism

Plume violated Standard VI(A) Disclosure of Conflicts by not disclosing in his research report that Global is controlled by Castle. That fact would have been important in allowing the users of the report to assess the conflict of interest and determine how it may have impacted Plume's independence and objectivity in writing his research reports. The risk of impairment of his independence and objectivity was high given that he developed close relationships with two key members of Castle's management team.

Because of his ownership of preferred shares of Castle and options on Castle's common stock, Plume should have disclosed that Global is controlled by Castle. By not doing so, he violated Standard VI(A). Additionally, because he owns shares of Castle, he has a material beneficial ownership interest in both STRX and APBX (and he issued 'buy' recommendations on them). That is a conflict of interest that he should have disclosed.

Plume's nondisclosure in his research report of his annual bonus is a violation of Standard I(B) Professionalism, Independence and Objectivity because he is being compensated based on a deal amount. Standard I(B) states, "Compensation arrangements should not link analyst remuneration directly to investment banking assignments in which the analysts may participate as a team member." Additionally, the bonus is calculated on the gross proceeds of the IPO, which makes it an additional compensation arrangement. As a result, the nondisclosure would be a violation of Standard VI(A).

Plume's short sale transaction of APBX violates Standard VI(A) because of the conflict of interest arising when he had previously issued a 'buy' recommendation. That conflict should have been disclosed.

Sandra Benning, CFA, was previously employed as an investment adviser at Kodiak Securities (Kodiak) and resigned from there recently to join Global in the same role. Immediately upon resignation from Kodiak, she used social media and personal email to encourage her clients to move with her to Global. Global paid Benning a substantial signing bonus calculated on the percentage of her clients from Kodiak who transferred their accounts to Global. Global's annual bonus for its investment advisers is calculated on the amount of their clients' IPO participation. Neither bonus was disclosed to Benning's clients.

DISCUSSION: Duties to Employers and Conflicts of Interest

Because there was not a noncompete agreement in place with Kodiak and her solicitation of her clients from Kodiak occurred after she resigned, Benning's actions do not constitute a violation of Standard IV(A) Loyalty.

Benning's signing bonus was based on the percentage of her former clients who switched over to Global. Clearly there is an actual or potential conflict of interest that should have been disclosed to her former clients. Knowing that Benning would be compensated for the percentage of clients switched over would have allowed her former clients to recognize that her independence and objectivity may be impaired. In short, it would have allowed them to make a more informed decision on whether they should switch their accounts over or not. Because she did not disclose the signing bonus to her former clients, Benning violated Standard VI(A) Disclosure of Conflicts.

Benning's annual bonus that is based on the level of her clients' participation in IPOs results in a conflict of interest because it brings into question whether she is recommending the IPOs because they are suitable for her clients or because she is trying to maximize her bonus. As a result, she was required to disclose the annual bonus to her former clients and by not doing so, Benning once again violated Standard VI(A).

Global is underwriting an upcoming IPO for Frontier Therapeutics (FTSX), one of the companies controlled by Castle. Global's IPO allocation policy is to allocate IPO shares only to those institutional clients who indicate they will buy more shares on the first day of trading.

DISCUSSION: Tie-In Agreement

A tie-in agreement exists when an underwriter requires the investing client to purchase additional shares of the new issue in the secondary market in exchange for the ability to purchase the IPO shares. The effect is to artificially increase demand and increase the share price on day one of trading. That is in direct violation of Standard II(B) Market Manipulation. It is also in violation of Standard III(B) Fair Dealing because Benning is not treating all her institutional clients fairly when she is only allocating IPO shares to those clients who will buy more shares once trading commences.

Benning's new client, Claris Deacon, makes a series of visits to Benning's office to open a series of accounts, including a brokerage account and a checking account. As well, Deacon signed an Option Account Application and Agreement on her final visit but subsequent to that visit, Benning amended some of the wording in the agreement regarding Deacon's

suitability. Benning decides to initial the agreement for Deacon to save Deacon the time from having to make another visit.

Later Deacon contacts Benning to advise her that she cannot transfer funds between her brokerage and checking accounts. Benning investigates and determines that the links between the accounts were not activated. She calls Deacon and obtains her verbal authorization to sign the Account Linking form on her behalf.

Benning subsequently receives a call from Deacon's husband, Steve. He advises that his wife is having major health problems and requests that Benning redeem some mutual fund shares and transfer the proceeds over immediately. In response, Benning processes several redemptions and withdrawals from Deacon's account at Steve's request in the coming weeks.

DISCUSSION: Professionalism and Loyalty, Prudence, and Care

Changing the language and initialing the form on behalf of Deacon is a violation of Standard I(D) Misconduct in that there may have been elements of dishonesty or deceit in doing so. Although there was verbal approval from Deacon, it would have been necessary for her to provide written authorization.

Benning is also in violation of Standard III(A) Loyalty, Prudence, and Care when she redeemed shares and processed withdrawals in Deacon's account without Deacon's written consent. Benning did not demonstrate loyalty, prudence, or care with those actions. Deacon's husband was not listed as a joint account holder on any of the accounts and was not given any prior written authorization by Deacon to transact in any of her accounts.

CASE OUTLINE: LIONSGATE LIMITED AND BANK OF AUSTRALIA

Lionsgate Limited (LL) is a fund manager and its strongest fund is an equity mutual fund, the Victory Capital Fund (VCF) that is managed by Tony Hill and his group of analysts. In LL's marketing materials, statements include VCF being the best performing Australian equity fund for a 10-year period, earning returns of 28.7% gross of fees over the most recent 1-year period, and 13.2% annually since inception in 2005.

Hill often appears on talk shows to discuss the VCF and in lieu of any financial remuneration, the show sponsors offer him nonmonetary items such as wine, retail gift cards, and travel discounts. Hill does not disclose the receipt of those items to LL.

Nicole Martin, CFA, is an analyst on Hill's team. When Hill became less involved with VCF, Martin picked up more of the duties associated with VCF including security selection and investment decision-making. Over the past three years, VCF's performance was attributable only to Martin and the other analysts. However, Martin and Hill maintain publicly that he is the one in charge of all investment decision making for the VCL.

During LL's most recent quarterly board meeting, Hill announced his resignation to the board and informed them that he will be establishing his own fund management firm. To minimize the negative impacts of his departure, the board requests that he not disclose his departure to anyone for the next two weeks while they attempt to search for his replacement. Hill promises not to do so. After the board meeting, Hill has a private meeting with his team to announce his departure and establishment of his own firm. He asks his team to join him and 10 of his 16 analysts agree to do so. To those 10 analysts, he advises that they will have to use their time after work and on weekends to lease office space and register with the

government authorities. Furthermore, he advises them that because there was no noncompetition agreement signed with LL, they are able to begin soliciting their clients from LL as soon as the new firm commences operations.

DISCUSSION: Duties to Clients, Communication With Clients and Prospective Clients, Duties to Employers

Hill's statements about the performance of VCF are statements of fact and not opinions so there is no violation of Standard III(D) Performance Presentation. He is specific in stating that the performance is gross of fees or "pre-fees" and that complies with Standard III(D).

Hill's appearance on the talk shows is meant presumably to promote the interests of the VCF (and LL) so there is no conflict of interest with VCF and LL. Therefore, the acceptance of the nonmonetary items is not a violation of Standard IV(B) Additional Compensation Arrangements.

Both Martin and Hill violated Standard V(B)1: Communication with Clients and Prospective Clients because they did not disclose that Hill no longer has primary responsibility for the fund's performance. In other words, their public statement about Hill is false. The fact that Hill still worked at LL is not sufficient on its own.

Hill violated Standard IV(A) Loyalty. The board (and indirectly his employer) requested a two-week period of confidentiality on his pending departure and after promising such confidentiality, he immediately reneged on his promise when he met with his team to announce his departure from LL. Had Hill not made the promise to the board, it would have been acceptable for him to announce his departure to his team without violating Standard IV(A).

Simply asking his team to move with him away from LL is not a violation of Standard IV(A). The team members are free to make their own decisions; there is no breach of loyalty to LL by Hill.

Leasing space and registering with the government authorities prior to resigning from LL is not a violation of Standard IV(A) or Standard III(A) Loyalty, Prudence, and Care so long as the activities are performed outside of work hours (e.g. weekends and evenings).

In the absence of a noncompete agreement with LL, Hill does not violate Standard IV(A) when telling his team to solicit their former clients with LL only after his team ceases employment with LL.

Rob Portman, CFA, works at LL as a salesperson for the VCF and has set up a major event for prospective clients in hopes of meeting his annual sales targets. To clients and prospective clients he emphasizes Hill's stock-picking skills and Hill's role as the VCF's primary investment decision maker. Hill is always invited to important client meetings and when necessary, clients are directed to Martin (who is referred to as Hill's "assistant"). Portman speaks with LL's chief investment officer (CIO) to inquire about rumors regarding Hill and members of his team departing LL. The CIO advises him to disregard the rumors. However, Portman checks "Sky News Business Channel" and discovers that the CIO and some board members recently sold their shares in LL and in the VCF. In response, Portman does the same thing.

DISCUSSION: Misrepresentation and Integrity of Capital Markets

Portman has misrepresented the VCF by inviting Hill to important client meetings and making his clients believe that Hill is in charge of stock selection and investment decision-making for the VCF. In fact, those activities are performed by Martin and the other team members. Furthermore, with clients he refers to Martin as Hill's "assistant". Therefore, Portman is in violation of Standard I(C) Misrepresentation.

LL's CIO and the board members sold their shares prior to the public announcement of Hill's departure. Hill's departure would be considered material nonpublic information in that reasonable investors would want to know such information prior to making an investment decision. By acting on the information, they violated Standard II(A) Material Nonpublic Information.

Portman does not have material nonpublic information about Hill's departure from LL and the VCF. Portman merely used a public source of information to determine the sale of the shares by the CIO and the board members. Therefore, Portman did not use material nonpublic information and did not violate Standard II(A).

LL is owned in part by Bank of Australia (BOA). Kirk Graeme, CFA, works as a financial adviser in BOA's wealth management group and is well-regarded for his work on new issues. He receives additional compensation for new issue purchases that are paid by the issuer. BOA has a capital markets group and the group is a member of the syndicate for the new issues purchased by Graeme. BOA's policy does not require disclosure of commissions on new issues since clients already receive such information in their prospectuses when they purchase new issues. However, Graeme discloses his new issue commissions to those clients who request it. In 2016 and 2017, Graeme and BOA earned commissions of \$477,000 and \$1,908,900, respectively, on the same transactions.

DISCUSSION: Disclosure of Conflicts

Graeme violated Standard VI(A) Disclosure of Conflicts by only informing those clients who asked about his commissions earned on new issues. In fact, Standard VI(A) requires him to advise all of his clients about the commissions in order for them to have all the information needed to determine the objectivity of the investment advice or actions taken by him on their behalf. It does not matter that the information is already included in the prospectuses of the new issues. The size of the commissions earned by Graeme is reasonably large (about 25% of the amount earned by BOA) so it is large enough to potentially impair his objectivity.

Graeme opened a \$250,000 joint account for Melissa and Rodney Delaney. The Delaneys mentioned that the account comprised most of their investable assets. They further stated that they had a long investment time horizon in excess of 15 years and a low risk tolerance. For the next 10 months, 50% Graeme's purchase recommendations were new issues and 75% of the dollar value of the purchases in the account were new issues. Five months was the longest holding period for any new issues in their account. During the same time, he conducted similar activities in many of his other client accounts.

At year end, his supervisor, Jane Balmer, met with him to discuss her concerns over his handling of his accounts over the past year. She referred her concerns to BOA's director of compliance. Graeme substantially curtailed the activity in his client accounts after the meeting with Balmer.

DISCUSSION: Suitability and Responsibility of Supervisors

The Delaneys have low risk tolerance. Graeme's handling of their account with the frequent purchases of the new issues and short holding periods was inconsistent with the Delaneys' risk tolerance. As a result, Graeme is in violation of Standard III(C)1: Suitability in that the new issues were not suitable for his clients because of their low risk tolerance.

Balmer was not thorough enough in her duties as a supervisor in relation to Graeme's behavior. As a result, she is in violation of Standard IV(C) Responsibilities of Supervisors. Merely referring the situation to the director of compliance was insufficient; instead, she should have opened up a full investigation to determine the full severity of Graeme's violations. As well, she should not have relied on his subsequent curtailing of activity as an indication of the nonrecurrence of the violations.

Graeme opened an account for David Milgram five years ago. The investment policy statement (IPS) was drawn up together and has not been updated since. Recently, Milgram complained to Balmer about the decline in value of his account. Immediately afterwards, Balmer meets with Graeme to discuss the complaint and the account. Nothing is reported to the BOA's director of compliance. Graeme, Balmer, and Milgram meet the next day at BOA's offices to review the account and update the IPS. Graeme emphasizes the need to look at the nature of the investments and to focus on other factors in addition to the value of holdings.

DISCUSSION: Suitability and Responsibilities of Supervisors

Standard III(C)1: Suitability requires that the IPS be updated at least annually. Because it was not updated for five years, then Graeme has violated Standard III(C)1.

Balmer immediately began an investigation as soon as she received the complaint by Milgram. She met with Graeme to discuss the complaint and the account as well as meeting with Graeme and the Milgram to review the account and IPS. As a result, Balmer was in compliance with Standard III(C)1. There was no requirement for her to report the complaint to the director of compliance as long as she began the investigation promptly, which she did.

CASE OUTLINE: GABBY SIM

Gabby Sim began working at Global Harvest Bank (GHB), an independent private bank offering a wide range of services. She first meets with her supervisor, Ahmad Yousoff, who is also the chief investment officer (CIO). Then she meets with the president, Irene Wong, and two board members, David Tan and Audrey Chuong, CFA. The four of them discuss a memorandum of understanding (MOU) signed with MGM2, a new institutional client. MGM2 is owned by the government of Sasparia and has the objective of promoting Sasparian economic development. Yousoff and Wong paid Tan and Chuong some of the advisory fees earned from MGM2 in recognition of the latter's efforts in assisting to bring MGM2 on as a client. Yousoff did not disclose the fee-sharing agreement to MGM2. Chuong then encourages Yousoff to meet Boe Hie, a businessman in Sasparia who was one of the founders of MGM2. Chuong did not disclose to Yousoff that Hie has given her son an executive position in MGM2.

DISCUSSION: Conflicts of Interest

The compensation paid to Tan and Chuong is a reward to them for helping to bring MGM2 on as a client. It is not a referral fee since they did not refer MGM2 to GHB as a client. Therefore, it does not need to be disclosed to MGM2 and the lack of disclosure is not a violation of Standard VI(C) Referral Fees.

There is a potential impairment of Chuong's independence and objectivity when Hie hired her son into an executive position at MGM2. Her conflict situation could lead to her acting against her employer, GHB's, best interests. As a result, she should have disclosed to her employer that her son is an employee of the potential client. Therefore, her lack of disclosure is a violation of Standard VI(A) Disclosure of Conflicts.

Sim has been assigned by Yousoff to open an account for Hie in the name of Bad Moon Rising Ltd. (Bad Moon). Hie is the sole beneficial owner and authorized signatory on the account. Sim is not given the chance to ask Hie about his investment experience, objectives, and risk tolerance. Instead, Hie refuses to answer those questions and that for confidentiality reasons, he asks her to destroy all notes of their meeting and replace them with the following

information: *Self-employed consultant with a net worth of \$110 million. Long-term investment objective with annual return goal between 5% and 10% and a conservative risk profile.*

Hie advises Sim that there will be many large deposits going into his account from MGM2 in the coming months and some of those funds may need to be wired to his other accounts around the world. He requests that she process those transactions expediently and will pay her a year-end bonus for doing so. Hie advises that if Sim has any further questions about the account or its transactions, she should contact board members Tan and Chuong.

After the meeting, Sim uses the information provided by Hie to prepare his investment policy statement and destroys the meeting notes as requested by Hie. She later meets with Yousoff to discuss the meeting with Hie and makes no mention of the year-end bonus from Hie. Sim opens the account.

DISCUSSION: Record Retention, Additional Compensation Arrangements, and Suitability

By destroying all meeting notes with Hie, Sim is not maintaining appropriate records to support her investment actions and therefore is in violation of Standard V(C) Record Retention. Supporting documents under Standard V(C) include notes from clients from meetings to review investment policy statements. Although Hie has stated that he requires confidentiality, keeping meeting notes would not be a violation of Standard III(E) Preservation of Confidentiality or Standard III(A) Loyalty, Prudence, and Care.

The bonus promised by Hie is considered additional compensation, therefore Sim violated Standard IV(B) Additional Compensation Arrangements when she failed to disclose the bonus to Yousoff. It is possible that processing Hie's transactions expediently may cause Sim to favor Hie over GHB's other clients. The existence of the bonus could likely impair her independence and objectivity, therefore she also violated Standard I(B) Professionalism, Independence and Objectivity by not disclosing the bonus. Standard I(B) states that bonuses from clients are permissible if they are disclosed to the employer. It is then up to the employer to determine if the bonus is acceptable and will not disadvantage the other clients.

Opening the account for Hie violates Standard III(C) Suitability because Sim was not provided with sufficient information by Hie to develop a reasonable IPS. The information provided was vague and would not have allowed Sim to formulate a proper IPS that consists of items such as risk tolerance, return requirements, time horizon, liquidity needs, and tax concerns.

Very shortly after the Bad Moon account is opened, a large sum is wired to the account from MGM2. Sim contacts Hie about the deposit and he faxes her a copy of an investment agreement between MGM2 and Bad Moon to support the deposit. However, Sim is not completely satisfied with the amount and description in the agreement, so she raises her concerns with Yousoff. Sim explains to Yousoff that she would like to meet with Hie and a representative from MGM2 to provide her with assurance over the validity of the deposit. Yousoff says the copy of the investment agreement is sufficient and that she should contact Tan and Chuong instead. Sim contacts them and they both confirm the validity of the investment agreement and Hie's interactions with MGM2.

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DISCUSSION: Responsibilities of Supervisors and Confidentiality

Yousoff has responsibilities as a supervisor and merely asking Sim to contact Tan and Chuong is a violation of Standard IV(C) Responsibilities of Supervisors. As part of his duties as a supervisor, he should have agreed with Sim's idea to meet with Hie and a representative from MGM2 rather than telling her to contact Tan and Chuong instead. Contacting the latter is not as direct as obtaining firsthand knowledge of the transaction. As well, he should not have simply declared the agreement to be acceptable since Sim specifically raised concerns about it. Yousoff should have investigated it further to fulfill his supervisory duties to detect violations of the laws, rules, and the Code and Standards.

Because Hie specifically told Sim to contact Tan and Chuong with any further questions about the Bad Moon account, Sim is not in violation of Standard III(E) Preservation of Confidentiality.

In the subsequent months, MGM2 wires a substantial amount of money into the Bad Moon account over several transactions. Hie provides Sim with documentation in the form of agreements signed by Yousoff in his role as GHB's CIO. Most of the funds eventually end up in Hie's various personal bank accounts around the world. Sim continues to be suspicious of the account activity and again contacts Yousoff. She tells him that she suspects money laundering. Yousoff tells her to ignore her suspicions and merely focus on getting the transactions executed in an expedient manner.

DISCUSSION: Professionalism

It is clear that Sim's repeated concerns about the account have produced inaction on the part of Yousoff in his role as a supervisor. Therefore, under Standard I(A) Knowledge of the Law, Sim must escalate the matter and obtain advice from compliance personnel or legal counsel.

Hie had recommended that Sim meet with his mother-in-law, Madam Tan Swee Neo. Sim meets with her and finds out that she is 70 years old and made her money through real estate although she has since moved that money into fixed deposits and low risk energy utility stocks. However, she has recently decided that she wants to earn more income from her investments and tells Sim that she wants to invest in more conservative equities with the return objective of paying for her grandchildren's educational expenses. She heard from her friends about oil-linked structured notes issued by GHB even though she does not know anything about oil futures. Sim provides Neo with a brochure on the structured note written in English, which Neo cannot read. Therefore, Sim verbalizes the summary of the product to Neo in Chinese. Sim does not translate all the fine print for Neo but does warn her that there is no guarantee of the 10% annual coupon and there is a penalty for early redemption. Sim does state that the coupon payments have been made for all three years of the product's existence. Neo invests \$50,000 (half of her life savings) in the notes and Sim processes the transaction.

DISCUSSION: Suitability

In purchasing the structured notes for Neo, Sim violated Standard III(C) Suitability. Because Neo does not know anything about oil futures and such investments are inconsistent with her current investment portfolio of fixed deposits and low risk energy utility stocks, Sim should not have purchased the structured notes. Sim does not meet the requirements of Standard III(C) by merely providing Neo with a brochure in English (which Neo cannot read) and warning Neo that the annual 10% coupon is not guaranteed.

One year later, Neo does not receive any coupon payment from her investment. She also hears that oil prices are likely to continue falling in the coming years. As a result, she calls Sim to request that Sim promptly redeem her investment and move the funds into a fixed deposit. Sim advises Neo about the penalties involved with redemption, but Neo is impatient, does not want to hear the details, and tells Neo to get the redemption done as soon as possible. Sim executes the redemptions. Because of the redemptions, the investment has decreased from \$50,000 to \$30,000 and Neo wants to know why. Sim reminds her of the penalty for early redemption and that Neo was warned about it. However, Neo says she did not expect the penalty to be so large and thought her investment would be low risk since

coupon payments have been made every year for the three years the product has been in existence. Dissatisfied, Neo launches a complaint against Sim.

DISCUSSION: Prudence and Care

Sim must demonstrate reasonable care or prudent judgment in dealing with her clients' requests. By executing the redemptions immediately and not fully explaining the penalties to Neo and not further researching the impact of the falling oil prices on the risk of the investment, Sim is in violation of Standard III(A) Loyalty, Prudence, and Care. Despite Neo's impatience, Sim should have insisted on thoroughly explaining to Neo the penalties involved with redemption. Sim should have also performed sufficient due diligence to determine if the falling oil prices would indeed increase the risk of the investment in oil futures.

Additionally, Sim could be in violation of Standard III(C) Suitability because Neo's request for immediate redemption indicated her lack of investment experience. The substantial redemption penalties would jeopardize Neo's return objective of providing sufficient funds for her grandchildren's education and Sim should have considered that prior to the redemption.



MODULE QUIZ 3.1

To best evaluate your performance, enter your quiz answers online.

1. Marcia Lopez, private wealth manager at BankGlobal, has several high net worth clients that have told her they would like to receive information about the overall economic and financial market outlook through her social media platform; this is in addition to the quarterly written reports they already receive from BankGlobal. With approval from the bank's technology and compliance departments, she establishes her social media group and requests her clients to join the group to receive the information. The platform makes it clear to all clients that if they post any comments, the comments will be public, so the platform is not the right place to communicate personal or confidential information. Nevertheless, one of her clients posts on the group page that he personally lost a lot of money in the stock market recently, and he proceeds to provide very personal and confidential details in the process. All clients in the group were able to view the client's comment until Lopez discovered it a few hours later, and promptly removed the comment. Did Lopez violate the Code and Standards in her conduct with the social media platform?
 - A. Yes, because Lopez should have screened the client's comment before it was posted.
 - B. Yes, because Lopez should not have set up such a group in the first place because of the high risks to client confidentiality.
 - C. No, because Lopez took reasonable steps to maintain client confidentiality by telling clients that all posts would be public, and she promptly deleted inappropriate posts.
2. Sandra Benning, CFA, is an investment adviser at Global Capital Management (Global) and has a client, Claris Deacon, who is recovering from health issues. Benning earns a portfolio return that is far superior to the target previously established with Deacon. As a result, Deacon offers to have Benning join her and her husband on an all-expense paid trip to the Bahamas for two weeks. It is a common occurrence for investment advisers at Global to receive gifts from clients, ranging from modest to substantial values. What should Benning do regarding the gift from Deacon?
 - A. Disclose Deacon's gift to her supervisor.
 - B. Thank Deacon for the gift, but politely decline it because it is too lavish.
 - C. Accept the gift as it is a common occurrence to receive gifts from clients.
3. Tony Hill was employed as an equity mutual fund manager at Lionsgate Limited and played a key role in developing a highly successful quantitative model used within the Victory Capital Fund. Hill developed the model while working overtime hours into the late evenings, but was not paid for the work because his compensation is based solely on management and incentive fees. After Hill left the firm, Hill's former supervisor continues to authorize the use of Hill's model without his permission and without providing any attribution to him. By allowing the continued use of Hill's model after his departure from the firm, is there a violation of the Code and Standards?

- A. Yes, because the firm did not provide any attribution to Hill after Hill left the firm.
 - B. Yes, because the firm is no longer allowed to use the model after Hill leaves the firm.
 - C. No, because the model is the property of Lionsgate, and so they can continue using it and need not provide attribution to Hill.
4. Ahmad Yousoff is a supervisor at Global Harvest Bank (GHB) where Gabby Sim works. Sim has a client, Boe Hie, who has made some questionable transactions in his account. Being dissatisfied with Yousoff's response to her concerns with the suspicious transactions in Hie's account, Sim escalates her concerns to the firm's compliance department. They concur with Yousoff and advise her that she should do as he instructs since he is her supervisor. Sim is dissatisfied with the compliance department's response. What is the appropriate course of action for Sim to take at this point?
- A. Request that the firm disclose the information publicly.
 - B. Notify legal counsel at GHB or resign from her position.
 - C. Take no action since she has already escalated her concerns to the highest level within the firm.

KEY CONCEPTS

LOS 3.a, 3.b

Marcia Lopez

- Standard III(B) Fair Dealing requires all clients to be treated in a fair and impartial manner. For example, investment advisers cannot favor their discretionary accounts over their other accounts.
- Standard III(C) Suitability requires:
 - One to develop an investment policy statement for a client prior to making any investment recommendations for the client.
 - Investments to be consistent with the client's long-term objectives.
- Standard III(D) Performance Presentation does not allow the exclusion of the performance of terminated accounts.
- Standard III(E) Preservation of Confidentiality requires all information about a current, former, or prospective client to be kept confidential, including the name of the client.
- Standard VII(B) Reference to CFA Institute, the CFA designation, and the CFA Program, does not permit one to state he has earned a partial designation or to state an expected date of receipt of the CFA charter.

Castle Biotechnology

- Standard I(B) Independence and Objectivity, requires the disclosure of a bonus or any compensation arrangement by a researcher (e.g., in a relevant research report).
- Standard I(D) Misconduct does not permit an investment adviser to sign a form on behalf of a client.
- Standard II(B) Market Manipulation does not permit the use of tie-in agreements because of their intention to artificially increase demand and support a higher share price.
- Standard III(A) Loyalty, Prudence, and Care, requires a client to provide written authorization in order to allow another party to transact in the client's account.
- Standard IV(A) Loyalty does not prohibit former employees from contacting clients of their previous firm as long as there is no noncompete agreement.
- Standard VI(A) Disclosure of Conflicts requires:
 - The disclosure to clients of full ownership details of a related group of companies when there are potential conflicting activities, such as investment banking and research.
 - The disclosure of beneficial ownership interests where one is a researcher making investment recommendations.
 - Full disclosure where a researcher makes a personal investment decision that is contrary to what is stated publicly.
 - The disclosure of any bonuses received that were based on the level of client participation in investments.

- Standards VI(A) Disclosure of Conflicts and VI(C) Referral Fees requires one to disclose to clients the receipt of any signing bonuses related to bringing them in as new clients.

Lionsgate Limited and Bank of Australia

- Standard I(C) Misrepresentation does not allow for any misrepresentations of one's role in the investment process to clients.
- Standard II(A) Material Nonpublic Information does not:
 - Allow one to act on material nonpublic information; acting on such information before its public dissemination is a violation.
 - Prohibit one from acting on publicly reported information and on information that one does not reasonably believe is material nonpublic information.
- Standard III(C)1: Suitability requires:
 - The management of client accounts in a manner consistent with the clients' risk tolerances.
 - At least an annual updating of the client IPS.
- Standard III(D) Performance Presentation requires one to make only statements of fact when presenting performance and does not permit false or opinion-based statements.
- Standard IV(A) Loyalty:
 - Requires an employee to honor all requests made by the employer that were agreed upon by the employee; the employee must not be disloyal to the employer, even upon the announcement of resignation and before departure.
 - Allows a departing employee to solicit colleagues of the same firm to also depart with the employee to go into a competitive business.
 - Requires all activities related to the new competing business to be conducted outside of work hours.
 - Allows the solicitation of former clients as long as there is no noncompete agreement and that the solicitation occurs only after departure from the former firm.
- Standard IV(B) Additional Compensation Arrangements does allow for the receipt of a gift by an employee as long as it does not create a conflict with her employer's interest.
- Standard IV(C) Responsibilities of Supervisors requires:
 - That the supervisor do more than merely escalate concerns to the director of compliance.
 - Supervisors to initiate an investigation to ascertain the extent of any wrongdoing by employees when there is reasonable suspicion of a violation of the law or the Code and Standards.
- Standard V(B)1: Communication With Clients and Prospective Clients requires proper and accurate disclosure of who is primarily responsible for the investment decision-making duties.
- Standard VI(A) Disclosure of Conflicts requires one to make full disclosure to clients of commissions received from investments made by those clients.

Gabby Sim

- Standard I(A) Knowledge of the Law, requires one to escalate one's concerns to compliance personnel or legal counsel if the initial reporting of the concerns to the supervisor does not result in any resolution.
- Standard III(A) Loyalty, Prudence, and Care, requires one to use reasonable care or prudent judgment in executing transactions for clients. Sufficient prior research and explanation to the client is necessary as opposed to merely executing a transaction immediately upon request by the client.
- Standard III(C) Suitability requires:
 - Full information of a potential client's investment experience, objectives, and risk tolerance before an account is opened.
 - Investments to be made that are consistent with the risk and return objectives noted in a client's IPS.
- Standard III(E) Preservation of Confidentiality allows a lapse in confidentiality if specific permission was granted by the client.
- Standards IV(B) Additional Compensation Arrangements and I(B) Professionalism, Independence and Objectivity, require the disclosure to the employer of any bonuses or other payments received from a client to prevent any preferential treatment of that client to the detriment of other clients.
- Standard IV(C) Responsibilities of Supervisors requires supervisors to make reasonable efforts to ensure compliance with laws, rules, regulations, and the Code and Standards when faced with a query from a subordinate. Merely accepting statements at face value without further investigation is not sufficient.
- Standard V(C) Record Retention does not permit the destruction of meeting notes with a client that support investment actions, even if the destruction is requested by the client.
- Standard VI(A) Disclosure of Conflicts requires the disclosure to one's employer of a potential conflict such as a family member being an employee of a potential client.
- Standard VI(C) Referral Fees specifically covers referral fees only and does not cover all fee-sharing arrangements.

ANSWER KEY FOR MODULE QUIZZES

Module Quiz 3.1

1. **C** Lopez is not in violation of Standard III(E) Preservation of Confidentiality. She took reasonable steps to maintain client confidentiality in the use of the social media platform. She specifically stated that all comments posted to the platform would be public so it was not the appropriate place to communicate personal or confidential information. Therefore, if a client discloses confidential information through a comment, then it is beyond Lopez's control. The fact that she promptly removed the comment once she found out about it further supports her compliance with Standard III(E). (LOS 3.a, 3.b)
2. **A** Under Standard I(B) Independence and Objectivity, members and candidates may accept bonuses or gifts from clients as long as they disclose them to their employer because gifts in a client relationship are deemed less likely to affect one's independence and objectivity than gifts in other situations. However, disclosure is required to allow supervisors to monitor such situations to prevent against employees favoring a gift-giving client over non-gift-giving clients. It is not necessary for Deacon to decline the gift; it is her employer's prerogative to decide whether or not Deacon should accept the gift. (LOS 3.a, 3.b)
3. **C** Research and models developed while employed at the firm are the property of the firm. The firm still has the right to use Hill's work after he leaves and need not provide any attribution to him. The firm has paid Hill for his work. It does not matter that he was not paid explicitly for working overtime to perform the work because he is implicitly paid for it through the management and incentive fees that he earns from his employer. Therefore, there is no violation of Standard I(C) Misrepresentation regarding plagiarism. (LOS 3.a, 3.b)
4. **B** Informing the firm's compliance department produced no action toward resolving the concerns of Sim; therefore, under Standard I(A) Knowledge of the Law, the next step for Sim is to seek the advice of legal counsel regarding her concerns. Another possibility would be to report the violation to governmental or regulatory organizations. The Guidance to Standard I(A) states, "Although the Code and Standards does not compel members and candidates to report violations to their governmental and regulatory organizations unless such disclosure is mandatory under applicable law . . . such disclosure may be prudent under certain circumstances." That was not one of the choices provided. The issue does not pertain to Standard II(A) Material Nonpublic Information; therefore, attempting to have her firm disclose the information publicly is not relevant. Although extreme, CFA members must dissociate from the activity which may result in her resigning from her position. (LOS 3.a, 3.b)

The following is a review of the Ethical and Professional Standards (2) principles designed to address the learning outcome statements set forth by CFA Institute. Cross-Reference to CFA Institute Assigned Reading #4.

READING 4: PROFESSIONALISM IN THE INVESTMENT INDUSTRY

Study Session 2

EXAM FOCUS

This reading focuses on the importance of acting ethically and some of the challenges facing the investment management profession.

MODULE 4.1: ESTABLISHING TRUST, EXPECTATIONS, FRAMEWORK FOR ETHICAL DECISION-MAKING, AND CHALLENGES OF INVESTMENT MANAGEMENT PROFESSIONALS

LOS 4.a: Describe how professions establish trust.

CFA[®] Program Curriculum, Volume 1, page 254



A **profession** is defined as follows:

A profession is an occupational group that has specific education, expert knowledge, and a framework of practice and behavior that underpins community trust, respect and recognition. Most professions emphasize an ethical approach, the importance of good service, and empathy with the client.¹

Video covering this content is available online.

Notice how the structure and goals of the CFA program reflect this definition for investment professionals:

- The “specific education [and] expert knowledge” needed to be an investment professional is found in the CFA curriculum, and mastery of it is required to earn the CFA charter.
- “A framework of practice and behavior” for investment professionals is detailed in *The Standards of Practice Handbook*.
- The emphasis on “an ethical approach” is reflected in the importance of ethics and professional standards at all three levels of the CFA curriculum.

Professions establish trust by:

- *Normalizing practitioner behavior* by developing and promulgating codes and standards.
- *Providing a service to society* that exceeds the prescribed codes and standards.
- *Maintaining a client focus* that places client interests above those of the professional.
- *Having high standards for entry* that signal mastery of the body of expert knowledge.

- *Possessing a body of expert knowledge* based on best practice.
- *Encouraging continuing education* to ensure professionals maintain and grow their expertise and ethical awareness.
- *Monitoring professional conduct* through self-regulation to maintain industry integrity.
- *Being collegial* with colleagues and competitors.
- *Having recognized overseeing bodies* with a mission of excellence, integrity, and public service.
- *Encouraging the engagement of members* by encouraging volunteerism.

A profession and its professional standards change and adapt over time as the world changes, economies grow, the common understanding of ethical behavior and integrity expands, and technology changes the professional's opportunities and challenges in her daily practice.

LOS 4.b: Explain professionalism in investment management.

CFA® Program Curriculum, Volume 1, page 256

Investment management as a profession is relatively new, as compared to doctors and lawyers, for example. As a result, the industry is still in the process of developing the framework and common understanding of what it means to be an investment professional and satisfy the definition of a profession. There has been a definite trend over the last 20 years toward a global understanding of the tenets of the profession of investment management.

Trust in the investment management profession is earned with society through the expectation that professionals will have the technical expertise, the knowledge of applicable law, and an understanding of ethics and professional standards to serve their clients with care, transparency, and integrity. CFA Institute is an investment management professional body that embodies many, if not most, of the tenets of a profession.

- The mission of CFA Institute is “to lead the investment profession globally, by promoting the highest standards of ethics, education, and professional excellence for the ultimate benefit of society.”
- The CFA Institute Global Body of Investment Knowledge and the Candidate Body of Knowledge articulate the competencies necessary to be an investment professional. They are continually updated to reflect global industry trends through practice analysis.
- CFA Institute and CFA societies around the world engage members with volunteer and continuing education opportunities.
- CFA charterholders and candidates are required to certify every year that they adhere to the Code and Standards.

LOS 4.c: Describe expectations of investment professionals.

CFA® Program Curriculum, Volume 1, page 259

Expectations

Expectations for our profession are set in the Code of Ethics. Members of CFA Institute [including Chartered Financial Analyst® (CFA®) charterholders] and candidates for the CFA designation (“Members and Candidates”) must:²

- Act with integrity, competence, diligence, respect, and in an ethical manner with the public, clients, prospective clients, employers, employees, colleagues in the investment profession, and other participants in the global capital markets.
- Place the integrity of the investment profession and the interests of clients above their own personal interests.
- Use reasonable care and exercise independent professional judgment when conducting investment analysis, making investment recommendations, taking investment actions, and engaging in other professional activities.
- Practice and encourage others to practice in a professional and ethical manner that will reflect credit on themselves and the profession.
- Promote the integrity and viability of the global capital markets for the ultimate benefit of society.
- Maintain and improve their professional competence and strive to maintain and improve the competence of other investment professionals.

LOS 4.d: Describe a framework for ethical decision making.

CFA® Program Curriculum, Volume 1, page 260

Framework for Ethical Decision Making

A framework for ethical decision making is based on the premise that, when firms instill ethical decision making into all employees' decisions, a strong ethical culture will ensue, resulting in increased trust from investors, enhanced financial markets, and an overall benefit to society. The ethical decision-making framework helps the decision maker see the situation from multiple perspectives with a longer range view that is less self-centered, thereby benefitting stakeholders.

An ethical decision-making framework has four phases, which is an iterative process. The decision maker may move from one phase to another in a different order than presented.

Phase 1 – Identify important facts and other information that may still be needed while separating fact from opinion. Identify stakeholders and responsibility to them, along with relevant laws and regulations and any conflicts of interest.

Phase 2 – Behavioral biases and situational influences are identified that can affect thinking and decision-making ability. In this phase, it's best to seek the advice of trusted resources, such as the compliance department, legal counsel, and advice from individuals outside the firm who are not connected to the situation to give a fresh perspective. Another technique would be to imagine how an ethical person would act in the situation.

Phase 3 – Make a decision and act on it.

Phase 4 – Assess the outcome by reflecting on whether or not it occurred as anticipated and why. This is an iterative process whereby after having learned from the process it starts over again.

Applying an ethical decision-making framework can help to view a situation from multiple perspectives, thereby allowing the best decision to be made avoiding the negative consequences of a making a poorly conceived decision.

Challenges

Over the last few years, there has been an erosion of respect for and growing lack of trust toward experts in general, particularly in the United States but also in Europe. Investment professionals have not been immune from that trend. In particular, investment professionals are generally viewed by the public as not being able to manage conflicts of interest in the best interests of their clients.

Global trends that present challenges to investment professionals include the following:

- *Consumerism* has led clients to buy investment products in the same manner as they buy other consumer items, making the profession of investment management more demanding.
- *Regulations* have tended to grow stricter globally as consumers have demanded additional protection, particularly since the crash of 2008.
- *Globalization* has benefits to the extent that professional bodies like CFA Institute can work to create consistent standards across the globe. However, this gets more difficult as the diversity of countries and large companies with their own needs, demands, and expectations grows.
- *Technological innovation* is rapidly changing the role of the investment professional and his working relationship with the client, requiring new skills and new standards of conduct. Fintech trends such as data science, cybersecurity, robo-advising, blockchain, cryptocurrency, and artificial intelligence all present new challenges.



MODULE QUIZ 4.1

To best evaluate your performance, enter your quiz answers online.

1. Which of the following is *least likely* to be an effective method for professions to establish trust?
 - A. Be client focused.
 - B. Encourage collegiality.
 - C. Require continuing education.
2. Which of the following phrases is part of the mission of CFA Institute?
 - A. Serve members and candidates.
 - B. Maximize the value of the CFA designation.
 - C. Promote the highest standards of ethics, education, and professional excellence.
3. Which of the following is *not* part of the CFA Institute Code of Ethics?
 - A. Promote the integrity and viability of the global capital markets for the ultimate benefit of society.
 - B. Practice and encourage others to practice in a professional and ethical manner that will reflect credit on themselves and the profession.
 - C. Do not engage in any conduct that compromises the reputation or integrity of CFA Institute or the CFA designation or the integrity, validity, or security of CFA Institute programs.

KEY CONCEPTS

LOS 4.a

A profession is an occupational group that has specific education, expert knowledge, and a framework of practice and behavior that underpins community trust, respect and recognition. Most professions emphasize an ethical approach, the importance of good service, and empathy with the client.³

Professions establish trust by:

- Normalizing practitioner behavior.
- Providing a service to society.
- Maintaining a client focus.
- Having high standards for entry.
- Possessing a body of expert knowledge.
- Encouraging continuing education.
- Monitoring professional conduct.
- Being collegial.
- Having recognized overseeing bodies.
- Encouraging the engagement of members.

LOS 4.b

Trust in the investment management profession is earned with society through the expectation that professionals will have the technical expertise, the knowledge of applicable law, and an understanding of ethics and professional standards to serve their clients with care, transparency, and integrity. CFA Institute is an investment management professional body that embodies many, if not most, of the tenets of a profession.

LOS 4.c

The expectations of investment professionals are promulgated through CFA Institute's Code of Ethics.

LOS 4.d

A framework for ethical decision-making is based on the premise that, when firms instill ethical decision making into all employees' decisions, a strong ethical culture will ensue, resulting in increased trust from investors, enhanced financial markets, and an overall benefit to society.

An ethical decision-making framework has four phases, which is an iterative process.

Phase 1 – Identify important facts and other information that may still be needed while separating fact from opinion. Identify stakeholders and responsibility to them, along with relevant laws and regulations and any conflicts of interest.

Phase 2 – Behavioral biases and situational influences are identified that can affect thinking and decision-making ability. In this phase, it's best to seek the advice of others to give a fresh perspective and imagine how an ethical person would act in the situation.

Phase 3 – Make a decision and act on it.

Phase 4 – Assess the outcome by reflecting on whether or not it occurred as anticipated and why. This is an iterative process that starts over again.

ANSWER KEY FOR MODULE QUIZZES

Module Quiz 4.1

1. **C** Professions should encourage and facilitate continuing education, but it is not necessary or practical that they require it. (LOS 4.a)
2. **C** The mission of CFA Institute is “to lead the investment profession globally, by promoting the highest standards of ethics, education, and professional excellence for the ultimate benefit of society.” This will, in the long run, likely serve the members and candidates by increasing the value of the designation, but that is an indirect consequence. (LOS 4.b)
3. **C** Standard VII(A) from the Standards of Professional Conduct is quoted in answer choice C. (LOS 4.c)

1. Bidhan L. Parmar et al., *Professionalism in the Investment Industry*, (CFA Institute, 2019).

2. Copyright 2014, CFA Institute. Reproduced and republished from “The Code of Ethics,” from *Standards of Practice Handbook, 11th Ed.*, 2014, with permission from CFA Institute. All rights reserved.

3. McClean and Mehta, *Professionalism in Investment Management*, (CFA Institute, 2018).

The following is a review of the Ethical and Professional Standards (2) principles designed to address the learning outcome statements set forth by CFA Institute. Cross-Reference to CFA Institute Assigned Reading #5.

READING 5: ASSET MANAGER CODE OF PROFESSIONAL CONDUCT

Study Session 2

EXAM FOCUS

The Asset Manager Code is specific to Level III. It applies to investment firms, not individuals. It largely duplicates and, in some cases, extends portfolio management-related requirements of the Standards of Professional Conduct.

MODULE 5.1: THE ASSET MANAGER CODE

LOS 5.a: Explain the purpose of the Asset Manager Code and the benefits that may accrue to a firm that adopts the Code.



Video covering this content is available online.

CFA[®] Program Curriculum, Volume 1, page 267

The Asset Manager Code (AMC) is global, voluntary, and applies to investment management firms. Firms are encouraged to adopt the AMC as a template and guidepost to ethical business practice in asset management. Adoption demonstrates that the firm is placing client interests first. The AMC is flexible and firms must develop their own policies and procedures, tailored to their business and clients, to ensure compliance with the AMC. The AMC provides guidance on risk management. Adoption benefits the firm as a step in gaining the trust and confidence of its clients.

LOS 5.b: Explain the ethical and professional responsibilities required by the six General Principles of Conduct of the Asset Manager Code.

LOS 5.c: Determine whether an asset manager's practices and procedures are consistent with the Asset Manager Code.

LOS 5.d: Recommend practices and procedures designed to prevent violations of the Asset Manager Code.

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PROFESSOR'S NOTE

These three LOS are inseparable. We will cover the six general principals of the AMC. Meeting the principals and requirements puts the firm in compliance. Unless an item in the following write up is denoted as recommended, it is a requirement.

Under each principal, we will also list the recommended practices and procedures (P&P). The recommendations are not requirements, but provide guidance on the type of policies and procedures the firm could use to meet the requirements and then claim compliance with the AMC. Adopting the recommended P&P (if relevant) will assist the firm in preventing violations of the AMC. The firm is

still responsible for determining the specific P&P needed for their business. Not all sections of the AMC have recommendations.

There are many references to issues such as the client IPS, best execution, firm-wide risk management, and soft dollars that are covered elsewhere in the curriculum, so do not bog down on those. This is your initial study and the material makes more sense after you go through all the study sessions. You cannot know how pieces fit together until you see the whole curriculum. The intent of the Level III material is to be highly interconnected.

Once you read the material and/or watch our related videos, you should immediately work our questions and the end of chapter questions in the CFA reading for the AMC.

There are six components to the Asset Manager Code of Professional Conduct:¹

- A) Loyalty to Clients.
- B) Investment Process and Actions.
- C) Trading.
- D) Risk Management, Compliance, and Support.
- E) Performance and Valuation.
- F) Disclosures.

Related to these components are six general principles of conduct:

- Always act ethically and professionally.
- Act in the best interest of the client.
- Act in an objective and independent manner.
- Perform actions using skill, competence, and diligence.
- Communicate accurately with clients on a regular basis.
- Comply with legal and regulatory requirements regarding capital markets.

A) Loyalty to Clients

1. Place the client's interest ahead of the firm's.

Recommendations: Align manager compensation to avoid conflict with client best interests, such as avoiding an incentive for excessive risk taking in order to increase manager compensation.

2. Maintain client confidentiality.

Recommendations: Create a privacy policy to document how such information is gathered, stored, and used. Include an anti-money laundering policy (if needed) to prevent the firm's involvement in illegal activities.

3. Refuse business relationships and gifts that would compromise independence, objectivity, and loyalty to clients.

Recommendations: Refuse gifts and entertainment of more than minimal value from service providers. Establish written P&P to define appropriate limits for gifts from both service providers and clients. Require employees to disclose such gifts. Prohibit cash gifts. Managers may maintain other (significant) business relationships with clients as long as potential conflicts are managed and disclosed.

B) Investment Process and Actions

1. Use reasonable care and judgment in managing client assets. Managers should act as other knowledgeable professionals would act to balance risk and return for the client.
2. Do not manipulate price and volume in an effort to mislead market participants as this damages the integrity of markets to the detriment of all investors. Actions such as establishing large positions to distort prices or spreading false rumors are violations.
3. Deal fairly with all clients when providing information, advice, and taking actions. Managers may offer higher levels of service to some clients for higher compensation if the service levels are disclosed and available to all clients willing to pay for them. Managers can engage in secondary investment opportunities (that are offered as a result of other business activities) if the opportunity is fairly allocated to all suitable clients.
4. Have a reasonable and adequate basis for recommendations. The due diligence required will vary based on the complexity and risks of the strategy. Third-party research can be used if there is a reasonable basis to support it. Managers must be knowledgeable of the securities they recommend. This is particularly true for complex strategies and such strategies must be explained in understandable ways to the client.
5. For portfolios **managed to a specific style or strategy**, managers do not have to evaluate the suitability to a given client. Managers must provide suitable disclosure so clients can determine if the portfolio is suitable for their needs. The portfolio must then be managed in the manner intended. Flexibility and deviations from that intent must be expressly agreed to by clients.

Recommendations: Disclose permitted deviations from intent as they occur (or in normal reporting). If the strategy or style of the portfolio changes, allow clients to redeem the investment without undue penalty.

6. When **managing portfolios of a specific client**, understand the client's objectives and constraints in order to take suitable actions for that client.

Recommendations: Establish and update a written IPS for that client at least annually and as circumstances warrant. The IPS will specify the roles and responsibilities of the manager, and those will vary by situation. A performance benchmark to evaluate portfolio performance should be specified. Ideally, each investment decision will be made in the context of the client's total situation (but recognizing the client decides what information to share with the manager).

C) Trading

1. Do not act or cause others to act on material nonpublic information that could affect the value of public securities. Such actions are frequently illegal and damage the integrity of markets. Managers must adopt compliance procedures to segregate information between those with reasons to have such information and the rest of the firm.

Recommendations: Managers can use procedures such as firewalls between those with reasons to have such information and the rest of the firm. They should develop procedures to evaluate whether company-specific information is material and nonpublic. Information on pending trades or holdings may be material nonpublic information.

2. Give clients priority over the firm. Managers cannot execute ahead of clients or to the detriment of clients' interests. Managers may invest their own capital along with clients

if clients do not suffer.

Recommendations: Develop P&P to monitor and limit personal trading by employees, require prior approval of investment in private placements and IPOs, and provide the compliance officer with employee personal transaction and holdings information. Establish a watch list of companies in which employees may not personally trade without approval.

3. Use client commissions only to pay for investment-related products and services that directly benefit the client, not for the management of the firm.

Recommendations: Some managers have eliminated soft dollars. If soft dollars are used, disclose this to clients and adopt industry best practices such as the CFA Institute Soft Dollar Standards.

4. Seek best execution for all client trades.

Recommendations: If clients direct trading, advise the clients it may compromise the manager's ability to seek best execution and seek written acknowledgment of this from the client.

5. Establish policies for fair and equitable trade allocation. All clients for whom the trade is suitable should be given the opportunity to participate.

Recommendations: Group suitable accounts and trade as a block (all participate at the same price) and allocate partial trades pro rata. Specifically address how IPOs and private placements are handled.

D) Risk Management, Compliance, and Support

1. Develop detailed P&Ps to comply with the AMC and all legal/regulatory requirements.
2. Appoint a competent, knowledgeable, credible compliance officer with authority to implement the P&Ps.

Recommendations: The officer is independent of the investment and operations personnel. The officer reviews all firm and employee transactions. Require all employees to acknowledge they understand and comply with the AMC.

3. Use an independent third party to verify that information provided to clients is accurate and complete. Verification may be based on audit or reviews of pooled funds and account statements and transaction reports from the custodian bank for individual accounts (i.e., not just on internal records of the firm.)

4. Maintain records to document investment actions.

Recommendations: Retain compliance records and documentation of violations and corrective actions. Retain for at least seven years or as required by law and regulations.

5. Employ sufficient and qualified staff to meet all AMC requirements. Managers must have (pay for) the resources to deliver the services promised and to assure compliance with the P&Ps.
6. Establish a business continuity plan to deal with disasters or market disruptions. At minimum this should include:
 - Backup (preferably offsite) of account information.
 - Plans to monitor, analyze, and trade investments.
 - Communication plans with key vendors and suppliers.

- Employee communication and coverage of key business functions when normal communications are out.
 - Client communication plans.
7. Establish a firm-wide risk management plan to measure and manage the risks taken. It must be objective and independent of the influence of the portfolio managers.
- Recommendations: Consider outsourcing this process if needed. It may include stress and scenario testing. Be prepared to describe the process to clients.

E) Performance and Valuation



PROFESSOR'S NOTE

See the GIPS reading.

1. Present performance data that is fair, accurate, relevant, timely, and complete. Do not misrepresent performance of accounts or the firm.
Recommendations: Adopt GIPS.
2. Use fair market prices when available and fair valuation in other cases.
Recommendations: Independent third parties should be responsible for valuation to avoid conflicts of interest as manager fees are normally based on account value.

F) Disclosures

1. Ongoing, timely communication with clients using appropriate methods.
2. Ensure truthful, accurate, complete, and understandable communication. Use plain language. Determine what to disclose and how.
3. Include any (all) material facts regarding the firm, personnel, investments, and the investment process.
4. Disclose:
 - Any conflicts of interest such as those arising from relationships with brokers and other clients, fees, soft dollars, bundled fees, directed brokerage, manager or employee holdings in the same securities as clients, and any other material issues.
 - Regulatory and disciplinary actions related to professional conduct by the firm or employees.
 - Investment process information including strategy, risk factors, lock-up period, derivatives, and leverage.
 - Management fees and client costs including the method of their determination. Provide gross- and net-of-fee returns. Disclose any unusual expenses. Use plain language to explain how all fees are calculated. Disclose all fees charged and provide itemized charges if requested. Disclose average or expected fees to prospective clients.
 - All soft dollar and bundled fees, what is received in return, and how they benefit the client.
 - Regular and timely client investment performance reporting. Quarterly performance within 30 days of quarter end is recommended.

- Valuation methods used to make investment decisions and value client assets. Typical disclosure is by asset class.
- The P&Ps used for shareholder voting. These must address how controversial and unusual issues are handled, provide guidance for further actions when voting against corporate management recommendations, and disclose any delegation of voting. Provide clients details on votes cast for their holdings if requested.
- Trade allocation policies.
- Review and audit results of the client's funds and accounts.
- Significant personnel and organizational changes including mergers and acquisitions involving the firm.
- The firm's risk management process and changes to the process. Disclose what risk metrics the client will receive. Regular disclosure of client specific risk information is recommended.



MODULE QUIZ 5.1

To best evaluate your performance, enter your quiz answers online.

1. Terillium Traders is a small stock brokerage firm that specializes in buying and selling stocks on behalf of client accounts. Several of Terillium's brokers have recently been placing both a bid and an offer on the same security about two hours before the market opens for trading. This allows their trades to be one of the first ones made after the markets open. Just before the markets open, these brokers would then cancel one of the orders in anticipation that the market would move in favor of the other order. Which component, if any, of the Asset Manager Code of Professional Conduct has *most likely* been violated?
 - A. The component dealing with investment process and actions related to market manipulation.
 - B. The Trading section of the Code because this is an example of "front-running" client trades.
 - C. Loyalty to Clients, the section pertaining to placing client interests before their own.
2. Harriet Fields, an investment adviser specializing in selling municipal bonds, advertises on television explaining the safety and security of these bonds. The bonds she is currently selling are limited obligation bonds backed only by the revenue generated from the projects they fund, which include a housing project and a golf course. Fields tells her prospective clients that the bonds are safe, secure, and offer generous interest payments. Which of the following statements is *most correct* regarding Fields's actions?
 - A. Fields did not violate the Code because municipal bonds are generally regarded as being safe investments.
 - B. Fields violated the part of the Code dealing with performance and valuation.
 - C. Fields violated the Code when she misrepresented the bonds by not explaining their inherent risks.
3. World Investment Advisers (WIA) is a large sales force of registered investment representatives which has affiliations with many firms that produce investment-related products. One of the affiliated firms is a mutual fund company called Life Investors, which has a special agreement with WIA in which WIA has identified Life Investors as a "preferred product provider" in their internal marketing materials to their investment representatives. In return for this preferential treatment by WIA, Life Investors has reimbursed WIA for the cost of these marketing materials out of the trading commissions generated from the sale of Life Investors mutual funds by WIA sales representatives. Which of the following statements regarding any violations of the Code is *most correct*? WIA violated the Code relating to:
 - A. accepting gifts of minimal value because Life Investors is paying for the marketing materials that could influence WIA's representatives.
 - B. having a reasonable and adequate basis for making investment decisions.
 - C. soft commissions by using client brokerage to pay for marketing materials.

4. Liz Jenkins, CFA, is an asset manager for Gray Financial, a financial services firm that has adopted the Asset Manager Code in managing client accounts. Jenkins has a client who has recently been depositing into his account bearer bonds (coupon bonds) issued by Gas Tech, a natural gas exploration company. Shortly after depositing the bonds, the client has then been requesting disbursement of funds from these bonds. Jenkins suspects this client may be using the firm in an illegal money laundering scheme. Which of the following items regarding how the firm should act is *most correct*?
- A. The firm must monitor the suspicious activity without the client knowing he is being investigated.
 - B. The firm must disassociate from the client.
 - C. A report must be filed with the appropriate legal authorities.
5. Kendall Asset Managers has branch offices in several different geographical locations spread out by hundreds of miles, and in some instances, located in remote areas. Due to their remote locations and small staffs, some offices do not have a compliance officer, and brokers working in these offices have sometimes had to take on the responsibility of hiring the branch manager. Some brokers work out of their homes and use their own personal email to contact clients. Some branches only keep records in electronic form for seven years. Which of the following is *least likely* a breach of the Code regarding Kendall Asset Managers?
- A. Keeping records in electronic form for seven years.
 - B. Communicating with clients via personal email.
 - C. Having the brokers in a remote office hire the branch manager.
6. As part of the Asset Manager Code, the firm must adopt policies that:
- A. prohibit managers from engaging in outside business interests with clients separate from the portfolio management relationship.
 - B. establish guidelines for when confidential client information will be disclosed to others.
 - C. prohibit managers from accepting lavish gifts from clients and service providers.

KEY CONCEPTS

LOS 5.a

The purpose of AMC is to assist the firm in developing ethical business and risk management practices while gaining the trust of clients.

LOS 5.b

The AMC covers:

1. Loyalty to Clients.
2. Investment Process and Actions.
3. Trading.
4. Risk Management, Compliance, and Support.
5. Performance and Valuation.
6. Disclosures.

General principles of conduct:

- Always act ethically and professionally.
- Act in the best interest of the client.
- Act in an objective and independent manner.
- Perform actions using skill, competence, and diligence.
- Communicate accurately with clients on a regular basis.
- Comply with legal and regulatory requirements regarding capital markets.

LOS 5.c

Review the cases and work the questions in the Schweser and CFA material to practice applying the ethics requirements.

LOS 5.d

Loyalty to clients

- Always put the client's interests before your own by designing appropriate compensation arrangements for managers.
- Determine how confidential client information should be collected, utilized, and stored.
- Determine the amount of which token gifts can be accepted.

Investment process and actions

- Take reasonable care when dealing with client accounts.
- Don't engage in market manipulation.
- Deal fairly with all clients.
- Have a reasonable basis for all investment recommendations.

Trading

- Do not trade on material nonpublic information.
- Always place client trades before your own.

- Use soft dollars to aid the manager in the investment decision-making process.
- Seek best execution and allocate trades equitably among all clients.

Risk management, compliance, and support

- Ensure compliance with the Asset Manager Code and legal and regulatory requirements.
- Appoint a compliance officer.
- Disseminate portfolio information in an accurate manner.
- Have an independent third party review client accounts.
- Appropriately maintain records.
- Hire qualified staff with sufficient resources.
- Have a contingency plan in place.

Performance and valuation

- Report results in an accurate manner using fair market values.

Disclosures deal with any kind of material information disclosed to the client, such as conflicts of interest, regulatory disciplinary actions, the investment decision-making process, and strategies including inherent risks, fee schedules, calculation of performance results, proxy voting issues, allocating shares of stock, and the results of any audits.

ANSWER KEY FOR MODULE QUIZZES

Module Quiz 5.1

1. **A** This is an example of trying to manipulate price and/or volume. There is no indication of trying to execute for personal or firm benefit ahead of clients, making the other two choices not relevant. (LOS 5.d)
2. **C** Fields violated the Disclosures section of the Code by misrepresenting the bonds as being safe and secure. She must provide a more balanced discussion of reward and risk. Performance and valuation deals with presenting the track record of the manager and disseminating client account values to the client. Fields violated at least two of the ethical responsibilities related to the Code, which are (1) to always act in an ethical manner and (2) to act for the benefit of your clients. (LOS 5.b)
3. **C** This is a violation of the Code dealing with trading, specifically related to the use of soft dollar commissions, also referred to as client brokerage, which are trading commissions paid to WIA by Life Investors. Soft commissions are assets of the client and should only be used to purchase goods or services to aid in the investment decision-making process (e.g., purchasing research) and should not be used to pay for marketing materials. (LOS 5.d)
4. **A** Potential illegal or unethical activity cannot be ignored. The firm must take action, such as investigating. There is no requirement to disassociate merely due to suspicion and no requirement to go to the authorities. (LOS 5.d)
5. **A** Record retention for seven years is only a suggestion if no other regulations or laws exist, but it is the least likely violation here. Using personal emails for client communication would compromise the ability to maintain and review records. Allowing the brokers to hire their supervisor would compromise any effective supervision. Communicating with clients using personal email is not acceptable because this type of communication may be difficult to monitor as mandated by the Compliance and Support part of the Code. Part of an effective compliance system is to have a designated compliance officer who can develop and implement written compliance policies. Allowing the brokers in an office to hire and presumably fire the person who is responsible for supervising them does not allow for effective internal controls, which need to be present to prevent fraudulent behavior. (LOS 5.d)
6. **B** The firm must develop policies and procedures to maintain client information, including how to deal with the rare cases it must disclose. Lavish gifts from service providers are prohibited, but not from clients. Gifts from clients are a disclosure issue. Outside business relationships with clients are not prohibited, but are another potential for conflicts of interests (like lavish client gifts), which require disclosure to the employer. (LOS 5.d)

The following is a review of the Ethical and Professional Standards (2) principles designed to address the learning outcome statements set forth by CFA Institute. Cross-Reference to CFA Institute Assigned Reading #6.

READING 6: OVERVIEW OF THE GLOBAL INVESTMENT PERFORMANCE STANDARDS

Study Session 2

EXAM FOCUS

GIPS is considered part of portfolio management. It is typically 0–5% of the exam and tested in item set. On rare occasions, it has been tested in constructed response.

GIPS falls pretty far down the list of favorite topics for most candidates. Like ethics, you must know the concepts and principles, then apply them to specific situations to identify compliance or non-compliance. There are a surprising number of calculation issues. To prepare for GIPS:

- **It is strongly advised you watch the videos that go with each module for this reading.**
- **Work practice questions.**

There are a couple of pitfalls to watch out for:

- A popular myth is to read the actual 2010 GIPS document from the CFA Institute website instead of the assigned material. It will not provide the end-of-chapter questions you are expected to have worked and can mislead you on what is actually in the assigned material.
- Like ethics, it is easy to make up questions that cannot be answered. Exam questions are designed to test your understanding of the assigned material and not hypothetical real-world situations that would require additional research or delve into the sub-issues that can arise in GIPS.

Read the assigned material, work the expected questions, and there is every reason to do well on this section of the exam.

MODULE 6.1: GIPS OVERVIEW

THE CREATION AND EVOLUTION OF THE GIPS STANDARDS



Video covering this content is available online.

The Global Investment Performance Standards (GIPS®) contain ethical and professional standards for the presentation of investment performance results. The GIPS are a *voluntary* set of standards. They are based on the fundamental principles of full disclosure and fair representation of performance results. When investment management firms comply with the GIPS, clients, prospective clients, and consultants are better equipped to fairly assess

historical investment performance.

The GIPS are not all-encompassing because there is no practical way for a set of standards to address every possible situation a firm may face. The GIPS should, therefore, be viewed as a *minimum* set of investment performance presentation standards. Investment management firms should always include additional information in their performance presentations that would help current and prospective clients better understand the reported performance results.

Recognizing the need for one globally accepted set of investment performance presentation standards, CFA Institute [formerly Association for Investment Management and Research (AIMR)] sponsored and funded the Global Investment Performance Standards Committee to develop and publish a single global standard by which all firms calculate and present performance to clients and prospective clients. As a result of this initiative, the AIMR Board of Governors formally endorsed GIPS on February 19, 1999, as the worldwide standard. This was not the first time that such a unified approach had been conceived: as far back as 1966, Peter O. Dietz published a description for pension fund investment performance,¹ and in 1980, Wilshire Associates was involved in the establishment of the Trust Universe Comparison Service, a database of portfolio returns for which members produced unified return calculations. Later, in 1993, AIMR published the Performance Presentation Standards, effectively the precursor to today's GIPS.

Since 1999, the Investment Performance Council (IPC), the replacement of the GIPS Committee, has developed the standards further. The IPC's purpose is "to promote the adoption and implementation of a single investment performance presentation standard throughout the world as the common method for calculating and presenting investment performance." As such, the IPC issued revised GIPS standards that were adopted by the CFA Institute Board of Governors on February 4, 2005, and became effective on January 1, 2006. The latest edition of the GIPS was adopted by the GIPS Executive Committee on January 29, 2010.

OBJECTIVES, KEY CHARACTERISTICS, AND SCOPE OF THE GIPS

LOS 6.a: Discuss the objectives, key characteristics, and scope of the GIPS standards and their benefits to prospective clients and investment managers.

CFA® Program Curriculum, Volume 1, page 304

GIPS Objectives

- Establish global, industry-wide best practices for the calculation and presentation of investment performance, so that performance presentations for GIPS-compliant firms can be compared regardless of their country location.
- Facilitate the accurate and unambiguous presentation of investment performance results to current and prospective clients.
- Facilitate a comparison of the historical performance of investment management firms so that clients can make educated decisions when hiring new managers.
- Encourage full disclosure and fair global competition without barriers to entry.
- Encourage self-regulation.

GIPS Characteristics

- The GIPS are voluntary, minimum standards for performance presentation.
- The GIPS contain requirements that must be followed and recommendations that are considered industry best practice and should be followed but are not required. Firms must meet all requirements on a firm-wide basis in order to claim compliance.
- Only investment management firms may claim compliance; individuals may not claim GIPS compliance.
- The GIPS provide a minimum standard where local or country-specific laws, regulation, or industry standards may not exist.
- The GIPS require managers to include all actual fee-paying, discretionary portfolios in composites defined according to similar strategy and/or investment objective.
- Firms must present a minimum of five years of GIPS-compliant history or since inception if less than five years. After presenting at least five years of compliant history, the firm must add annual performance each year going forward, up to ten years, at a minimum.
- Firms may link years of noncompliant performance but must present only compliant data for periods beginning on or after January 1, 2000.
- Firms must use prescribed calculation and presentation methods and include required disclosures in presentations.
- The GIPS rely on the integrity of input data. The accuracy of input data is critical to the accuracy of the performance presentation.
- The GIPS must be applied with the goal of full disclosure and fair representation of investment performance. Meeting the objective of full and fair disclosure will likely require more than compliance with the minimum requirements of the GIPS.
- If an investment firm applies the GIPS in a performance situation that is not addressed specifically by the standards or that is open to interpretation, disclosures other than those required by the GIPS may be necessary. To fully explain the performance included in a presentation, firms are encouraged to present all relevant supplemental information.
- In cases in which applicable local or country-specific laws or regulations conflict with the GIPS, the standards require firms to comply with the local law or regulation and make full disclosure of the conflict.
- Firms are encouraged to develop monitoring processes and controls for maintaining GIPS compliance.
- Firms must document the policies used to ensure the existence and ownership of client assets.
- January 1, 2011, is the effective date of the 2010 edition of the GIPS. Presentations that include performance for periods beginning on or after January 1, 2011, must comply with the 2010 version of the GIPS.

Scope of the GIPS

Firms from any country may come into compliance with the GIPS. Compliance with the standards will facilitate a firm's participation in the investment management industry on a global level.

For periods prior to January 1, 2006, firms are granted reciprocity, so that if pre-2006 data are presented in compliance with a previous edition of the GIPS or a Country Version of GIPS (CVG), such data may continue to be shown as compliant with the revised GIPS.

Benefits to Managers and Clients

The benefits to existing and prospective clients derive from the underlying purpose of the GIPS—the ability to compare the performance of firms operating in different countries with different sets of established practices. With the increase in global investing and the accompanying increase in global competition comes the need for a standardized method for calculating and presenting investment results. The GIPS ensure that performance data are complete and fairly presented so that existing and prospective clients can have greater confidence in comparative investment results.

In addition to a more reliable measure of past investment performance results, the GIPS provide managers with the ability to compete fairly in foreign markets. Firms located in countries with little or no regulation can compete on an even basis with regulated countries by presenting performance results that have been verified through GIPS compliance. Simply put, investors can place more confidence in GIPS-compliant performance results. In addition to external benefits to GIPS compliance, firms can identify weaknesses in internal management controls during the implementation of GIPS.

MODULE 6.2: COMPLIANCE AND DATA REQUIREMENTS



Video covering this content is available online.

LOS 6.b: Explain the fundamentals of compliance with the GIPS standards, including the definition of the firm and the firm's definition of discretion.

CFA® Program Curriculum, Volume 1, page 306

GIPS compliance must be on a *firm-wide basis*. How a firm defines itself, therefore, is critically important because it determines total firm assets as well as the policies and practices that must be performed in compliance with the GIPS. *Total firm* assets are defined as the total fair value of all assets the firm manages, including non-fee-paying and non-discretionary portfolios. Also included in the definition are assets delegated to sub-advisers, as long as the firm has selected the sub-advisers. Assets managed by sub-advisers not selected by the firm are not included in total firm assets.

How a firm defines *discretion* is also of paramount importance. If (according to the firm's definition of discretion) a portfolio is deemed discretionary, it is considered sufficiently free of client-mandated constraints such that the manager is able to pursue its stated strategy, objectives, or mandate. The GIPS require that all actual, fee-paying discretionary portfolios are included in at least one composite.²

Definition of the Firm³

A **firm** is defined as:

“an investment firm, subsidiary, or division held out to clients or potential clients as a distinct business entity.”

A **distinct business entity** is defined as:

“a unit, division, department, or office that is organizationally or functionally separated from other units, divisions, departments, or offices and that retains discretion over the assets it manages and that should have autonomy over the investment decision-making process.”

Fundamentals of Compliance

To claim compliance with GIPS, the firm must meet all requirements. Partial compliance is not acceptable. The firm must also meet the ethical intent of GIPS. Technical compliance that violates the intent is a violation of GIPS.

- Firms must establish, update on a timely basis, and document policies and procedures for meeting GIPS. This includes policies for error correction. Manuals and handbooks are proper documentation.
- A firm may not assert that calculations are in accord with GIPS unless it is a firm in compliance with GIPS, making a performance presentation to an individual firm client.
- Firms cannot claim partial compliance with GIPS or in compliance “except for.”
- Only investment management firms can claim compliance with GIPS, not a pension plan sponsor or a consultant.

While not required, it is recommended the firm:

- Comply with the GIPS recommendations as well as the requirements.
- Have compliance verified by an independent third party.
- Adopt a broad definition of the firm that includes all parts of the firm that operate as the same brand without regard to location or name used by the unit.
- Provide an annual GIPS compliant report to all existing clients for the composites in which that client’s performance is included. This will likely require an explanation whenever the client’s return is below the composite’s return.

INPUT DATA REQUIREMENTS AND RECOMMENDATIONS

LOS 6.c: Explain the requirements and recommendations of the GIPS standards with respect to input data, including accounting policies related to valuation and performance measurement.

CFA® Program Curriculum, Volume 1, page 310

GIPS Input Data Requirements (Standards 1.A.1–7)

- **Standard 1.A.1.** All data and information necessary to support the firm’s performance presentation, including calculations, must be stored and maintained.
Discussion: Current and prospective clients as well as auditors and regulators should be able to confirm valuations and recreate return calculations.
- **Standard 1.A.2.** For periods beginning on or after January 1, 2011, portfolios must be valued at fair value according to GIPS principles. Cost or book values are not permitted.

Discussion: Fair value is the price, including any earned income, at which willing and knowledgeable participants would trade. These should be observable prices for identical investments trading in active markets. For thinly traded securities or other assets for which current market prices are not readily available, firms should use recognized and justifiable methods for estimating fair value.

■ **Standard 1.A.3.** Portfolio valuation.

- Prior to January 1, 2001, portfolios must be valued at least quarterly.
- Beginning on or after January 1, 2001, at least monthly.
- Beginning on or after January 1, 2010, at least monthly and on the date of all large external cash flows.

Discussion: What constitutes a *large cash flow* is not defined by the GIPS. Firms must define *large* either on a value or percentage basis for each portfolio or composite. A large cash flow is generally one that has the potential to distort valuations and, hence, return calculations.

■ **Standard 1.A.4.** For periods beginning January 1, 2010, firms must value portfolios as of the calendar month-end or the last business day of the month.

Discussion: Prior to this date, there is more flexibility, depending on the firm's reporting cycle.

■ **Standard 1.A.5.** For periods beginning January 1, 2005, firms must use trade-date accounting.

Discussion: The use of trade-date accounting establishes the true economic value of an asset and improves the accuracy of performance measurements. The result of this requirement is that an asset will be shown (along with changes in cash balances) on the date of trade rather than settlement date. Settlement date accounting, which is valid for periods prior to 2005, would not for instance show an asset that was purchased just before the period end if the settlement date was in the following period. Note that pre-2005 performance results calculated using settlement date accounting will *not* need to be recalculated.

■ **Standard 1.A.6.** Accrual accounting must be used for fixed-income securities and all other assets that accrue interest income. Market values of fixed-income securities must include accrued income.

Discussion: When a fixed-income security or other asset that accrues interest is sold, the amount of the accrued interest at the sale date is calculated and paid by the purchaser. Thus, to measure performance fairly and accurately, accrued interest (received or paid) must be accounted for in both beginning and ending portfolio valuations.

■ **Standard 1.A.7.** For periods beginning January 1, 2006, composites must have consistent beginning and ending annual valuation dates. Unless the composite is reported on a non-calendar fiscal year, the beginning and ending valuation dates must be at calendar year-end (or on the last business day of the year).

Discussion: The valuation dates given for each composite must be the same each year, and either December 31 (or the previous Friday if that was the last working day of the year) or the last working day of the corporate accounting year.

GIPS Input Data Recommendations (Standards 1.B.1–4)

- **Standard 1.B.1.** Rather than only at large external cash flows, portfolios should be valued at each external cash flow.

- **Standard 1.B.2.** Valuations should be obtained from an independent third party.

Discussion: To avoid disagreements between managers and custodians and to make fair and accurate representation of performance, firms should utilize qualified third-party valuers.

- **Standard 1.B.3.** Dividends from equities should be accrued as of the ex-dividend date.

- **Standard 1.B.4.** When presenting net-of-fees returns, firms should accrue investment management fees.

Discussion: Performance may be presented gross or net of management fees (see *Disclosures* discussed later). If data is shown net of fees, part-year performance should accrue the appropriate percentage.

MODULE 6.3: CALCULATION



LOS 6.d: Discuss the requirements of the GIPS standards with respect to return calculation methodologies, including the treatment of external cash flows, cash and cash equivalents, and expenses and fees.

Video covering this content is available online.

CFA® Program Curriculum, Volume 1, page 314

GIPS Calculation Methodology Requirements

GIPS requires comparable calculation methods by all firms to facilitate comparison of results. Returns must be calculated on a total return basis using beginning and ending fair value (Standard 2.A.1). If there are no client contributions or withdrawals (ECFs), this is simply $(EV - BV) / BV$.

- Beginning and ending portfolio value must include income earned, realized gain and loss, and unrealized gain and loss. For fixed income securities, both beginning and ending values must include accrued interest. (It is recommended, but not required, that stock dividends be included in portfolio value as of the ex-dividend date.)

When there are ECFs, the calculations are more complex, and time-weighted (geometrically compounded) computations must be used to link periodic rates of return (Standard 2.A.2).

- Beginning January 1, 2001, firms must value portfolios and compute periodic returns at least monthly.
 - Prior to that date, quarterly valuation was allowed.
 - Less frequent valuation provisions may apply to real estate and private equity. (If relevant, this is covered in the special provisions for RE and PE.)
- Beginning January 1, 2010, GIPS requires firms to also value portfolios on the date of any large external cash flow (ECF) and time weight the subperiod returns.
 - The firm is responsible for determining what constitutes a large ECF. The definition is normally a percentage ($ECF / \text{portfolio value}$). A large ECF is defined as any ECF that is large enough that it may distort the computed return. The firm's definition of large is composite specific and can consider practical realities. It can be higher for illiquid than for liquid markets.

- Once the valuation frequency policy by composite is adopted, it must be followed. More or less frequent valuation to determine subperiod returns is prohibited. This prevents firms from cherry-picking the periods in an effort to find the most favorable (highest) return calculation.
- Prior to 2010, firms could use approximations of time-weighted return to deal with large ECFs.
- Technically, those older methods can still be used but only if the firm can document that they do not materially differ from true time-weighted return with subperiods determined by the date of large ECFs.
- BV and EV must include the value of any cash and cash equivalents the manager chooses to hold in the portfolio (Standard 2.A.3). This cash represents a manager decision, as does any other holding. This requirement applies even if the firm uses another manager to manage the cash equivalents.
 - If the cash and cash equivalent position is due to client activity and large enough to prevent the manager from implementing the intended strategy, other provisions of GIPS apply.
- All return calculations must be gross of fees. This means after actual trading expenses but before all other fees (Standard 2.A.4). Estimated trading expense is not allowed. Note that this will normally occur in trade settlement, as sale proceeds (purchase cost) are normally reduced (increased) for actual transaction costs. Instead of gross-of-fee returns, firms may report net-of-fee returns, which are gross returns minus the account investment management fee.
 - Bundled fees (Standard 2.A.5) may make gross-of-fee reporting difficult. A bundled fee is any fee that includes some combination of trading expense, management fee, and other fees. Other fees are anything other than trading and management fees. If trading and management expenses cannot be separated out of the bundled fee, deduct the entire bundled fee. If the bundled fee includes trading but not management, label the result gross-of-fee. If the bundled fee includes both trading and management fees, label the result net-of-fee. What is included in the bundled fee must be fully disclosed.
- When the firm controls the timing of ECFs, time-weighted return cannot be used, and internal rate of return (IRR) must be used for return computations. (If relevant, this is covered in the special provisions for RE and PE.)

EXAMPLE: Time-weighted rate of return

The Rooney account was \$2,500,000 at the start of the month and \$2,700,000 at the end. During the month, there was a cash inflow of \$45,000 on day 7 and \$25,000 on day 19. The values of the Rooney account are \$2,555,000 and \$2,575,000 (inclusive of the cash flows for the day) on day 7 and day 19, respectively.

Calculate the time-weighted rate of return (assuming 30 days in the month).

Answer:

First, calculate three subperiod returns using the rate of return calculation when external cash flows occur at the end of the evaluation period:

Subperiod 1 (days 1–7)

$$r_{t,1} = \frac{[(\$2,555,000 - \$2,500,000) - \$45,000]}{\$2,500,000} = 0.004 = 0.4\%$$

Subperiod 2 (days 8–19)

$$r_{t,2} = \frac{[(\$2,575,000 - 2,555,000) - 25,000]}{\$2,555,000} = -0.002 = -0.2\%$$

Subperiod 3 (days 20–30)

$$r_{t,3} = \frac{(\$2,700,000 - 2,575,000)}{\$2,575,000} = 0.049 = 4.9\%$$

Second, compound the returns together (chain-link) to calculate an overall time-weighted rate of return:

$$TWRR = (1 + 0.004)(1 - 0.002)(1 + 0.049) - 1 = 0.051 = 5.1\%$$

Older Computation Methods

Prior to January 1, 2005, ECFs could be treated as if they occurred in the middle of the time period (the original Dietz method). After January 1, 2005, until the current rules took effect on January 1, 2010, two methods were allowed to approximate time-weighted return:

- ECFs could be daily weighted (the modified Dietz method).
- The modified internal rate of return could be used. (MIRR is simply IRR, and *modified* refers to using IRR as an approximation for time-weighted return.)

EXAMPLE: Older methods of approximating TWRR for GIPS

Based on the previous data in the Rooney account, calculate the approximations of TWRR.

Original Dietz:

- Total ECFs were +45,000 + 25,000 for a net +ECF of 70,000.

$$(EV - BV - ECF) / [BV + 0.5(\text{Net ECF})]$$

$$(\$2,700,000 - \$2,500,000 - 70,000) / [\$2,500,000 + .5(\$70,000)]$$

$$130,000 / 2,535,000 = 5.13\%$$

Modified Dietz:

- The numerator is the same as for original Dietz: 130,000.
- The denominator is the BV plus each ECF time weighted for the remainder of the full time period:

2,500,000 was available for the full month

+ 45,000 received on day 7 is available for (30 – 7) / 30 of the month

$$+ 45,000[(30 - 7) / 30] = 34,500 \approx 45,000(0.77)$$

+ 25,000 received on day 19 is available for (30 – 19) / 30 of the month

$$+ 25,000[(30 - 19) / 30] = 9,167 \approx 25,000(0.37)$$

$$130,000 / (2,500,000 + 34,500 + 9,167) = 5.11\%$$

MIRR:

- This must be solved by trial and error to find the r that equates the EV to the FV of the BV and ECFs. Like modified Dietz, each ECF is weighted for the portion of the month it is available. (The ,000 are dropped to simplify, and the remainder of month periods are calculated to two decimal places.)

$$2,700 = 2,500(1 + r) + 45(1 + r)^{0.77} + 25(1 + r)^{0.37}$$

$$r = \text{MIRR} = 5.11\%$$



PROFESSOR'S NOTE

The previously calculated true TWRR was 5.1%, making the older approximations methods very close. This is not surprising, given that the ECFs were relatively small. Unless ECFs are relatively large and the path of returns varies significantly by subperiod, the methods will produce similar results.

The old methods are covered in the CFA text and are easy enough once you grasp the concept. Solving for MIRR by trial and error is not an LOS and not specifically covered in the CFA text. For the exam, focus on the currently required true TWRR method.



MODULE QUIZ 6.1, 6.2, 6.3

To best evaluate your performance, enter your quiz answers online.

1. Assume that Firm Z is the investment manager for 15 retail clients and has full discretion over the investment of the clients' assets. At the end of each day, any excess cash in the portfolios is swept into a money market fund. Firm Z does not manage the money market fund, so it does not include the cash portion of the portfolio in its total return performance calculation. **Discuss** whether it is an acceptable practice for Firm Z to claim compliance with the GIPS.
2. Consider the total quarterly returns for the growth and income composite of the investment firm ADA: Q1 = 3.00%, Q2 = 4.15%, Q3 = 3.75%, and Q4 = 3.15%. **Calculate** the appropriate total annual return under the calculation methodology under the GIPS.
3. For promotional purposes, the Jaspre Investment Management firm (JIM) wants to take advantage of the prestige associated with presenting performance results that are in compliance with the GIPS. To save time and expense, JIM decides to create five composites for marketing purposes. These portfolios represent 60% of the firm's fee-paying discretionary portfolios. Recognizing that the firm cannot claim compliance for all of its portfolios, JIM plans to include the following compliance statement with its performance presentation: *"The investment results presented in this report have been prepared and presented in compliance with the Global Investment Performance Standards (GIPS®) for the majority of the assets under management by Jaspre Investment Management, Incorporated."* **Discuss** whether JIM's claim of compliance is acceptable under the GIPS.
4. Kenzo Fund Managers (KFM) manages a fund that has the following cash flows and valuations (in U.S.\$ millions) for the month of September:

Date	Value (Before Cash Flow)	Cash Flow	Value (After Cash Flow)
1 September	50.0	N/A	50.0
10 September	51.5	5.0	56.5
20 September	59.0	-2.0	57.0
30 September	55.0	N/A	55.0

- (a) Assuming this data is for September 2002, **calculate** an approximate time-weighted rate of return (TWRR) for KFM using the Original Dietz Method.
- (b) Now suppose this data is for September 2005. **Calculate** the TWRR for KFM using the Modified Dietz Method.
- (c) If this data were for September 2012, **calculate** the accurate TWRR for KFM for the month.

MODULE 6.4: COMPOSITES

LOS 6.e: Explain the requirements and recommendations of the GIPS standards with respect to composite return calculations, including methods for asset-weighting portfolio returns.



Video covering this content is available online.

GIPS requires firms to report performance by composite, where a composite is a group of accounts with similar objectives (Standards 2.A.6 and 7). The return of the composite is the weighted average monthly return of the accounts in the composite. (Prior to January 1, 2010, quarterly returns could be used.)

Weights can be based on either beginning of period account value or beginning of period plus weighted average ECFs for the period. End of period account values cannot be used, as that would increase the relative weighting of the accounts with the higher relative return for the period.

It is also allowable to aggregate total beginning and ending market value and aggregate all the ECFs of the composite. Then, directly calculate the return of the composite as if it were all one account.



PROFESSOR'S NOTE

The formulas for computing weighted average can look intimidating. Of course, by now, you have computed weighted average dozens of times in the course of CFA exam prep; this is no different. One weighted average is like another weighted average.

EXAMPLE: Comparison of composite returns calculation methods

Using the data presented in portfolios A and B, **calculate** the composite return using the (1) beginning market value-weighted method, (2) beginning market value plus cash flow method, and (3) aggregate return method.

Figure 6.1: Portfolio A

Date	Market Value (\$)	Cash Flow (\$)	Market Value After Cash Flow (\$)
03/31/05	500,000		
04/10/05	515,000	100,000	615,000
04/18/05	650,000		
04/30/05	665,000		
Monthly return = 11.32%			

Figure 6.2: Portfolio B

Date	Market Value (\$)	Cash Flow (\$)	Market Value After Cash Flow (\$)
03/31/05	250,000		
04/10/05	256,000		
04/18/05	265,000	-35,000	230,000
04/30/05	235,000		
Monthly return = 8.26%			

Answer:

Beginning market value method:

$$R_{BMV} = \frac{(500,000 \times 0.1132) + (250,000 \times 0.0826)}{500,000 + 250,000} = 10.30\%$$

Beginning market value plus cash flows method:

$$W_{\text{Port A}} = \frac{30-10}{30} = 0.67$$

$$W_{\text{Port B}} = \frac{30-18}{30} = 0.40$$

$$R_{\text{BMV} + \text{CF}} = \frac{\left\{ \begin{array}{l} [500,000 + (100,000 \times 0.67)] \times 0.1132 \\ + [250,000 + (-35,000 \times 0.40)] \times 0.0826 \end{array} \right\}}{\left\{ \begin{array}{l} [500,000 + (100,000 \times 0.67)] \\ + [250,000 + (-35,000 \times 0.40)] \end{array} \right\}} = 10.42\%$$

Aggregate method:

$$W_{\text{Port A}} = \frac{30-10}{30} = 0.67$$

$$W_{\text{Port B}} = \frac{30-18}{30} = 0.40$$

$$R_{\text{BMV} + \text{CF}} = \frac{(665,000 + 235,000) - (500,000 + 250,000) - [100,000 + (-35,000)]}{500,000 + 250,000 + (100,000 \times 0.67) + (-35,000 \times 0.40)} = 10.59\%$$

GIPS Calculation Methodology Recommendations

- **Standard 2.B.1.** Returns should be calculated net of non-reclaimable withholding taxes on dividends, interest, and capital gains. Reclaimable withholding taxes should be accrued.

Discussion: This Standard is similar to 2.A.4 stated previously. Foreign investments often have a tax on income or gains that is deducted at the source. It is often possible to reclaim this amount by applying to the relevant tax authorities. If the withheld tax is reclaimable, it should be accrued until recovered; if the tax is not reclaimable, it should be treated like a transactions cost.

DISCRETIONARY PORTFOLIOS

LOS 6.f: Explain the meaning of “discretionary” in the context of composite construction and, given a description of the relevant facts, determine whether a portfolio is likely to be considered discretionary.

CFA® Program Curriculum, Volume 1, page 325

- **Standard 3.A.1.** All actual, fee-paying, discretionary portfolios must be included in at least one composite. Although non-fee-paying discretionary portfolios may be included in a composite (with appropriate disclosures), nondiscretionary portfolios must not be included in a firm’s composites.

Discussion: From the wording of this Standard, it is clear that the notion of “discretionary” is key to a portfolio because it determines whether the portfolio *must* be included in at least one composite or if it *must not* be included in any composite.

The Investment Performance Council defines discretion as “the ability of the firm to implement its intended strategy.” A client may place significant constraints on the manager—for instance, the investment policy statement (IPS) may specify limits on sectors, credit ratings, durations, et cetera. Furthermore, there may be total restrictions on certain transactions, such as the purchase of “unethical” or foreign investments, or the sale of specified stocks. These restrictions *do not* automatically remove the discretionary nature of the portfolio.

A portfolio becomes nondiscretionary when the manager is no longer able to implement the intended investment strategy. If for instance the liquidity requirements are so great that much of the value must be in cash, or if the portfolio has minimal tracking limits from an index portfolio, then the description of “discretionary” is really no longer appropriate.

Standard 3.A.1 also demonstrates that by including all fee-paying discretionary portfolios in at least one composite, managers cannot cherry-pick their best performing portfolios to present to prospective clients. Firms are permitted to include a portfolio in more than one composite, provided it satisfies the definition of each composite.

Non-fee-paying portfolios may be included in the firm’s composites, but if they are, firms are required to disclose the percentage of composite assets represented by non-fee-paying portfolios. If the firm includes non-fee-paying portfolios in its composites, those portfolios are subject to the same rules as fee-paying portfolios.

If a portfolio’s status changes from discretionary to nondiscretionary, the portfolio may not be removed from a composite retroactively. However, the portfolio must be removed going forward.

CONSTRUCTING COMPOSITES: MANDATES, STRATEGIES, AND STYLES

LOS 6.g: Explain the role of investment mandates, objectives, or strategies in the construction of composites.

CFA® Program Curriculum, Volume 1, page 328

- **Standard 3.A.4.** Composites must be defined according to similar investment objectives and/or strategies. Composites must include all portfolios that meet the composite definition. The full composite definition must be made available on request.

Discussion: Composites should be defined such that clients are able to compare the performance of one firm to another. Composites must be representative of the firm’s products and be consistent with the firm’s marketing strategy.

- Firms are not permitted to include portfolios with different investment strategies or objectives in the same composite.
- Portfolios may not be moved into or out of composites except in the case of valid, documented, client-driven changes in investment objectives or guidelines or in the case of the redefinition of the composite.

Generic definitions such as “equity” or “fixed income” may be too broad to enable clients to make comparisons, so qualifiers such as sector, benchmark, capitalization (e.g., large, mid, small), style (e.g., value, growth, blend), or even risk-return profile may be useful. However, too many qualifiers could result in a plethora of similar composites, each containing a very small number of portfolios.

CONSTRUCTING COMPOSITES: ADDING PORTFOLIOS AND TERMINATING PORTFOLIOS

LOS 6.h: Explain the requirements and recommendations of the GIPS standards with respect to composite construction, including switching portfolios among composites, the timing of the inclusion of new portfolios in composites, and the timing of the exclusion of terminated portfolios from composites.

CFA® Program Curriculum, Volume 1, page 331

- **Standard 3.A.2.** Composites must include only assets under management within the defined firm.
- **Standard 3.A.3.** Firms are not permitted to link simulated or model portfolios with actual performance.

Discussion: Simulated, back-tested, or model portfolio results do not represent the returns of actual assets under management and, thus, may not be included in composites performance results.

- **Standard 3.A.5.** Composites must include new portfolios on a timely and consistent basis after the portfolio comes under management.

Discussion: For each individual composite, firms should have a policy for the inclusion of new portfolios. Ideally, the policy will prescribe inclusion of a new portfolio in a composite at the start of the next full performance measurement period.

Recognizing that situations exist where firms may need time to invest the assets of a new portfolio, the Standards allow some discretion on this issue. For example, it will likely take longer to add a new portfolio to an emerging markets fixed-income portfolio than it will take to add portfolio assets to a developed market government bond portfolio, or a client may deposit the asset for a new portfolio over a period of time. In any case, firms must establish a policy for the inclusion of new portfolios on a composite-by-composite basis and apply it consistently.

- **Standard 3.A.6.** Terminated portfolios must be included in the historical returns of the appropriate composites up to the last full measurement period that the portfolio was under management.

Discussion: Retaining the performance of a terminated portfolio through its final full period helps alleviate the effects of survivorship bias. For example, if the portfolio was in the composite for one quarter and the performance for the composite for that quarter is reported, the performance of the terminated portfolio must be included. However, presenting an annual return for a terminated portfolio with less than a full year's performance (e.g., creating an annual return from less than four quarterly returns) is not allowed. This would be equivalent to presenting simulated performance. (See Standard 3.A.3.)

- **Standard 3.A.7.** Portfolios must not be switched from one composite to another unless documented changes in client guidelines or the redefinition of the composite make it appropriate. The historical record of the portfolio must remain with the original composite.

Discussion: Even if investment strategies change over time, firms usually do not change the definition of a composite. Rather, changes in strategy typically result in the creation of a new composite. In the rare case that it is deemed appropriate to redefine a composite, the firm must disclose the date and nature of the change. Changes to composite definitions must not be applied retroactively.

- **Standard 3.A.9.** If a firm sets a minimum asset level for portfolios to be included in a composite, no portfolios below that asset level can be included in that composite. Any changes to a composite-specific minimum asset level are not permitted to be applied retroactively.

Discussion: If a composite specifies a minimum size for portfolios, the minimum size must be applied on a consistent basis. Because portfolios may drop below the minimum for a short period, the IPC Guidance Statement on Composite Definition recommends that a policy be put in place to identify percentage or period of breaches after which a portfolio should be removed from the composite. For instance, a portfolio may have to be removed after falling more than 10% below the limit or after being below the limit at the start of three successive periods.

Note that the performance history for a composite may not be adjusted as a result of a constituent portfolio being removed, and composite definitions may not be changed retroactively.

- **Standard 3.A.10.** A portfolio could receive a significant external cash flow (defined as a cash flow large enough that the portfolio temporarily does not reflect the composite's style). The recommendation is to put the cash in a temporary new account that is not part of the composite until the funds are invested in accordance with the style. At that time the temporary new account should be merged into the existing account. Only if this is not possible should the account be temporarily removed from the composite until the account again reflects the composite style.

Discussion: The intent is to prevent the client contribution from creating a cash drag and disrupting the ability of the manager to implement the intended style. Either the temporary account or removal should be temporary and only for a period of time long enough for the manager to make investments that reflect the composite's style.

EXAMPLE:

Account #207 invests in illiquid, fixed income securities. The account receives a large cash infusion on April 12 that cannot be invested quickly at reasonable prices. It is expected to take 60 days for the funds to be reasonably invested.

Best Solution:

Place the funds in a new, temporary, subaccount (call it 207T) until the funds are invested. Continue to report results for 207 in its appropriate composite. Results for 207T will not be reported in any composite. Once 207T is invested in accord with account objectives, 207T will be merged into 207 and affect future results for 207. (Note that the client will need to receive reports showing the results of 207T and 207 to comply with general reporting requirements under the Standards of Professional Conduct. Subaccount 207T is only excluded from GIPS reporting.)

Alternative Solution:

The funds could be placed directly into 207 and 207 results would be excluded from the composite results until the funds are invested in accord with client objectives. GIPS composite results are based on monthly results so if the investments are completed by June 15, account 207 will be excluded from the composite for months April, May, and June. (Note that the client will need to receive reports showing the results of 207 to comply with general reporting requirements under the Standards of Professional Conduct. Account 207 is temporarily excluded from GIPS reporting.)

- **Standard 3.B.2.** To remove the effect of significant cash flows, firms should use temporary new accounts.

Discussion: Significant cash flows are external cash flows directed by a client that are large enough to disrupt the management of the composite. In the case of significant inflows, the firm is encouraged to create a separate account until the funds can be invested according to the composite strategy. The inclusion of the new securities in the composite should be managed according to the firm's established policy on the inclusion of new portfolios. When the client directs a significant withdrawal, the firm is encouraged to establish a securities account separate from the composite until the securities can be liquidated and the cash distributed.

CARVE-OUTS

LOS 6.i: Explain the requirements of the GIPS standards for asset class segments carved out of multi-class portfolios.

CFA® Program Curriculum, Volume 1, page 334

- **Standard 3.A.8.** For periods beginning on or after January 1, 2010, carve-outs must not be included in a composite unless the carve-out is actually managed separately with its own cash balance. Prior to that date, firms could do internal computations to simulate the results of dividing the portfolio into subaccounts.

Carve out accounting is optional and used if an investment management firm wishes to report the results of portions of an account that follows a multiple-strategy objective.

EXAMPLE:

DVE Asset Management manages portfolios that include four styles: (1) domestic equity, (2) international equity, (3) fixed income, and (4) balanced portfolios that include all three asset segments. DVE maintains composites for each of these four investment styles. Within DVE there are separate teams that manage each of the three asset segments (the first three styles). One of the accounts, the BJ Foundation (BJF), is a balanced account that has a strategic objective to invest one-third in each of the three asset segments. BJF results are reported as part of the Balanced Composite and DVE would like to also report the domestic equity results of BJF as part of the Domestic Equity Composite.

Solution:

DVE should set up an account for BJF domestic equity and manage it as a separate account. If, for example, BJF is a \$30 million portfolio, then \$10 million (one-third of the \$30 million) should be placed in the BJF domestic equity account and the performance of this separate subaccount can be included in the Domestic Equity Composite. If the managers of the BJF domestic equity account hold cash in that account, it will affect the total return calculation that is included in the domestic equity composite for BJF. The results of the entire \$30 million BJF account must continue to be included in the Balanced Composite (and reported to the client). (Note that DVE could also set up separate subaccounts for BJF international equity and fixed income as well if desired and report each of these subaccount performances in their respective asset segment composites.)



MODULE QUIZ 6.4

To best evaluate your performance, enter your quiz answers online.

1. Alan Tribon, compliance officer at Frankfurt Investment Management, has scheduled a meeting with one of Frankfurt's portfolio managers, Ashon Gupta, to discuss an investment performance presentation that he recently prepared.

The following are excerpts from the conversation between Tribon and Gupta:

Excerpt 1

Tribon: "I see that the returns in the presentation are reported net of investment management fees. I seem to recall that the GIPS require firms to present performance on a gross of management fees basis."

Guptar: "You are correct, and I will promptly see that the performance results are recalculated and the presentation is changed to reflect gross-of-fees performance."

Excerpt 2

Tribon: "I notice that there is disclosure of total firm assets for each period. I know this has always been a GIPS requirement, but must we disclose the assets that we direct to sub-advisers under client mandate?"

Guptar: "Yes, unfortunately, the GIPS require that the firm include as total assets under management those assets managed by client-appointed sub-advisers if the firm retains discretion of more than 50% of the portfolio from which the assets were drawn."

Excerpt 3

Tribon: "I couldn't help but notice that the only compliance statement in the presentation indicates firm-wide compliance with the Global Performance Standards of CFA Institute. Does this also satisfy the statement of compliance requirements under the GIPS?"

Guptar: "Yes, under the GIPS, there is considerable flexibility in the wording of the GIPS compliance statement, but the one we included is recommended."

Using the template provided, **identify** whether each of the statements is correct or incorrect. If incorrect, briefly **explain** why.

Template for Question 1

Comments	Correct or Incorrect (Circle One)	If Incorrect, State Reason
"I seem to recall that the GIPS require firms to present performance on a gross of management fees basis."	Correct Incorrect	
"...the GIPS require that the firm include as total assets under management those assets managed by client-appointed sub-advisers if the firm retains discretion of more than 50% of the portfolio from which the assets were drawn."	Correct Incorrect	
"Yes, under the GIPS, there is considerable flexibility in the wording of the GIPS compliance statement, but the one we included is recommended."	Correct Incorrect	

2. The investment management firm of Rangan, Rollins, and Cramer (RRC) manages portfolios using a long-short strategy. However, RRC does not ever intend to market this strategy and, thus, does not include the performance of these portfolios in any of the firm's composites. **Discuss** whether this practice is acceptable if RRC claims that its performance presentation results are compliant with the GIPS.
3. The Teletron Investment Management firm (TIM) plans to market an aggressive growth investment strategy using a newly developed proprietary prediction model. To test the model, TIM created an aggressive growth composite and produced a years of returns history using hypothetical assets and a back-tested asset allocation strategy. TIM intends to show the model composite results in its performance presentation. **Discuss** whether this practice is acceptable under the GIPS.
4. It would be *most likely* that since inception (SI-IRR), as well as component returns for private equity and real estate, would be required for the GIPS report if:
 - A. the account is large.
 - B. the account is non-discretionary.
 - C. the manager can control the timing of external cash flows into and out of the portfolio.
5. **Indicate** whether *may be included* or *must be excluded* describes the GIPS with respect to the handling of a portfolio with the indicated characteristics. **Circle** the appropriate indicator in the following template and **explain** your decision.

Template for Question 5

Characteristic	May Be Included in a Composite Must Be Excluded From Composite	Explanation
Client has significant liquidity needs with an accompanying significant cash position.	May be included Must be excluded	
Client does not pay fees.	May be included Must be excluded	
Client requests strictly following an index.	May be included Must be excluded	

MODULE 6.5: DISCLOSURES

LOS 6.j: Explain the requirements and recommendations of the GIPS standards with respect to disclosure, including fees, the use of leverage and derivatives, conformity with laws and regulations that conflict with the GIPS standards, and noncompliant performance periods.



Video covering this content is available online.

GIPS REQUIRED DISCLOSURES

- **Standard 4.A.1.** Once a firm has met all the requirements of the GIPS standards, the firm must disclose its compliance with the GIPS standards using one of the following compliance statements.

For firms that are verified:

[Insert name of firm] claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. [Insert name of firm] has been independently verified for the periods [insert dates]. The verification report(s) is/are available upon request.

Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis, and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards. Verification does not ensure the accuracy of any specific composite presentation.

For composites of a verified firm that have also had a performance examination:

[Insert name of firm] claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. [Insert name of firm] has been independently verified for the periods [insert dates].

Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis, and (2) the firm's processes and procedures are designed to calculate and present performance in compliance with the GIPS standards. The [insert name of composite] composite has been examined for the periods [insert dates]. The verification and examination reports are available upon request.

For firms that have not been verified:

[Insert name of firm] claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. [Insert name of firm] has not been independently verified.

- **Standard 4.A.2.** Firms must disclose the definition of “firm” used to determine the total firm assets and firm-wide compliance.
- **Standard 4.A.3.** Firms must disclose the composite description.
- **Standard 4.A.4.** Firms must disclose the benchmark description.
- **Standard 4.A.5.** When presenting gross-of-fees returns, firms must disclose if any other fees are deducted in addition to the direct trading expenses.
- **Standard 4.A.6.** When presenting net-of-fees returns, firms must disclose a) if any other fees are deducted in addition to the investment management fee and direct trading expenses, b) if model or actual investment management fees are used, and c) if returns are net of performance-based fees.
- **Standard 4.A.7.** Firms must disclose the currency used to express performance.
- **Standard 4.A.8.** Firms must disclose which measure of internal dispersion is used.
- **Standard 4.A.9.** Firms must disclose the fee schedule appropriate to the compliant presentation.

- **Standard 4.A.10.** Firms must disclose the composite creation date.
- **Standard 4.A.11.** Firms must disclose that the firm's list of composite descriptions is available upon request.
- **Standard 4.A.12.** Firms must disclose that policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.
- **Standard 4.A.13.** Firms must disclose the presence, use, and extent of leverage, derivatives, and short positions, if material, including a description of the frequency of use and characteristics of the instruments sufficient to identify risks.

Discussion: It is important that prospective clients understand how leverage or derivatives affected past performance and could affect future performance (i.e., risk and return). Many clients may never have dealt with some of these complex strategies, so a clear and comprehensive description is essential. For instance, a manager may use equity or debt futures to adjust the beta or duration of a portfolio. The description of the strategy should highlight possible differences in performance between the derivative and the underlying assets, such as rollover, basis, or call risk.

An example of an acceptable disclosure under this Standard is as follows: "Eurodollar CD futures are used occasionally to hedge against adverse interest rate changes. The positions are not leveraged."

- **Standard 4.A.14.** Firms must disclose all significant events that would help a prospective client interpret the compliant presentation.
- **Standard 4.A.15.** For any performance presented for periods prior to January 1, 2000, that does not comply with the GIPS standards, firms must disclose the periods of non-compliance.

Discussion: In order to claim compliance with the GIPS, performance presentations for periods beginning January 1, 2000, must be GIPS-compliant. For periods prior to January 1, 2000, firms may present performance results that do not comply with the Standards as long as they disclose the periods of non-compliance.

- **Standard 4.A.16.** If the firm is redefined, the firm must disclose the date of, description of, and reason for the redefinition.
- **Standard 4.A.17.** If a composite is redefined, the firm must disclose the date of, description of, and reason for the redefinition.
- **Standard 4.A.18.** Firms must disclose any changes to the name of a composite.
- **Standard 4.A.19.** Firms must disclose the minimum asset level, if any, below which portfolios are not included in a composite. Firms must also disclose any changes to the minimum asset level.
- **Standard 4.A.20.** Firms must disclose relevant details of the treatment of withholding tax on dividends, interest income, and capital gains, if material. Firms must also disclose if benchmark returns are net of withholding taxes if this information is available.
- **Standard 4.A.21.** For periods beginning January 1, 2011, firms must disclose and describe any known material differences in the exchange rates or valuation sources used among the portfolios within a composite and between the composite and the benchmark. For periods prior to January 1, 2011, firms must disclose and describe any known inconsistencies in the exchange rates used among the portfolios within a composite and between the composite and the benchmark.

- **Standard 4.A.22.** If the compliant presentation conforms with laws and/or regulations that conflict with the requirement of the GIPS standards, firms must disclose this fact and disclose the manner in which the local laws and regulations conflict with the GIPS standards.
- **Standard 4.A.23.** For periods prior to January 1, 2010, if carve-outs are included in a composite, firms must disclose the policy used to allocate cash to the carve-outs.
- **Standard 4.A.24.** If a composite contains portfolios with bundled fees, firms must disclose the types of fees that are included in the bundled fee.
- **Standard 4.A.25.** Beginning January 1, 2006, firms must disclose the use of a sub-adviser and the periods a sub-adviser was used.
- **Standard 4.A.26.** For periods prior to January 1, 2010, firms must disclose if any portfolios were not valued at calendar month end or on the last business day of the month.
- **Standard 4.A.27.** For periods beginning January 1, 2011, firms must disclose the use of subjective unobservable inputs for valuing portfolio investments if the portfolio investments valued using subjective unobservable inputs are material to the composite.
- **Standard 4.A.28.** For periods beginning January 1, 2011, firms must disclose if the composite's valuation hierarchy materially differs from the recommended hierarchy in the GIPS Valuation Principles.
- **Standard 4.A.29.** If the firm determines no appropriate benchmark for the composite exists, the firm must disclose why no benchmark is presented.
- **Standard 4.A.30.** If the firm changes the benchmark, the firm must disclose the date of, description of, and reason for the change.
- **Standard 4.A.31.** If a custom benchmark or combination of multiple benchmarks is used, the firm must disclose the benchmark components, weights, and rebalancing process.
- **Standard 4.A.32.** If the firm has adopted a significant cash flow policy for a specific composite, the firm must disclose how the firm defines a significant cash flow for that composite and for which periods.
- **Standard 4.A.33.** Firms must disclose if the 3-year annualized ex post standard deviation of the composite and/or benchmark is not presented because 36 monthly returns are not available.
- **Standard 4.A.34.** If the firm determines that the 3-year annualized ex post standard deviation is not relevant or appropriate, the firm must a) describe why ex post standard deviation is not relevant or appropriate and b) describe the additional risk measure presented and why it was selected.
- **Standard 4.A.35.** Firms must disclose if the performance from a past firm or affiliation is linked to the performance of the firm.

GIPS RECOMMENDED DISCLOSURES

- **Standard 4.B.1.** Firms should disclose material changes to valuation policies and/or methodologies.
- **Standard 4.B.2.** Firms should disclose material changes to calculation policies and/or methodologies.

- **Standard 4.B.3.** Firms should disclose material differences between the benchmark and the composite's investment mandate, objective, or strategy.
- **Standard 4.B.4.** Firms should disclose the key assumptions used to value portfolio investments.
- **Standard 4.B.5.** If a parent company contains multiple defined firms, each firm within the parent company should disclose a list of the other firms contained within the parent company.
- **Standard 4.B.6.** For periods prior to January 1, 2011, firms should disclose the use of subjective unobservable inputs for valuing portfolio investments if the portfolio investments valued using subjective unobservable inputs are material to the composite.
- **Standard 4.B.7.** For periods prior to January 1, 2006, firms should disclose the use of a sub-adviser and the periods a sub-adviser was used.
- **Standard 4.B.8.** Firms should disclose if a composite contains proprietary assets.

MODULE 6.6: PRESENTATION AND REPORTING



LOS 6.k: Explain the requirements and recommendations of the GIPS standards with respect to presentation and reporting, including the required timeframe of compliant performance periods, annual returns, composite assets, and benchmarks.

Video covering this content is available online.

CFA® Program Curriculum, Volume 1, page 334

LOS 6.l: Explain the conditions under which the performance of a past firm or affiliation must be linked to or used to represent the historical performance of a new or acquiring firm.

CFA® Program Curriculum, Volume 1, page 346

LOS 6.m: Evaluate the relative merits of high/low, range, interquartile range, and equal-weighted or asset-weighted standard deviation as measures of the internal dispersion of portfolio returns within a composite for annual periods.

CFA® Program Curriculum, Volume 1, page 341

After constructing composites, gathering input data, calculating returns, and determining the necessary disclosures, firms must integrate this information in presentations based on the guidelines set out in GIPS for presenting the investment performance results. No finite set of guidelines can cover all potential situations or anticipate future developments in investment industry structure, technology, products, or practices. When appropriate, firms have the responsibility to include information not covered by the Standards.

- **Standard 5.A.1.** The following items must be reported for each composite presented:
 - a. At least five years of annual performance (or a record for the period since firm or composite inception if the firm or composite has been in existence less than five years) that meets the requirements of the GIPS standards; after presenting five years of performance, the firm must present additional annual performance up to a minimum of ten years.
 - b. Annual returns for all years clearly identified as gross- or net-of-fees.

- c. For composites with a composite inception date beginning on or after January 1, 2011, when the initial period is less than a full year, firms must present returns from the composite inception through the initial year-end.
- d. For composites with a termination date of January 1, 2011, or later, returns from the last annual period through the termination date.
- e. Annual returns for a benchmark, which reflects the mandate, objective, or strategy of the portfolio.
- f. The number of portfolios in the composite at each year-end. If the composite contains *five portfolios or less*, the number of portfolios is not required.
- g. The amount of assets in the composite at the end of each annual period.
- h. Either total firm assets or composite assets as a percentage of firm assets at each annual period end.
- i. A measure of dispersion of individual portfolio returns for each annual period. If the composite contains *five portfolios or less* for the full year, a measure of dispersion is not required.

Internal dispersion is a measure of the range of returns for only those portfolios that are included in the composite over the entire period. Portfolios added to or removed from a composite during the period are not included in that period's calculation of internal dispersion.

EXAMPLE: Internal dispersion

The following figure illustrates the structure of a composite during 2014. An *X* indicates that the portfolio was included in the composite for the quarter. If a cell is blank, the portfolio was not included in the composite for the entire quarter. **Determine** which portfolios should be contained in the internal dispersion measure for 2014.

Figure 6.3: Composite Structure, 2014

Portfolio	Quarter 1	Quarter 2	Quarter 3	Quarter 4
A	X	X	X	X
B	X	X	X	
C	X	X	X	X
D		X	X	X
E	X	X	X	X
F			X	X

Answer:

Based on the information contained in the previous figure, Portfolios A, C, and E would be included in the internal dispersion measure for 2014. Portfolios B, D, and F should be excluded from the calculation of the composite's 2014 internal dispersion because they do not have an entire year of performance results. Note that this is only three portfolios to include in the dispersion calculation. Unless there are other portfolios with a full year of data to include in the calculation, no dispersion will be reported. Six or more are required to report dispersion.

The GIPS Handbook identifies the following acceptable methods for calculating internal dispersion:

- The range of annual returns.
- The high and low annual returns.
- Interquartile range.

- The standard deviation of equal-weighted annual return.
- The asset-weighted standard deviation of annual returns.

The **range** of annual returns and the **high and low** annual returns are the simplest and most easily understood measures of dispersion. The advantages of these measures include simplicity, ease of calculation, and ease of interpretation. Disadvantages include the fact that an extreme value can skew the data, and they do not stand alone as adequate risk measures.

The **interquartile range** is the middle 50% of a population, excluding the top 25% and bottom 25%. Hence, it measures the part of the population between the bottom of the first quartile and the bottom of the third quartile.

The **standard deviation** across equally weighted portfolios is the most widely accepted measure of dispersion within a composite. It is calculated as:

$$\sigma_C = \sqrt{\frac{\sum_{i=1}^n [R_i - \text{MEAN}(R)]^2}{n-1}}$$

where:

R_i = return on portfolio i

$\text{MEAN}(R)$ = equal-weighted mean (composite) return

n = number of portfolios



PROFESSOR'S NOTE

The use of either n or $n - 1$ in the denominator can be supported, and firms are encouraged to disclose how they calculate standard deviation.

The *standard deviation with asset-weighted composite* returns is calculated in the following manner:

$$\text{dispersion} = \sqrt{\sum_{i=1}^n w_i (R_i - C_{\text{ASSET}})^2}$$

where:

R_i = unweighted return on portfolio i

w_i = market weight of portfolio i relative to the market value of the composite.

C_{ASSET} = composite's asset-weighted return, or $C_{\text{ASSET}} = \sum w_i R_i$

- **Standard 5.A.2.** For periods beginning on or after January 1, 2011, firms must present for each annual period:
 - a. Three-year annualized ex post standard deviation using monthly returns for the composite and benchmark.
 - b. An additional 3-year ex post risk measure if management feels standard deviation is inappropriate. The firm must match the periodicity of calculated returns used for the composite and benchmark.
- **Standard 5.A.3.** Firms may link non-GIPS-compliant returns to their compliant history so long as the firms meet the disclosure requirements for noncompliant performance and only compliant returns are presented for periods after January 1, 2000.
- **Standard 5.A.4.** Returns of portfolios and composites for periods of less than one year must not be annualized.

Discussion: The annualizing of partial-year returns is essentially the simulation of returns over a period, which is not allowed.

- **Standard 5.A.5.** For periods beginning on or after January 1, 2006, and ending prior to January 1, 2011, if a composite includes carve-outs, the presentation must include the percentage of the composite that is composed of carve-outs for each annual period.

- **Standard 5.A.6.** If a composite contains any non-fee-paying portfolios, the firm must present, as of the end of each annual period, the percentage of the composite assets represented by the non-fee-paying portfolios.

Discussion: An example of a non-fee-paying portfolio is one that is managed on a *pro bono* basis. Portfolios that are non-fee-paying do not have to be included in any composite, and the firm need not make any disclosures regarding such portfolios.

- **Standard 5.A.7.** If a composite includes bundled-fee portfolios, the firm must present, as of the end of each annual period, the percentage of the composite assets represented by bundled-fee portfolios.

- **Standard 5.A.8.**

- a. Generally a performance track record of a composite *must* stay with the firm where it was generated. The record is not “portable,” but if a past firm or affiliation is acquired and if three other conditions are met, the past record must be linked to and used by the new or acquiring firm. The three conditions are:

- i. Substantially all the investment decision makers are employed by the new firm (e.g., research department, portfolio managers, and other relevant staff);

- ii. The decision-making process remains substantially intact and independent within the new firm; and

- iii. The new firm has records that document and support the reported performance.

- b. If a firm acquires another firm or affiliation, the firm has one year to bring any noncompliant assets into compliance.

Discussion: If ownership of the firm changes, through acquisition by a larger firm or other means, and the assets, managers, and management process remain substantially the same, the firm’s composites are considered to have continued as if nothing happened.

For most *new affiliations* or *newly formed entities*, however, performance results of a prior firm cannot be used to represent a historical record. For example, when a manager leaves a firm to start or join another firm, the manager cannot present the old firm’s past performance in the new firm’s composite. The composite record is assumed to remain with the old firm because that firm *owns* the strategy and process.

GIPS PRESENTATION AND REPORTING RECOMMENDATIONS

- **Standard 5.B.1.** Firms should present gross of fees returns.
- **Standard 5.B.2.** Firms should present:
 - a. Cumulative returns for composite and benchmarks for all periods.
 - b. Equal-weighted mean and median returns for each composite.

- c. Quarterly and/or monthly returns.
- d. Annualized composite and benchmark returns for periods greater than 12 months.
- **Standard 5.B.3.** For periods prior to January 1, 2011, the 3-year annualized ex post standard deviation of monthly returns for each year for the composite and its benchmark.
- **Standard 5.B.4.** For each year in which an annualized ex post standard deviation is present for the composite and the benchmark, corresponding annualized return should be presented.
- **Standard 5.B.5.** For each year that annualized composite and benchmark returns are reported, the corresponding annualized standard deviation of monthly returns for the composite and benchmark.
- **Standard 5.B.6.** Additional ex post composite risk measures.
- **Standard 5.B.7.** Firms should present more than ten years of annual performance in the compliant presentation.
- **Standard 5.B.8.** Firms should comply with GIPS for all historical periods.
- **Standard 5.B.9.** Firms should update compliant presentations quarterly.

MODULE 6.7: REAL ESTATE AND PRIVATE EQUITY



Video covering this content is available online.

LOS 6.n: Identify the types of investments that are subject to the GIPS standards for real estate and private equity.

CFA® Program Curriculum, Volume 1, page 349

Most of the GIPS provisions we have discussed thus far apply to real estate and private equity, and there are some exceptions as well as additional standards for the two asset classes.

The GIPS standards relating to real estate and private equity are fairly complex due to the nature of the investments. Before describing the Standards, let us first consider exactly which investments are covered by the provisions. (The GIPS, in fact, describe investments that should *not* be included in the asset classes.)

For **real estate**, the following investment types would fall under the *general provisions* of the GIPS standards (as opposed to the provisions dealing directly with real estate and private equity):

- Publicly traded real estate securities, including any listed securities issued by public companies.
- Mortgage-backed securities (MBS).
- Private debt investments, including commercial and residential loans where the expected return is solely related to contractual interest rates without any participation in the economic performance of the underlying real estate.

Note that publicly traded securities include Real Estate Investment Trusts (REITs) and mortgage-backed securities (MBS). If a portfolio consists of real estate plus other investments, the carve-out provisions of GIPS (Standard 3.A.8) would apply.

The exclusions to the definitions of **private equity** are *open-end* and *evergreen* funds, both of which are covered by the general provisions of the GIPS. Because redemptions and subscriptions may be made after the funds' inception, open-end and evergreen funds do not have fixed levels of capital with a set number of investors.

LOS 6.o: Explain the provisions of the GIPS standards for real estate and private equity.

CFA® Program Curriculum, Volume 1, page 349

GIPS REAL ESTATE REQUIREMENTS

For assets meeting the GIPS definition of real estate, the following additional provisions apply.

- **Standard 6.A.1.** Beginning January 1, 2011, real estate investments must be valued in accordance with the definition of fair value and the GIPS valuation principles.
- **Standards 6.A.2 and A.3.** For periods prior to January 1, 2008, real estate investments must be valued at market value at least once every 12 months. For periods beginning January 1, 2008, real estate investments must be valued at least quarterly. For periods on or after January 1, 2010, firms must value portfolios as of the end of each quarter or the last business day of each quarter using fair value principles.
- **Standards 6.A.4 and A.5.** For periods prior to January 1, 2012, real estate investments must have an external valuation done at least once every three years. External valuation means an outside, independent party certified to perform such valuations. "Certified" would mean licensed or otherwise recognized as qualified to perform such work. For periods beginning January 1, 2012, real estate investments must have an external valuation done at least once every 12 months or if a client agreement states otherwise, at least once every three years.
- **Standards 6.A.6 and A.7.** Beginning January 1, 2006, real estate portfolio returns must be calculated at least quarterly after the deduction of transaction costs during the period. Transaction costs include actual financial, investment banking, legal, and advisory fees incurred for recapitalization, restructuring, buying, and selling properties.
- **Standard 6.A.8.** Beginning January 1, 2011, income and capital component returns must be calculated separately using geometrically linked time-weighted rates of return.
- **Standard 6.A.9.** Composite returns, including component returns, must be calculated at least quarterly by asset-weighting the individual portfolio returns using time-weighted rates of return.
- **Standard 6.A.10.a.** The firm must provide a description of discretion. Discretion in real estate exists if the firm has sole or sufficient discretion to make major decisions regarding the investments.
- **Standards 6.A.10.b–e.** In regard to valuation methods used, the firm must disclose the internal valuation methods used and the frequency of external valuation. Beginning January 1, 2011, disclose material changes in valuation approach and differences in internal and external valuation and the reason for the difference.
- **Standards 6.A.11 and 6.A.15.** On or after January 1, 2006, GIPS compliant and non-compliant performance may not be linked. Prior to this date, any such linking must be

disclosed.



PROFESSOR'S NOTE

Standards 6.A.12 and 6.A.13 are not discussed in the CFA reading.

- **Standard 6.A.14.** In addition to the total return, the capital return and income return components must be disclosed, must sum to the total return, and must be clearly identified as gross or net of fees.

Core real estate may earn most of its return from income while opportunistic real estate may earn more return from capital return. In either case, disclosing the components of return provides clients with information about the nature of the investment. The firm:

- May present total return and component returns gross-of-fees (management), net-of-fees, or both ways. If only gross total return is presented, gross component returns must be presented. If only net total return is presented, net component returns must be presented. If both gross and net total returns are presented, then at least gross component returns must be presented.
- For any quarterly return, the income and capital return components must sum to the total return (allowing for rounding differences). If the firm calculates monthly returns, the monthly component returns will sum to the monthly total return. However, the geometrically linked monthly component returns will not sum to the geometrically linked monthly total returns.

Figure 6.4: Hypothetical Real Estate Return Presentation

	Income Return	Capital Return	Total Return
January	1.00%	1.00%	2.00%
February	1.00%	1.00%	2.00%
March	1.00%	1.00%	2.00%
1st Quarter	3.03%	3.03%	6.12%

- The quarterly return is found by *geometrically linking* the monthly returns:

$$R_{\text{quarterly component returns}} = 1.01^3 - 1 = 0.0303 = 3.03\%$$

$$R_{\text{quarterly total return}} = (1.02)^3 - 1 = 0.0612 = 6.12\%$$

- **Standard 6.A.16.a.** Composites with more than five portfolios must disclose the high and low of the portfolio time-weighted rates of return as the internal dispersion number.
- **Standard 6.A.16.b.** The percentage of composite assets valued using an external valuator as of the end of each annual period.

Recommended Items

Firms should disclose the accounting methods used for the portfolios (e.g., GAAP or IFRS) and at the end of each year any material differences in valuations for performance reporting versus financial reporting.

Both gross- and net-of-fee reporting is recommended along with the component returns for the benchmark and the percentage of value of the composite that is not real estate (if any).

Closed-End Fund Reporting

- **Standards 6.A.17 and 6.A.18.** Since inception rates of return (SI-IRR) must be reported using at least quarterly rates of return. This is the IRR of the cash flows since the start of the portfolio. Time periods less than a year are not annualized and periods longer than a year are annualized.

	Quarter	Value
Invested December 31, 2015	0	\$100,000*
Invested March 31, 2016	1	\$200,000
Distributed June 30, 2016	2	\$10,000
Value as of September 30, 2016	3	\$295,000

*It is recommended the cash flows be done on a daily basis and at least quarterly must be used. GIPS allow flexibility in the exact calculation method used as long as the method is used consistently and fairly represents results.

Using the cash flow functions of the calculator or by trial and error, the quarterly periodic IRR is 0.7209%. This is less than one year of data; therefore, the three-quarter geometrically linked return must be reported as 2.18%
($= 1.007209^3 - 1$).

- **Standards 6.A.19 and 6.A.22.** Composites must be defined by grouping accounts with similar objective, strategy, et cetera, and **vintage year**. Vintage year can be determined by either (1) year of first drawdown or capital call (i.e., when investors first contribute funds) or (2) when investor-contributed capital is closed and legally enforceable (i.e., when all investors to the fund have legally committed to the amount they must contribute).

Disclosures

- **Standard 6.A.20.** The final liquidation date for liquidated composites.
- **Standard 6.A.21.** The frequency of cash flows used in the SI-IRR calculation.
- **Standard 6.A.23.** On or after January 1, 2011, periods less than a year must present net-of-fees SI-IRR and reporting must continue until liquidation of the composite.

Presentation and reporting

- **Standard 6.A.24.** Firms must report the benchmark SI-IRR results and, for comparison, may wish to report composite gross-of-fees SI-IRR. If this is done, then gross- and net-of-fees composite results must be shown for all reporting periods.
- **Standard 6.A.25.** At the end of each reporting period, the firm must disclose the following (these provisions also apply to private equity):
 - **Committed capital and since-inception paid-in-capital.** These are respectively the amount of capital the investor must contribute and how much of that has been contributed to date.
 - **Distributions.** What has been paid back to investors.
 - **TVPI (the investment multiple).** The ratio of total value to since-inception paid-in-capital; total value is the residual value (value of the portfolio at the end of the period) plus since-inception distributions.

- **DPI (the realization multiple).** The ratio of since-inception distributions to paid-in-capital.
- **PIC multiple.** The ratio of paid-in-capital to committed capital.
- **RVPI (the unrealized multiple).** The ratio of residual value to paid-in-capital.
- **Standard 6.A.26.** The SI-IRR of the benchmark through each annual period end. The benchmark must:
 - a. Reflect the investment mandate, objective, or strategy of the composite.
 - b. Be presented for the same time period as presented for the composite.
 - c. Be the same vintage year as the composite.

PRIVATE EQUITY REQUIREMENTS

Input data:

- **Standards 7.A.1 and 7.A.2.** Private equity assets must be valued at least annually, at fair value, and according to GIPS Valuation Principles.

Calculation methodology:

- **Standards 7.A.3 and 7.A.4.** Annualized since-inception internal rate of return (SI-IRR).
SI-IRR must be calculated using daily or monthly cash flows prior to January 1, 2011. Beginning January 1, 2011, the SI-IRR must be calculated using daily cash flows. Stock distributions must be valued at the time of the distribution and included as cash flows.
- **Standards 7.A.5 and 7.A.6.** Net-of-fees returns must be calculated with consideration given to management fees and carried interest.
All returns must be calculated after deducting transaction expenses for the period.
- **Standard 7.A.7.** For fund of funds, all returns must be net of all partnership fees, fund fees, expenses, and carried interest.

Composite construction:

- **Standard 7.A.8.** Throughout the life of the composite, composite definitions must remain consistent.
- **Standard 7.A.9.** Primary funds must be included in at least one composite defined by vintage year and investment strategy, mandate, or objective.
- **Standard 7.A.10.** Fund of funds must be included in at least one composite defined by vintage year and/or investment strategy, mandate, or objective.



PROFESSOR'S NOTE

Carried interest is an incentive fee earned by the manager. Generally, these are not paid until the investors have received back an amount equal to their contributed capital. They are essentially a deduction for an accrued fee to be paid.

Required disclosures:

- **Standards 7.A.11 and 7.A.12.** Vintage year and definition of the vintage year for the composite.

The liquidation date for liquidated composites.

- **Standards 7.A.13 and 7.A.14.** Valuation methodology used for the most recent period, and starting January 1, 2011, any material changes in methodology or policies.
- **Standard 7.A.15.** Industry guidelines that have been followed in addition to the GIPS guidelines.
- **Standard 7.A.16.** The benchmark used and the return calculation methodology applied to the benchmark.
- **Standard 7.A.17.** The frequency of cash flows if daily cash flows are not used in calculating the SI-IRR prior to January 1, 2011.
- **Standards 7.A.18 and 7.A.19.** If any other fees are deducted in addition to transaction expenses when presenting gross-of-fees returns.

If any other fees are deducted in addition to investment management fees and transaction expenses when presenting net-of-fees returns.

- **Standard 7.A.20.** Any periods of non-compliance prior to January 1, 2006.

Presentation and reporting:

- **Standard 7.A.21.** Beginning January 1, 2011, firms must present both the net-of-fees and gross-of-fees annualized SI-IRR of the composite for each year since inception and through the final liquidation date.

Discussion: SI-IRR is the *since inception internal rate of return*. Remember that the IRR is the interest rate that makes the net present value (NPV) of the investment equal to zero. It is the IRR calculation example we did under closed-end fund reporting for Standards 6.A.17 and 18. The calculations must be performed and reported starting with the first period after initial client contributions and continue until the private equity investment is liquidated.

- **Standard 7.A.22.** Beginning January 1, 2011, for fund of funds composites, firms must present the SI-IRR of the underlying investments grouped by vintage year as well as the other measures required by Standard 7.A.23. All measures must be presented gross of the fund of funds investment management fees and for the most recent annual accounting period.
- **Standard 7.A.23.** For each period presented, firms must report:
 - a. Since-inception paid-in capital.
 - b. Cumulative committed capital.
 - c. Since-inception distributions.
 - d. Total value to paid-in capital (investment multiple or TVPI).
 - e. Cumulative distributions to paid-in capital (realization multiple or DPI).
 - f. Paid-in capital to committed capital (PIC multiple).
 - g. Residual value to paid-in capital (unrealized multiple or RVPI).

Discussion: These were discussed in the real estate requirements.

- **Standard 7.A.24.** If a benchmark is shown, the cumulative annualized SI-IRR for the benchmark that reflects the same strategy and vintage year of the composite must be presented for the same periods for which the composite is presented. If no benchmark is shown, the presentation must explain why no benchmark is disclosed.

Discussion: The **vintage year** is the year in which the private equity fund first draws down (calls for) capital. The economic conditions the year a fund starts significantly affects future performance, making vintage year an important disclosure item.

- **Standard 7.A.25.** For fund of funds composites, if a benchmark is presented, it must be of the same vintage year and investment objective, strategy, or mandate as the underlying investments.
- **Standard 7.A.26.** Beginning January 1, 2011, fund of funds composites must present the percentage of composite assets invested in direct investments.
- **Standard 7.A.27.** Beginning January 1, 2011, primary fund composites must present the percentage of composite assets invested in fund investment vehicles (instead of direct investments) as of the end of each annual period-end.
- **Standard 7.A.28.** Prior to January 1, 2006, firms may present non-GIPS-compliant performance.

GIPS PRIVATE EQUITY RECOMMENDATIONS

- **Standards 7.B.1–B.3.** Valuation should be done at least quarterly for private equity investments. For periods before January 1, 2011, the SI-IRR should be calculated using daily cash flows. Firms should disclose and explain any material differences between valuations used in performance reporting and those used in financial reporting as of the end of each annual reporting period.



MODULE QUIZ 6.5, 6.6, 6.7

To best evaluate your performance, enter your quiz answers online.

1. Johnson Investment Management (JIM) uses monthly valuation. Assuming the general provisions of GIPS apply, **discuss** when it would be appropriate to remove a portfolio from JIM's composite if the portfolio is terminated on July 15, 2015.
2. Jeff Gunthorpe, CFA, is presenting recommendations to the team responsible for constructing and presenting composite performance. In his discussion, he mentions that, according to the GIPS, open-ended and evergreen funds must be presented as part of the company's managed private equity holdings. In the following template, **indicate** whether you agree or disagree with Gunthorpe and, if you disagree, **explain** your decision.

Template for Question 2

Statement	Agree or Disagree	Explanation
"Open-ended and evergreen funds must be presented as part of the company's managed private equity holdings."	Agree Disagree	

3. For a firm currently reporting to be compliant with GIPS real estate reporting requirements, it is *most correct* to say, "Valuation must be done:
- A. annually, and only the presentation of total returns are required."
 - B. quarterly, and only the presentation of total returns are required."
 - C. quarterly, and income and capital appreciation component returns must be presented in addition to total return."

MODULE 6.8: WRAP FEE/SEPARATELY MANAGED ACCOUNTS AND ADVERTISING

LOS 6.p: Explain the provisions of the GIPS standards for Wrap fee/Separately Managed Accounts.



Video covering this content is available online.

CFA® Program Curriculum, Volume 1, page 358

These GIPS provisions were adopted January 1, 2006, and apply to **wrap fee/separately managed accounts** (WFSMAs) where a GIPS-compliant investment manager serves as the subadviser to a sponsor. For example:

Sponsor B is the client's (end user's) investment adviser and typically provides investment services such as overall portfolio advice, recordkeeping, and reporting; everything except the individual security management. Sponsor B is the client's manager but uses subadviser K who has discretion and authority to manage the underlying assets. The client's investment adviser (sponsor B) charges the client a single bundled fee that covers all expenses including subadviser K's fee as well as custody, trading, and administrative fees. There can be other types of bundled fees or subadviser relationships but the following WFSMA provisions only apply when an intermediary (sponsor) exists between the investment management firm and the sponsor's client.



PROFESSOR'S NOTE

The CFA text does not illustrate these other types of relationships and there is no reason to expect a "trick" question where you must identify such situations. But suppose manager G hires adviser M as a subadviser to G and pays M for this advice. G can follow or not follow the advice of M and G has full responsibility and discretion for how the advice is used in any of G's client portfolios. The

normal provisions of GIPS apply but not the special WFSMA provisions. M, the subadviser, does not have discretion to manage underlying client assets.

These specific WFSMA provisions apply where the underlying investment management firm has discretion to manage the client portfolio and a bundled fee is charged by the sponsor. All of the normal provisions of GIPS still apply with the following being particularly important: (1) the performance results of the end user client must be computed, documented, and verified. The underlying investment manager may choose to rely on the sponsor to do so (with due diligence to verify the sponsor's ability) or maintain her own tracking and shadow accounting of the account's performance. (2) Returns must be calculated after actual trading expenses. If the trading expenses cannot be identified and separated from the bundled wrap fee, the entire bundled fee including the trading expenses must be deducted from the return. (3) All of the fees that are included in the bundled fee must be disclosed. (4) Composite results must disclose the percentage of composite assets made up of portfolios with bundled fees.

This treatment of WFSMA portfolios can cause concern for management firms. The GIPS require investment management firms to include WFSMA portfolios in an appropriate composite according to their written policies for inclusion. Thus, they must decide whether to create composites containing only WFSMAs or include WFSMAs in other composites containing non-wrap fee accounts. If firms include WFSMAs in composites containing non-WFSMA accounts and are unable to isolate the direct trading expenses from the sponsor's bundled fees, the resulting WFSMA returns could bring down the reported performance of the composites. Remember that in GIPS, gross of fees means before management fees but after direct trading expenses. This could put the firm at a competitive disadvantage when presenting the performance of a composite to current and potential non-wrap fee clients because the large bundled fee would cause reported results to appear low in relation to accounts that do not have the bundled fee. Offsetting this concern is the ability to show more assets under management in the composite than if the WFSMA was in a totally separate composite.

The additional provisions of this section are the following:

- Include the performance of actual WFSMAs in appropriate composites and then use the composite results for presentations to prospective new WFSMA prospects.
- If the composite presentation includes time periods when WFSMA accounts were not included, the details of when this occurred must be disclosed.
- If any non-GIPS-compliant results prior to January 1, 2006, are included, this must be disclosed. After January 1, 2006, (the adoption date of these provisions) non-compliant results cannot be included.
- If an investment management firm manages assets for more than one sponsor using the same investment style, the composite presentation to prospective clients must include the results of all WFSMAs that follow that style (regardless of sponsor). The composite is style specific, not sponsor specific, and results must be after the entire wrap fee.
- In addition, a sponsor-specific composite may also be produced if desired. In this case, the sponsor's name must be disclosed. For this sponsor-specific composite, the entire wrap fee does not have to be deducted; but, if it is not deducted, this must be disclosed and the presentation must be labeled as only for the use of that sponsor (to discourage the sponsor from using it for prospective WFSMA client presentations). The intent is

that the sponsor is not to use the report for marketing to clients but only as part of any internal review of the manager's performance.

GIPS VALUATION PRINCIPLES

LOS 6.q: Explain the requirements and recommended valuation hierarchy of the GIPS Valuation Principles.

CFA® Program Curriculum, Volume 1, page 360

For periods beginning on or after January 1, 2011, the GIPS require firms to use *fair values*.

In simple terms, this means that if the investment is a regularly traded security, the recent reported trading price is used as fair value (i.e., what is more generally referred to as market value). If that is not available (due perhaps to the asset being infrequently traded, transaction prices not being reported, or a private investment with no transactions occurring), then fair value establishes a hierarchy for what to use instead. The hierarchy is in descending order of usage. A method lower in the hierarchy is used only when all methods higher in the hierarchy are unavailable. The fair value hierarchy is:

1. "Market value" (e.g., for an actively traded stock or bond use the last trade price.)
2. Quoted prices for less actively traded identical or very similar investments (e.g., a stock trades infrequently, the last available price is a week old, and there is no material evidence indicating the price would have changed; another example is a dealer quote for a stock that has not recently traded).
3. Using market-based inputs to estimate price (e.g., using P/E or dividend yield for comparable and actively traded securities to infer a price estimate or using a YTM for similar actively traded bonds to price a bond that has not traded).
4. Price estimates based on inputs that are not directly observable (e.g., a discounted free cash flow price estimate based on projected cash flows and assumed discount rate).

Real estate and private equity (as defined for GIPS reporting) will generally fall well down the valuation hierarchy. GIPS provides additional guidance for these assets.

Real estate valuation principles

- The GIPS require that real estate investments be valued externally by outside sources following accepted industry and governmental valuation standards.
- The amount of the external valuator's fee must not be based on the resulting value.
- Although appraisal standards allow reporting values in ranges, the GIPS recommend a single value be reported for returns purposes.
- The firm should rotate external valuers every three to five years.

Private equity valuation principles:

- The valuation methodology utilized must be "the most appropriate for a particular investment based on the nature, facts, and circumstances of the investment."
- When valuing private enterprises, the process should consider:
 - Reliable appraisal data.
 - Comparable enterprise or transaction data.

- The enterprise's stage of development.
- Additional characteristics unique to the enterprise.

Other miscellaneous GIPS valuation requirements are:

- If local laws or regulations related to valuation conflict with the GIPS, firms are required to follow the local laws or regulations and disclose the conflict.
- Firms must disclose their portfolio valuation policies and hierarchy.
- For periods beginning on or after January 1, 2011, firms must disclose any subjective valuation if the portfolio is a significant portion of the composite.
- Firms must disclose if the valuation hierarchy used to value composites differs from the GIPS recommended hierarchy.

Firms must always follow the intent of GIPS and not mechanical rules. The intent is to indicate what the investment is “worth.” If the mechanical following of the valuation hierarchy somehow created a misrepresentation of true value, the firm should follow the intent and disclose the issue. Generally, firms should follow standard industry and governmental valuation guidelines as closely and consistently as possible in an effort to obtain the best possible value estimates. Firms must also document valuation policies followed and disclose those policies to prospective clients. Firms are recommended to provide the input data to prospective clients as well, so they can feel comfortable relying on the presented values and returns.

GIPS ADVERTISING GUIDELINES

LOS 6.r: Determine whether advertisements comply with the GIPS Advertising Guidelines.

CFA® Program Curriculum, Volume 1, page 363

In addition to the GIPS report, firms may also present a more abbreviated report following the GIPS Advertising Guidelines if they wish. This provision is intended to assist firms in their marketing efforts by allowing limited GIPS information to be presented without the rather cumbersome full GIPS report being presented. The most significant caveat of this provision is that it must be clear the full GIPS report is available as well.

All advertisements that include a claim of compliance with the GIPS Advertising Guidelines must include the following:

1. A description of the firm.
2. How an interested party can obtain a presentation that complies with the requirements of GIPS standards and/or a list and description of all firm composites.
3. The GIPS Advertising Guidelines compliance statement:

[Insert name of firm] claims compliance with the Global Investment Performance Standards (GIPS®).

The briefest of the three full compliance statements is shown in the following for comparison. A full statement must still be used in the GIPS report.

[Insert name of firm] claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards.

[Insert name of firm] has not been independently verified.

All advertisements that include a claim of compliance with the GIPS Advertising Guidelines and that present performance results must also include the following information (the relevant information must be taken/derived from a presentation that adheres to the requirements of the GIPS standards):

4. A description of the composite being advertised.
5. One of the following sets of total returns:
 - a. 1-, 3-, and 5-year annualized composite returns through the most recent period.
 - b. Period-to-date composite performance results in addition to 1-, 3-, and 5-year cumulative annualized composite returns with the end-of-period date clearly identified (or annualized period since composite inception if inception is greater than one and less than five years). Periods of less than one year are not permitted to be annualized. The annualized returns must be calculated through the same period of time as presented in the corresponding compliant presentation.
 - c. Period-to-date composite returns in addition to five years of annual composite returns calculated through the same period of time as presented in the corresponding compliant presentation.
6. Whether performance is shown gross and/or net of investment management fees.
7. The benchmark total return for the same periods for which the composite return is presented and a description of that benchmark. (The appropriate composite benchmark return is the same benchmark total return as presented in the corresponding GIPS-compliant presentation.) If no benchmark is presented, the advertisement must disclose why no benchmark is presented.
8. The currency used to express returns.
9. Describe the extent and use of leverage, derivatives, and short selling in sufficient detail to identify the risks involved.
10. When presenting noncompliant performance information for periods prior to January 1, 2000, in an advertisement, firms must disclose the period(s) and which specific information is not in compliance with the GIPS standards.

The Advertising Guidelines also suggest that firms may present other information, though this supplemental information should be of equal or lesser prominence than the required information described previously.



MODULE QUIZ 6.8

To best evaluate your performance, enter your quiz answers online.

1. Lambert Capital Management (LCM) manages portfolios for wealthy individuals and serves as a sub-advisor to several pension funds and endowments through wrap fee/separately managed accounts. LCM manages money for several sponsors and reports style-specific composite results. One of those sponsors, Quick and Ready Advisers (Quick), has requested LCM prepare a GIPS-compliant composite for only the LCM accounts managed for Quick with results gross of the bundled fee. According to GIPS standards, which of the following is acceptable? LCM could use the composite results in presentations:
 - A. to prospective accounts where Quick will be the sponsor.
 - B. only to Quick.
 - C. this is not allowed under GIPS.
2. If a security does not have an observable, quoted market price available from an active market, the next *best* valuation basis, according to the GIPS valuation hierarchy, is:
 - A. subjective, unobservable inputs.

- B. observable market-based inputs other than quoted prices.
- C. quoted prices from an inactive market for the same or a similar security.

MODULE 6.9: VERIFICATION AND AFTER-TAX REPORTING



Video covering
this content is
available online.

LOS 6.s: Discuss the purpose, scope, and process of verification.

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Once a firm claims compliance with the GIPS, it is responsible for its claim of compliance and for maintaining its compliance. In doing so, the firm may *voluntarily* hire an independent third party to verify its claim of compliance, which adds credibility to the firm's claim of compliance.

The *primary purpose of verification* is to increase the level of confidence that a firm claiming GIPS compliance did, indeed, adhere to the Standards on a firm-wide basis.

Verification involves the review of an investment management firm's performance-measurement processes and procedures by an *independent third-party verifier*. Upon completion of verification, a verification report is issued that must confirm the following:

- The investment firm has complied with all the composite construction requirements of GIPS on a firm-wide basis.
- The firm's processes and procedures are designed to calculate and present performance results in compliance with the GIPS.

Without such a report from the verifier, the firm cannot assert that its claim of compliance with GIPS has been verified.

Other noteworthy aspects of GIPS verification include the following:

- A single verification report is issued to the entire firm; *GIPS verification cannot be carried out for a single composite*.
- Verification cannot be partial: it is all or nothing. In other words, verification cannot enable a firm to claim that its performance presentation is in compliance with GIPS "except for ..."
- Verification is not a requirement for GIPS compliance, but it is *strongly encouraged*.
- The initial minimum period for which verification can be performed is one year of a firm's presented performance. The recommended period over which verification is performed will be that part of the firm's track record for which GIPS compliance is claimed.
- After performing the verification, the verifier may conclude that the firm is not in compliance with GIPS or that the records of the firm cannot support a complete verification. In such situations, the verifier must issue a statement to the firm clarifying why a verification report was not possible.

AFTER-TAX RETURNS

LOS 6.t: Discuss challenges related to the calculation of after-tax returns.

Reporting after-tax return data is extremely complex and, if reported, is part of supplemental information. As of January 1, 2011, responsibility for advising firms on after-tax reporting was shifted to the GIPS country sponsors who assist firms in adapting GIPS to a specific country. Firms that claim particular ability to manage portfolios in a tax-sensitive manner and maximize after-tax returns may want to present after-tax composite results to support this claim and gain a competitive advantage.



PROFESSOR'S NOTE

It might seem surprising that you cannot just report the average after-tax return of the clients, but consider three issues: (1) clients have no reason to share their personal tax return with the manager; (2) if they do, it is highly confidential information; and (3) if after-tax client returns were averaged, there is no way to explain the tax rules applied and therefore no way for prospective clients to relate the reported returns to their specific tax situations.

Two methods for incorporating the effects on returns are the pre-liquidation method and the mark-to-liquidation method:

- The *pre-liquidation* method calculates after-tax returns based on income earned and gains and losses actually recognized over the period through asset sales. This method ignores unrealized gains and losses, generally understating tax liability (gains are more likely in the long run) and overstating after-tax return.
- The *mark-to-liquidation* method assumes all gains, whether recognized or not, are taxed each period. This method ignores the value of tax deferral, overstating tax liability and understating after-tax return.

Neither method measures the portfolio's true economic value. To measure a portfolio's true economic value would require numerous assumptions about the size, timing, and recognition of future investment results as well as tax laws and the client's tax status. Of course, future tax liabilities will depend on the initial cost of securities that are sold as well as the length of the investment period, as most tax regimes make a distinction between long- and short-term capital gains. Under GIPS, the responsibility falls on the firm to make and disclose reasonable assumptions to use if the firm wishes to report supplemental after-tax composite returns.

After-Tax Benchmark Returns

If the firm presents after-tax portfolio returns, they must also present appropriate after-tax benchmark returns. The appropriate after-tax benchmark should exhibit all the characteristics of a valid benchmark plus be reflective of the client's tax status. Generally, index providers do not present after-tax returns. The portfolio manager is left with this complicated task.⁴ To estimate the after-tax returns on an index, the manager must consider:

- The way the provider constructed the index, such as price, equal, or market value weighting.
- The rebalancing policy followed by the index provider.
- The effects of taxable events such as price changes, dividends, splits, et cetera, associated with each of the component firms.

As an alternative to using an index as a benchmark and trying to estimate the after-tax index returns, the manager can consider using mutual funds or exchange-traded funds as

benchmarks. Unfortunately, mutual funds that track indices are subject to licensing fees, and their returns can differ from the index. In addition, their tax effects are driven by the trading actions of the manager and redemptions and deposits by shareholders. Because they are not subject to taxes related to investors' deposits or redemptions, exchange traded funds may make better after-tax benchmarks.

The most accurate after-tax benchmark may be the use of a custom security-based benchmark that adjusts the components and value of the benchmark to reflect the client's actions and tax status. Alternatively, managers can construct *shadow portfolios*, paper portfolios used as benchmarks constructed from mutual funds or exchange traded funds, and then adjust the shadow portfolios to reflect the client's transactions.

Firms must also adjust for the effect of client-directed actions in order to accurately report the results of the firm's management decisions. A client with multiple managers may direct a manager to sell a high tax basis holding to generate a tax loss (tax loss harvesting). The client can then use the loss on his tax return to shelter other gains. The manager cannot take the full benefit of this loss in reporting after-tax results because the sale was not a manager decision. In such cases, firms should disclose the percentage effect of such loss harvesting on reported after-tax return.

The challenges of after-tax composite return reporting are considerable. Firms must have the mathematical skills, data collection, technological, and human resources to undertake such supplemental reporting.



PROFESSOR'S NOTE

The CFA text is specific in stating it will not cover the mathematics.



MODULE QUIZ 6.9

To best evaluate your performance, enter your quiz answers online.

1. Regarding the reporting of after-tax performance after January 1, 2011, which of the following is *most likely* correct?
 - A. Firms are required to report returns on an after-tax basis.
 - B. Firms may report after-tax performance as supplemental information.
 - C. Because of the subjective nature of after-tax performance reporting, firms cannot show after-tax performance.
2. Hicks Capital Management manages assets for high-net-worth clients and specializes in managing taxable accounts. The management team implements strategies to reduce dividend and capital gains taxes. To illustrate its superior performance, the management team would like to report performance on an after-tax basis. Which of the following is *least likely* to be a suitable benchmark option for Hicks Capital Management?
 - A. An after-tax capital market index.
 - B. Mutual funds or exchange-traded funds.
 - C. Developing a custom shadow portfolio.

MODULE 6.10: EVALUATING A REPORT

LOS 6.u: Identify and explain errors and omissions in given performance presentations and recommend changes that would bring them into compliance with GIPS standards.



Video covering this content is available online.

EXAMPLE: Evaluating a performance presentation

Equity Investors, the equity management unit of Manhattan Investment Management, Incorporated (MIMI), has prepared the following performance presentation for its equity growth composite for use in its marketing materials to prospective clients. MIMI manages equity, fixed-income, and balanced portfolios for retail clients to a variety of investment strategies. **Evaluate** the presentation in the following figure, and **identify** any errors or omissions that would prevent Equity Investors from claiming compliance with the GIPS.

Figure 6.5: Equity Investors Equity Growth Composite

Year	Composite Return (%)	Number of Portfolios	Dispersion (%)	Total Assets at End of Period (\$U.S. 000s)	Percentage of Firm Assets	Total Firm Assets (\$U.S. 000s)
2013	16.49	19	4.7	235	19	1,237
2014	13.81	24	6.1	365	20	1,825
2015	28.20	27	8.8	400	25	1,600
2016	7.96	26	1.9	410	22	1,864
2017	9.83	32	4.5	470	27	1,741

Equity Investors has prepared and presented this report in compliance with the Global Investment Performance Standards (GIPS®).

Notes:

1. Equity Investors is defined as the equity management unit of Manhattan Investment Management, Incorporated. Equity Investors manages all dedicated equity portfolios for Manhattan Investment Management, Incorporated.
2. The Equity Growth Composite was created in February 2013.
3. Performance results are presented gross of management, wrap, and custodial fees but after all trading commissions.
4. Trade date prices, expressed in U.S. dollars, are used to calculate performance results.
5. The Equity Growth Composite includes all portfolios managed to the firm's equity growth strategy. The composite also includes the equity-only growth segments of the balanced portfolios managed by another unit of Manhattan Investment Management, Incorporated.
6. Dispersion is measured as the standard deviation of monthly composite returns.

Answer:

1. The equity management unit of a larger investment management firm usually does not satisfy one of the options for defining a firm. In the case of Equity Investors, it is affiliated with the parent company, Manhattan Investment Management, Incorporated, as indicated by the source of the carve-out returns. Thus, Equity Investors may not define itself as a firm.
2. The Equity Growth Composite includes the carve-out returns of the equity growth segment of the firm's balanced composites. In order to include the equity carve-out return of balanced accounts in the equity composite, the equity portion must be set up and run as a separate account with its own cash balance.
3. The firm did not report an internal measure of dispersion of the composite's portfolio returns about the composite's aggregate return.
4. The firm reported standard deviation as the external measure of dispersion for the composite but did not report the same measure for the composite benchmark. Standard deviation must be used to measure external dispersion.
5. The compliance statement is incorrect.
6. When wrap fees are present, performance results should have been presented net of all wrap fees.
7. The presentation does not include a benchmark return.

8. The firm failed to disclose that a complete list and description of the firm's composites is available upon request.

GIPS: Bringing a Presentation Into Compliance

With reference to the preceding example, the following changes will bring the presentation into compliance with the GIPS.

1. Manhattan Investment Management, Incorporated is the firm.
2. The equity portions of the balanced accounts must be managed as separate accounts with their own cash balances.
3. The firm must report an internal measure of dispersion of the composite's portfolio returns about the composite's aggregate return for each year in the presentation.
4. The firm must also report the annualized trailing 36-month standard deviation of the composite benchmark.
5. An acceptable compliance statement in this presentation would be as follows:
"Manhattan Investment Management, Incorporated, claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. Manhattan Investment Management, Incorporated, has not been independently verified."
6. The wrap fees should have been deducted. Performance results presented to prospective wrap fee clients should be net of wrap fees. There should be disclosure of what is in the bundled wrap fee.
7. The presentation should include the total return for an appropriate benchmark for each year. For the composite reported in this presentation, the return on a U.S. Growth Index may be an appropriate benchmark return.
8. The firm must disclose that the firm's list of composite descriptions is available upon request.



MODULE QUIZ 6.10

To best evaluate your performance, enter your quiz answers online.

1. McGregor Asset Management has prepared the performance presentation displayed in the following table. McGregor is of the opinion that the presentation is in compliance with the Global Investment Performance Standards (GIPS).

McGregor Asset Management, Inc. Investment Results:

Aggressive Growth Equity Composite

January 1, 2011, through December 31, 2015

Year	Total Return (%)	Benchmark Return (%)	Number of Portfolios	Total Assets at End of Period	Percentage of Firm Assets	Total Firm Assets
2011	16.5	13.9	25	130.65	67	195.00
2012	4.2	4.2	31	166.85	71	235.00
2013	18.9	23.0	34	197.82	63	314.00
2014	8.1	7.8	46	286.70	61	470.00
2015	7.5	9.1	47	550.00	58	948.28

McGregor Asset Management has prepared and presented this report in compliance with the Global Investment Performance Standards (GIPS®).

State five errors or omissions that invalidate McGregor's belief that its presentation is in compliance with GIPS.

2. In July 2007, Edith Poloski, Jason Masserelli, and Rajesh Granta formed PMG Investment Management (PMG). Poloski has considerable experience in the area of security analysis, and Masserelli and Granta have expertise in fixed income and equity portfolio management, respectively.

Initially, PMG exclusively managed the portfolios of high-net-worth individuals with a minimum investment requirement of \$3 million. However, recently, PMG has decided to broaden its client base by lowering its minimum investment requirement. To attract new clients and improve the information that its current clients receive, PMG has prepared a performance presentation that reflects the results of its major investment styles. Performance results are presented for a fixed income, an equity, and a balanced composite. The following list contains the actions that PMG took when preparing its current performance presentation.

Action 1: The S&P 500 Index was used as the benchmark for comparison with all three composite styles.

Action 2: PMG used accrual accounting, and book values are used for computations of fixed-income returns.

Action 3: For fixed-income return calculations, accrued income is included.

Action 4: Due to the change in the firm's client base, PMG did not include its fee schedule.

Action 5: All actual fee-paying discretionary accounts were included in at least one of the three composites.

Action 6: Asset-weighted composite returns were calculated using end-of-period weightings.

Action 7: The performance of the equity portion of the balanced accounts, excluding cash, was combined with the equity composite results.

Action 8: All composites included only assets under management and were not linked with simulated or model portfolio performance.

Action 9: Equal-weighted rates of return that adjust for cash flows are used for portfolio returns.

Action 10: Performance calculations were made after the deduction of actual trading expenses.

Using the template provided, **cite** five actions in the list of actions that PMG took that are not in compliance with the GIPS, and **describe** how the actions you select are not compliant with the GIPS.

	Action Number	Explanation of Why Action is Not GIPS Compliant
1.		
2.		
3.		
4.		
5.		

KEY CONCEPTS

LOS 6.a

Recognizing the need for one globally accepted set of investment performance presentation standards, CFA Institute (formerly Association for Investment Management and Research) sponsored and funded the Global Investment Performance Standards Committee to develop and publish a single global standard by which all firms calculate and present performance to clients and prospective clients. As a result of this initiative, the AIMR Board of Governors formally endorsed the GIPS on February 19, 1999, as the worldwide standard. The latest edition of the GIPS is the 2010 GIPS Standards effective January 1, 2011.

GIPS objectives:

- Establish global, industry-wide best practices for the calculation and presentation of investment performance.
- Facilitate the accurate and unambiguous presentation of investment performance results to current and prospective clients.
- Facilitate a comparison of the historical performance of investment management firms.
- Encourage full disclosure and fair global competition without barriers to entry.
- Encourage self-regulation.

GIPS characteristics:

- Voluntary minimum standards for performance presentation.
- Firms must meet all requirements on a firm-wide basis in order to claim compliance.
- Only investment management firms may claim compliance.
- Provide a minimum standard where local or country-specific laws, regulation, or industry standards may not exist.
- Require managers to include all actual fee-paying discretionary portfolios in composites defined according to similar strategy and/or investment objective.
- Firms must present a minimum of five years of GIPS-compliant history or since inception if less than five years. After presenting at least five years of compliant history, the firm must add annual performance each year going forward up to 10 years, at a minimum.
- Firms may link years of noncompliant performance but must present only compliant data for periods beginning on or after January 1, 2000.
- Firms must use prescribed calculation and presentation methods and include required disclosures in presentations.
- Meeting the objective of full and fair disclosure will likely require more than compliance with the minimum requirements of the GIPS.
- To fully explain the performance included in a presentation, firms are encouraged to present all relevant supplemental information.
- In cases in which applicable local or country-specific laws or regulations conflict with the GIPS, the standards require firms to comply with the local law or regulation and make full disclosure of the conflict.

- Firms are encouraged to develop monitoring processes and controls for maintaining GIPS compliance.
- Firms must document the policies used to ensure the existence and ownership of client assets.
- January 1, 2011, is the effective date of the 2010 edition of the GIPS. Presentations that include performance for periods beginning on or after January 1, 2011, must comply with the 2010 version of the GIPS.

Scope of the GIPS:

Firms from any country may come into compliance with the GIPS. Compliance with the standards will facilitate a firm's participation in the investment management industry on a global level.

For periods prior to January 1, 2006, firms are granted reciprocity, so that if pre-2006 data are presented in compliance with a previous edition of the GIPS or a Country Version of GIPS (CVG), such data may continue to be shown as compliant with the revised GIPS.

The benefits to existing and prospective clients derive from the ability to compare the performance of firms operating in different countries with different sets of established practices. The GIPS ensure that performance data are complete and fairly presented so that existing and prospective clients can have greater confidence in comparative investment results.

LOS 6.b

GIPS compliance must be on a firm-wide basis. Total firm assets are defined as the total fair value of all assets the firm manages, including non-fee-paying and non-discretionary portfolios. Also included in the definition are assets delegated to sub-advisers, as long as the firm has selected the sub-advisers. If (according to the firm's definition of discretion) a portfolio is deemed discretionary, it is considered sufficiently free of client-mandated constraints such that the manager is able to pursue its stated strategy, objectives, or mandate.

A **firm** is defined as "an investment firm, subsidiary, or division held out to clients or potential clients as a distinct business entity."

A **distinct business entity** is defined as "a unit, division, department, or office that is organizationally or functionally separated from other units, divisions, departments, or offices and that retains discretion over the assets it manages and that should have autonomy over the investment decision-making process."

Firms must meet all the requirements of GIPS and the ethical intent. Partial compliance is not acceptable. Policies and procedures must be developed, maintained, and documented to meet the requirements.

LOS 6.c

GIPS input data requirements

- **Standard 1.A.1.** All data and information necessary to support the firm's performance presentation, including calculations, must be stored and maintained.
- **Standard 1.A.2.** For periods beginning on or after January 1, 2011, portfolios must be valued at fair value according to GIPS principles. Cost or book values are not permitted.

- **Standard 1.A.3.** Portfolio valuation.
 - Prior to January 1, 2001, portfolios must be valued at least quarterly.
 - Beginning on or after January 1, 2001, at least monthly.
 - Beginning on or after January 1, 2010, at least monthly and on the date of all large external cash flows.
- **Standard 1.A.4.** For periods beginning January 1, 2010, firms must value portfolios as of the calendar month-end or the last business day of the month.
- **Standard 1.A.5.** For periods beginning January 1, 2005, firms must use trade-date accounting.
- **Standard 1.A.6.** Accrual accounting must be used for fixed-income securities and all other assets that accrue interest income. Market values of fixed-income securities must include accrued income.
- **Standard 1.A.7.** For periods beginning January 1, 2006, composites must have consistent beginning and ending annual valuation dates. Unless the composite is reported on a non-calendar fiscal year, the beginning and ending valuation dates must be at calendar year-end (or on the last business day of the year).

GIPS input data recommendations

- **Standard 1.B.1.** Rather than only at large external cash flows, portfolios should be valued at each external cash flow.
- **Standard 1.B.2.** Valuations should be obtained from an independent third party.
- **Standard 1.B.3.** Dividends from equities should be accrued as of the ex-dividend date.
- **Standard 1.B.4.** When presenting net-of-fees returns, firms should accrue investment management fees.

LOS 6.d

GIPS calculation methodology requirements

- **Standard 2.A.1.** Total returns must be used.
- **Standard 2.A.2.** Time-weighted rates of return that adjust for external cash flows must be used. Periodic returns must be geometrically linked. External cash flows must be treated in a consistent manner with the firm's documented, composite-specific policy in order to determine when portfolios in the composite require revaluation. For periods beginning January 1, 2010, firms must value portfolios on the date of all large external cash flows.

Cash and cash equivalents

- **Standard 2.A.3.** Returns from cash and cash equivalents held in portfolios must be included in total return calculations.

Fees and expenses

- **Standard 2.A.4.** All returns must be calculated after the deduction of the actual trading expenses incurred during the period. Estimated trading expenses are not permitted.
- **Standard 2.A.5.** If the actual direct trading expenses cannot be identified and segregated from a bundled fee:

1. When calculating gross-of-fees returns, returns must be reduced by the entire bundled fee or the portion of the bundled fee that includes the direct trading expenses. The use of estimated trading expenses is not permitted.
2. When calculating net-of-fees returns, returns must be reduced by the entire bundled fee or the portion of the bundled fee that includes the direct trading expenses and the investment management fee. The use of estimated trading expenses is not permitted.

LOS 6.e

- **Standard 2.A.6.** Composite returns must be calculated by asset-weighting the individual portfolio returns using beginning-of-period values or a method that reflects both beginning-of-period values and external cash flows.
- **Standard 2.A.7.** For periods beginning January 1, 2006, firms must calculate composite returns by asset-weighting the individual portfolio returns at least quarterly. For periods beginning on or after January 1, 2010, composite returns must be calculated by asset-weighting the individual portfolio returns at least monthly.

GIPS calculation methodology recommendations

- **Standard 2.B.1.** Returns should be calculated net of non-reclaimable withholding taxes on dividends, interest, and capital gains. Reclaimable withholding taxes should be accrued.

LOS 6.f

- **Standard 3.A.1.** All actual fee-paying discretionary portfolios must be included in at least one composite. Although non-fee-paying discretionary portfolios may be included in a composite (with appropriate disclosures), nondiscretionary portfolios must not be included in a firm's composites.

The IPC defines discretion as “the ability of the firm to implement its intended strategy.” A client may place significant constraints on the manager; for instance, the investment policy statement (IPS) may specify limits on sectors, credit ratings, durations, et cetera. Furthermore, there may be total restrictions on certain transactions, such as the purchase of “unethical” or foreign investments, or the sale of specified stocks. These restrictions *do not* automatically remove the discretionary nature of the portfolio.

A portfolio becomes nondiscretionary when the manager is no longer able to implement the intended investment strategy. If, for instance, the liquidity requirements are so great that much of the value must be in cash, or if the portfolio has minimal tracking limits from an index portfolio, then the description of “discretionary” is really no longer appropriate.

LOS 6.g

- **Standard 3.A.4.** Composites must be defined according to similar investment objectives and/or strategies. Composites must include all portfolios that meet the composite definition. The full composite definition must be made available on request.

LOS 6.h

- **Standard 3.A.2.** Composites must include only assets under management within the defined firm.

- **Standard 3.A.3.** Firms are not permitted to link simulated or model portfolios with actual performance.
- **Standard 3.A.5.** Composites must include new portfolios on a timely and consistent basis after the portfolio comes under management.
- **Standard 3.A.6.** Terminated portfolios must be included in the historical returns of the appropriate composites up to the last full measurement period that the portfolio was under management.
- **Standard 3.A.7.** Portfolios must not be switched from one composite to another unless documented changes in client guidelines or the redefinition of the composite make it appropriate. The historical record of the portfolio must remain with the appropriate composite.
- **Standard 3.A.9.** If a firm sets a minimum asset level for portfolios to be included in a composite, no portfolios below that asset level can be included in that composite. Any changes to a composite-specific minimum asset level are not permitted to be applied retroactively.
- **Standard 3.A.10.** Firms that wish to remove portfolios from composites in cases of significant cash flows must define *significant* on an ex-ante composite-specific basis and must consistently follow the composite-specific significant cash flow policy.
- **Standard 3.B.2.** As an alternative to temporarily removing the account from the composite, the firm can direct the significant cash flow into a temporary new account until the funds are invested.

LOS 6.i

- **Standard 3.A.8.** For periods beginning on or after January 1, 2010, carve-outs must not be included in a composite unless the carve-out is actually managed separately with its own cash balance.

LOS 6.j

GIPS required disclosures

- **Standard 4.A.1.** Once a firm has met all the requirements of the GIPS standards, the firm must disclose its compliance with the GIPS standards using one of the following compliance statements.

For firms that are verified:

[Insert name of firm] claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. [Insert name of firm] has been independently verified for the periods [insert dates]. The verification report(s) is/are available upon request.

Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis, and (2) the firm's policies and procedures are designed to calculate and present performance in compliance with the GIPS standards.

Verification does not ensure the accuracy of any specific composite presentation.

For composites of a verified firm that have also had a performance examination:

[Insert name of firm] claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the

GIPS standards. [Insert name of firm] has been independently verified for the periods [insert dates].

Verification assesses whether (1) the firm has complied with all the composite construction requirements of the GIPS standards on a firm-wide basis, and (2) the firm's processes and procedures are designed to calculate and present performance in compliance with the GIPS standards. The [insert name of composite] composite has been examined for the periods [insert dates]. The verification and examination reports are available upon request.

For firms that have not been verified:

[Insert name of firm] claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. [Insert name of firm] has not been independently verified.

- **Standard 4.A.2.** Firms must disclose the definition of “firm” used to determine the total firm assets and firm-wide compliance.
- **Standard 4.A.3.** Firms must disclose the composite description.
- **Standard 4.A.4.** Firms must disclose the benchmark description.
- **Standard 4.A.5.** When presenting gross-of-fees returns, firms must disclose if any other fees are deducted in addition to the direct trading expenses.
- **Standard 4.A.6.** When presenting net-of-fees returns, firms must disclose: a) if any other fees are deducted in addition to the investment management fee and direct trading expenses; b) if model or actual investment management fees are used; and c) if returns are net of performance-based fees.
- **Standard 4.A.7.** Firms must disclose the currency used to express performance.
- **Standard 4.A.8.** Firms must disclose which measure of internal dispersion is used.
- **Standard 4.A.9.** Firms must disclose the fee schedule appropriate to the compliant presentation.
- **Standard 4.A.10.** Firms must disclose the composite creation date.
- **Standard 4.A.11.** Firms must disclose that the firm's list of composite descriptions is available upon request.
- **Standard 4.A.12.** Firms must disclose that policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.
- **Standard 4.A.13.** Firms must disclose the presence, use, and extent of leverage, derivatives, and short positions, if material, including a description of the frequency of use and characteristics of the instruments sufficient to identify risks.
- **Standard 4.A.14.** Firms must disclose all significant events that would help a prospective client interpret the compliant presentation.
- **Standard 4.A.15.** For any performance presented for periods prior to January 1, 2000, that does not comply with the GIPS standards, firms must disclose the periods of non-compliance.
- **Standard 4.A.16.** If the firm is redefined, the firm must disclose the date of, description of, and reason for the redefinition.
- **Standard 4.A.17.** If a composite is redefined, the firm must disclose the date of, description of, and reason for the redefinition.

- **Standard 4.A.18.** Firms must disclose any changes to the name of a composite.
- **Standard 4.A.19.** Firms must disclose the minimum asset level, if any, below which portfolios are not included in a composite. Firms must also disclose any changes to the minimum asset level.
- **Standard 4.A.20.** Firms must disclose relevant details of the treatment of withholding tax on dividends, interest income, and capital gains, if material. Firms must also disclose if benchmark returns are net of withholding taxes if this information is available.
- **Standard 4.A.21.** For periods beginning on or after January 1, 2011, firms must disclose and describe any known material differences in the exchange rates or valuation sources used among the portfolios within a composite and between the composite and the benchmark. For periods prior to January 1, 2011, firms must disclose and describe any known inconsistencies in the exchange rates used among the portfolios within a composite and between the composite and the benchmark.
- **Standard 4.A.22.** If the compliant presentation conforms with laws and/or regulations that conflict with the requirement of the GIPS standards, firms must disclose this fact and disclose the manner in which the local laws and regulations conflict with the GIPS standards.
- **Standard 4.A.23.** For periods prior to January 1, 2010, if carve-outs are included in a composite, firms must disclose the policy used to allocate cash to the carve-outs.
- **Standard 4.A.24.** If a composite contains portfolios with bundled fees, firms must disclose the types of fees that are included in the bundled fee.
- **Standard 4.A.25.** Beginning on January 1, 2006, firms must disclose the use of a sub-adviser and the periods a sub-adviser was used.
- **Standard 4.A.26.** For periods prior to January 1, 2010, firms must disclose if any portfolios were not valued at calendar month end or on the last business day of the month.
- **Standard 4.A.27.** For periods beginning January 1, 2011, firms must disclose the use of subjective unobservable inputs for valuing portfolio investments if the portfolio investments valued using subjective unobservable inputs are material to the composite.
- **Standard 4.A.28.** For periods beginning on January 1, 2011, firms must disclose if the composite's valuation hierarchy materially differs from the recommended hierarchy in the GIPS Valuation Principles.
- **Standard 4.A.29.** If the firm determines no appropriate benchmark for the composite exists, the firm must disclose why no benchmark is presented.
- **Standard 4.A.30.** If the firm changes the benchmark, the firm must disclose the date of, description of, and reason for the change.
- **Standard 4.A.31.** If a custom benchmark or combination of multiple benchmarks is used, the firm must disclose the benchmark components, weights, and rebalancing process.
- **Standard 4.A.32.** If the firm has adopted a significant cash flow policy for a specific composite, the firm must disclose how the firm defines a significant cash flow for that composite and for which periods.
- **Standard 4.A.33.** Firms must disclose if the 3-year annualized ex post standard deviation of the composite and/or benchmark is not presented because 36 monthly

returns are not available.

- **Standard 4.A.34.** If the firm determines that the 3-year annualized ex post standard deviation is not relevant or appropriate, the firm must: a) describe why ex post standard deviation is not relevant or appropriate; and b) describe the additional risk measure presented and why it was selected.
- **Standard 4.A.35.** Firms must disclose if the performance from a past firm or affiliation is linked to the performance of the firm.

GIPS recommended disclosures

- **Standard 4.B.1.** Firms should disclose material changes to valuation policies and/or methodologies.
- **Standard 4.B.2.** Firms should disclose material changes to calculation policies and/or methodologies.
- **Standard 4.B.3.** Firms should disclose material differences between the benchmark and the composite's investment mandate, objective, or strategy.
- **Standard 4.B.4.** Firms should disclose the key assumptions used to value portfolio investments.
- **Standard 4.B.5.** If a parent company contains multiple defined firms, each firm within the parent company should disclose a list of the other firms contained within the parent company.
- **Standard 4.B.6.** For periods prior to January 1, 2011, firms should disclose the use of subjective unobservable inputs for valuing portfolio investments if the portfolio investments valued using subjective unobservable inputs are material to the composite.
- **Standard 4.B.7.** For periods prior to January 1, 2006, firms should disclose the use of a sub-adviser and the periods a sub-adviser was used.
- **Standard 4.B.8.** Firms should disclose if a composite contains proprietary assets.

LOS 6.k,l,m

GIPS presentation and reporting requirements

- **Standard 5.A.1.** The following items must be reported for each composite presented:
 - a. At least five years of annual performance (or a record for the period since firm or composite inception if the firm or composite has been in existence less than five years) that meets the requirements of the GIPS standards; after presenting five years of performance, the firm must present additional annual performance up to a minimum of ten years.
 - b. Annual returns for all years clearly identified as gross- or net-of-fees.
 - c. For composites with a composite inception date beginning on or after January 1, 2011, when the initial period is less than a full year, firms must present returns from the composite inception through the initial year-end.
 - d. For composites with a termination date of January 1, 2011, or later, returns from the last annual period through the termination date.

- e. Annual returns for a benchmark, which reflects the mandate, objective, or strategy of the portfolio.
 - f. The number of portfolios in the composite at each year-end. If the composite contains *five portfolios or less*, the number of portfolios is not required.
 - g. The amount of assets in the composite at the end of each annual period.
 - h. Either total firm assets or composite assets as a percentage of firm assets at each annual period end.
 - i. A measure of dispersion of individual portfolio returns for each annual period. If the composite contains *five portfolios or less* for the full year, a measure of dispersion is not required.
- **Standard 5.A.2.** For periods beginning on or after January 1, 2011, firms must present for each annual period:
 - a. Three-year annualized ex post standard deviation using monthly returns for the composite and benchmark.
 - b. An additional 3-year ex post risk measure if management feels standard deviation is inappropriate. The firm must match the periodicity of calculated returns used for the composite and benchmark.
 - **Standard 5.A.3.** Firms may link non-GIPS-compliant returns to their compliant history so long as the firms meet the disclosure requirements for noncompliant performance and only compliant returns are presented for periods after January 1, 2000.
 - **Standard 5.A.4.** Returns of portfolios and composites for periods of less than one year must not be annualized.
 - **Standard 5.A.5.** For periods beginning on or after January 1, 2006, and ending prior to January 1, 2011, if a composite includes carve-outs, the presentation must include the percentage of the composite that is composed of carve-outs for each annual period.
 - **Standard 5.A.6.** If a composite contains any non-fee-paying portfolios, the firm must present, as of the end of each annual period, the percentage of the composite assets represented by the non-fee-paying portfolios.
 - **Standard 5.A.7.** If a composite includes bundled-fee portfolios, the firm must present, as of the end of each annual period, the percentage of the composite assets represented by bundled-fee portfolios.
 - **Standard 5.A.8.**
 - a. Performance track records of a past firm or affiliation must be linked to or used to represent the historical record of the new or acquiring firm on a composite-specific basis if:
 - i. Substantially all the investment decision makers are employed by the new firm (e.g., research department, portfolio managers, and other relevant staff).
 - ii. The decision-making process remains substantially intact and independent within the new firm.
 - iii. The new firm has records that document and support the reported performance.

- b. If a firm acquires another firm or affiliation, the firm has one year to bring any noncompliant assets into compliance.

GIPS presentation and reporting recommendations

- **Standard 5.B.1.** Firms should present gross of fees returns.
- **Standard 5.B.2.** Firms should present:
 - a. Cumulative returns for composite and benchmarks for all periods.
 - b. Equal-weighted mean and median returns for each composite.
 - c. Quarterly and/or monthly returns.
 - d. Annualized composite and benchmark returns for periods greater than 12 months.
- **Standard 5.B.3.** For periods prior to January 1, 2011, the 3-year annualized ex post standard deviation of monthly returns for each year for the composite and its benchmark.
- **Standard 5.B.4.** For each year in which an annualized ex post standard deviation is present for the composite and the benchmark, corresponding annualized return should be presented.
- **Standard 5.B.5.** For each year that annualized composite and benchmark returns are reported, the corresponding annualized standard deviation of monthly returns for the composite and benchmark.
- **Standard 5.B.6.** Additional ex post composite risk measures.
- **Standard 5.B.7.** Firms should present more than ten years of annual performance in the compliant presentation.
- **Standard 5.B.8.** Firms should comply with the GIPS for all historical periods.
- **Standard 5.B.9.** Firms should update compliant presentations quarterly.

LOS 6.n

For real estate, the following investment types would fall under the *general provisions* of the GIPS (as opposed to the provisions dealing directly with real estate and private equity):

- Publicly traded real estate securities, including any listed securities issued by public companies.
- Mortgage-backed securities (MBS).
- Private debt investments, including commercial and residential loans where the expected return is solely related to contractual interest rates without any participation in the economic performance of the underlying real estate.

Note that publicly traded securities include Real Estate Investment Trusts (REITs). If a portfolio consists of real estate plus other investments, the carve-out provisions of GIPS (Standard 3.A.8) would apply.

The exclusions to the definitions of private equity are *open-end* and *evergreen* funds, both of which are covered by the general provisions of the GIPS. Because redemptions and subscriptions may be made after the funds' inception, open-end and evergreen funds do not have fixed levels of capital with a set number of investors.

LOS 6.o

GIPS Real Estate Requirements

- **Standard 6.A.1.** Beginning January 1, 2011, real estate investments must be valued in accordance with the definition of fair value and the GIPS valuation principles.
- **Standards 6.A.2 and A.3.** For periods prior to January 1, 2008, real estate investments must be valued at market value at least once every 12 months. For periods beginning January 1, 2008, real estate investments must be valued at least quarterly. For periods on or after January 1, 2010, firms must value portfolios as of the end of each quarter or the last business day of each quarter using fair value principles.
- **Standards 6.A.4 and A.5.** For periods prior to January 1, 2012, real estate investments must have an external valuation done at least once every three years. External valuation means an outside, independent party certified to perform such valuations. For periods beginning January 1, 2012, real estate investments must have an external valuation done at least once every 12 months or if a client agreement states otherwise, at least once every three years.
- **Standards 6.A.6 and A.7.** Beginning January 1, 2006, real estate portfolio returns must be calculated at least quarterly after the deduction of transaction costs during the period.
- **Standard 6.A.8.** Beginning January 1, 2011, income and capital component returns must be calculated separately using geometrically linked time-weighted rates of return.
- **Standard 6.A.9.** Composite returns, including component returns, must be calculated at least quarterly by asset-weighting the individual portfolio returns using time-weighted rates of return.
- **Standard 6.A.10.a.** The firm must provide a description of discretion. Discretion in real estate exists if the firm has sole or sufficient discretion to make major decisions regarding the investments.
- **Standards 6.A.10.b–e.** The firm must disclose the internal valuation methods used and the frequency of external valuation. Beginning January 1, 2011, disclose material changes in valuation approach and differences in internal and external valuation and the reason for the difference.
- **Standards 6.A.11 and 6.A.15.** On or after January 1, 2006, GIPS compliant and non-compliant performance may not be linked. Prior to this date, any such linking must be disclosed.

Standards 6.A.12 and 6.A.13 are not discussed in the CFA reading.

- **Standard 6.A.14.** In addition to the total return, the capital return and income return components must be disclosed, must sum to the total return, and must be clearly identified as gross or net of fees.
 - May present total return and component returns gross-of-fees (management), net-of-fees, or both ways.
 - For any quarterly return, the income and capital return components must sum to the total return (allowing for rounding differences). If the firm calculates monthly returns, the monthly component returns will sum to the monthly total return.

The quarterly return is found by *geometrically linking* the monthly returns.

- **Standard 6.A.16.a.** Composites with more than five portfolios must disclose the high and low of the portfolio time-weighted rates of return as the internal dispersion number.
- **Standard 6.A.16.b.** The percentage of composite assets valued using an external valuator as of the end of each annual period.

Closed-End Fund Reporting

- **Standards 6.A.17 and 6.A.18.** Since inception rates of return (SI-IRR) must be reported using at least quarterly rates of return. Time periods less than a year are not annualized and periods longer than a year are annualized.
- **Standards 6.A.19 and 6.A.22.** Composites must be defined by grouping accounts with similar objective, strategy, et cetera, and vintage year.

Disclosures

- **Standard 6.A.20.** The final liquidation date for liquidated composites.
- **Standard 6.A.21.** The frequency of cash flows used in the SI-IRR calculation.
- **Standard 6.A.23.** On or after January 1, 2011, periods less than a year must present net-of-fees SI-IRR and reporting must continue until liquidation of the composite.

Presentation and reporting

- **Standard 6.A.24.** Firms must report the benchmark SI-IRR results and, for comparison, may wish to report composite gross-of-fees SI-IRR.
- **Standard 6.A.25.** At the end of each reporting period, the firm must disclose the following:
 - **Committed capital and since-inception paid-in-capital.**
 - **Distributions.**
 - **TVPI (the investment multiple).** The ratio of total value to since-inception paid-in-capital; total value is the residual value (value of the portfolio at the end of the period) plus since-inception distributions.
 - **DPI (the realization multiple).** The ratio of since-inception distributions to paid-in-capital.
 - **PIC multiple.** The ratio of paid-in-capital to committed capital.
 - **RVPI (the unrealized multiple).** The ratio of residual value to paid-in-capital.
- **Standard 6.A.26.** The SI-IRR of the benchmark through each annual period end. The benchmark must:
 - a. Reflect the investment mandate, objective, or strategy of the composite.
 - b. Be presented for the same time period as presented for the composite.
 - c. Be the same vintage year as the composite.

Private Equity Requirements

Input data:

- **Standards 7.A.1 and 7.A.2.** Private equity assets must be valued at least annually, at fair value, and according to GIPS Valuation Principles.

Calculation methodology:

- **Standards 7.A.3 and 7.A.4.** Annualized since-inception internal rate of return (SI-IRR).
SI-IRR must be calculated using daily or monthly cash flows prior to January 1, 2011. Beginning January 1, 2011, the SI-IRR must be calculated using daily cash flows. Stock distributions must be valued at the time of the distribution and included as cash flows.
- **Standards 7.A.5 and 7.A.6.** Net-of-fees returns must be calculated with consideration given to management fees and carried interest.
All returns must be calculated after deducting transaction expenses for the period.
- **Standard 7.A.7.** For fund of funds, all returns must be net of all partnership fees, fund fees, expenses, and carried interest.

Composite construction:

- **Standard 7.A.8.** Throughout the life of the composite, composite definitions must remain consistent.
- **Standard 7.A.9.** Primary funds must be included in at least one composite defined by vintage year and investment strategy, mandate, or objective.
- **Standard 7.A.10.** Fund of funds must be included in at least one composite defined by vintage year and/or investment strategy, mandate, or objective.

Required disclosures:

- **Standards 7.A.11 and 7.A.12.** Vintage year and definition of the vintage year for the composite.
The liquidation date for liquidated composites.
- **Standards 7.A.13 and 7.A.14.** Valuation methodology used for the most recent period, and starting January 1, 2011, any material changes in methodology or policies.
- **Standard 7.A.15.** Industry guidelines that have been followed in addition to the GIPS guidelines.
- **Standard 7.A.16.** The benchmark used and the return calculation methodology applied to the benchmark.
- **Standard 7.A.17.** The frequency of cash flows if daily cash flows are not used in calculating the SI-IRR prior to January 1, 2011.
- **Standards 7.A.18 and 7.A.19.** If any other fees are deducted in addition to transaction expenses when presenting gross-of-fees returns.
If any other fees are deducted in addition to investment management fees and transaction expenses when presenting net-of-fees returns.
- **Standard 7.A.20.** Any periods of non-compliance prior to January 1, 2006.

Presentation and reporting:

- **Standard 7.A.21.** Beginning January 1, 2011, firms must present both the net-of-fees and gross-of-fees annualized SI-IRR of the composite for each year since inception and through the final liquidation date.
SI-IRR is the *since inception internal rate of return*.
- **Standard 7.A.22.** Beginning January 1, 2011, for fund of funds composites, firms must present the SI-IRR of the underlying investments grouped by vintage year as well as

the other measures required by Standard 7.A.23. All measures must be presented gross of the fund of funds investment management fees and for the most recent annual accounting period.

- **Standard 7.A.23.** For each period presented, firms must report:
 - a. Since-inception paid-in capital.
 - b. Cumulative committed capital.
 - c. Since-inception distributions.
 - d. Total value to paid-in capital (investment multiple or TVPI).
 - e. Cumulative distributions to paid-in capital (realization multiple or DPI).
 - f. Paid-in capital to committed capital (PIC multiple).
 - g. Residual value to paid-in capital (unrealized multiple or RVPI).
- **Standard 7.A.24.** If a benchmark is shown, the cumulative annualized SI-IRR for the benchmark that reflects the same strategy and vintage year of the composite must be presented for the same periods for which the composite is presented. If no benchmark is shown, the presentation must explain why no benchmark is disclosed.
- **Standard 7.A.25.** For fund of funds composites, if a benchmark is presented, it must be of the same vintage year and investment objective, strategy, or mandate as the underlying investments.
- **Standard 7.A.26.** Beginning January 1, 2011, fund of funds composites must present the percentage of composite assets invested in direct investments.
- **Standard 7.A.27.** Beginning January 1, 2011, primary fund composites must present the percentage of composite assets invested in fund investment vehicles (instead of direct investments) as of the end of each annual period-end.
- **Standard 7.A.28.** Prior to January 1, 2006, firms may present non-GIPS-compliant performance.

LOS 6.p

These GIPS provisions were adopted January 1, 2006, and apply to wrap fee/separately managed accounts (WFSMAs) where a GIPS-compliant investment manager serves as the subadviser to a sponsor.

These specific WFSMA provisions apply where the underlying investment management firm has discretion to manage the client portfolio and a bundled fee is charged by the sponsor. All of the normal provisions of GIPS still apply with the following being particularly important: (1) the performance results of the end user client must be computed, documented, and verified. The underlying investment manager may choose to rely on the sponsor to do so (with due diligence to verify the sponsor's ability) or maintain her own tracking and shadow accounting of the account's performance. (2) Returns must be calculated after actual trading expenses. If the trading expenses cannot be identified and separated from the bundled wrap fee, the entire bundled fee including the trading expenses must be deducted from the return. (3) Disclose all of the other items included in the bundled fee. (4) Composite results must disclose the percentage of composite assets made up of portfolios with bundled fees.

The additional provisions of this section are the following:

- Include the performance of actual WFSMAs in appropriate composites and then use the composite results for presentations to prospective new WFSMA prospects.

- If the composite presentation includes time periods when WFSMA accounts were not included, the details of when this occurred must be disclosed.
- If any non-GIPS compliant results prior to January 1, 2006, are included, this must be disclosed. After January 1, 2006, (the adoption date of these provisions) non-compliant results cannot be included.
- If an investment management firm manages assets for more than one sponsor for the same investment style, the composite presentation to prospective clients must include the results of all WFSMAs that follow that style (regardless of sponsor). The composite is style specific, not sponsor specific, and results must be after the entire wrap fee.
- In addition a sponsor specific composite may also be produced if desired. In this case, the sponsor's name must be disclosed. For this sponsor-specific composite, the entire wrap fee does not have to be deducted, but if it is not deducted, this must be disclosed and the presentation must be labeled as only for the use of that sponsor (to discourage the sponsor from using it for prospective WFSMA client presentations).

LOS 6.q

GIPS valuation requirements

- If local laws or regulations related to valuation conflict with the GIPS, firms are required to follow the local laws or regulations and disclose the conflict.
- Firms must disclose their portfolio valuation policies and hierarchy.
- For periods beginning on or after January 1, 2011, firms must disclose any subjective valuation if the portfolio is a significant portion of the composite.
- Firms must disclose if the valuation hierarchy used to value composites differs from the GIPS recommended hierarchy.

The GIPS valuation hierarchy is a list of value sources. Starting at the top, if the firm is unable to utilize the source, it should proceed to the next source on the list:

1. Objective, observable, unadjusted market prices for similar investments in active markets.
2. Quoted prices for identical or similar investments in markets that are not active.
3. Market-based inputs other than quoted prices that are observable for the investment.
4. Subjective, unobservable inputs.

Real estate valuation principles

- The GIPS require that real estate investments be valued externally by outside sources following accepted industry and governmental valuation standards.
- The amount of the external valuator's fee must not be based on the resulting value.
- Although appraisal standards allow reporting values in ranges, the GIPS recommend a single value be reported for returns purposes.
- The firm should rotate external valuers every three to five years.

Private equity valuation principles

- The valuation methodology utilized must be "the most appropriate for a particular investment based on the nature, facts, and circumstances of the investment."

- When valuing private enterprises, the process should consider:
 - Reliable appraisal data.
 - Comparable enterprise or transaction data.
 - The enterprise's stage of development.
 - Additional characteristics unique to the enterprise.

The GIPS require *fair representation of values*. This means firms should follow standard industry and governmental valuation guidelines as closely and consistently as possible in an effort to obtain the best possible value estimates.

LOS 6.r

All advertisements that include a claim of compliance with the GIPS Advertising Guidelines must include the following:

1. A description of the firm.
2. How an interested party can obtain a presentation that complies with the requirements of GIPS standards and/or a list and description of all firm composites.
3. The GIPS Advertising Guidelines compliance statement:
[Insert name of firm] claims compliance with the Global Investment Performance Standards (GIPS®).
4. A description of the composite being advertised.
5. One of the following sets of total returns:
 - a. 1-, 3-, and 5-year annualized composite returns through the most recent period.
 - b. Period-to-date composite performance results in addition to 1-, 3-, and 5-year cumulative annualized composite returns with the end-of-period date clearly identified (or annualized period since composite inception if inception is greater than one and less than five years). Periods of less than one year are not permitted to be annualized. The annualized returns must be calculated through the same period of time as presented in the corresponding compliant presentation.
 - c. Period-to-date composite returns in addition to five years of annual composite returns calculated through the same period of time as presented in the corresponding compliant presentation.
6. Whether performance is shown gross and/or net of investment management fees.
7. The benchmark total return for the same periods for which the composite return is presented and a description of that benchmark. (The appropriate composite benchmark return is the same benchmark total return as presented in the corresponding GIPS-compliant presentation.) If no benchmark is presented, the advertisement must disclose why no benchmark is presented.
8. The currency used to express returns.
9. The description of the use and extent of leverage and derivatives if leverage or derivatives are used as an active part of the investment strategy (i.e., not merely for efficient portfolio management) of the composite. Where leverage/derivatives do not have a material effect on returns, no disclosure is required.
10. When presenting noncompliant performance information for periods prior to January 1, 2000, in an advertisement, firms must disclose the period(s) and which specific

information is not in compliance with the GIPS standards.

The Advertising Guidelines also suggest that firms may present other information, though this supplemental information should be of equal or lesser prominence than the required information described previously.

LOS 6.s

The *primary purpose of verification* is to increase the level of confidence that a firm claiming GIPS compliance did, indeed, adhere to the Standards on a firm-wide basis.

Verification involves the review of an investment management firm's performance-measurement processes and procedures by an *independent third-party verifier*. Upon completion of verification, a verification report is issued that must confirm the following:

- The investment firm has complied with all the composite construction requirements of GIPS on a firm-wide basis.
- The firm's processes and procedures are designed to calculate and present performance results in compliance with the GIPS.

Other noteworthy aspects of GIPS verification include the following:

- A single verification report is issued to the entire firm; *GIPS verification cannot be carried out for a single composite*.
- Verification cannot be partial: it is all or nothing. In other words, verification cannot enable a firm to claim that its performance presentation is in compliance with GIPS "except for"
- Verification is not a requirement for GIPS compliance, but it is *strongly encouraged* and may eventually become mandatory.
- The initial minimum period for which verification can be performed is one year of a firm's presented performance. The recommended period over which verification is performed will be that part of the firm's track record for which GIPS compliance is claimed.
- After performing the verification, the verifier may conclude that the firm is not in compliance with the GIPS or that the records of the firm cannot support a complete verification. In such situations, the verifier must issue a statement to the firm clarifying why a verification report was not possible.

LOS 6.t

For periods beginning on or after January 1, 2011, when firms include after-tax return information in a compliant performance presentation, the information must be presented as supplemental information.

The *pre-liquidation* method calculates after-tax returns based on income earned and gains and losses actually recognized over the period through asset sales. This method effectively ignores the effects of future capital gains taxes.

The *mark-to-liquidation* method assumes all gains, whether recognized or not, are taxed each period. It ignores the time value of money benefits of postponing capital gains and the associated taxes.

Client-directed trades: Because we are attempting to measure the after-tax return resulting from the manager's actions, firms must remove the effects of the resulting capital gains taxes

by adjusting the ending value of the portfolio (on paper) by adding back the amount of the these non-discretionary taxes before calculating returns.

LOS 6.u

The following are the minimum items that should be present in a performance presentation:

- The correct compliance statement of the firm claiming compliance with the GIPS standards.
- The definition of the firm.
- The composite description.
- The composite creation date and that a complete list of firm composites and performance results are available upon request.
- Policies for valuing portfolios, calculating performance, and preparing compliant presentations are available upon request.
- The currency used.
- A complete description of the benchmark used, and if no benchmark is used, explain why none is suitable.
- Present at least five years of annual returns if available, adding an additional year until ten years are present.
- Present gross-of-fees or net-of-fees.
 - a. If gross-of-fees disclose, if any other fees are deducted in addition to trading expenses.
 - b. If net-of-fees disclose, if any other fees in addition to trading expenses and management fees are deducted.
- The management fee schedule is available upon request.
- The presentation of the data should contain at least seven columns.
 - a. The years.
 - b. The composite return, either gross or net of fees for each year.
 - c. The corresponding benchmark return for each year.
 - d. Number of portfolios in the composite for each year.
 - e. An internal measure of dispersion for each year.
 - f. The amount of composite assets at the end of each year.
 - g. Either total firm assets or composite assets as a percentage of total firm assets at the end of each year.
- Beginning 2011, present for each year an annualized 3-year ex post standard deviation, or some other measure, for both the composite and benchmark.

ANSWER KEY FOR MODULE QUIZZES

Module Quiz 6.1, 6.2, 6.3

1. GIPS require the returns from cash and cash equivalents held in portfolios must be included in total-return calculations as long as the portfolio manager has control over the amount of the portfolio allocated to cash. This requirement stands even if the manager does not actually invest the cash, as is the case when it is held in a money market sweep account. This would not be an acceptable practice. (Module 6.3, LOS 6.d)

2. GIPS require periodic returns to be geometrically linked. Thus, the annual return is computed as follows:

$$R_{\text{annual}} = [(1 + R_{Q1}) \times (1 + R_{Q2}) \times (1 + R_{Q3}) \times (1 + R_{Q4})] - 1 =$$

$$[(1.0300)(1.0415)(1.0375)(1.0315)] - 1 = 14.8\%.$$

(Module 6.3, LOS 6.d)

3. JIM may not claim compliance with the GIPS. A firm must be in full compliance with the GIPS in order to claim GIPS compliance. There is no such thing as *partial* compliance under the GIPS. (Module 6.2, LOS 6.b)

4. (a) The original Dietz method assumes that cash flows occur on average halfway through the month. This method is permissible for periods up to January 1, 2005.

$$R_{\text{Dietz}} = \frac{\text{EMV} - \text{BMV} - \text{CF}}{\text{BMV} + 0.5 \text{CF}} = \frac{55 - 50 - 3}{50 + 0.5 \times 3} = 3.88\%$$

- (b) The modified Dietz method gives a weighting to each cash flow but assumes that returns are even during the month. This method may be used for any period up to January 1, 2010.

$$R_{\text{MDietz}} = \frac{\text{EMV} - \text{BMV} - \text{CF}}{\text{BMV} + \sum_{i=1}^n W_i \times \text{CF}_i}$$

$$= \frac{55 - 50 - 3}{50 + \left(\frac{20}{30} \times 5\right) + \left(\frac{10}{30} \times (-2)\right)}$$

$$= 3.80\%$$

- (c) The most accurate calculation is the daily valuation method, for which a new subperiod is defined on the date of any cash flows. This method will be necessary for all periods after January 1, 2010.

The month divides into three periods:

$$\text{period 1 return} = (51.5 - 50.0) / 50 = 1.5 / 50 = 3.00\%$$

$$\text{period 2 return} = (59.0 - 56.5) / 56.5 = 2.5 / 56.5 = 4.42\%$$

$$\text{period 3 return} = (55.0 - 57.0) / 57.0 = -2 / 57.0 = -3.51\%$$

$$\text{geometric linking for the month} = (1.0300 \times 1.0442 \times 0.9649) - 1 = 3.78\%$$

(Module 6.3, LOS 6.d)

Module Quiz 6.4

1. Comment: I seem to recall that the GIPS require firms to present performance on a gross of management fees basis.

Incorrect. Under the GIPS, firms may present performance net or gross of fees, but gross-of-fees performance is recommended. The GIPS do require firms to disclose whether performance results are calculated gross or net of investment management and other fees paid by clients to the firm or to the firm's affiliates.

Comment: GIPS require that the firm include as total assets under management those assets managed by client-appointed sub-advisers if the firm retains discretion of more than 50% of the portfolio from which the assets were drawn.

Incorrect. Total firm assets include all discretionary and non-discretionary assets under management within the defined firm. They do not include assets assigned to a sub-adviser unless the firm has discretion over the selection of the sub-adviser.

Comment: Yes, under the GIPS, there is considerable flexibility in the wording of the GIPS compliance statement, but the one we included is recommended.

Incorrect. Firms that wish to claim non-verified compliance with the GIPS must use the following statement:

McGregor Asset Management claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. McGregor Asset Management has not been independently verified. (LOS 6.f, 6.j)

2. All actual fee-paying discretionary portfolios must be included in at least one composite. This requirement prevents firms from *cherry-picking* their best performing portfolios for presentation purposes. It does not matter if the firm ever plans to market the particular strategy to which a portfolio is being managed; if the portfolio is fee-paying and discretionary, it must be included in a composite. (LOS 6.f)
3. TIM cannot include model performance results in its presentation and claim compliance with the GIPS. Composites must include only assets under management and may not link simulated or model portfolios with actual performance. Simulated, back-tested, or model portfolio results do not represent the returns of actual assets under management and, thus, may not be included in the composites' GIPS-compliant performance results. The model results must be presented as simulated rather than real assets. (LOS 6.h)
4. **C** The most relevant and correct statement is that these special provisions apply when the manager controls the timing of ECFs. Normally time weighted returns must be used and IRR cannot be used because the client's decisions of when to add or withdraw funds from the account affect the IRR. A special case often applies to RE and PE because they are infrequently priced and generally lack liquidity. Therefore, the manager decides when the client can add or remove funds and SI-IRR is required.
The requirement to separately disclose income and pricing based return components is due to the general lack of objective market prices for these assets and it is not relevant to the question asked. It is true that small account results may be excluded from the GIPS report if the cutoff size is disclosed but that is unrelated to RE and PE issues,

making it a very poor answer choice. Non-discretionary accounts can never be included in GIPS results (though they are included in the firm's total assets). (LOS 6.d, 6.e)

5.

Characteristic	May Be Included in a Composite Must Be Excluded From Composite	Explanation*
Client has significant liquidity needs with an accompanying significant cash position.	Must be excluded	With both a significant liquidity requirement and cash position, <i>the manager's actions are limited to the point that the portfolio would probably not qualify as discretionary and thus should not be included.</i>
Client does not pay fees.	May be included	Fee-paying portfolios are required to be in a composite. <i>Non-fee-paying portfolios that are discretionary may be included.</i>
Client requests strictly following an index.	Must be excluded	If the portfolio has minimal tracking limits from an index portfolio, then <i>the description of discretionary is no longer appropriate.</i>

*Italics indicate an answer that would be sufficient for the exam. (LOS 6.f)

Module Quiz 6.5, 6.6, 6.7

1. The GIPS require terminated portfolios to be included in the historical record of the appropriate composite(s) through the last full reporting period that the portfolio was under management. This prevents the inclusion of the returns from a terminated portfolio for partial periods in a composite's return. Also, retaining the performance of a terminated portfolio in a composite's historical performance avoids survivorship bias. In the case of JIM, the terminated portfolio should be included in the composite until June 30 (i.e., the end of the month preceding July 15). (Module 6.4, LOS 6.h)

2.

Statement	Agree or Disagree	Explanation*
"Open-ended and evergreen funds must be presented as part of the company's managed private equity holdings."	Disagree	<i>Open-ended and evergreen funds are covered by the general provisions of the GIPS.*</i> This is because redemptions and subscriptions may be made after the funds' inception; therefore, open-ended and evergreen funds do not have fixed levels of capital with a set number of investors.

*Italics indicate an answer that would be sufficient for the exam.

(Module 6.7, LOS 6.n)

3. **C** For periods beginning January 1, 2008, real estate investments must be valued at least quarterly. External valuation must be done at least every 36 months by an outside,

independent party certified to perform such valuations. For periods beginning on or after January 1, 2012, this must be done at least every 12 months. The income and capital appreciation component returns must be presented in addition to the total return. (Module 6.7, LOS 6.n, 6.o)

Module Quiz 6.8

1. **B** A sponsor-specific composite is additional reporting the investment manager can make if desired. The primary requirement is for style-specific composites, regardless of who is the sponsor. Sponsor-specific composites must still group accounts by comparable style/objective and are then to be used only for reporting to that sponsor. These special-purpose sponsor-specific composites are reported before deduction of wrap fees and are to be labeled as only for the use of that sponsor to discourage the sponsor from using the results for client presentations. Certainly, LCM cannot use it for any purpose other than presentation to the sponsor, Quick. (LOS 6.p)
2. **C** The GIPS valuation hierarchy is as follows:
 1. Quoted prices from an active market for the same or a similar security.
 2. Quoted prices from an inactive market for the same or a similar security.
 3. Observable market-based inputs other than quoted prices.
 4. Subjective, unobservable inputs.

Based on this hierarchy, if observed market prices from an active market are not available, the next best valuation basis is to use quoted prices from an inactive market. (LOS 6.q)

Module Quiz 6.9

1. **B** Prior to January 1, 2011, after-tax performance reporting was encouraged. Effective January 1, 2011, after-tax performance reporting is considered supplemental information. (LOS 6.t)
2. **A** One of the major difficulties with after-tax performance reporting is finding an appropriate benchmark. There are no after-tax capital market indices available that account for capital gains taxes, so an after-tax capital market index would not be a suitable benchmark. (LOS 6.t)

Module Quiz 6.10

1. Errors and omissions in the McGregor performance presentation:
 1. The proper GIPS compliance statement.
 2. Definition of firm.
 3. Composite description.
 4. Benchmark description.
 5. If gross-of-fees returns, any fees in addition to trading expenses.
 6. If net-of-fees, any fees in addition to management fees and trading expenses that are deducted; if model or actual management fees are deducted; if net of any performance-based fees.
 7. Currency used to express returns.

8. Internal dispersion and the measure used.
9. Fee schedule.
10. Composite creation date.
11. That a list of composite descriptions is available.
12. That the policies for valuing portfolios, calculating performance, and preparing compliant statements are available.

Other omissions or errors:

- The correct compliance statement for an unverified GIPS-compliant performance presentation should read as follows:

McGregor Asset Management claims compliance with the Global Investment Performance Standards (GIPS®) and has prepared and presented this report in compliance with the GIPS standards. McGregor Asset Management has not been independently verified.

- For periods beginning on or after 2011, 3-year ex post standard deviation of monthly returns for composite and benchmark must be presented. Additional measure must be presented if management feels ex post standard deviation is inappropriate. (LOS 6.u)

2.

Action Number		Explanation of Why Action is Not GIPS Compliant
1.	1	The total return for the benchmark (or benchmarks) that reflects the investment strategy or mandate represented by the composite must be presented for the same periods for which the composite return is presented. The S&P 500 Index should not be used as a benchmark for the fixed-income and balanced composites.
2.	2	Portfolio valuations must be based on fair values (not cost basis or book values).
3.	4	The GIPS requires the disclosure of an appropriate fee schedule.
4.	6	Composites must be asset-weighted using beginning-of-period weightings or another method that reflects both beginning market value and cash flows.
5.	7	For periods beginning on or after January 1, 2010, a carve-out cannot be included as part of a composite unless it is managed separately with its own cash balance.
6.	9	Time-weighted rates of return that adjust for cash flows must be used. Periodic returns must be geometrically linked.

Actions 3, 5, 8, and 10 are in compliance with the GIPS.

(LOS 6.u)

1. Peter O. Dietz, *Pension Funds: Measuring Investment Performance* (New York: The Free Press, 1966).
2. Actual means that the portfolio is assets under management, not a model or simulated portfolio. A composite is a portfolio or group of portfolios managed to the same investment strategy or mandate.
3. CFA Program 2020 Curriculum, Volume 1, Level III.
4. Some index providers present returns net of withholding taxes on dividends.

Study Session 2

TOPIC ASSESSMENT: ETHICAL AND PROFESSIONAL STANDARDS

Use the following information to answer Questions 1 through 6.

Gerard Cutty, CFA, a technology stock analyst and money manager at Unique Investments, has been hearing rumors for months that Simpson Semiconductor was near a breakthrough on a next-generation telecommunications microchip. Simpson is best known for its expert design engineers, perennially shaky balance sheet, and extremely volatile stock.

One morning, as he is listening to a recorded *Barron's* interview with Simpson's CEO, who is also a CFA charterholder, he learns that Simpson has struck a licensing agreement with Simak Foundry, a privately held chip fabricator in Malaysia. Then he reads in *The Asian Wall Street Journal* that a Malaysian bank has loaned \$500 million to Simak for construction of a new plant.

Cutty owns an apartment in Paris that is leased to Gladys Catcher, CFA. The lease is about to expire, and Cutty and Catcher are currently in the process of renegotiating the terms of the lease. Cutty has other potential tenants for the apartment who are willing to pay more than what Catcher is currently paying, so he would like to negotiate a significant increase in the monthly payments.

Catcher works for a Paris public relations firm that handles accounts for a lot of Asian technology companies. Cutty calls Catcher, and after learning that her firm handled the Simak account, he asks what she knows about the Simak loan. Catcher says Simak has inked a deal with a big U.S. firm to make a new kind of microchip but will not say more. After conducting a detailed patent search, Cutty learns that a Simpson engineer has filed for a series of patents related to the new technology over the past 18 months.

Cutty works up detailed revenue and market share projections, then concludes that if the new technology works, it could triple the company's profits over the next three years. He writes up a research report on Simpson, detailing the licensing deal, specs on the new chip, and his opinion about the company's growth potential. Cutty then raises his rating on Simpson from neutral to high-risk buy.

Mary Wabb, lead portfolio manager for Unique Investments, calls Cutty into her office after reviewing the analyst's report. Wabb asks Cutty about his sources and methodology, and Cutty explains his thinking process. She then thanks Cutty for his good work and tells him he will receive Unique's World Series tickets this year. After Cutty leaves, Wabb makes minor edits to the report and sends it to the fulfillment department for inclusion in the daily email report and weekly printed report for clients and prospects. Then Wabb instructs the trading desk to purchase Simpson stock for all client accounts after the reports have been issued.

The day after Cutty's report is released, rival analyst Sue Ellen Slusher, CFA, publishes her own analysis of Simpson Semiconductor. She has talked with executives at Werfel Wafers, and she believes Simpson will never reap the profits from the new technology because she thinks Simpson infringed on one of Werfel's patents. In her report, Slusher specifically cites Cutty's report, quoting him directly and rebutting his conclusions point by point with her own research, criticizing his lack of thoroughness and questioning his abilities as an analyst and

his academic and professional credentials. Specifically, she says that she's a better analyst than he is because "he earned his charter way back in 1986, when the CFA[®] exam was a lot easier to pass than it is today, but I earned my charter last year."

1. In the production of his research report, Cutty violated:
 - A. Standard V(B) Communications with Clients and Prospective Clients.
 - B. Standard V(A) Diligence and Reasonable Basis.
 - C. none of the Standards.
2. Which of the following statements regarding potential violations of Standard III(A) Loyalty, Prudence, and Care in this scenario is *most accurate*?
 - A. Neither Cutty, Catcher, nor Simpson violated the Standard.
 - B. Cutty violated the Standard by using Catcher's information.
 - C. Catcher violated the Standard by revealing information about her client, Simak.
3. Which of the following statements, if found in Cutty's report without clarification, would *most likely* violate Standard V(B) Communications with Clients and Prospective Clients?
 - A. "Simpson controlled 25% of the communications-chip market five years ago but commands just a 14% share today."
 - B. "Simpson's sales have faltered in recent years, but I believe the new technology will bring back the days of 25% revenue growth."
 - C. "After a few phone calls and an analysis of the relevant information from our internal database, I concluded that Simpson's new technology was more than just a rumor."
4. Which of Wabb's actions *most likely* violated the Code and Standards? Her:
 - A. newsletter instructions violated Standard III(B) Fair Dealing.
 - B. trading instructions violated Standard III(C) Suitability.
 - C. handling of Cutty's research report violated Standard IV(C) Responsibilities of Supervisors.
5. Which of the following actions could Cutty have taken while researching his report on Simpson *without* violating CFA Institute Standards of Professional Conduct?
 - A. Ignoring a rival analyst's report on a Simpson competitor with a similar technology.
 - B. Using statements from the Standard & Poor's report on Simpson without verifying them.
 - C. Attributing the information about the \$500 million loan to Simak to a "leading financial publication."
6. According to CFA Institute Standards of Professional Conduct, Slusher violated:
 - A. Standard VII(B) Reference to CFA Institute, the CFA designation, and the CFA Program because of her criticism of Cutty's credentials.
 - B. Standard I(B) Independence and Objectivity because of her criticism of Cutty's research report and conclusions.
 - C. Standard I(C) Misrepresentation for her use of material from Cutty's report.

Use the following information to answer Questions 7 through 12.

Chandra Patel, CFA, manages private client portfolios for QED Investment Advisers. Part of QED's firm-wide policy is to adhere to CFA Institute Standards of Professional Conduct in the management of all client portfolios, and to this end, the firm requires that client objectives, investment experience, and financial limitations be clearly established at the outset of the relationship. This information is updated at regular intervals not to exceed 18 months. The information is maintained in a written IPS for each client.

Anarudh Singh has been one of Patel's clients ever since she began managing money ten years ago. Shortly after his regular situational update, Singh calls to inform Patel that his uncle is ill, and it is not known how long the uncle will survive. Singh expects to inherit "a sizable sum of money," mainly in the form of municipal bonds. His existing portfolio allocation guidelines are for 75% to be invested in bonds. Singh believes that the expected inheritance will allow him to assume a more aggressive investment profile and asks Patel to begin moving toward a 75% allocation to equities. He is specifically interested in opening sizable positions in several technology firms, some of which have only recently become publicly traded companies. Patel agrees to begin making the changes to the portfolio and the next day begins selling bonds from the portfolio and purchasing stocks in the technology sector as well as in other sectors. After placing the trade orders, Patel sends Singh an email to request that he come to her office sometime during the next week to update his IPS. Singh replies to Patel, saying that he can meet with her next Friday.

A few days before the meeting, however, Singh's uncle dies and the portfolio of municipal bonds is transferred to Singh's account with QED. Patel sees this as an opportunity to purchase more technology stocks for the portfolio and suggests taking such action during her meeting with Singh, who agrees. Patel reviews her files on technology companies and locates a report on NetWin. The analyst's recommendation is that this stock is a "core holding" in the technology sector. Patel decides to purchase the stock for Singh's account, as well as several other wealthy client accounts with high risk tolerance levels, but due to time constraints she does not review the holdings in each account. Patel does examine the aggregate holdings of the accounts to determine the approximate weight that NetWin should represent in each portfolio.

Since Patel has very recently passed the Level III examination and has been awarded her CFA charter, QED sends a promotional email to all of the firm's clients. The email states, "QED is proud to announce that Chandra Patel is now a CFA (Chartered Financial Analyst). This distinction, which is the culmination of many years of work and study, is further evidence of the superior performance you've come to expect at QED." Patel also places phone calls to several brokers that she uses to place trades for her accounts to inform them of her accomplishments, stating that she passed all three CFA examinations on her first attempts. One of the people Patel contacts is Max Spellman, a long-time friend and broker with TradeRight Brokers, Inc. Patel uses the opportunity to discuss her exclusive trading agreement with TradeRight for Singh's account.

When ordering trades for Singh's account, Patel's agreement with TradeRight for brokerage services requires her to first offer the trade to TradeRight and then to another broker if TradeRight declines to take the trade. TradeRight never refuses the trades from any manager's clients. Patel established the relationship with TradeRight because Singh, knowing the firm's fee schedule relative to other brokers, asked her to do so. However, because TradeRight is very expensive and offers only moderate quality of execution, Patel is

considering directing trades on Singh's account to BullBroker, which charges lower commissions and generally completes trades sooner than TradeRight.

7. Do QED's policies comply with CFA Institute Standards of Professional Conduct with respect to the information contained within their clients' IPSs and the frequency with which the information is updated?
 - A. Only one policy complies with the Standards.
 - B. Both policies comply with the Standards.
 - C. Neither policy complies with the Standards.
8. In light of Singh's comments during his telephone call to Patel prior to his uncle's death, which of the following actions that Patel can take comply with CFA Institute Standards of Professional Conduct? Patel:
 - A. must adhere, in principle, to the existing strategy but may begin altering the account's composition based upon Singh's expectations.
 - B. must not place any trades in the account until she meets with Singh to develop a new portfolio strategy based on the updated information.
 - C. must adhere to the existing portfolio strategy until she meets with Singh to develop a new portfolio strategy based upon updated financial information but may place trades which are consistent with the existing strategy.
9. According to CFA Institute Standards of Professional Conduct, may Patel reallocate Singh's portfolio toward technology stocks after his uncle dies but before the meeting with Singh?
 - A. Yes, because the funds have actually been transferred, and the timing is no longer uncertain.
 - B. No, because Patel and Singh must meet and revise the IPS and portfolio strategy before reallocating.
 - C. Yes, because the total value of the municipal bonds received into the account will be too large relative to the other assets in the portfolio.
10. Did Patel violate any CFA Institute Standards of Professional Conduct when she purchased the NetWin stock for Singh's portfolio or for the other clients' portfolios?
 - A. Patel violated the Standards for both Singh's portfolio and the other clients' portfolios.
 - B. Patel did not violate the Standards in regards to either Singh's portfolio or the other clients' portfolios.
 - C. Patel violated the Standards in regards to either Singh's portfolio or the other clients' portfolios but not both.
11. Which of the following statements regarding the promotional announcement of Patel passing the Level III exam and her phone calls about her accomplishment is *least accurate*?
 - A. The phone calls are not likely a violation unless she did not actually pass the exams on her first attempts.
 - B. The announcement violates the Code of Ethics because it implies that obtaining a CFA charter leads to superior performance.
 - C. The fact that a promotional announcement was made violates the restrictions on misrepresenting the meaning of the CFA designation.
12. If Patel continues to trade with TradeRight, will she be violating any CFA Institute Standards of Professional Conduct?

- A. No.
- B. Yes, because Patel is obligated to seek the best possible price and execution for all clients.
- C. Yes, because Patel failed to properly notify Singh that using TradeRight would lead to higher commissions and opportunity costs.

Use the following information to answer Questions 13 through 18.

MH Securities is a subsidiary of MH Group, a large Korean conglomerate, and has recently established offices in the United States and Canada. MH plans to target Korean Americans and Canadians for its services, which include selling the firm's research services as well as Korean equities, bonds, and won-denominated certificates of deposit (CDs). Chan-Heung Lee, CFA, has been hired to develop, implement, and oversee MH's compliance activities. Because there are very few compliance procedures in place, Lee will have to build the entire compliance framework. His objective is to conform to the CFA Institute Code and Standards. As one of his first steps, Lee decides to interview several MH employees to determine what formal and informal policies and procedures currently exist at the firm. Lee calls meetings with Jamie Jin, Nadine Yu, and Mark Larson, each of whom is a CFA charterholder.

Jamie Jin has recently been hired as an investment officer by MH. Jin informs Lee during their meeting that her previous employer, Rearguard Funds, has agreed to pay her a 25 basis point commission plus an annual bonus for all Rearguard Funds she sells to MH clients. Jin is unsure whether she will even use any Rearguard products with her new clients but agrees to the arrangement in case a client specifically requests a Rearguard product. Because the likelihood of actually receiving any compensation from Rearguard seems remote, Jamie has not previously disclosed the arrangement to MH.

In his meeting with Nadine Yu, an equity analyst at MH, Lee discovers that Yu has recently and abruptly changed her investment recommendation on Korean won-denominated bonds from buy to sell. She has prepared a research report to this effect and provides a copy to Lee in accordance with one of the firm's few existing compliance procedures. Her change of opinion is based upon nonpublic information provided to her in confidence by a friend on the monetary board at the Bank of Korea. While Lee is surprised at the abrupt change in the recommendation, he does not question the rationale and allows the report to be issued. Having received approval for her investment recommendation, Yu simultaneously releases the report to her individual and institutional research service subscribers as well as to MH's portfolio managers.

Lee's final meeting is with a new hire, Mark Larson, who has recently agreed to go to work for MH starting at the beginning of the next month. Lee is meeting with Larson to discuss new clients that Larson is expected to bring to MH. Larson, without providing details, assures Lee that he will have no problem increasing MH's client base. Prior to leaving his current employer, Affinity Advisers, Larson contacts 25 individuals from an Affinity prospect list by calling them, using public records and not Affinity's records, on Saturday mornings from his home. Of the prospects, a list of 10 individuals had previously been rejected as being too small for Affinity, but they still meet MH standards. The other list of 15 individuals remained viable prospects for Affinity. After learning of their status with Affinity, Larson suggests that all 25 prospects consider directing their business to him and his new firm, MH.

Lee's meetings with Jin, Yu, and Larson help him formulate compliance procedures. Lee decides that he will develop a written compliance manual that will be distributed to all of the

firm's employees. The manual will delineate procedures for reporting violations and sanctions, describe the supervision hierarchy and each supervisor's duties, and outline the steps to monitor and evaluate the compliance program. Lee also designates Jin as the employee with ultimate responsibility for the compliance procedures and their enforcement.

13. Because there are currently no compliance procedures in place, Lee should:
 - A. implement procedures based upon Korean securities laws and adjust these to conform with the CFA Institute Code and Standards as situations arise.
 - B. implement a comprehensive set of compliance procedures immediately and verify their conformance with the CFA Institute Code and Standards as circumstances dictate.
 - C. determine what constitutes adequate compliance procedures under the CFA Institute Code and Standards and then implement such procedures immediately.
14. Prior to her meeting with Lee, did Jin's decision regarding the disclosure of the arrangement with Rearguard Funds violate any CFA Institute Standards of Professional Conduct?
 - A. Yes.
 - B. No, because she disclosed the arrangement with Rearguard to Lee in their meeting.
 - C. No, because there was very little likelihood that she would actually receive a commission from Rearguard.
15. With regard to Yu's recommendation that investors sell Korean bonds, did Lee and Yu violate any CFA Institute Standards of Professional Conduct?
 - A. Neither Lee nor Yu violated any CFA Institute Standards.
 - B. Both Lee and Yu violated the CFA Institute Standards.
 - C. Only one person violated the CFA Institute Standards.
16. With respect to the release of Yu's investment recommendation, did Yu violate any CFA Institute Standards of Professional Conduct?
 - A. No.
 - B. Yes. Yu should have released the recommendation to the portfolio managers first.
 - C. Yes. Yu should have released the recommendation to the individual and institutional clients first.
17. In soliciting the list of 10 previously rejected prospects and the list of 15 viable prospects, did Larson violate any CFA Institute Standards of Professional Conduct?
 - A. No, regarding both lists.
 - B. Yes, regarding both lists.
 - C. Yes, regarding only one of the lists.
18. Does the compliance program developed by Lee after his meetings with MH employees comply with CFA Institute Standards of Professional Conduct?
 - A. Yes.
 - B. No. Authority to enforce the compliance program should rest with the compliance officer.
 - C. No. Assigning supervisory duties takes away the responsibility of all supervisors to detect all violations of the compliance procedures.

Use the following information to answer Questions 19 through 24.

Kyle Hogue, CFA, is an emerging market analyst for Garrison Equity Funds, a U.S.-based mutual fund manager. Hogue has been covering the South American markets for five years and generally makes several 1-week trips per year to visit various countries and businesses in his assigned markets. As part of his trips, Hogue meets with government officials to discuss economic policies of the country and with executives of firms within the country to gather information on both short- and long-term prospects for the companies.

During Hogue's latest data-gathering trip, he spent the majority of his time in Brazil. Brazilian legislators and economic policymakers informed Hogue that the country's taxation system was about to be restructured and that trade barriers were going to be relaxed. Under the new tax structure, foreign entities with operations in Brazil will face an increase in effective tax rates, while local firms will be given a 5-year reduction in their effective tax rate, which can be extended up to a maximum of 15 years. New policies with regard to foreign trade will reduce tariffs on foreign imports of consumer goods, but high tariffs will remain in effect for industrial and agricultural products, Brazil's largest contributors to its growing GDP. The policymakers give Hogue a confidential economic report used internally by government officials to read and return. The report contains detailed data on the general trends he had been discussing with the government and economic officials. Hogue photocopies the report and then returns the original as requested by his hosts.

Hogue also met with several Brazilian brokerage firms and members of the Brazilian stock exchange. During their first meeting, Hogue informed them that his research on the Brazilian market was being purchased by outside clients in record numbers. Hogue mentions that American investors are very excited about one company in particular, Brazil AgriTech, Inc. (BAI). Hogue notes that 3,000 investors have expressed great interest in purchasing BAI stock either directly or through Garrison's Brazil Fund within the next two months. He does not mention that only 600 investors actually expressed interest in purchasing the stock directly and that the remaining investors were existing clients who had expressed interest in purchasing shares of the Brazil Fund but had no specific opinions about the individual holdings.

During his final meeting with the exchange members, Hogue convinced two exchange specialists to enter into a contract with the exchange to increase their daily trading volume of BAI stock as well as the stock of Banc de Brazil (BDB), the country's largest private banking institution. BDB provides both commercial and investment banking services and has recently added brokerage services to its product mix. The trading contract will be effective the following day and will last for one year but will not be renewable at the end of its term. It is disclosed to potential investors in the marketing collateral.

Two days later, after returning to his office in the United States, Hogue has noticed that the stock price of BAI has risen and the bid-ask spread of BDB has narrowed, which he fully expected to occur. Hogue puts together a sell recommendation on BAI stock, noting in the report sharply lower growth in agricultural technological innovation and the increase in foreign-owned farms with access to better technologies developed outside of Brazil. He also constructs a buy recommendation on BDB stock, citing several key fundamental factors that make the stock attractive as well as a "deepening level of local market liquidity that will create attractive price entry points as a result of a temporary 1-year contract to increase market liquidity for BDB." Hogue releases the recommendation reports first to his "tier one" clients that pay the highest fees. He then issues shorter versions of the reports to the rest of his "tier two" clients later that day with a disclosure that more information is available upon

request. Hogue also sells all holdings of BAI stock in the Brazil Fund and purchases shares of BDB with the proceeds the day after the recommendations are released.

Hogue's supervisor, Marianne Jones, CFA, questions him regarding his method of distributing recommendations to his clients. Jones is relatively new to the firm and just wants to make sure everything is on the "up and up." Hogue explains that he offers different levels of service to his clients and that in order to receive a lesser subscription to his research reports, they must sign a waiver. He goes on to say:

"All clients are offered both levels of service so that clients are fully informed before making a decision. The details of the service levels, including fees charged for both, are contained in my marketing brochures along with 10-year performance figures for the Brazil fund. Because I have only been managing the fund for five years, I have included my predecessor's performance to present a full 10-year period. Our management styles are very similar, however, so this minor detail is only disclosed to those clients who ask. I generally find that my clients are only interested in the last five years of data anyway. The brochure presents market-value-weighted return data before any fees or taxes are deducted. These return calculation methods are disclosed in clear language in the brochure."

19. Did Hogue violate any CFA Institute Standards of Professional Conduct by meeting with Brazilian economic and governmental officials or by photocopying the economic report?
 - A. No, regarding both the meeting and the photocopying.
 - B. Yes, regarding both the meeting and the photocopying.
 - C. Yes, regarding either the meeting or the photocopying, but not both.
20. During his first meeting with the Brazilian brokers and stock exchange members, did Hogue violate any CFA Institute Standards of Professional Conduct?
 - A. No.
 - B. Yes, because he attempted to manipulate the market price of a Brazilian security.
 - C. Yes, because he failed to maintain independence and objectivity by meeting with influential Brazilian market participants.
21. Did the increased trading volume contract that Hogue negotiated between the Brazilian market specialists for the BDB stock violate any CFA Institute Standards of Professional Conduct?
 - A. No.
 - B. Yes, because the intent of the contract is to distort the trading volume of BDB in order to attract investors.
 - C. Yes, because the contract discriminates against clients who will purchase the stock after the 1-year term is over.
22. When he distributed his buy and sell recommendations on BDB and BAI, respectively, did Hogue violate any CFA Institute Standards of Professional Conduct?
 - A. No.
 - B. Yes, because he has released the two versions of the report at different times.
 - C. Yes, because he has issued two versions of the same report, which is a disadvantage to clients paying lower fees.
23. Has Hogue violated any CFA Institute Standards of Professional Conduct with respect to the time period of returns and method of calculating returns used in his performance presentation?

- A. Yes, regarding both the time period and calculation method.
 - B. No, regarding both the time period and calculation method.
 - C. Yes, regarding either the time period or calculation method, but not both.
24. By charging “tier one” and “tier two” clients different fees, has Hogue violated any CFA Institute Standards of Professional Conduct?
- A. No.
 - B. Yes, because the two classes of clients creates an inherent conflict of interest.
 - C. Yes, because having two classes of clients inappropriately discriminates against the lower fee clients.

Use the following information to answer Questions 25 through 30.

Jose Gonzales, CFA, was recently hired as a quantitative analyst for StatInvest, Inc., a national investment research firm covering investments in the United States and Canada. Gonzales has worked in similar positions for 11 years. Prior to joining StatInvest, Gonzales worked as an analyst and portfolio manager for Rutherford & Co., a much smaller company that served a regional market.

In his first assignment with StatInvest, Gonzales must put together a report that will be distributed to investors on a monthly basis. The report will center on investments within the North American industrial sector. Gonzales begins by rebuilding a quantitative stock selection model that he created and used while at Rutherford & Co. The model was originally designed to select stocks in the consumer products sector based on fundamental, technical, and quantitative factors. Gonzales has kept the primary algorithms for stock screening the same in the new model but has updated the key identifiers to coincide with the industrial sector rather than the consumer products sector.

Once the model is complete, Gonzales backtests the model to determine its accuracy and consistency in selecting investments with positive performance. He determines that in each of the last ten years, the model would have indicated a buy on the single best performing stock for the year. The model would have also indicated a buy on several stocks that had zero or slightly negative returns. Satisfied with the results, Gonzales begins to write his first report. Following are several excerpts from the report:

- “StatInvest’s model for selecting industrial sector stocks is based on a computerized algorithm that selects securities according to a factor screening mechanism. Dozens of fundamental, technical, and quantitative factors are used as selection criteria to recommend long and short positions.”
- “If StatInvest’s industrial sector model had existed ten years ago, investors would have had an average annual rate of return of 23% over the 10-year period. This estimate is based on backtesting of our model, which consistently recommended the top-performing stocks for each year over the past decade.”
- “The current buy recommendations include Pearson Metals, Nuvo Chemical Co., and Luna Mining. These three investment opportunities will provide returns in excess of 15% over the next 12 months. However, if a significant number of market participants develop (or are already using) models similar to StatInvest’s model, returns on these three company’s common stock could be different from our expectations.”

After the report is issued, Gonzales backs up his electronic files on a disk and has the disk archived in the firm’s offsite storage facility along with all of the hard copy files supporting

his model and the recommendation. Gonzales also begins to compile records to support investment recommendations he issued while working at Rutherford & Co. so that similar recommendations may be issued for StatInvest's consumer products division. All of the recommendations had an adequate basis at the time of issuance and were issued only a short time ago. After reanalyzing that relevant information and looking for significant changes in the company's financial positions, Gonzales determines that the recommendations are still valid. After Gonzales compiles the supporting documentation, he issues the recommendations.

Several clients who have been subscribing to Gonzales's monthly report have expressed a desire to have their portfolios professionally managed. Gonzales refers all clients expressing such an interest to Samantha Ovitz, CFA, a portfolio manager and partner of Ryers & Ovitz, Inc. In return for the referrals, Ryers & Ovitz subscribes to several periodic reports published by StatInvest, including the industrial sector report written by Gonzales. Ovitz, however, does not disclose the referral arrangement to clients and prospects because the funds used to pay for StatInvest research are allocated from a general overhead account and not directly from client fees, and because StatInvest's reports have a general disclaimer stating that "all referrals provided by StatInvest are in exchange for some benefit, whether monetary, in kind, or other compensation."

Ovitz is a board member of her local CFA Society and, through her position, often speaks to local media regarding the society's events as well as current issues in the investment community. Ovitz has often been quoted in the press expressing her disagreement with long-standing policies of CFA Institute. Despite her disagreements, however, Ovitz is also known to heavily promote the CFA designation in her dealings with the media. In a recent interview with a local newspaper, Ovitz noted the superior track record of CFA charterholders versus non-charterholders with respect to investment performance and ethical business practices. After reading the article, the chairman of the local CFA Society board called Ovitz to thank her for doing such an excellent job of maintaining the prestigious image of the CFA designation.

25. By developing the quantitative model to select stocks in the industrial sector, did Gonzales violate any CFA Institute Standards of Professional Conduct?
 - A. No.
 - B. Yes, because the underlying premise of the model is not based on adequate research or a reasonable basis.
 - C. Yes, because the basic model is the property of his former employer and Gonzales has not obtained permission to use the model.
26. In his first report on investments in the industrial sector, did Gonzales's description of the stock selection model or its historical results violate any CFA Institute Standards of Professional Conduct?
 - A. Both the model description and its historical results were violations of the Standards.
 - B. Neither the model description nor its historical results were violations of the Standards.
 - C. Either the model description or its historical results were violations of the Standards but not both.
27. In his first report on investments in the industrial sector, did Gonzales's three investment recommendations violate any CFA Institute Standards of Professional

Conduct?

- A. No.
 - B. Yes, because he failed to distinguish between fact and opinion with regard to expected performance.
 - C. Yes, because he provided an inherent guarantee of investment performance that cannot reasonably be expected.
28. With regard to his record retention actions and his reissuance of past investment recommendations, has Gonzales violated any CFA Institute Standards of Professional Conduct?
- A. Both his record retention and past recommendations are violations of the Standards.
 - B. Either his record retention or past recommendations are violations of the Standards but not both.
 - C. Neither his record retention nor past recommendations are violations of the Standards.
29. Does the referral arrangement between StatInvest and Ryers & Ovitz, Inc., violate any CFA Institute Standards of Professional Conduct?
- A. No.
 - B. Yes, because the referral arrangement is not properly disclosed to clients and prospects of Ryers & Ovitz, Inc.
 - C. Yes, because Ryers & Ovitz pays for the research out of a general overhead account, which disadvantages some clients.
30. In her dealings with the local media, has Ovitz violated any CFA Institute Standards of Professional Conduct?
- A. No.
 - B. Yes, because she has improperly exaggerated the meaning of the CFA designation.
 - C. Yes, because her comments regarding her disagreement with CFA Institute policies compromise the reputation of the organization.

Use the following information to answer Questions 31 through 36.

Patricia Spraetz, CFA, is the chief financial officer and compliance officer at Super Performance Investment Advisers. Super Performance is a large investment firm that manages discretionary investment accounts. The company has incorporated the Code and Standards into its compliance manual. Spraetz's most recent investigation involved Karen Jackson, a portfolio manager for Super Performance and a compensated board member of NewBio, a rapidly growing biotech company. Jackson is not a CFA charterholder. Super Performance's biotech analyst had previously determined that NewBio was a questionable investment and elected not to add it to the firm's monitored list. Recently, the board of NewBio needed to raise capital, and Jackson purchased NewBio for her clients who invest in biotech stocks.

Super Performance has three portfolio managers (Linda Cole, Thomas Bermudez, and Anthony Ring) who recently have been awarded the right to use the CFA designation and another portfolio manager (Diane Takao) who is scheduled to take the Level III CFA exam this year. The firm wants to include information about these individuals in a brochure.

Brenda Ford, a CFA Institute member, has been a full-time analyst for Super Performance for 12 years. She recently started providing investment services to private clients on her own time. Ford's direct supervisor at Super Performance told her she could start the business and gave her advice about how to get started on her own. Ford also sent a letter to each of her clients disclosing her employment at Super Performance.

Super Performance recently hired Ron Anderson, CFA, who previously worked as an independent investment adviser. Anderson wants to keep his existing clients for himself, and has obtained written consent from Super Performance to do so.

Tetsuya Wang, CFA, a trader at Super Performance, placed an order to purchase 70,000 shares of Imperial Shipping Company on behalf of his clients. Due to a clerical error within Super Performance, the wrong ticker symbol was entered for the trade, and 70,000 shares of Industrial Storage Company were inadvertently acquired. By the time the error was discovered two hours later, Industrial Storage Company shares had declined in price and there was a loss on the reversing trade.

Joe Kikuchi, manager at Eastern Trading, the brokerage firm that executed the trade, offered to absorb the loss on the trade, as well as the commission expense, thus making up the loss for all of Wang's clients. Eastern will do this if Super Performance assures Eastern that it will place orders to purchase or sell an aggregate of 1 million shares over the next two years with Eastern Trading. Super Performance's orders with Eastern have averaged 500,000 shares each year for the last five years. Eastern delivers best price and execution, offers reasonable commission prices, and provides Wang with soft dollars for research.

Williams & Fudd is a major brokerage and investment-banking firm. Super Performance is one of the top three holders of each of the securities listed on Williams & Fudd's "PrimeShare #10" equity security list. On the morning of August 22, Williams & Fudd released a research report recommending the purchase of Skelmerdale Industries to its clients, including Super Performance. On the afternoon of August 23, Super Performance bought 1.5 million shares of Skelmerdale.

31. After reviewing the Jackson case, Spraetz reviews Super Performance's policy statement. Which of the following excerpts from the policy statement concerning responsibilities to clients is likely to be the *most* relevant to the case?
 - A. "Avoid misrepresenting the characteristics of the investment, as not all investments are suitable for all clients."
 - B. "Keep sufficient records to justify all investment actions in the event that those actions are challenged in the future."
 - C. "Distinguish between fact and opinion. Well-formed opinions are a cornerstone of money management but must always be identified as opinions."
32. To satisfy the Code of Ethics, Spraetz must act with:
 - A. integrity, competence, and diligence.
 - B. conviction, skill, and ethical awareness.
 - C. honesty, professionalism, and goodwill.
33. Which of the following statements in Super Performance's marketing brochure *best* complies with the Code and Standards?
 - A. Linda Cole is one of more than 100 elite CFA charterholders at Super Performance.
 - B. Diane Takao is a Level III CFA candidate.

- C. Anthony Ring, a Chartered Financial Analyst, has more than ten years of portfolio management experience and is most qualified to manage client investments.

34. Which of the following statements regarding Standard IV Duties to Employers is *most accurate*?
- A. Neither Ford nor Anderson violated the Standard.
 - B. Either Ford or Anderson violated the Standard but not both.
 - C. Both Ford and Anderson violated the Standard.
35. Wang rejects Kikuchi's offer to cover the costs of Wang's trading error. Which of the following is *most likely* to be the underlying rationale for the rejection?
- A. Trade volume.
 - B. Commissions.
 - C. Soft dollars.
36. Super Performance's purchase of Skelmerdale stock violates:
- A. the fair dealing standard because clients were never told about the stock.
 - B. the disclosure of conflicts standard because clients were unaware of Super Performance's history of investing in Williams & Fudd's recommendations.
 - C. no standards.

TOPIC ASSESSMENT ANSWERS: ETHICAL AND PROFESSIONAL STANDARDS

1. **C** Cutty's use of someone with whom he does personal business as a source could be perceived by some as a conflict of interest. However, there seems to be no ill intent, and Cutty corroborated Catcher's information from an additional source (the patent search). The research reports Standard requires that the analyst use reasonable judgment and distinguish between fact and opinion—Cutty did that. Cutty's broad-based research also satisfies the requirements of the reasonable basis Standard. (Study Session 1, Module 2.7, LOS 2.a, 2.b)
2. **A** Cutty and Catcher's real estate negotiations reflect Paris real estate market conditions. Catcher works in public relations and only discusses a loan that has been reported in the press. There is no indication of revealing material nonpublic information or material conflicts of interest. This makes no violation the best answer choice. (Study Session 1, Module 2.4, LOS 2.a, 2.b)
3. **C** While Cutty clearly states that his opinion is based on his own conclusions rather than verifiable facts, he violates Standard V(B) by not providing details about the evaluation process, which was quite complicated. Therefore, choice C is not an adequate description of the process, and it is a violation of the Standard. Cutty's use of "I believe" suggests the statement about sales in choice B is his opinion. Historical market-share data is a fact, not an opinion, and can be stated as such as in choice A. Therefore, choices A and B are not violations. (Study Session 1, Module 2.7, LOS 2.a, 2.b)
4. **B** Because Simpson is a risky stock, it is probably not suitable for all clients, and a blanket purchase order violates Standard III(C) Suitability. Wabb's instructions for the fulfillment department meet the requirements of Standard III(B) Fair Dealing, as the Standard does not require that everyone be notified at the same time, only that the dissemination of information is handled fairly. In this case, everyone with email will get the information at the same time, and those without email will get it later, but at the same time as their low-tech peers. Wabb acted correctly as a supervisor by verifying Cutty's facts and procedures. (Study Session 1, Module 2.5, LOS 2.a, 2.b)
5. **B** Members are in compliance with Standard V(A) Diligence and Reasonable Basis if they depend on the research of others they know to be competent and diligent. S&P qualifies as such a source. A rival's report about a competitor with similar technology could have a material effect on Cutty's financial model for Simpson and must be considered. Cutty should acknowledge the appropriate source of his information, so his clients can assess for themselves the credibility of the source and the veracity of the information. (Study Session 1, Module 2.7, LOS 2.a, 2.b)
6. **A** Slusher's claim that her credentials are superior to Cutty's because she earned her charter more recently is a violation of Standard VII(B) Reference to CFA Institute, the CFA designation, and the CFA Program. Slusher did not plagiarize Cutty's work because she cited him as the author. Just because Slusher disagrees with and criticizes Cutty's well-researched opinion does not mean she has violated the independence and objectivity standard. (Study Session 1, Module 2.9, LOS 2.a, 2.b)

7. **A** According to Standard III(C) Suitability, members and candidates must consider investment experience, objectives (risk and return), and constraints before investing funds on the client's behalf or recommending investments to the client. The firm has complied with this part of Standard III(C). The IPS must be updated at least annually or after significant changes in client circumstances, according to the guidance statement accompanying Standard III(C). Thus, the firm has not complied with Standard III(C) in this regard. (Study Session 1, Module 2.5, LOS 2.a, 2.b)
8. **C** According to Standard III(C) Suitability, Patel must observe the written investment objectives now in effect as determined in cooperation with the client and may trade only on that basis. Because the anticipated change in Singh's financial condition was subject to an event of indeterminable timing, she should continue to honor the existing written investment objectives until a change (1) is warranted by an actual increase in the client's total financial assets and (2) has been agreed upon with her client. (Study Session 1, Module 2.5, LOS 2.a, 2.b)
9. **B** According to Standard III(C) Suitability, investment recommendations and actions must be consistent with a client's written objectives and constraints (usually in the form of an IPS). Because Singh's written IPS would not allow the large allocation to technology stocks prior to receiving the inheritance, the IPS must be updated by Singh and Patel prior to taking any actions that deviate from the original IPS. Patel will violate Standard III(C) by reallocating the portfolio before meeting with Singh. (Study Session 1, Module 2.5, LOS 2.a, 2.b)
10. **A** According to Standard III(C) Suitability, Patel must analyze the appropriateness and suitability of NetWin stock on a case-by-case basis before buying it. This will necessarily consider the basic characteristics of the security and how these will affect overall portfolio characteristics relative to the existing investment strategy for each portfolio. Patel has not analyzed the effect that the stock will have on any of the individual portfolios in question and has thus violated the Standard. Patel cannot look at aggregate measures to determine the appropriate weight that the security should represent in the individual portfolios because the portfolios are being managed individually, not in aggregate. (Study Session 1, Module 2.5, LOS 2.a, 2.b)
11. **C** An announcement that a member of a firm has received the right to use the CFA[®] designation is not a violation of the Code or Standards. However, Standard VII(B) requires that any reference to the Charter must not misrepresent or exaggerate the meaning or implications of the CFA designation. A Charterholder cannot claim that holding a Charter leads to superior performance results. The letters "CFA" can only be used as an adjective (never a noun, as in "he is a CFA"). As long as it is true, stating that she passed her exams on her first attempts is not a violation. (Study Session 1, Module 2.9, LOS 2.a, 2.b)
12. **A** Because Singh directed Patel to use TradeRight, this should be considered client-directed brokerage. While Patel should inform Singh of the implications of that choice, Patel has no option but to follow the client's direction according to Standard III(A) Loyalty, Prudence, and Care. Singh was fully aware of the fees charged by TradeRight relative to other brokerage firms and elected to use TradeRight anyway. Answer choice B is generally correct in the absence of client direction. (Study Session 1, Module 2.4, LOS 2.a, 2.b)

13. **C** In order to best conform to the CFA Institute Code and Standards, Lee should first define what constitutes adequate standards. According to Standard IV(C) Responsibilities of Supervisors, “‘adequate’ procedures are those designed to meet industry standards, regulatory requirements, the requirements of the Code and Standards, and the circumstances of the firm.” Once this has been done, he should implement the procedures immediately. (Study Session 1, Module 2.6, LOS 2.a, 2.b)
14. **A** In order to be in compliance with Standard IV(B), Jin must disclose all additional compensation arrangements, in writing, to her employer. It does not matter whether Rearguard actually pays her a commission on the funds or whether the firm previously had such a policy. In addition, the relationship with Rearguard creates a potential conflict of interest between Jin and her clients because she may be tempted to increase her income by recommending Rearguard Funds that are inappropriate for her clients’ needs. Standard VI(A) Disclosure of Conflicts requires disclosure of such conflicts to clients and prospects. There is no indication that Jin has made such a disclosure. (Study Session 1, Modules 2.6 and 2.8, LOS 2.a, 2.b)
15. **B** Yu is in violation of Standard II(A) Material Nonpublic Information, as she has used material nonpublic information in her investment recommendations. She is forbidden to act upon such information. Lee, the firm’s compliance officer, has violated Standard IV(C) Responsibilities of Supervisors in the discharge of his responsibility as a supervisor. Given the abrupt change in the recommendation, Lee should have attempted to determine if there was a reasonable basis for the dramatic shift in opinion. (Study Session 1, Modules 2.3 and 2.6, LOS 2.a, 2.b)
16. **A** According to Standard III(B) Fair Dealing, members and candidates must ensure that all clients are treated equitably with regard to investment recommendations and investment actions. Because MH has clients that subscribe to their research service but do not pay for portfolio management services and the firm has clients that pay for discretionary portfolio management, investment recommendations must be communicated to research subscribers and the firm’s portfolio managers simultaneously in order to ensure that all clients have equal opportunity to trade on the firm’s research without being disadvantaged because of the type of service the client receives. (Study Session 1, Module 2.4, LOS 2.a, 2.b)
17. **C** According to Standard IV(A) Loyalty, Larson must not solicit current or prospective Affinity clients prior to his leaving. Larson is allowed to solicit prospects that have been rejected by Affinity as long as he does so on his own time, does not use Affinity’s client lists, and his actions do not impair his performance at work. His solicitation of prospects who are still viable for Affinity is a clear violation of duty to his employer under Standard IV(A). (Study Session 1, Module 2.6, LOS 2.a, 2.b)
18. **B** According to Standard IV(C) Responsibilities of Supervisors, the responsibility to implement procedures and the authority to enforce the procedures should both reside with the compliance officer (in this case Lee, rather than Jin, who is an investment officer). (Study Session 1, Module 2.6, LOS 2.a, 2.b)
19. **C** In meeting with the officials, Hogue is performing proper due diligence on the Brazilian market to support his recommendations to clients. This is entirely appropriate. There is no indication that he is being inappropriately influenced by the policymakers, and the meeting is not a violation of the Standards. By photocopying the

report, however, Hogue has violated Standard I(D) Misconduct. Under the Standard, he is not to commit any professional act involving dishonesty or deceit or conduct himself in a way that reflects poorly on his professional reputation, integrity, or competence. The report was marked confidential and Hogue was instructed to return it after he had a chance to read it. The intent was not to distribute the report for Hogue's professional benefit. He has, therefore, deceived the officials by photocopying the report without receiving permission. (Study Session 1, Module 2.2, LOS 2.a, 2.b)

20. **B** Hogue clearly exaggerated the American investors' interest in BAI stock in an attempt to get local market participants to buy the stock in anticipation of increased American investment. By pumping the stock, the price rose, and Hogue sold the Brazil Fund position and recommended investors do the same to take advantage of the artificially high prices. Hogue cites poor business prospects in his sell recommendation, a clear indication of his devious intent in claiming the high level of interest from American investors. By manipulating market prices in Brazil, Hogue has violated Standard II(B) Market Manipulation. (Study Session 1, Module 2.3, LOS 2.a, 2.b)
21. **A** The contract is fully disclosed to potential investors in the marketing collateral. Thus, investors can evaluate for themselves the true cost of the transactions. Therefore, the intent of the increased liquidity is not to deceive investors, but rather to increase the market liquidity and ease of trading for foreign investors. The contract does not violate Standard II(B) Market Manipulation because it is disclosed. If it were not disclosed, however, it would constitute a violation. (Study Session 1, Module 2.3, LOS 2.a, 2.b)
22. **B** Standard III(B) Fair Dealing requires members and candidates to deal fairly with their clients. Hogue can offer different levels of service so long as it is disclosed to his clients and all service levels are available to all clients. Because his "tier one" clients pay higher fees, the depth of research they receive may be greater than the "tier two" clients without violating the Standard. By releasing the reports at different times, however, the "tier two" clients are put at a great disadvantage simply because they subscribe to a lesser level of service. This is a violation of Standard III(B), which says that members can offer different services to clients, but different levels of service must not disadvantage clients. (Study Session 1, Module 2.4, LOS 2.a, 2.b)
23. **C** According to Standard III(D) Performance Presentation, Hogue must disclose the fact that the 10-year performance history of the fund is composed of five years of his performance and five years of his predecessor's performance. By not disclosing this, the presentation is misleading and violates Standard III(D). It does not matter that the investment styles are similar or that he believes most investors are only interested in the last five years of data. Performance presentations need to be fair, accurate, and complete. His method of calculating returns before fees and taxes on a market-value-weighted basis is acceptable and fully disclosed. Therefore, the calculation methodology does not constitute a violation of Standard III(D). (Study Session 1, Module 2.5, LOS 2.a, 2.b)
24. **A** Hogue is allowed to offer different levels of service without violating Standard III(B) Fair Dealing, as long as the different levels of service are fully disclosed and offered to all clients and prospects. Hogue has his "tier two" clients sign a waiver indicating they are aware of the different levels of service offered by the firm. Thus, he has complied with the Standard. (Study Session 1, Module 2.4, LOS 2.a, 2.b)

25. **A** Gonzales has recreated the model that he developed while working for his previous employer. He did not take the model or its supporting documentation from his employer. Instead he has reproduced them from memory and customized the model to fit his current requirements. Therefore, he has not violated Standard I(C) Misrepresentation by committing plagiarism, nor Standard IV(A) Loyalty because he recreated the model at StatInvest and did not simply copy the model and use it for his new employer's gain. By updating the key identifiers to reflect the industrial sector and by backtesting the model, Gonzales has complied with Standard V(A) by having a reasonable and adequate basis, supported by appropriate research and investigation, for his analysis. (Study Session 1, Module 2.7, LOS 2.a, 2.b)
26. **C** The description provided by Gonzales is an accurate depiction of the process by which the model selects stocks to recommend for either a purchase or sell. Gonzales does not provide every detail regarding the individual factors used to screen the stocks or how the algorithm works because these are proprietary details. In describing the historical results of the model, however, Gonzales has violated Standard III(D) Performance Presentation and Standard I(C) Misrepresentation. In his report, Gonzales omitted the fact that the model selected several stocks with zero or negative returns. By not including this result in the report, Gonzales is not portraying a fair, accurate, and complete performance record [a violation of Standard III(D)] and, thus, intentionally misleads his clients with the recommendations [a violation of Standard I(C)]. Clients are lead to believe that the model only picks top performers and, therefore, the recommendations in the report imply that they will fall into this category. (Study Session 1, Module 2.5, LOS 2.a, 2.b)
27. **C** Gonzales has provided a guarantee that the investment returns are going to provide a return in excess of 15%. This is a misrepresentation of the risk inherent in the stocks and is a violation of Standard I(C) Misrepresentation, which prohibits such misrepresentations. (Study Session 1, Module 2.2, LOS 2.a, 2.b)
28. **C** Standard V(C) Record Retention requires members and candidates to maintain records supporting their research and investment recommendations. Gonzales has kept a copy of both his electronic and hard copy files used to generate his report and has thus complied with the Standard with regard to his record retention practices. The fact that the records are stored off site is not relevant as long as they are being appropriately maintained. Gonzales has also not violated any Standards by compiling research to support an investment recommendation he made while at another firm. As long as he did not reissue the recommendation without supporting documentation or take (without permission) the supporting documentation from the previous employer, he has not violated the Standards. (Study Session 1, Module 2.7, LOS 2.a, 2.b)
29. **B** Ovitz cannot rely on disclosures made by StatInvest but must disclose the referral arrangement to clients and prospects herself. It does not matter that a general overhead account is designated as the source of funds for the research purchased from StatInvest. Ryers & Ovitz, Inc., and StatInvest have an agreement that provides a form of compensation to both parties and may pose a cost to the client either directly or indirectly. In order to assess the full cost of either firms' services, the client must be aware of the referral arrangement. By not actively disclosing the agreement, Ovitz has violated Standard VI(C) Referral Fees. (Study Session 1, Module 2.8, LOS 2.a, 2.b)

30. **B** Standard VII(A) prohibits members and candidates from taking any action that compromises the integrity or reputation of CFA Institute, the CFA designation, or the CFA exam. Members and candidates are allowed, however, to disagree with CFA Institute policies and express their lack of agreement. Therefore, Ovitz did not violate Standard VII(A). Ovitz did violate Standard VII(B), which prohibits members and candidates from exaggerating the meaning of the CFA designation. Ovitz has implied that CFA charterholders are better investment managers and more ethical than other investment professionals, which overstates the implications of being a charterholder. (Study Session 1, Module 2.9, LOS 2.a, 2.b)
31. **B** There is no evidence that Jackson misrepresented the characteristics of NewBio. Because she only purchased it for clients who already invest in biotech stocks, these are clients for whom biotech presumably fits their objectives and constraints. The issue concerning fact versus opinion does not appear relevant to the situation. The key issue is that Jackson acted against the advice of Super Performance's biotech analyst, who is on record as not liking the stock, so she may be hard pressed to produce records justifying her purchase of NewBio stock. (Study Session 1, Module 2.7, LOS 2.a, 2.b)
32. **A** The first component of the Code of Ethics states, "Act with integrity, competence, diligence, and in an ethical manner..." All of the traits described are good for an analyst to have, but none of the other combinations can be found explicitly in the Code of Ethics. (Study Session 1, Module 1.1, LOS 1.b)
33. **B** The description of Diane Takao as a Level III CFA candidate is accurate. CFA members must not misrepresent or exaggerate the meaning of the CFA designation. (Study Session 1, Module 2.9, LOS 2.a, 2.b)
34. **C** Together, Standard IV(A) Loyalty and Standard IV(B) Additional Compensation Arrangements require that Ford and Anderson obtain written consent from both their employer (Super Performance) and the clients for whom they undertake independent practice. Anderson received written permission from his employer, but not from his clients. Ford received only verbal permission from her employer, and while she notified her clients in writing, she did not receive their permission. As such, both Ford and Anderson violated the Standard. (Study Session 1, Module 2.6, LOS 2.a, 2.b)
35. **C** Logic dictates that even though Eastern is volunteering to cover the costs of Wang's trading error, they will seek to offset this cost in some way. The most likely method for Eastern to recoup these costs is to reduce the soft dollar compensation to Super Performance. In so doing, Super Performance is effectively transferring resources that belong to the client (soft dollars) to itself, and this violates its fiduciary duty to its clients. The other factors listed seem reasonable or are unlikely to be affected under the situation. (Study Session 2, Module 5.1, LOS 5.b, 5.c, 5.d)
36. **C** There is no violation. Super Performance manages discretionary accounts, so its clients need not be told about the stock, and the company can purchase the stock without disenfranchising any clients. There is no significance to a 48-hour period for trading. Super Performance's purchase of Williams & Fudd recommendations violates no Standard. As long as the firm believes Williams & Fudd's research is good and buys the stock on the open market, there is no conflict of interest. (Study Session 1, Module 2.8, LOS 2.a, 2.b)

The following is a review of the Behavioral Finance principles designed to address the learning outcome statements set forth by CFA Institute. Cross-Reference to CFA Institute Assigned Reading #7.

READING 7: THE BEHAVIORAL FINANCE PERSPECTIVE¹

Study Session 3

EXAM FOCUS

This opening topic review introduces the concept of behavioral finance, contrasts it with traditional finance theory, and then explores its affects on investment decision-making. Behavioral finance is a relatively modern concept, and the CFA Institute introduced it into the curriculum at an early stage in the evolution of the concept. It is highly likely behavioral finance will be tested with a dedicated item set or as part of a constructed response question. In constructed response it is often linked into an investment policy statement question.

Some candidates find this study session confusing. Much of the terminology is redundant in that more than one term can mean the same thing. Many of the concepts are overlapping, and most of the questions depend heavily on comprehending the terminology. Your focus should be on understanding the basic meaning of each term as given in the material.

MODULE 7.1: INTRO: TRADITIONAL FINANCE VS. BEHAVIORAL FINANCE

LOS 7.a: Contrast traditional and behavioral finance perspectives on investor decision making.



Video covering this content is available online.

CFA[®] Program Curriculum, Volume 2, page 7

Traditional finance (TF) focuses on how individuals *should* behave. It assumes people are rational, risk-averse, and selfish utility maximizers who act in their own self-interests without regard to social values—unless such social values directly increase their own personal utility. Utility can be defined as the pleasure or satisfaction an individual gains from obtaining or consuming a good or service. Such individuals will act as *rational economic men* (REM), which will lead to efficient markets where prices reflect all available, relevant information. Traditional finance is concerned with normative analysis and determining the rational solution to a problem. It uses prescriptive analysis to look for practical tools and methods to find those rational solutions.

Behavioral finance (BF) is descriptive, which focuses on describing how individuals behave and make decisions. It draws on concepts of traditional finance, psychology, adaptive economics, and neuroeconomics. Neuroeconomics has been used to look at decision-making under uncertainty, drawing on studies of brain chemistry to understand how decision-making utilizes both rational and emotional areas of the brain. Behavioral finance recognizes that the way information is presented can affect decision-making, leading to both emotional and cognitive biases.

- **Cognitive errors.** Errors resulting from faulty information processing or memory. These often arise from the brain's attempt to simplify information processing.
- **Emotional bias.** Errors resulting from the priority of human emotions over rational decision-making. Emotions such as joy, hate, fear, and love may result in decision-making that differs from a rational, dispassionate approach.

Individuals are *normal* and may or may not act in a risk-averse utility maximization manner. Their resulting decisions may be suboptimal from a rational (traditional finance) perspective. This can result in markets that temporarily or persistently deviate from efficiency.

Behavioral finance can be divided into two general categories: micro and macro. *Micro behavioral finance* is concerned with describing the decision-making processes of individuals. It attempts to explain why individuals deviate from traditional finance theory. *Macro behavioral finance* focuses on explaining how and why markets deviate from what we would term *efficient* in traditional finance.

By understanding how investors and markets actually behave, and the divergence of actual and theoretically optimal behavior, it is hoped that investors can modify their actions to achieve better outcomes. A better outcome is defined as being closer to the optimal normative outcome suggested by traditional finance.

Raiffa² provides a framework for the analysis of decision-making:

1. **Normative analysis.** The optimal rational solution. This is the solution decisions should strive to emulate.
2. **Descriptive analysis.** Focusing on how individuals actually make decisions.
3. **Prescriptive analysis.** Advice and tools aimed at aligning actual behavior with the normative ideal.

Traditional Finance

Traditional finance is based on neoclassical economics and assumes individuals are risk-averse, have perfect information, and focus on maximizing their personal utility function. Investors who behave this way are then defined as rational, or a REM. Such behavior leads to efficient markets where prices reflect available, pertinent information. A rational investor will exhibit utility theory, which asserts individuals have a limited budget and will select the mix of goods and services that maximize their utility. A rational decision maker will follow four self-evident rules or axioms:

- *Completeness* assumes individuals know their preferences and use them to choose between any two mutually exclusive alternatives. Given a choice between D or E, they could prefer D, E, or be indifferent.
- *Transitivity* assumes individuals consistently apply their completeness rankings. If D is preferred to E and E is preferred to F, then D must be preferred to F.
- *Independence* assumes rankings are also additive and proportional. If D and F are mutually exclusive choices where D is preferred and J is an additional choice that adds positive utility, then $D + x(J)$ will be preferred to $F + x(J)$. In this case, x is some portion of J.
- *Continuity* assumes utility indifference curves are continuous, meaning that unlimited combinations of weightings are possible. If F is preferred to D, which is preferred to E,

then there will be a combination of F and E for which the individual will be indifferent to D.

For the Exam: Many of the assertions that are said to be self-evident under TF are not so self-evident under BF. Behavioral finance essentially asserts that this is not the way individuals always act. Most of the terminology you see here should be familiar from Levels I and II with some additions. The next section covers Bayes' formula, which was called Bayes' Theorem and posterior probabilities at Level I.

A REM, when presented with new information, is assumed to adapt his beliefs about probabilities using Bayes' formula. The following are REM assumptions in the presence of uncertainty:

1. Individuals follow the four axioms of utility theory.
2. Individuals assign probability measures to uncertain events.
3. Individuals incorporate new information by updating probabilities according to Bayes' formula.
4. Individuals choose actions to maximize utility based on these conditional probabilities.

$$P(A|B) = \frac{P(B|A)}{P(B)} P(A)$$

where:

$P(A|B)$ = probability of event A occurring given that event B has occurred; conditional probability of event A

$P(B|A)$ = probability of event B occurring given that event A has occurred; conditional probability of event B

$P(B)$ = unconditional probability of event B occurring

$P(A)$ = unconditional probability of event A occurring

EXAMPLE: Applying Bayes' formula

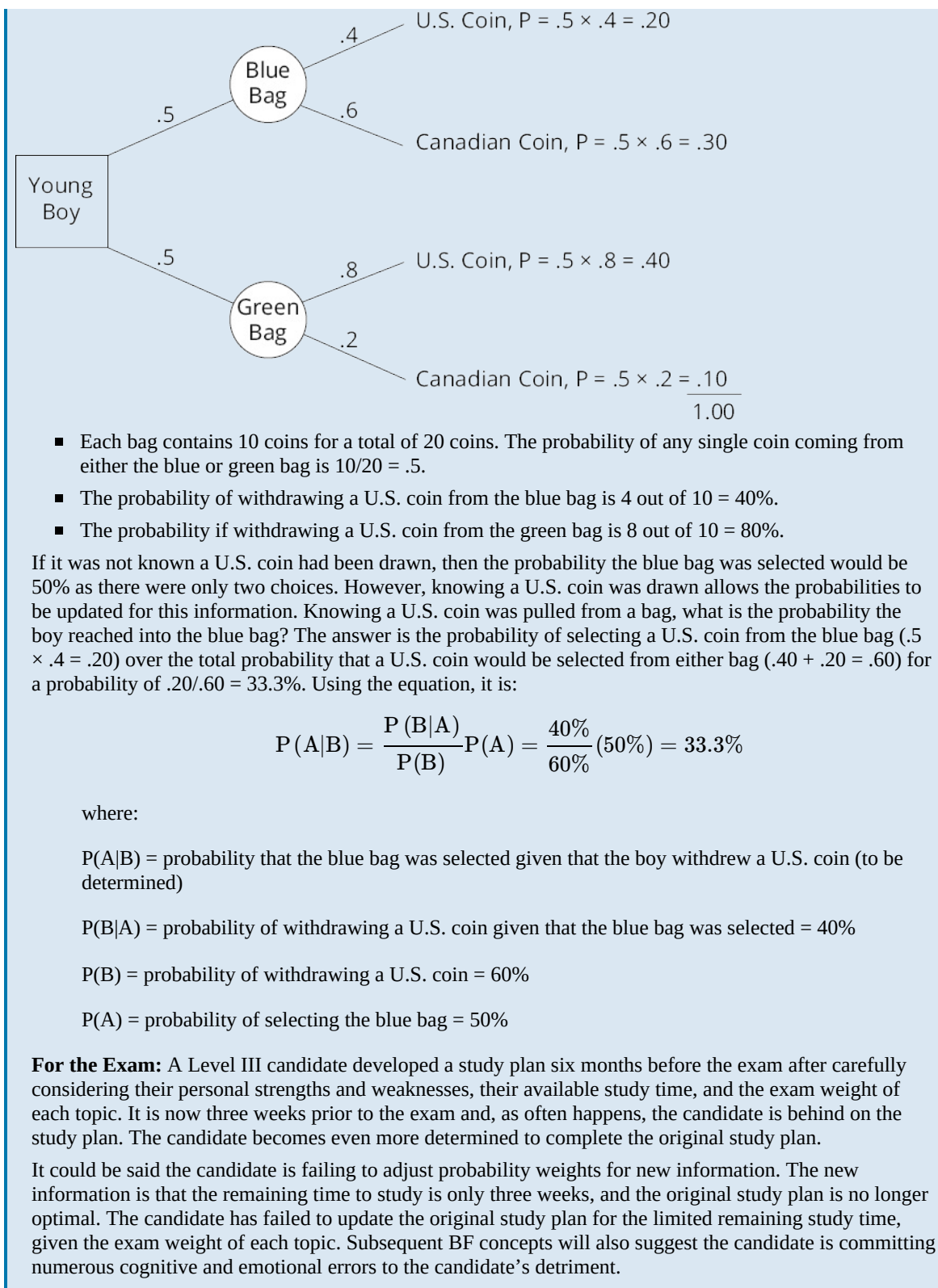
Assume a blue bag and a green bag each contain 10 coins:

- The blue bag contains 4 U.S. coins and 6 Canadian coins.
- The green bag contains 8 U.S. coins and 2 Canadian coins.

Without looking at the bags, a young boy reaches into one of them and withdraws a U.S. coin. Determine the probability that the boy reached into the blue bag.

Answer:

The first step is to draw the event diagram.



RISK AVERSION

Traditional finance generally assumes individuals are risk-averse and prefer greater certainty to less certainty. In contrast, behavioral finance assumes that individuals may be risk-averse, risk-neutral, risk-seeking, or any combination of the three; the way something is presented

can affect decision-making. The concepts can be illustrated by considering what a person would pay to participate in an investment with an equal probability of the investment paying back immediately GBP 100 or GBP 200. In other words, it would pay back on average GBP 150.

The maximum an individual would be willing to pay to participate in an event with uncertain outcomes is referred to as the certainty equivalent.

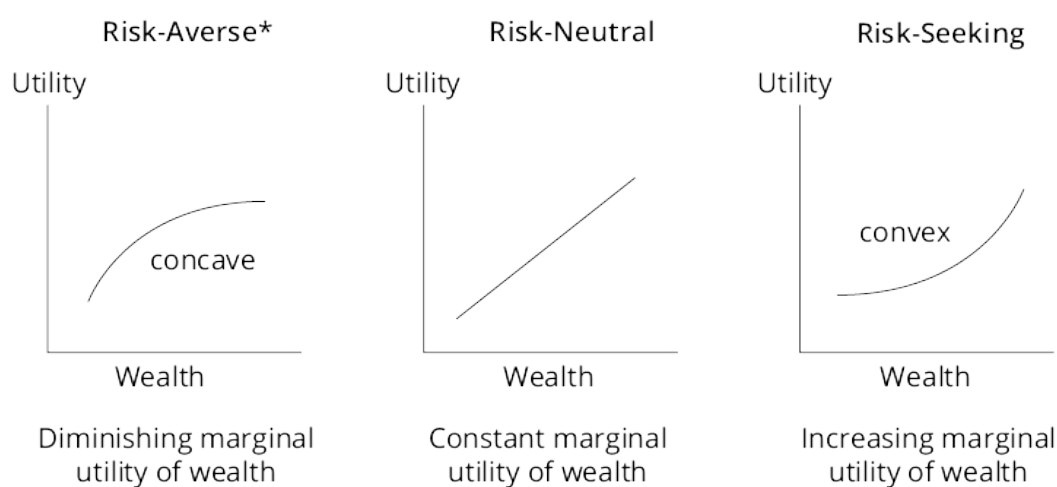
Risk-averse. The risk-averse person suffers a greater loss of utility for a given loss of wealth than they gain in utility for the same rise in wealth. Therefore, they would pay less than GBP 150 for an uncertain, but expected, payoff of GBP 150. Certainty equivalent is less than (<) expected value.

Risk-neutral. The risk-neutral person gains or loses the same utility for a given gain or loss of wealth and would be willing to pay GBP 150 for the expected payoff of GBP 150. Certainty equivalent equals expected value.

Risk seeker. The risk-seeking person gains more in utility for a rise in wealth than they lose in utility for an equivalent fall in wealth. Therefore, they would pay more than GBP 150. Certainty equivalent is greater than (>) expected value.

In each case, the person's utility (satisfaction) is a function of wealth and can be described graphically.

Figure 7.1: Utility Function of Wealth



* Generally assumed for Traditional Finance Theory

Challenges to Traditional Finance and the REM (Perfect Rationality)

Behavioral finance does not assume individuals are always risk-averse, that they adhere to Bayes' formula, that they act in their own self-interest, or that they have perfect information. Individuals sometimes act as REM, but at other times, their behavior is better explained by psychology. Challenges to the REM include:

- Decision-making can be flawed by lack of information or flaws in the decision-making process.

- Individuals may not process all information available to them.
- Personal inner conflicts that prioritize short-term (spending) goals over long-term (saving) goals can lead to poor prioritization.
- Lack of perfect knowledge is perhaps the most serious challenge to REM. How many individuals can properly assess the impacts of a change in central bank policy on their future wealth?
- Empirically, people are not perfectly self-interested. The acts of kindness, sacrifice, and philanthropy would not exist in a world of perfect self-interest.
- Wealth utility functions may not always be concave as assumed by utility theory, and individuals can sometimes exhibit risk seeking behavior.



MODULE QUIZ 7.1

To best evaluate your performance, enter your quiz answers online.

1. An investor has ranked three investments and labeled them as A, B, and C. He prefers investment A to investment B and investment B to investment C. Not being able to rank investment A relative to investment C would *most likely* violate which of the four axioms of utility?
 - A. Continuity.
 - B. Dominance.
 - C. Transitivity.
2. Applying the independence axiom of utility, an investor who prefers investment A to investment B and has the option to add all or a portion of investment C to his selection would *not* prefer:
 - A. $(A + C)$ to $(B + C)$.
 - B. $(A + 0.25C)$ to $(B + 0.25C)$.
 - C. $(B + 0.75C)$ to $(A + 0.75C)$.
3. Data for two investments are presented in the following:

Investment	Expected Return	Standard Deviation
A	8%	20%
B	10%	20%

A rational investor who selects investment B over investment A would *most likely* have a utility function characterized as:

- A. concave.
 - B. convex.
 - C. linear.
4. An investor who actively seeks risk in investing *most likely* experiences:
 - A. constant marginal utility.
 - B. decreasing marginal utility.
 - C. increasing marginal utility.

MODULE 7.2: UTILITY THEORY AND PROSPECT THEORY



Video covering this content is available online.

LOS 7.b: Contrast expected utility and prospect theories of investment decision making.

For the Exam: This material is very theoretical, and it is not always clear in the reading exactly what could be relevant to any particular LOS. You would be wise to work through the end-of-chapter questions for the CFA readings to get a better sense of what level of detail is expected.

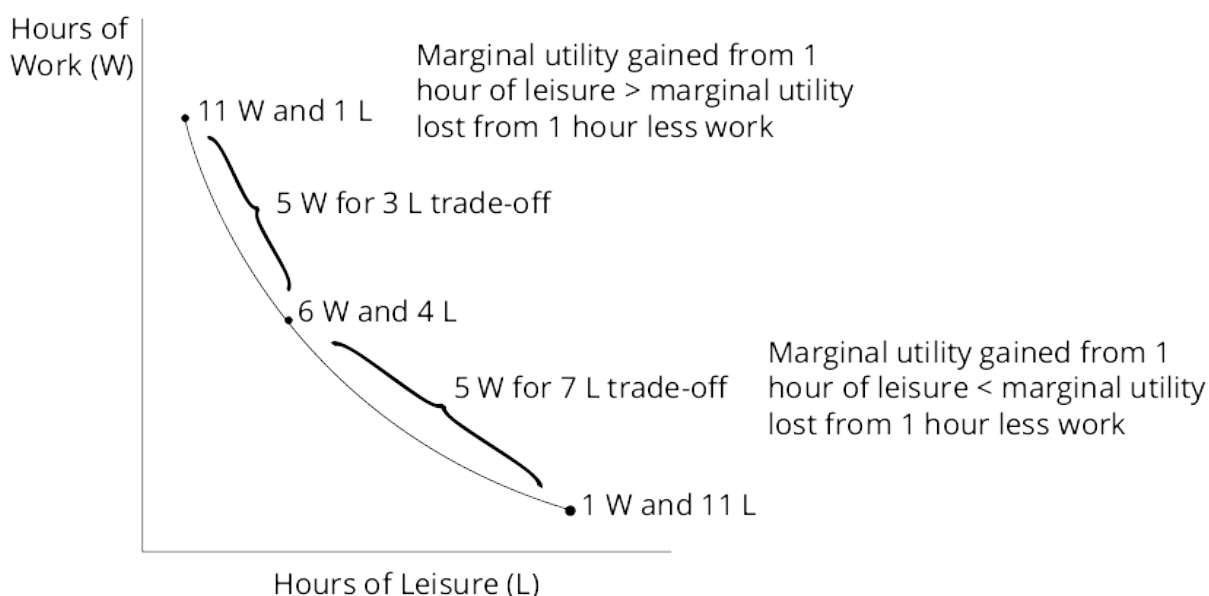
Utility Theory and Indifference Curves

Traditional finance is based in **utility theory** with an assumption of diminishing marginal utility. This leads to two consequences. First, the risk-averse utility function is concave. As more and more wealth is added, utility (satisfaction) increases at a diminishing rate. Second, it leads to convex indifference curves due to a diminishing marginal rate of substitution.

For example, consider an individual looking at the trade-off between paid hours of work (W) and unpaid hours of leisure (L). Suppose an individual has 12 hours available in a day after allowing for sleep, eating, and other needs. How would the individual split work hours and leisure hours to maintain an indifferent level of satisfaction?

- Suppose the individual currently works 11 hours with 1 hour of leisure. Having little leisure time, the individual might trade 5W for 3L, a 5/3 trade-off, that results in a total of 6W and 4L at the same level of utility.
- From the new indifference point, adding more leisure adds less marginal utility. The individual might only give up 5 more W for 7L, a 5/7 trade-off, resulting in 1W and 11L.
- At any point on the indifference curve, they are equally satisfied.

Figure 7.2: Trade-Off Between Work and Leisure



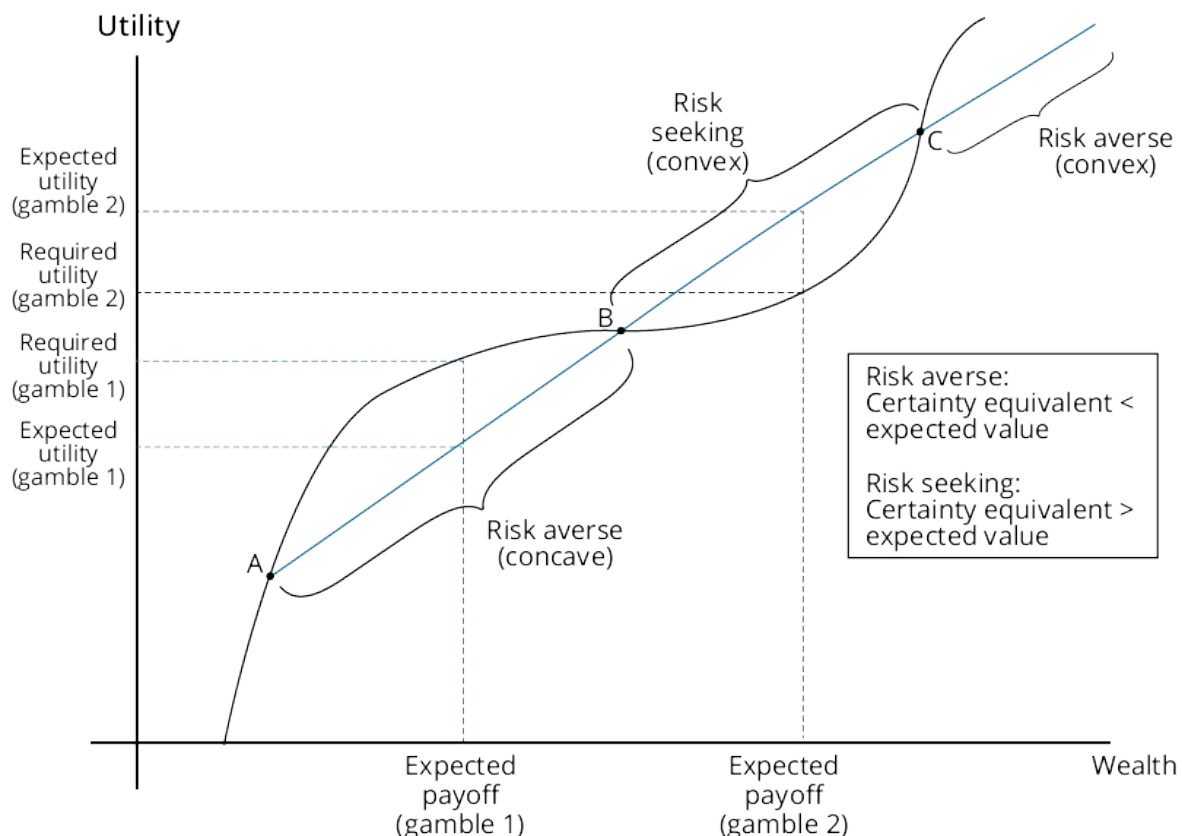
While indifference curves and utility theory appear rational, they ignore that many individuals are unable to quantify such mathematical trade-offs. Indifference curves also don't explicitly consider exogenous factors such as risk and the assumption of risk aversion. For example, during recessions when jobs are scarce, the trade-off of W for L would likely change.

Complex Risk Functions

Behavioral finance observes that individuals sometimes exhibit risk-seeking as well as risk-averse behavior. Many people simultaneously purchase low-payoff, low-risk insurance policies (risk-averse behavior) and low-probability, high-payoff lottery tickets (risk-seeking behavior). Combinations of risk seeking and risk aversion may result in a complex double inflection utility function.

Risk evaluation is reference dependent, resulting in risk evaluation that is influenced by the individual's wealth and personal circumstances.

Figure 7.3: Friedman-Savage, Double Inflection Utility Function



An individual faces two gambles:

Gamble 1 has an equal chance of paying out A or B.

Note that, at the expected payoff of gamble 1, the expected utility of this gamble is lower than the individual's required utility. The price that the individual would be willing to pay to enter the gamble would be less than the gamble's expected payoff. The conclusion is that the individual would pay a premium to avoid this expected outcome.

Gamble 2 has an equal chance of paying out B or C.

This time, at the expected payoff, the individual's required utility is below the expected utility. The price that the individual would be willing to pay to enter the gamble is greater than the gamble's expected payoff. The conclusion is that the individual would pay a premium to face this expected outcome.

The shape of the individual's utility function drives the difference in results. Between points A and B, the individual is exhibiting risk-averse behavior (shown by a concave utility function). This behavior is consistent with ensuring against small losses. Point B represents an inflection point where the individual's behavior changes from risk averse to risk seeking. Between points B and C, the individual is exhibiting risk-seeking behavior (shown by a convex utility function). This behavior is consistent with purchasing lottery tickets where the expected payoff is lower than the ticket price. Note that beyond inflection point C, the investor is again exhibiting risk-averse behavior.

Neuroeconomics

Neuroeconomics is a blend of neuroscience, economics, and psychology, which is trying to establish the relationship between investor behavior and the physical functioning of the brain. By analyzing the brain's activity, chemical composition, and blood flow, it is hoped to understand how the brain makes decisions. Neuroeconomics is an emerging field, and the long-term impacts may lie in the future. Major impacts on economic theory have yet to be felt.

Studies of serotonin and dopamine may explain the root of some behavioral biases. Lowered levels of serotonin have been linked to anxiety, irritability, depression, and impulsiveness. Failure of events to meet expectations leads to lowered levels of serotonin. Serotonin levels may influence loss aversion and increased risk taking following losses. Increased levels of dopamine create feelings of pleasure and euphoria. The anticipation of most kinds of rewards triggers the production of dopamine. The failure of a reward to materialize results in lowered levels of dopamine, causing a depressed state of mind.

Anatomy of the brain has highlighted the significance of the fight-or-flight response, governed by the amygdala. This area of the brain can cause pleasure, fear, and panic, and may be linked to knee-jerk responses in the markets.

Decision Theory

Decision theory is focused on making the ideal decision when the decision maker is fully informed, mathematically able, and rational. The theory has evolved over time.

Figure 7.4: Development of Normative Decision Theory—Timeline

Pascal (1670): Decisions based on expected value. Individuals evaluate outcomes and assign probabilities to assess expected values of outcomes. The chosen action is the one that results in the greatest expected values.

Knight (1921): Differentiates between risk and uncertainty. Risk = unknown outcomes with known probabilities. Uncertainty = unknown outcomes and unknown possibilities. Maximizing utility requires measurable risk. Uncertainty is not measurable.

von Numann and Morgenstern (1944): Rational decision makers apply the axioms of utility theory and base decision-making on maximizing utility.

Bernoulli (1738): Differentiates between expected value and expected utility. Expected value is the same for all participants. Expected utility depends on preference. Proposed diminishing marginal utility as wealth increases.

Savage (1954): Extends the scope of utility theory to include situations where only subjective probabilities of outcomes are available. SEU = subjective expected utility theory.

Prescriptive approaches

Prescriptive theories move beyond normative decision-making by empirically analyzing how people actually make decisions. Prescriptive approaches consider the impact of incompleteness of information, intellectual inadequacy, individuals beliefs, and preferences on subjective expected utility theory. Descriptive analysis of decision-making focuses on how individuals reduce complicated problems to manageable decision-making. The process involves approximations and heuristic approaches.

The study of heuristic approaches were developed in the 1970s and 1980s by Tversky and Kahneman. Their studies focus on the mental shortcuts, use of intuition, rules of thumb, and educated guesses that individuals use to reduce the cognitive burden and speed up decision-making.

LOS 7.c: Discuss the effect that cognitive limitations and bounded rationality may have on investment decision making.

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In traditional finance, all investors are assumed to possess the same information and interpret it accurately and instantly, without bias, in evaluating investments and in making utility-maximizing decisions. Behavioral finance acknowledges that investors do not always make decisions consistent with this form of utility maximization.

Bounded Rationality

Bounded rationality³ assumes knowledge capacity limits and removes the assumptions of perfect information, fully rational decision-making, and consistent utility maximization. Individuals instead practice satisfice. Limitations imposed by cost and time result in

outcomes that offer sufficient satisfaction rather than optimal utility. Individuals operate with partial information and use heuristics (mental shortcuts) to process the information.



PROFESSOR'S NOTE

Cognitive limitations stem from a lack of the resources, mental or mechanical, to thoroughly interpret information. Knowledge limitations refer to the inability to have all relevant information.

EXAMPLE: Satisfice and bounded rationality

Jane Smith has excess funds she can deposit to earn interest. She wants the funds to be backed by the government, so she visits the bank closest to her workplace. The rate seems acceptable, and she makes the deposit after verifying that the deposits are government insured. Is her behavior consistent with a rational economic man?

Answer:

No. Smith is showing bounded rationality and satisfice. The rate was adequate and met the condition of government guarantee, so she accepted it. She did not research all other options or have perfect information (bounded rationality). There is no reason to expect that this particular rate is the optimal solution.

Bounded rationality acknowledges it is impractical to consider all potential outcomes. As an alternative to optimization, individuals set constraints that will lead to a satisfactory outcome. Individuals use experience and the observation of others to set aspiration levels. Aspiration levels are then adjusted upward if previous aspirations are met, and downward if they are not.

Prospect Theory

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For the Exam: The LOS and end-of-chapter questions are conceptually focused and not mathematically focused. The discussion of the evaluation phase of prospect theory specifically says “a quantitative illustration ... is complex and not necessary to review here.” No math is provided.

Bounded rationality relaxes the assumptions of perfect information and maximizing expected utility. Prospect theory⁴ further relaxes the assumption of risk aversion and instead proposes loss aversion. Prospect theory is suited to analyzing investment decisions that involve risky outcomes. It focuses on the framing of decisions as either gains or losses and weighting uncertain outcomes. While utility theory assumes risk aversion, prospect theory assumes loss aversion. Loss aversion bias is where individuals fear losses more than they value gains.

Under prospect theory, choices are made in two phases. In the first phase, the editing phase, proposals are framed or edited using simple heuristics (decision rules) to make a preliminary analysis prior to the second evaluation phase. In the editing phase, economically identical outcomes are grouped and a reference point is established to rank the proposals. Outcomes above the reference rate are viewed as gains; outcomes below the reference rate are viewed as losses. The goal of the editing phase is to simplify the number of choices that must be made before making the final evaluation and decision. Doing so addresses the cognitive limitations individuals face in evaluating large amounts of information. The risk is that the selection of the reference point frames the proposal as a gain or loss and affects the subsequent evaluation or decision step.

In the second phase, the evaluation phase, investors focus on loss aversion rather than risk aversion. The difference is subtle, but the implication is that investors are more concerned

with the *change in wealth* than they are in the resulting level of wealth, per se. In addition, investors are assumed to place a greater value in change on a loss than on a gain of the same amount. Given a potential loss and gain of equal sizes, the increase in utility associated with the potential gain is smaller than the decrease in utility (i.e., disutility) associated with the potential loss. Investors tend to fear losses and can become risk seeking (assume riskier positions) in an attempt to avoid them.

Experiments have shown that most individuals will not take a gamble that offers 50/50 odds of equal but opposite payoffs. For example, the average individual will not take a gamble with 50% probability of winning \$100 and 50% probability of losing \$100, even though the expected outcome is \$0. The possible gain would have to be increased to at least \$200 (at least double the possible loss) to entice the average individual to take the gamble.

EXAMPLE: Framing the decision as a gain or loss

Portfolio Assets	Current Price	Cost Basis	Yesterday's Close	Year-End Close
A	10	7	11	9
B	12	13	13	13
C	14	9	15	13

Which asset has the largest percentage loss?

Answer:

It depends on the selected (framed) reference point to determine perceived loss. A perception can affect subsequent decisions. For example, if yesterday's close is the reference point, every asset has a perceived loss with Asset A having the largest percentage loss. However, if cost basis is the selected reference, then B has the largest percentage loss while A and C have gains.

Editing Phase

The early editing phase can involve a large number of operations. The precise sequence and number of steps is determined by the data. The first three steps may apply to individual proposals.

1. **Codification** codes the proposal as a gain or loss of value, relative to a heuristically chosen reference point, and assigns a probability to each possible outcome.
2. **Combination** simplifies the outcomes by combining those with identical values. For example, an investor might probability weight expected returns of a stock (codification) and then combine identical outcomes.

Figure 7.5: Example of Combination

Outcomes:		Combined Outcomes:	
Probability (p)	E(R)	Probability (p)	E(R)
.10	-5%	.10	-5%
.20	0%	.20	0%
.20	10%		
.30	10%	.50	10%

.20	20%	.20	20%
1.00		1.00	

3. **Segregation** can be used to separate an expected return into both a risk-free and risky component of return. For example, assume a gamble offers a 75% chance of a \$100 payoff and a 25% chance of paying \$150. This can be segregated as a 100% risk-free payoff of \$100 and a 25% chance of another \$50.

The next three steps may apply when comparing two or more proposals.

4. **Cancellation** removes any outcomes common to two proposals. Overlapping outcomes would not affect any decision.

Figure 7.6: Example of Cancellation

	Before Cancellation:			After Cancellation:	
Proposal A:					
E(R)	5%	10%	15%		15%
p	.333	.333	.333		.333
Proposal B:					
E(R)	5%	10%		5%	10%
p	.50	.50		.167	.167

5. **Simplification** applies to very small differences in probabilities or to highly unlikely outcomes. For example, a 49% chance of \$500 with a 50% chance of \$700 and a 1% chance of \$750 might be simplified as an equal chance of \$500 or \$700.
6. **Detection of dominance** would discard from consideration any proposal that is clearly dominated. The previous 50/50 chance of \$500 or \$700 dominates an equal chance of \$400 or \$600 in every regard: higher average, higher minimum, and higher maximum.

Editing choices can sometimes lead to the preference anomaly known as the **isolation effect**, where investors focus on one factor or outcome while consciously eliminating or subconsciously ignoring others. It is referred to as an anomaly because the sequence of the editing can lead to different decisions.

EXAMPLE: The isolation effect

Assume an individual is asked to choose between two lotteries:

- Lottery 1 offers payoffs of a 33% chance of \$3,000 or nothing.
- Lottery 2 offers payoffs of a 20% chance of \$5,500 or nothing.

The expected (probability weighted) payoffs are \$1,000 and \$1,100 respectively.

Not surprisingly empirical studies show that most individuals select the higher and rational payoff of Lottery 2.

However, framing the lottery (e.g., changing the order of presentation) can affect the selection. Suppose the expected payoffs of Lottery 1 and Lottery 2 in this case were maintained, but they were recast to occur in the second stage of a two-stage lottery. In the new game, the first stage has a 67% chance in ending in a zero payoff and a 33% chance of moving on to the second stage. The second stage will consist of either Lottery 3 or Lottery 4, but an individual must select to participate in either Lottery 3 or Lottery 4 before the first stage is played. In other words, it is not known if the individual has moved to the second stage before selecting Lottery 3 or Lottery 4. They do know that:

- Lottery 3 offers payoffs of a 100% chance of \$3,000 or nothing.
- Lottery 4 offers payoffs of a 60% chance of \$5,500 or nothing.

What is surprising is that a majority of individuals now choose Lottery 3 even though it has an expected payoff of \$1,000 versus \$1,100 for Lottery 4. This is the opposite of the choice made when confronted with choosing between Lottery 1 and Lottery 2.

Expected payoffs:

Lottery 1: $.33 \times \$3,000 \approx \$1,000$

Lottery 2: $.20 \times \$5,500 = \$1,100$

Lottery 3: $.33 \times 1.00 \times \$3,000 \approx \$1,000$

Lottery 4: $.33 \times .60 \times \$5,500 \approx \$1,100$

Empirical studies have shown the framing and order of the lottery can produce inconsistent and irrational choices.

The Evaluation Phase

In the **evaluation phase**, investors place values on alternatives in terms of weighted and probability-weighted outcome to determine expected utility. A quantitative illustration is complex and specifically stated to be unnecessary to the purpose of the reading (thus, it is not presented here). The equation is shown as:

$$\text{utility} = w(p_1)v(X_1) + w(p_2)v(X_2) + \dots$$

where:

p_1 and p_2 = probability weights of possible outcomes X_1 and X_2

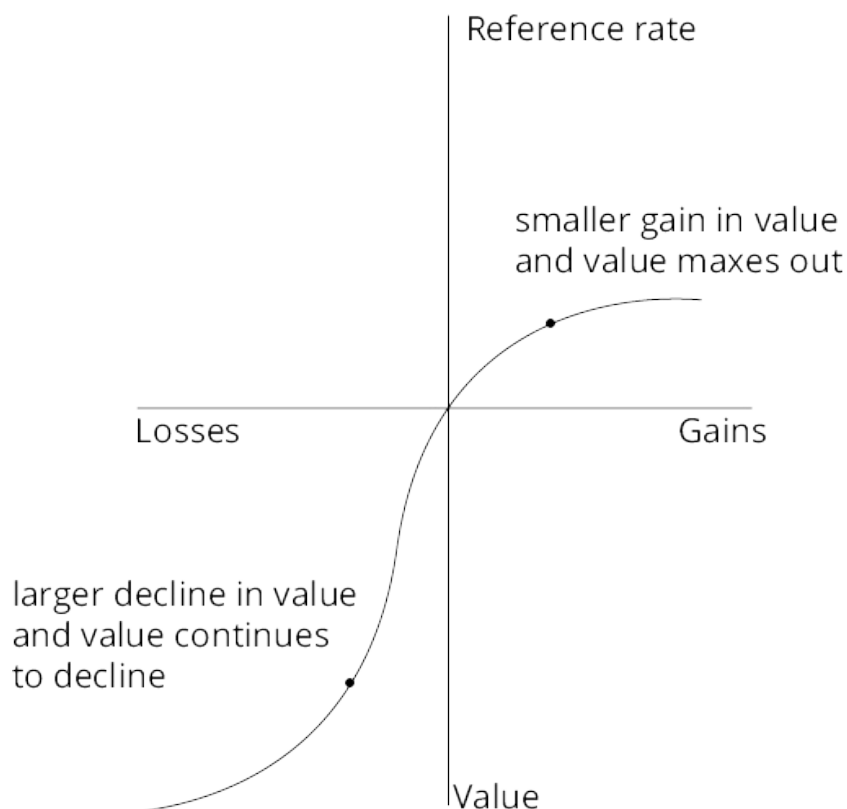
v = a function that assigns value to an outcome

w = a probability weighting function

The important implications are:

- w reflects a tendency of individuals to overreact to small probabilities and underreact to large probabilities.
- The value function is based on changes and is not level.

Figure 7.7: Value Function



- The resulting value function is S-shaped and asymmetric. Individuals experience a greater decline in value for a given loss than a rise in value for a corresponding gain. Kahneman and Tversky conclude that individuals' asymmetrical treatment of gains and losses is because people are loss averse rather than risk averse.
- As a result, most investors are risk averse when presented with gains. Empirical studies show that when given an equal chance of making \$100 or losing \$70, most individuals will not take the bet. They are risk averse and want a higher expected payoff than \$15.
- However, most individuals are risk seekers when confronted with likely losses. Offered the choice of a sure loss of \$75 or a 50/50 chance of winning \$30 or losing \$200, they exhibit risk-seeking behavior by taking the bet that has an expected payoff of -\$85. The bet is worse than the sure loss of \$75.
- This could explain why many investors over-concentrate in high-risk and low-risk investments but not medium-risk investments.

The conclusion is that individuals are risk averse when facing choices with a high probability of gains and low probability of losses. However, individuals display risk-seeking behavior when confronted with choices that lead to a high probability of losses and a low probability of gains.

Figure 7.8: Summary of Traditional Finance vs. Bounded Rationality and Prospect Theory

Traditional Finance Assumes:	Bounded Rationality* and Prospect Theory** Assume:
Unlimited perfect knowledge	Capacity limitations on knowledge*
Utility maximization	Satisfice*
Fully rational decision-making	Cognitive limits on decision-making*



MODULE QUIZ 7.2

To best evaluate your performance, enter your quiz answers online.

- According to prospect theory, investors are more concerned with changes in wealth than in returns, per se. Prospect theory suggests that investors:
 - are risk averse.
 - can be loss averse.
 - place more value on gains than on losses of equal magnitude.
- Based on the following data, **determine** and **explain** using expected utility whether or not the investor is likely to make the investment.

Outcome	Utility	Probability of Occurrence	Subjective Probability Factor
−8%	−120	15%	1.25
0%	−10	40%	1.15
6%	50	30%	0.85
10%	100	15%	0.65
Total	20	100%	

- At lunch, two portfolio managers discuss their recent trades. One complains that it is extremely difficult if not impossible to gather and analyze all relevant available information before trading. He admits that he often just “goes with” the information he has. **Determine** the behavioral bias most likely indicated by his actions and **explain** your choice.
- Satisficing is *best* described as:
 - making short-term, suboptimal decisions.
 - making utility-maximizing decisions.
 - a form of bounded rationality that causes investors to act rationally.

MODULE 7.3: IMPLICATIONS



LOS 7.d: Compare traditional and behavioral finance perspectives on portfolio construction and the behavior of capital markets.

Video covering this content is available online.

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The Traditional Finance Perspective

Much of modern portfolio theory is premised on the *efficient market hypothesis* (EMH). The EMH⁵ presumes market prices reflect all relevant available information. The aggregate decision-making of market participants is correct even if individual investors are wrong. The resulting efficient prices reflect intrinsic value and do not allow investors to earn excess, risk-adjusted returns after allowing for transaction costs. The EMH proposes three versions of efficiency:

- A market is **weak-form efficient** if current prices incorporate all past price and volume data. If markets are weakly efficient, managers cannot consistently generate excess

returns using technical analysis (charting).

- If a market is **semi-strong form efficient**, prices reflect all public information, including past price and volume data. The moment valuable information is released, it is fully and accurately reflected in asset prices. If markets are semi-strong form efficient, managers cannot consistently generate excess returns using technical or fundamental analysis.
- **Strong-form efficiency** requires prices to reflect all privileged nonpublic (i.e., inside) information as well as all public information, including past price and volume data. If a market is strong-form efficient, no analysis based on inside and/or public information can consistently generate excess returns. Strong-form efficiency is not generally accepted as nonpublic information is associated with excess returns.

The Grossman-Stiglitz paradox states that for information to be collected and analyzed, there must be a return paid for this activity. They argue that even when the market is in equilibrium, a return must be earned for information collection and processing. Markets are inefficient if abnormal returns can be earned after deducting information and transaction costs.

Support for the EMH

The weak form of the EMH has been the most studied and supported. If past security prices show strong serial correlation, then past prices could be used to predict subsequent changes. Nevertheless, historical studies show virtually zero serial correlation, which is consistent with weak-form efficiency. Stock price changes appear random.

However, the random nature of stock prices does not by itself support the further notion that the *price is right* and that price correctly reflects intrinsic value. Accepting the price as right when it does not, in fact, reflect intrinsic value could lead to a serious misallocation of portfolio resources.

Tests of the semi-strong form have focused on two areas:

- Event studies, such as the announcement of a stock split, look for evidence that such events are predictive of future stock price movement. In itself, a stock split creates no economic value and should not affect the split adjusted price. However, splits are strongly associated with abnormal dividend increases that might reflect rising economic value. Event studies show that stock prices rise abnormally for up to two years before the split and complete an upward adjustment coincident with the split announcement. This is consistent with the semi-strong EMH. Of course, if you knew ahead of time that the split and dividend increases were coming, it would allow you to earn excess returns. The ability to benefit from advance inside information is consistent with semi-strong form but is a rejection of strong-form efficiency.
- Other studies focus on the aggregate ability of professional managers to generate positive excess return or alpha. Studies of mutual fund managers show the majority have negative alphas both before and after management fees. This is consistent with semi-strong EMH. This is sometimes referred to as *no free lunch*, which asserts that it is difficult or impossible to consistently outperform the market on a risk-adjusted basis.

Challenges to EMH

Some studies do find evidence that appears to be or is inconsistent with the EMH. If such market anomalies persist, those anomalies argue for inefficiency of markets. Several different forms of anomalies have been identified.

Fundamental anomalies would relate future stock returns to stock fundamentals, such as P/E or dividend yield. Fundamental anomalies would be violations of both semi-strong and strong-form efficiency.

Numerous studies have shown evidence that value stocks with lower P/E, P/B, and P/S, higher E/P and B/P, and dividend yield outperform growth stocks (which tend to have the opposite fundamental characteristics).

Research suggests that investors underestimate the prospects of value stocks and overestimate the prospects of growth stocks. This results in value strategies exceeding the returns of growth strategies.

Studies show abnormal positive returns for small-cap stocks.

Other studies suggest the abnormal return of value stocks is not evidence of excess return but of higher risk. Fama and French^{6,7} propose extending the capital asset pricing model (CAPM) to include market cap and B/P as priced risks. Analysis using these revised risk premiums suggests the apparent excess returns are just a failure to properly adjust (upward) for risk.

For the Exam: This discussion is a perfect example of the kind of material you will commonly see at Level III. You could be asked to discuss evidence that contradicts the EMH and then to critique that same evidence. You are expected to understand both sides of the issue when the material is well discussed in the curriculum. Your general conclusion should be that markets are mostly efficient but with exceptions.

Technical anomalies relate to studies of past stock price and volume. Technical anomalies would be violations of all three forms of efficiency. (Hint: Remember the semi-strong and strong forms encompass the weak form as well.)

- Studies have shown that when a short-term (1-, 2-, or 5-day) moving average of price moves above (below) a longer-term (50-, 150-, or 200-day) moving average, it signals a buy (sell). Other studies show that when a stock price rises above a resistance level, it signals a buy; if the stock price moves below a support level, it signals a sell. As such, the signals do provide value. Other researchers dispute the validity of these findings.

Calendar anomalies appear to show that stocks (small-cap stocks in particular) have abnormally high returns in January, in the last day of each month, and in the first four days of each month. The January anomaly has been known and studied for more than 25 years but has persisted. It would be a violation of all forms of EMH.

Even when an anomaly may appear to violate the EMH, there may be no outperformance when transaction costs and risks are considered. Alternatively, any benefits may be temporary and the anomaly may disappear as investors buy and sell securities to exploit the opportunity. On the other hand, limits to arbitrage activity may allow anomalies to persist.

Shleifer and Vishny⁸ propose that the ability of investors to withdraw funds from a manager may limit arbitrage activity. An arbitrageur takes positions in anticipation those prices will correct, often using high leverage. For example, the arbitrageur could take a position to exploit the January effect, buying a stock in anticipation of the rise. If prices do not move up

as quickly as expected, the arbitrageur's investors may become dissatisfied and withdraw funds. The arbitrageur must then sell, pushing down the stock price, which is the opposite of what was expected. Such liquidity issues may put limits on the ability of arbitrage to establish market efficiency. A highly leveraged arbitrageur must be correct and market prices must correct quickly and in the way expected. The withdrawal of funds before fund managers' expectations are met is the reason that many hedge funds impose lock-up periods.

The Behavioral Finance Perspective

Traditional finance (TF) assumes markets are efficient and prices reflect fundamental value. New information is quickly and properly reflected in market prices. Portfolio managers can focus on identifying efficient portfolios on the efficient frontier that meet the client's objectives of risk and return while also observing the investor's constraints. (These ideas of portfolio management will be extensively covered in later study sessions.) However, if prices are not correctly reflecting intrinsic value, or at least providing the best indication possible, this approach to portfolio management is flawed.

Behavioral finance (BF) challenges these traditional finance notions. It has not yet been able to propose a unified, alternative theory. Four alternative behavioral models have been proposed: (1) consumption and savings, (2) behavioral asset pricing, (3) behavioral portfolio theory, and (4) the adaptive markets hypothesis.

For the Exam: The previous section on TF, along with a conceptual understanding of the four alternative models that follows, is the most direct answer to LOS 7.d.

1. **Consumption and savings⁹:** Traditional finance assumes investors are able to save and invest in the earlier stages of life to fund later retirement. This requires investors to show self-control by delaying short-term spending gratification to meet long-term goals. The consumption and savings approach proposes an alternative *behavioral life-cycle model* that questions the ability to exercise self-control and suggests individuals instead show mental accounting and framing biases. Investors mentally account and frame wealth as current income, assets currently owned, and present value of future income.

Traditional finance assumes that all forms of wealth are interchangeable (current income, current assets, and the present value of future income). Behavioral finance presumes the mental accounting for wealth by source makes individuals less likely to spend from current assets and expected future wages, but are more likely to spend from current income. Therefore, individuals will overcome at least some of their lack of self-control to save some of what they will need to meet long-term goals. This also makes them subject to framing bias. For example, if individuals perceive a bonus as current income, they are more likely to spend it. If they perceive it as future income, they are more likely to save it.

2. **Behavioral asset pricing¹⁰:** Traditional asset pricing models (e.g., CAPM) assume market prices are determined through an unbiased analysis of risk and return. The intrinsic value of an asset is its expected cash flows discounted at a required return, based on the risk-free rate and a fundamental risk premium. The behavioral asset pricing model adds a **sentiment premium¹¹** to the discount rate; the required return on an asset is the risk-free rate, plus a fundamental risk premium, plus a sentiment

premium. The sentiment premium can be estimated by considering the dispersion of analysts' forecasts. A high dispersion suggests a higher sentiment premium.

Under the traditional CAPM, the sentiment premium would be unwarranted. If this added, erroneous error is systematic and predictable, it might be possible to exploit it. If it is random, it will be more difficult to exploit.

For the Exam: The reading does not elaborate on this point, but consider the earlier discussion of arbitrage. If a price can be identified as wrong and is expected to quickly correct, it can be exploited to earn excess profit. If it just stays wrong, the arbitrage does not work.

3. **Behavioral portfolio theory (BPT)**¹²: Traditional finance assumes a diversified portfolio is chosen that satisfies the investor's risk and return tolerance from a set of mean variance-efficient portfolios that include combinations of risk-free lending and the Markowitz optimal portfolio of risky assets. Traditional finance assumes that investors are concerned about the expected return and variance of the portfolio as a whole. BPT assumes that investors construct their portfolios in layers, with each layer reflecting different risk and return expectations. The investor's goals are then used to determine the allocation to each layer.

Five-Factor Process:

1. Investor goals and the importance of each goal determines the allocation to each layer. If a high return for the goal is important, funds will be allocated to the high-return (high-risk) layer. If low risk is crucial to the goal, funds will be allocated to the low-risk (low-return) layer.
2. Asset selection will be done by layer and based on the goal for that layer. If high return is the goal, then higher-risk, more speculative assets will be selected.
3. The number of assets in a layer will reflect the investor's risk aversion. Risk-averse investors with a concave utility function will hold larger numbers of assets in each layer.
4. If an investor believes she holds an information advantage (has information others do not have), more concentrated positions will be held.
5. If an investor is loss averse, the investor will hold larger cash positions to avoid the possible need to sell assets at a loss to meet liquidity needs. Additionally, securities may continue to be held simply to avoid realizing losses rather than being based on the security's potential.

BPT investors maximize wealth, but with a constraint that wealth must have a low probability of failing to meet an arbitrary aspirational level. The investor will allocate to the low-risk layer (bonds and riskless investments) to ensure that the aspirational level is met with low risk. Once the investor is reasonably certain that the aspirational level of wealth will be met, the investor can then afford to take much more risk with her remaining portfolio.

The resulting overall portfolio may appear to be diversified but is likely to be sub-optimal because the layers were constructed without regard to their correlation with each other. Such layering can explain:

- The irrational holding of both insurance, a low risk asset, and high-risk lottery tickets by the same individual.

- Holding excess cash and low-risk bonds in the low-risk layer and excessively risky assets in the high-risk layer. (This also includes not holding more moderate-risk assets.)

6. **Adaptive markets hypothesis (AMH)**¹³: The AMH assumes successful market participants apply heuristics until they no longer work and then adjust them accordingly. In other words, success in the market is an evolutionary process. Survival is the goal rather than maximizing expected utility. Markets are driven by the competition for profit and adaptability of investors. Those who do not or cannot adapt do not survive.

Because AMH is based on behavioral finance theory, it assumes investors satisfice rather than maximize utility. Based on an amount of information they feel is sufficient, they make decisions to reach subgoals, steps that advance them toward their desired goal. In this fashion, they do not necessarily make optimal decisions as prescribed by utility theory or act as REM. Through trial and error, these heuristic rules that work come to be adopted by more and more participants until they are reflected in market pricing and then no longer work. The market evolves.

AMH leads to five conclusions:

- The relationship of risk and return should not be stable. The market risk premium changes over time as the competitive environment changes.
- Active management can find opportunities to exploit arbitrage and add value.
- No strategy should work all the time.
- Adaptation and innovation are essential to continued success.
- Survivors change and adapt.

AMH is essentially EMH with bounded rationality, satisficing, and evolution. In AMH, the degree to which the market is efficient will depend on the degree of competition in the market, the availability of profit, and the flexibility of participants to exploit opportunity. None of these models have been accepted by the finance community as presenting a complete picture of market behavior.

Hopefully, in time, the insights of behavioral finance will allow for the construction of portfolios that are efficient from a traditional finance perspective and understandable to investors. If an investor can understand the portfolio, the investor is more likely to stay with it for the long run.



MODULE QUIZ 7.3

To best evaluate your performance, enter your quiz answers online.

- Two analysts are overheard discussing market efficiency. They make the following statements:

"I don't care who you are. If the stock market is semi-strong efficient, no information can consistently generate excess returns. There are no free lunches!"

"The January effect supports the assertion that markets are not strong-form efficient."

Determine whether you agree or disagree with each statement, and if you disagree, **justify** your decision with one reason. Answer in the template provided.

Statement	Agree/Disagree	Justification
"I don't care who you are. If the stock market is semi-strong efficient, no information can consistently generate	Agree	

excess returns. There are no free lunches!"	Disagree
"The January effect supports the assertion that markets are not strong-form efficient."	Agree
	Disagree

-
2. Two analysts are overheard discussing technical trading rules. One says, "I have noticed over the last year or so that the market rises to about 11,000 and then falls back. It seems to do that every two to three months. At the bottom, it goes to about 10,000 and then rebounds. It's sort of like watching a roller coaster." From a technical standpoint, the numbers 10,000 and 11,000 in the analyst's statement would *most likely* be referred to respectively as:
- a fundamental anomaly and a technical anomaly.
 - a support and a resistance level.
 - both would be considered fundamental anomalies.
3. Two analysts are overheard discussing technical trading rules. One says, "I have noticed over the last year or so that the market rises to about 11,000 and then falls back. It seems to do that every two to three months. At the bottom, it goes to about 10,000 and then rebounds. It's sort of like watching a roller coaster."
- The market consistently staying in a band between 10,000 and 11,000 is *most likely* to be used as evidence against which form of market efficiency?
- Weak-form efficient.
 - Semi-strong form efficient.
 - Strong-form efficient.
4. An analyst states that investors should not conclude that market prices do not fully reflect all public information simply because they can temporarily wander from their intrinsic values. Use a liquidity argument to **explain** why the analyst is correct.
5. Beth Smargen, CFA candidate, makes the following statement:
- "The behavioral asset pricing model incorporates a sentiment premium when valuing assets. For example, the more strongly analysts feel about a security, the greater the sentiment premium and the higher the price."
- In the template, **indicate** by circling whether you agree or disagree with Smargen's statement. If you disagree, **justify** your decision.

Statement	Agree/Disagree	Justification
"The behavioral asset pricing model incorporates a sentiment premium when valuing assets. For example, the more strongly analysts feel about a security, the greater the sentiment premium and the higher the price."	Agree	
	Disagree	

KEY CONCEPTS

LOS 7.a

Traditional finance is *prescriptive*; it explains how investors *should* make investment decisions based on mathematical models and theories. Behavioral finance is *descriptive*; it tries to explain *observed* investor decision-making.

To maximize utility, a rational investor will make decisions conforming to the four axioms of utility: completeness, transitivity, independence, and continuity.

With the receipt of new, relevant information, rational investors revise expectations utilizing a Bayesian framework.

LOS 7.b

Traditional finance is based in utility theory and an assumption of diminishing marginal return. This leads to two consequences. First, the risk-averse utility function is concave. As more and more wealth is added, utility (satisfaction) increases at a diminishing rate. Second, it leads to convex indifference curves due to a diminishing marginal rate of substitution.

Decision theory is focused on making the ideal decision when the decision maker is fully informed, mathematically able, and rational. The theory has evolved over time.

- Initial analysis focused on selecting the highest probability-weighted payoff.
- Later evolution separated expected value, which is just the market price of an item paid by anyone, from expected utility. Expected utility is subjective and depends on the unique preferences of individuals and their unique rate of diminishing marginal utility and substitution.
- Risk is defined as a random variable due to the one outcome that will occur from any probability-weighted analysis. For example, a stock has an $E(R)$ of 10% but returns 12%. Risk can be incorporated into analysis by maximizing expected utility.
- In contrast, uncertainty is unknowable outcomes and probabilities. It is, by definition, immeasurable and not amenable to traditional utility maximization analysis.
- Subjective analysis extends decision theory to situations where probability cannot be objectively measured but is subjective.

LOS 7.c

Bounded rationality means that individuals act as rationally as possible, given their lack of knowledge and lack of cognitive ability.

Rather than optimize, individuals satisfice. Investors gather what they consider to be an adequate amount of information and apply heuristics to arrive at an acceptable decision. The result is that the investor takes steps and accepts short-term goals toward the ultimately desired goal. The investor does not necessarily make the theoretically optimal decision from a traditional finance perspective.

LOS 7.d

Traditional finance (TF) assumes markets are efficient and prices reflect fundamental value. New information is quickly and properly reflected in market prices. Portfolio managers can focus on identifying efficient portfolios on the efficient frontier that met the client's

objectives of risk and return while observing the investor's constraints. (These ideas of portfolio management will be extensively covered in later study sessions.) However, if prices are not correctly reflecting intrinsic value, or at least providing the best indication possible, this approach to portfolio management is flawed.

Behavioral finance (BF) challenges these TF notions. However, it has not yet been able to propose a unified, alternative theory. Four alternative behavioral models have been proposed: (1) consumption and savings, (2) behavioral asset pricing, (3) behavioral portfolio theory, and (4) the adaptive markets hypothesis.

1. **Consumption and savings approach:** Traditional finance assumes investors are able to save and invest in the earlier stages of life to fund later retirement. The consumption and savings approach proposes an alternative *behavioral life-cycle model* that questions the ability to exercise self-control and suggests individuals instead show mental accounting and framing biases.
2. **Behavioral asset pricing:** Traditional asset pricing models (e.g., CAPM) assume market prices are determined through an unbiased analysis of risk and return. The intrinsic value of an asset is its expected cash flows discounted at a required return, based on the risk-free rate and a fundamental risk premium. The behavioral asset pricing model adds a **sentiment premium** to the discount rate; the required return on an asset is the risk-free rate, plus a fundamental risk premium, plus a sentiment premium. Under the traditional CAPM, the sentiment premium would be unwarranted.
3. **Behavioral portfolio theory (BPT):** Based on empirical evidence and observation, rather than hold a well-diversified portfolio as prescribed by traditional finance, individuals construct a portfolio by layers. Each layer reflects a different expected return and risk. BPT further asserts that individuals tend to concentrate their holdings in nearly risk-free and much riskier assets. Allocation of funds to and investment of each layer depends on the importance of each goal to the investor. If a high return for the goal is important funds will be allocated to the high return (high risk) layer in the form of more speculative assets. If low risk is crucial to the goal then funds will be allocated to the low risk (low return layer) in the form of larger cash positions and low risk bonds. Risk-averse investors with a concave utility function will hold larger numbers of assets in each layer. If an investor believes they hold an information advantage (have information others do not have) more concentrated positions will be held.
4. **Adaptive markets hypothesis (AMH):** The AMH assumes successful market participants apply heuristics until they no longer work and then adjust them accordingly. In other words, success in the market is an evolutionary process. Those who do not or cannot adapt do not survive. AMH assumes investors satisfice rather than maximize utility.

ANSWER KEY FOR MODULE QUIZZES

Module Quiz 7.1

1. **C** According to transitivity, investment rankings must be applied consistently. If an investor prefers investment A to investment B and prefers investment B to investment C, he must prefer investment A to investment C. Continuity is the axiom of utility that must apply for indifference curves to be smooth and unbroken (continuous). Dominance has two, similar meanings. In portfolio theory, dominance is a characteristic of portfolios on the efficient frontier (EF). Portfolios on the EF are said to dominate any portfolio below the efficient frontier. In a similar fashion, during the editing phase of prospect theory, an investor will eliminate any investment opportunity he perceives as being dominated by others. (LOS 7.a)
2. **C** Adding choice C to both A and B will not affect the preference ranking of A and B. If the investor prefers A to B and we add C to both choices, the investor will prefer (A + C) over (B + C). This also applies to adding a portion of C. (LOS 7.a)
3. **A** A rational investor will maximize return for a given level of risk and minimize risk for a given level of return. Rational investors experience decreasing marginal utility, meaning that their utility functions are concave. Each additional unit of wealth increases their utility but at a decreasing rate. Risk-neutral investors more or less ignore risk and have linear utility functions (constant marginal utility), and risk seekers have convex utility functions. We are told the investor is rational, so we can rule out the linear and convex utility functions. (LOS 7.b)
4. **C** An investor who actively seeks risk in investments would be classified as risk seeking and would experience increasing marginal utility; each additional unit of wealth produces more utility than the previous unit, so the investor derives utility out of riskier investments with high expected returns. This investor would have a convex utility function. Constant marginal utility refers to risk-neutral investors with linear utility functions, and decreasing marginal utility applies to risk-averse investors with concave utility functions. (LOS 7.b)

Module Quiz 7.2

1. **B** One of the foundations of prospect theory loss aversion. Investors focus on risk relative to gains and losses (changes in wealth) rather than risk relative to returns. The result is that the disutility associated with a loss is greater than the increase in utility from a gain of the same magnitude. (LOS 7.c)
2. Determine the investor's subjective probability for each outcome and then find the subjective weighted average utility:

1 Outcome	2 Utility	3 Probability of Occurrence	4 Subjective Probability Factor, w	Subjective Probability (3 × 4)
-8%	-120	15%	1.25	18.75%
0%	-10	40%	1.15	46.00%
6%	50	30%	0.85	25.50%

10%	100	15%	0.65	9.75%
Total	20	100%		

$$\begin{aligned}\text{Exp(Utility)} &= wP_{-8\%} U_{-8\%} + wP_{0\%} U_{0\%} + wP_{6\%} U_{6\%} + wP_{10\%} U_{10\%} \\ &= 0.1875(-120) + 0.46(-10) + 0.255(50) + 0.0975(100) \\ &= -22.50 - 4.6 + 12.75 + 9.75 = -4.60\end{aligned}$$

The investor is **not likely** to make the investment because its subjective probability-weighted average utility is negative. (LOS 7.c)

- The manager's actions are indicative of *bounded rationality*. According to bounded rationality, investors attempt to make the most rational decision possible based on an amount of information they deem satisfactory. Rather than gather and analyze all relevant available information, the investor gathers and analyzes enough information to make a positive decision, not necessarily the optimal decision. Note that *satisficing* would have been an acceptable answer with the same discussion. (LOS 7.c)
- A** Satisficing refers to making the most rational decision possible given the available information and the investor's limited cognitive ability. Rather than making the optimal, utility-maximizing decision, investors act as rationally as possible in making decisions (bounded rationality). Each decision is seen as suboptimal but positive in that it moves the investor toward the desired goal. (LOS 7.c)

Module Quiz 7.3

1.

Statement	Agree/Disagree	Justification
"I don't care who you are. If the stock market is semi-strong efficient, no information can consistently generate excess returns. There are no free lunches!"	Disagree	Semi-strong efficiency only deals with public information. Non-public information can still generate excess return.
"The January effect supports the assertion that markets are not strong-form efficient."	Agree	The January effect is a calendar anomaly suggesting simple public price data can be used to add value. This violates all three forms of the EMH.

Non-public information could include proprietary analysis methods, advance knowledge of supply and demand, and material non-public information. Of course, some of this information would be unethical to act on. The simple statement semi-strong efficiency precludes excess return is false because it ignores the issue of non-public information. This question tests whether you understand that there are three versions of the efficient market hypothesis. (LOS 7.d)

- B** Support levels act like floors to security or index price levels. As the security or index price approaches the floor, buy pressure tends to push it up. Resistance levels act

like ceilings. As the security or index price approaches the resistance level, sell pressure tends to push it down. (LOS 7.d)

3. **A** The numbers 11,000 and 10,000 represent a technical trading band formed by a resistance level (11,000) and a support level (10,000). Support and resistance levels are technical trading indicators and are usually considered evidence against weak-form efficiency. (LOS 7.d)
4. An underlying assumption of the efficient markets hypothesis is that arbitrage forces will move instantaneously to correct mispricing. Liquidity concerns, however, can delay or even prohibit the forces of arbitrage. For example, a hedge fund manager may be constrained from quickly taking a position because of liquidity constraints. If the fund is open quarterly for subscription or withdrawal, liquidity needs are uncertain. Realizing he may have to meet liquidity needs by unwinding a position before the profit is realized or even at a loss, the manager can be hesitant to assume the position in the first place. If enough managers face similar constraints, market prices could stray from their intrinsic values and remain that way for extended periods. (LOS 7.d)

Statement	Agree/Disagree	Justification
"The behavioral asset pricing model incorporates a sentiment premium when valuing assets. For example, the more strongly analysts feel about a security, the greater the sentiment premium and the higher the price."	Disagree	The sentiment premium in the BAPM can be derived from the agreement or disagreement among analysts, not the strengths of their sentiments per se. The more widely dispersed analysts' opinions, the greater the sentiment premium, the higher the discount rate applied to assets' cash flows, and the lower their prices.

(LOS 7.d)

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- ¹ Terminology used throughout this topic review is industry convention as presented in Reading 9 of the 2020 Level III CFA exam curriculum.
 - ² Raiffa, Howard. 1997. *Decision Analysis: Introductory Readings on Choices under Uncertainty*. Columbus, OH: McGraw-Hill.
 - ³ Simon, Herbert A. 1957. *Models of Man: Social and Rational*. New York: John Wiley and Sons.
 - ⁴ Kahneman, Daniel, and Amos Tversky. 1979. "Prospect Theory: An Analysis of Decision under Risk." *Econometrica: Journal of the Econometric Society*, vol. 47, no. 2 (March):263–291.
 - ⁵ Thaler, Richard. 2009. "Markets Can Be Wrong and the Price Is Not Always Right." *Financial Times* (4 August).
 - ⁶ Fama, Eugene F., and Kenneth R. French. 1995. "Size and Book-to-Market Factors in Earnings and Returns." *Journal of Finance*, vol. 50:131–155.
 - ⁷ Fama, Eugene F., and Kenneth R. French. 2008. "Average Returns, B/M, and Share Issues." *Journal of Finance*, vol. 63:2971–2995.
 - ⁸ Shleifer, Andrei, and Robert W. Vishny. 1997. "The Limits of Arbitrage." *Journal of Finance*, vol. 52, no. 1 (March):35–55.
 - ⁹ Shefrin, Hersch, and Richard Thaler. 1988. "The Behavioral Life-Cycle Hypothesis." *Economic Inquiry*, vol. 26, no. 4:609–643.
 - ¹⁰ Shefrin, Hersch, and Meir Statman. 1994. "Behavioral Capital Asset Pricing Theory." *Journal of Financial and Quantitative Analysis*, vol. 29:323–349.

- [¹¹](#) The sentiment premium is referred to as a **stochastic discount factor** (SDF) in the proposed asset pricing model and is based on investor sentiment relative to fundamental value. Shefrin, Hersh, and Meir Statman, 1994. "Behavioral Capital Asset Pricing Theory." *Journal of Financial and Quantitative Analysis*, vol. 35, no. 2
- [¹²](#) Shefrin, Hersh, and Meir Statman. 2000. "Behavioral Portfolio Theory." *Journal of Financial and Quantitative Analysis*, vol. 35, no. 2.
- [¹³](#) Lo, Andrew. 2004. "The Adaptive Markets Hypothesis." *Journal of Portfolio Management*, vol. 30, no. 5 (30th anniversary issue):15–29.

The following is a review of the Behavioral Finance principles designed to address the learning outcome statements set forth by CFA Institute. Cross-Reference to CFA Institute Assigned Reading #8.

READING 8: THE BEHAVIORAL BIASES OF INDIVIDUAL¹

Study Session 3

EXAM FOCUS

This assignment builds on the previous reading. It goes into more details on various biases. Expect exam questions that present situations where you must identify which bias or biases are displayed. Because many of the biases are closely related, read each exam situation closely and identify from the facts presented which bias is the best fit to the facts. Also know the implications of a bias on investment decision-making or policy and be able to identify whether it is better to accommodate or mitigate a bias.

MODULE 8.1: COGNITIVE ERRORS VS. EMOTIONAL BIASES



Video covering this content is available online.

The assumptions of traditional finance that individuals act as rational economic men who objectively consider all relevant information to make rational decisions and that this process results in efficient markets is not completely accurate. Kahneman and Tversky's work in the 1970s set logic tests, where individuals' intuitive answers were predictably flawed. This revealed many of the systematic biases in human decision-making.

Behavioral finance looks at normal behavior of individual market participants (Behavioral Finance Micro) and the effect of such behavior on markets (Behavioral Finance Macro). A better understanding of the biases of clients (and of the professionals who work with those clients) should allow for the construction of portfolios that better approximate the efficiency of traditional finance and with which clients are better able to adhere to with during adverse conditions.

LOS 8.a: Distinguish between cognitive errors and emotional biases.

CFA[®] Program Curriculum, Volume 2, page 55

Individuals, when facing complex decision-making, often lack the time or ability to derive the optimal course of action prescribed by traditional finance. Every day, the average person makes between 2,000 and 10,000 decisions. Rather than following the processes and steps of a rational economic man (REM), individuals use shortcuts, rules of thumb, and intuition (known as heuristics) to arrive at decisions quickly. Additionally, emotions and social influences affect decision-making. Cognitive limitations and emotional responses introduce bias into the decision-making process, leading to irrational behaviors and decisions. Behavioral finance asserts that biases are not simply errors, which are random, but are systematic and therefore predictable.

Cognitive errors are due primarily to faulty reasoning and could arise from a lack of understanding proper statistical analysis techniques, information processing mistakes, faulty reasoning, or memory errors. Such errors can often be minimized or mitigated with better training or information.

Emotional biases are not related to conscious thought and stem from feelings or impulses or intuition. As such they are more difficult to overcome and may have to be accommodated. Despite the distinction in grouping biases as either cognitive or emotional, a bias may have elements of both cognition and emotion. When trying to overcome or mitigate biases that are both emotional and cognitive, success is more likely by focusing on the cognitive issues.



PROFESSOR'S NOTE

You should always look at the combination of facts and information presented in any question to see if the bias in a particular situation is arising more from cognitive or emotional thinking before determining if it is likely it can be mitigated or if it must be accommodated.

LOS 8.b: Discuss commonly recognized behavioral biases and their implications for financial decision making.

LOS 8.c: Identify and evaluate an individual's behavioral biases.

LOS 8.d: Evaluate how behavioral biases affect investment policy and asset allocation decisions and recommend approaches to mitigate their effects.

CFA® Program Curriculum, Volume 2, pages 56, 85

Cognitive Errors

While cognitive errors arise primarily from statistical or information or reasoning deficiencies or faulty memory, they can also have an emotional element. Market participants may unconsciously tilt away from behavior that causes personal distress or pain while tilting toward behavior that causes pleasure. In general cognitive errors are easier to mitigate or correct with better information, asking the right questions, or seeking qualified advice.

Cognitive errors can be divided into 5 “belief perseverance” biases that reflect a desire to stick with a previous decision and 4 “processing errors” where the information analysis process is flawed.



PROFESSOR'S NOTE

Candidates regularly complain that many BF terms mean the same thing. (1) This is partially true and exam questions will be written so there is a best answer choice. (2) The main terms are not the same. Keep definitions short and the differences become more apparent.

Candidates also complain that there are too many terms. The solution is to show judgment and focus on the terms that are discussed in detail and/or multiple times.

In the following section, a useful short distinguishing characteristic of main terms is in bold.

Cognitive Errors: Belief Perseverance

1. **Conservatism bias** occurs when market participants **rationally form an initial view but then fail to change that view as new information becomes available**. In Bayesian terminology, they overweight the initial probabilities and do not adjust

probabilities for the new information. Individuals displaying this bias will stick with their prior forecasts or views, ignoring or failing to recognize the significance of new information. Individuals may react slowly to new data or ignore information that is complex to process.

EXAMPLE: Conservatism

John Mue has carefully analyzed the historical data and concluded that recessionary environments occur on average 20% of the time. Mue has incorporated this probability into his strategic asset allocation recommendations. When new information is presented by a coworker showing that the actions of the central bank significantly affect the recession probabilities and that the new head of the central bank has announced tightening monetary conditions, Mue goes on vacation without making any adjustments to his work.

Answer:

Mue is showing conservatism by sticking with his original work and not considering the impact of the new information. In this case there may be an emotional aspect as well as Mue chooses the pleasure of a vacation over doing hard work.

Consequences and implications of conservatism may include market participants who:

- Are unwilling or slow to update a view or forecast, and therefore hold an investment too long.
- Hold an investment too long to avoid the mental effort or stress of updating a view, when the new information is complex to understand.

Conservatism detection starts with participants becoming aware of their own biases. The more difficult the thought process or information, the more likely conservatism bias will occur. Conversely easy changes may be made too often because they involve little mental effort. Thus conservatism can lead to either too little or too much change and turnover.

2. **Confirmation bias** occurs when market participants **look for new information or distort new information to support an existing view**. It is a kind of selection bias. Information that contradicts the individual's views is more likely to be ignored or undervalued. Psychologists refer to the discomfort individuals feel when presented with information that is contrary to their beliefs as cognitive dissonance. Subconsciously, human nature rejects this information to avoid the discomfort. Clients who get involved with the portfolio process by researching some of their portfolio holdings may become overly attached to some holdings and only bring up information favorable to the holding. This would be confirmation bias.

“What the human being is best at doing is interpreting all new information so that their prior conclusions remain intact.” - Warren Buffet

Consequences and implications of confirmation may include market participants who:

- Consider positive but ignore negative information and therefore hold investments too long.
- Set up the decision process or data screens incorrectly to find what they want to see.
- Under diversify as they become overly convinced their ideas are correct.
- Over concentrate in the stock of their employer believing they have an information advantage in to that security.

Confirmation detection starts with seeking out contrary views and information. For example if an analyst focuses on bottom up fundamental financial statement analysis then the analyst could consult with a top down economic forecaster to gain an alternative view. Additionally, further information and corroboration should be sought to support investment decisions.

3. **Representativeness bias** occurs when the similarity of objects or events confuses individuals' assessments regarding the probability of an outcome. Individuals systematically make the error of believing that two similar things or events are more closely correlated than they actually are. **Representativeness** is based on a belief **the past will persist and new information is classified based on past experience or classification**. While this may be efficient, the new information can be misunderstood if it is classified based on a superficial resemblance to the past or a classification.

Kahneman explains the bias with the following example: "Steve is a meek and tidy soul with a passion for detail, drawn at random from American census data. Is it more likely that Steve is a librarian, or a farmer?" Most people will answer *librarian*, as this conforms to our preconceptions (the base rate) of the characteristics of a librarian. There is little evidence that librarians are meeker, tidier, and more detail focused than the general population. In the United States, there are 20 times the number of male farmers than librarians, so it is much more likely that Steve is a farmer.

Two forms of representativeness include:

- **Base rate neglect**, where the base rate (probability) of the initial classification is not adequately considered. Essentially the classification is taken as being 100% correct with no consideration that it could be wrong. A stock could be classified as a value stock and new information about the stock is analyzed based on that classification. In reality, it may not be a value stock.
- **Sample-size neglect** makes the initial classification based on an overly small and potentially unrealistic sample of data. The error made is believing that the characteristics of the small sample reflect the population. Individuals simply infer too much from a small sample of data. For example, a fund manager may show strong performance over a three-year time horizon. This may lead investors to assume this manager has superior skill. However, over a short time horizon, results may have arisen from luck rather than skill. A Vanguard Investments study illustrates this. The five best-performing funds were analyzed over a 10-year horizon.
 - Only 16% of funds made the top five in the subsequent year.
 - The top five funds generated, on average, 15% lower returns in the subsequent year.
 - The top five funds only beat the market by 0.3% in the subsequent year.

EXAMPLE: Representativeness

XYZ company has long been recognized as a growth stock delivering superior earnings growth and stock price appreciation. While earnings have continued to grow, last year's revenue has not and neither has the stock price. Under the following two conditions, would an analyst be more likely to buy or sell the stock?

1. The analyst suffers from base-rate and sample-size neglect (focusing on the recent results).
2. The analyst treats the growth classification as representative.

Answer:

If the analyst exhibits sample-size and base-rate neglect the analyst will ignore XYZ's long record as a growth stock, focus on the short-term disappointing result and may recommend sale without considering

the long term possibility it will revert to growth behavior.

However, if the analyst over-relies on the initial growth classification, the analyst may assume it will return to growth and recommend purchase without properly considering all of the recent results.

Consequences and implications of representativeness may include market participants who:

- Attach too much importance to new pieces of information, or to a small sample. The impacts of such behavior can be excessive turnover based on short-term performance. The result can be excessive transaction fees and subsequent underperformance of the asset or fund that participants have switched to.
- Make decisions based on simple rules of thumb and classification without thorough and more difficult analysis, attaching either too much or too little importance to new information.

Representativeness detection starts with a better understanding of the laws of probability and statistical analysis. Helpful questions that might detect the bias include assessing the probability a given investment is properly categorized in a certain group of ideas and not in a different group. By thinking in probabilities, it is more likely risk will be considered and sufficient diversification will occur.

Long-term asset allocation should be implemented to create a diversified portfolio. A long-run perspective should be taken to avoid chasing short-term performance and excessive trading.

The following questions should avoid short-termism and ensure appropriate investments:

- How does the performance compare to similar portfolios (rather than to the general market alone)?
- Have there been changes in the managers of the portfolio?
- What is the general reputation of the manager?
- Has the portfolio or manager changed style or investment approach due to changing conditions?

Periodic tables of investment returns can be used to avoid representativeness bias when considering investment returns. Such tables look at asset classes and rank them from highest to lowest return by year. These tables demonstrate the variability in asset class returns year to year. The difficulty in predicting asset class performance demonstrates the importance of diversification.

Figure 8.1: Periodic Table of Returns for Key Indices—Annual Returns, 2008–2018

Periodic Table of Returns for Key Indices
Annual Returns 2008 - 2018

Highest
Returns



Lowest
Returns

2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
U.S. Fixed Income 5.24%	Emerging Market Equity 78.51%	Small Cap Equity 26.85%	U.S. Fixed Income 7.84%	Real Estate 27.73%	Small Cap Equity 38.82%	Real Estate 15.02%	Large Cap Equity 1.38%	Small Cap Equity 21.31%	Emerging Market Equity 37.28%	Cash Equivalent 1.87%
Non-U.S. Fixed Income 4.39%	High Yield 58.21%	Real Estate 19.63%	High Yield 4.98%	Emerging Market Equity 18.23%	Large Cap Equity 32.39%	Large Cap Equity 13.69%	U.S. Fixed Income 0.55%	High Yield 17.13%	Non-U.S. Equity 24.21%	U.S. Fixed Income 0.01%
Cash Equivalent 2.06%	Real Estate 37.13%	Emerging Market Equity 18.88%	Non-U.S. Fixed Income 4.36%	Non-U.S. Equity 16.41%	Non-U.S. Equity 21.02%	U.S. Fixed Income 5.97%	Cash Equivalent 0.05%	Large Cap Equity 11.96%	Large Cap Equity 21.83%	High Yield -2.08%
High Yield -26.16%	Non-U.S. Equity 33.67%	High Yield 15.12%	Large Cap Equity 2.11%	Small Cap Equity 16.35%	High Yield 7.44%	Small Cap Equity 4.89%	Real Estate -0.79%	Emerging Market Equity 11.19%	Small Cap Equity 14.65%	Non-U.S. Fixed Income -2.15%
Small Cap Equity -33.79%	Small Cap Equity 27.17%	Large Cap Equity 15.06%	Cash Equivalent 0.10%	Large Cap Equity 16.00%	Real Estate 3.67%	High Yield 2.45%	Non-U.S. Equity -3.04%	Real Estate 4.06%	Non-U.S. Fixed Income 10.51%	Large Cap Equity -4.38%
Large Cap Equity -37.00%	Large Cap Equity 26.47%	Non-U.S. Equity 8.95%	Small Cap Equity -4.18%	High Yield 15.81%	Cash Equivalent 0.07%	Cash Equivalent 0.03%	Small Cap Equity -4.41%	Non-U.S. Equity 2.75%	Real Estate 10.36%	Real Estate -5.63%
Non-U.S. Equity -43.56%	Non-U.S. Fixed Income 7.53%	U.S. Fixed Income 6.54%	Real Estate -6.46%	U.S. Fixed Income 4.21%	U.S. Fixed Income -2.02%	Emerging Market Equity -2.19%	High Yield -4.47%	U.S. Fixed Income 2.65%	High Yield 7.50%	Small Cap Equity -11.01%
Real Estate -48.21%	U.S. Fixed Income 5.93%	Non-U.S. Fixed Income 4.95%	Non-U.S. Equity -12.21%	Non-U.S. Fixed Income 4.09%	Emerging Market Equity -2.60%	Non-U.S. Fixed Income -3.09%	Non-U.S. Fixed Income -6.02%	Non-U.S. Fixed Income 1.49%	U.S. Fixed Income 3.54%	Non-U.S. Equity -14.09%
Emerging Market Equity -53.33%	Cash Equivalent 0.21%	Cash Equivalent 0.13%	Emerging Market Equity -18.42%	Cash Equivalent 0.11%	Non-U.S. Fixed Income -3.08%	Non-U.S. Equity -4.32%	Emerging Market Equity -14.92%	Cash Equivalent 0.33%	Cash Equivalent 0.86%	Emerging Market Equity -14.58%

Source: Callan Associates

4. **Illusion of control bias** exists when **market participants think they can control or affect outcomes when they cannot**. It is often associated with emotional biases: *illusion of knowledge* (belief you know things you do not know), *self-attribution* (belief you personally caused something to happen), and *overconfidence biases* (an unwarranted belief you are correct). An example of control bias can be seen in early humans' attempts to control the weather using ritual ceremonies. This allowed early humans to believe they had some control of the environment, when in fact, it is highly unlikely that a ceremony could influence the weather.

Consequences and implications of illusion of control may include market participants who:

- Trade more than is appropriate as they mistakenly believe they can control the outcome of a trade or are overconfident in their analysis.
- Fail to adequately diversify because they analyze a narrow range of investments and fail to consider other investments and asset types.

Illusion of control detection starts with realizing investment results are probabilistic. Investors should recognize that long-term returns on investments are often driven by factors outside of the individual's control (e.g., economic conditions). Investors should maintain a long-term perspective, acknowledging that short-term beliefs empirically have little impact on long-term performance. Participants should seek out opposing

viewpoints to consider alternative outcomes. Keeping good records to document the thinking behind ideas and reviewing results to see if there are patterns behind which ideas work, which don't, and the actual past probability of being right is essential.

5. **Hindsight bias** is a **selective memory of past events, actions, or what was knowable in the past, resulting in an individual's tendency to see things as more predictable than they really are.** Participants tend to remember their correct views and forget the errors. They also overestimate what could have been known. This behavior results from individuals being able to observe outcomes that did occur, but not the outcomes that did not materialize. Hindsight bias is sometimes referred to as the *I-knew-it-all-along phenomenon*.

Hindsight bias is caused by three heuristic errors:

1. Individuals distort their earlier predictions when looking back. This is the tendency to believe that we knew the outcome of an uncertain event all along.
2. Individuals tend to view events that have occurred as inevitable.
3. Individuals assume they could have foreseen uncertain events.

Consequences and implications of hindsight may include market participants who:

- Overestimate the rate at which they correctly predicted events which could reinforce an emotional overconfidence bias.
- Become overly critical of the performance of others. For example they might criticize the stock selections of an analyst whose recommendations underperformed the market when the recommendations outperformed the market groups for which the analyst was responsible.

Hindsight detection starts with asking questions like "Do I really remember what I predicted and recommended?" Participants should also maintain and review complete records to determine past errors as well as successes. Past mistakes should be identified and acknowledged, recognizing that cognitive dissonance makes this difficult for the individual.

They should remember there will be periods when strategies are in or out of favor and review success relative to appropriate benchmarks.

Cognitive Errors: Information-Processing Biases

These are related more to the processing of information and less to the decision-making process:

1. **Anchoring and adjustment bias** occurs when market participants use psychological heuristic experience based trial and error rules to unduly affect probabilities. **Changes are made but in relation to the initial view and therefore the changes are inadequate.** Generally when individuals are forced to estimate an unknown, they often select an arbitrary initial value and then try to adjust it up or down as they process information. This makes it closely related to conservatism and a reluctance to change as new information is received. New information is not dependent on initial estimates or starting points and the new data should be objectively considered without regard to any initial anchor point.

Individuals rely too heavily on the first piece of information offered (the anchor). Once an anchor is set, other judgments are made by adjusting away from that anchor, and there is a bias toward interpreting other information around the anchor.

EXAMPLE: Anchoring and adjustment

In an experiment, two groups of people are shown a bottle of champagne. They are asked to pick a random ball from a bag, and are told that the balls are numbered from 1 to 100. In fact, all of the balls for group 1 have the number 10. The balls for group 2 all have the much-higher number 65. After selecting the ball, the individuals are asked to value the champagne. What value do the two groups place on the champagne?

Answer:

Group 1 individuals will tend to value the champagne close to \$10, while group 2 individuals tend to estimate the value closer to \$65. Logically, the selection of a ball, with what the participants perceive as a random number on it, should have no bearing on the value of the champagne. The reality is that the number on the ball acts as a mental anchor that affects their valuation of the champagne.

Consequences and implications of anchoring and adjustment may include market participants who stay anchored to an initial estimate and do not adjust for new information.

Anchoring and adjustment detection starts with asking questions such as “Am I staying with this stock because I originally recommended it at a higher price. In other words am I becoming dependent on that previous price? Or would I recommend it based on an all new analysis if this was the first time I evaluated it?” Market participants should remember that past performance and market data are not good bases for forming opinions about future potential. Forecasts should be updated to reflect changes in the fundamentals of the company and not anchored to past estimates.

2. **Mental accounting bias** arises when **money is treated differently depending on how it is categorized**. For example a client might mentally treat wages differently from a bonus when determining saving and investment goals. Mental accounting bias is based on the observation that individuals group their expenditures into different categories (e.g., food, rent, investments) and assign each category a different mental account. Each mental account has its own budget and reference point and is viewed in isolation, rather than in the context of the individual’s entire budget. This behavior violates the traditional finances assumption that money is fungible and therefore interchangeable between accounts, and that investments are considered in the context of the entire portfolio.

Hastings and Shapiro¹ studied the impact of mental accounting by analyzing the consumption of regular- and premium-grade gasoline. In 2008, the price of regular gasoline declined from \$0.90 a liter to \$0.45. Imagine that a household spends \$60 a week on gasoline. Logic tells us that they would now be spending \$30, and the \$30 saved can be transferred to other mental accounts (i.e., spent on other products). The study actually showed that individuals continued to spend close to \$60 a week on gasoline. What actually happened was consumers switched to the more expensive premium-grade gasoline. Hastings and Shapiro’s study indicated that the switch to premium-grade gasoline was about 14 times greater than a demand model based on what the fungibility of money would predict.

A study by Thaler demonstrates the actions of mental accounting on the behavior of New York taxi drivers. This study demonstrated that each new day was a separate account in the minds of the taxi drivers. It appears that New York taxi drivers have a reference rate for daily income and suffer from loss aversion if they fail to meet it. On rainy days, demand for taxis is high, while on sunny days, the demand is low.

Logically, you would expect taxi drivers to work more hours on rainy days to maximize their incomes. In reality, the opposite is true. Taxi drivers work longer hours on sunny days as they strive to hit their target income. On rainy days, once the target is achieved, the taxi drivers stop working.

Consequences and implications of mental accounting may include market participants:

- Structuring portfolios in layers to meet different priority goals. This may help clients overcome other biases. But it ignores correlation between layers of the portfolio and results can be suboptimal from a traditional perspective.
- Failing to lower portfolio risk by adding assets with very low correlation.
- Segregating return into arbitrary categories of income, realized gains and losses, or unrealized gains and losses. The result tends to be an overemphasis on income generating assets, resulting in a lower total return.

Mental accounting could be detected by examining what the portfolio could have achieved if the entire client assets were examined as one portfolio considering the effects of correlation among all parts of the portfolio. An excessive focus on source of return (i.e., income versus price appreciation) could be detected by analyzing the maximum total return consistent with the investor's risk objective and constraints. For example, if the portfolio has an expected return of 6.7% and the return is primarily income but another portfolio with the same risk but less income has an expected return of 7.5%, it would appear better to accept the portfolio generating less income.



PROFESSOR'S NOTE

It is important not to jump to simplistic labeling of something as all good or all bad. For example layering a portfolio can be a “good” way help a client untrained in the concepts of portfolio theory to make better decisions yet it can be “bad” in not achieving a fully optimal portfolio.

3. **Framing bias** occurs **when decisions are affected by the way in which the question or data is “framed.”** In other words, the way the question is phrased affects how the information is processed leading to the answer given. Kahneman and Tversky demonstrate framing with the following example.

EXAMPLE: Framing bias (framing as a gain)

The United States is preparing for the outbreak of an unusual Asian disease, which is expected to kill 600 people. Two alternative programs have been proposed.

If program A is adopted, 200 people will be saved. If program B is adopted, there is a one-third probability that 600 people will be saved and a two-thirds chance that no one will be saved.

Which program will people choose?

Answer:

Note the expected value of both program A and program B is 200 lives saved. The majority choice in this problem is risk averse. Program A is typically selected. The prospect of saving 200 lives with certainty is more attractive than the risky option with the same expected value.

EXAMPLE: Framing bias (framing as a loss)

A different group of individuals is given the same issue, but the two programs are framed differently. If program A is adopted, 400 people will die. If program B is adopted, there is a one-third probability that nobody will die and a two-thirds probability that 600 will die.

Which program will people choose?

Answer:

In this situation, program B is typically selected. The majority choice is now risk-taking, with the certain death of 400 people being less acceptable than a two-thirds chance that 600 people will die.

Conclusions:

The two programs (A and B) are identical for both groups; however, the framing of the information presented results in different choices. For the first group, the information was presented in the context of a gain, while for the second group, in the context of a loss. Loss aversion bias—the idea that we fear losses more than we value gains—is then demonstrated by the choices made.

The reference rate we use to frame gains and losses is also significant. Imagine, if a stock is priced at GBP 20, and that is compared to a purchase price of GBP 15, the holder is more likely to sell (and experience the pleasure of realizing a gain). But if the price of GBP 20 is compared to a previous close of GBP 25, the holder is less likely to sell (and experience the pain of a loss). If only one or two reference points are considered (as just described), it could be called narrow framing.

EXAMPLE: Decision framing bias

Investors were shown 3 efficient portfolios and the 95% confidence interval of expected returns for each portfolio. For example the first portfolio was shown as having a range of 0.1% to 6.7%, while the other portfolios had wider ranges. Next the same portfolios were shown but the expected return was listed and then the standard deviation. If investors show loss aversion and framing bias, under which conditions would the investors be likely to pick the lowest return portfolio?

Answer:

If shown the range of returns they would be more likely to pick the lowest returning portfolio because it frames the data to show the first portfolio with a positive lower return while the other portfolios, with wider ranges, are more likely to show a lower number that is negative. The first number seen in the display of data is framing the final decision. In contrast the other display of data starts with expected positive return numbers and does not directly show any negative numbers, only a standard deviation. Thus investors often select a portfolio with a higher return number.

A number of other biases might also be present. Because the example distinguishes how the information is displayed, and the order the information is presented, decision framing is the best answer.

Consequences and implications of framing bias may include market participants who:

- Fail to properly assess risk and end up overly risk-averse or risk-seeking.
- Choose suboptimal risk for their portfolio or assets based on the way a presentation is made.
- Become overly concerned with short term price movement and trade too often.

Framing could be detected by asking a question such as, “Is my decision based on realizing a gain or a loss?”, and by acknowledging the impact of loss aversion on our willingness to take risk. Instead, a more appropriate analysis might compare current price to intrinsic value analysis.

4. **Availability bias** starts with putting **undue emphasis on the information that is readily available**. Availability bias occurs when individuals judge the probability of an event occurring by the ease with which examples and instances come easily to mind. By the very nature of memory, more recent events are typically easier to recall than events in the distant past, which leads to the bias of attaching too much significance to events that have recently occurred and too little to events that occurred further in the

past. Ease of recall suggests that if something is easily recalled in memory, it must occur with a higher probability.

EXAMPLE: Availability bias

Imagine a word is picked at random from a dictionary. Is it more likely that the word has the letter *r* as the first letter in the word or the third letter?

Answer:

When faced with this problem, most individuals state that it is more likely the letter *r* will be the first letter. In fact, in the English language, there are approximately three times more words with *r* as the third letter than the first. Individuals find it easier to recall words that begin with *r* than words with *r* as the third letter, which distorts their estimation of probabilities.

Availability bias can be further broken down into the following overlapping causes:

- **Retrievability.** If an idea or answer can be thought of quicker than others can, it is often chosen as correct, even if it is not. The dictionary example just discussed is an example of retrievability bias.
- **Categorization.** This is the tendency to place items in categories that share what individuals perceive as common characteristics (e.g., growth and value stocks, investment-grade bonds, junk bonds, or classifying stocks by industry type). Once placed into a category, the individual then tends to treat all items within the category as being the same when making decisions rather than looking at the individual characteristics of each investment. Individuals make the mistake of assuming the categories are better descriptions of reality than they actually are.
- **Narrow range of experience.** This results from an individual with a narrow range of experiences using her experience as a frame of reference when estimating probabilities for the population. For example, take a candidate attending a live Schweser weekly CFA Level III class. The candidates in that class will have studied (on average) over 200 hours, practiced hundreds of questions, and be generally well prepared for the exam. This might lead to the candidate overestimating how prepared the average candidate is for the exam. She may also overestimate the probability of failing even if adequately prepared, as she has little experience of candidates sitting in the exam who are unprepared. In statistics, we would describe this as sample selection bias.
- **Resonance.** If a piece of information or an event strikes a chord with an individual's own beliefs and desires, the individual may overweight the importance of this information when making decisions.

Consequences and implications of availability may include market participants who:

- Choose a manager or investment based on advertising or recalling they have heard the name.
- Limit investment choices to what they are familiar with and fail to consider alternative investments, resulting in:
 - Under-diversification.
 - Inappropriate asset allocation.
- Overreact to recent market conditions while ignoring data on historic performance.
- Place too much emphasis on events that receive a large amount of media attention or advertising.

Availability could be overcome by maintaining a carefully researched and constructed Investment Policy Statement (IPS); through appropriate research and analysis of all decisions; and a long term focus. Questions such as “where did I hear of this idea could help detect availability bias.” Problems created by availability include overreacting and trading too much based on recent and easily available news or relying on available information or opinions that are of low quality and relevance.

MODULE 8.2: EMOTIONAL BIASES



While there is no formally accepted definition, these six biases generally arise from emotion and feelings rather than any conscious thought.

Video covering this content is available online.



PROFESSOR'S NOTE

Some of the terms about to be discussed here have already come up in the discussion of cognitive biases. If the context of a discussion emphasizes a view is based on unconscious emotion that the holder is unwilling or unable to change it will be more appropriate to see it as an emotional bias. On the other hand if the facts suggest the bias can be overcome with a relatively simple change in thought process or information it is better to see it as a cognitive bias.

1. **Loss-aversion bias** arises from **feeling more pain from a loss than pleasure from an equal gain**. Kahneman and Tversky focused on the difference in how we feel when we win or lose and how that affects our readiness to take risk. They found that individuals' willingness to take a gamble (risk) was very different when facing a loss or a gain.

Consider the following two scenarios:

Scenario 1: An individual is given \$10. The individual is then given the following options:

1. Take an additional \$5 with certainty.
2. Flip a coin and win an additional \$10 if it lands heads up, or nothing if it lands tails up.

Note that the expected value of the outcome is \$5 for both option 1 and option 2. Both options represent a gain relative to the original \$10. Option 1 creates a guaranteed outcome of \$15. Option 2 introduces the uncertainty of either an outcome of \$10 or \$20. Most individuals will choose the riskless option 1 over the riskier option 2.

Scenario 2: An individual is given \$20. The individual is then given the following options:

1. Take a \$5 loss with certainty.
2. Flip a coin and lose nothing if it lands heads up, but lose \$10 if it land tails up.

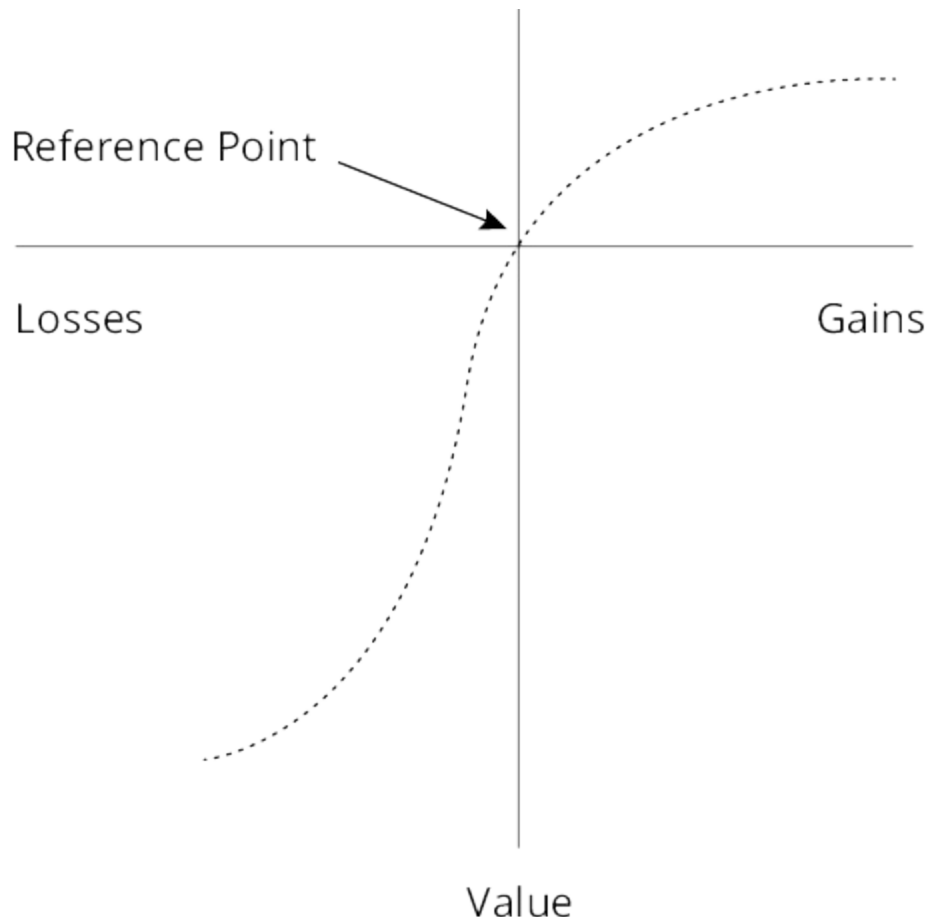
Note that the expected loss is \$5 for both option 1 and option 2. The options represent a potential loss relative to the original \$20. Most individuals will choose risky option 2 over the riskless certainty of option 1.

In both scenarios, the expected value of the individual's wealth is \$15. The options given to the individuals are also identical. Option 1 results in a guaranteed outcome in both scenarios of \$15, while option 2 results in the uncertain outcome of either \$10 or \$20.

The conclusion is that individuals display asymmetrical responses to gains and losses. Kahneman and Tversky found that humans look at decisions as gains or losses relative to a reference rate. Anything below the reference rate is seen a loss, and above the reference rate a gain. The reference rate in scenario 1 was the \$10 initial amount given to the individual, and in scenario 2 the \$20. The conflicting response to the scenarios is

explained by our attitude to gains and losses. Crucially, we fear losses far more than we value gains. In scenario 2, the individual is willing to take risk in the hope of avoiding the loss. Kahneman even suggests a value ratio between losses and gains of approximately 2. For example, it would take a gain of \$20 to offset the negative emotions of a loss of \$10.

Figure 8.2: Value Function of Loss Aversion



Be sure to understand the difference between risk aversion and loss aversion. A risk-averse investor is simply an investor who, given two investments with the same expected returns, would select the investment with the lowest risk. A loss-averse investor is one who feels greater pain (decreases in utility) from losses than satisfaction (increase in utility) from gains. As a result, the individual is more likely to take risk in the hope of avoiding losses.

Studies with capuchin monkeys indicate that they also exhibit loss aversion in their decision-making. This raises the possibility that loss aversion is an evolutionary trait rather than a product of cultural experience.

Consequences and implications of loss-aversion may include:

- Feeling less pleasure in a gain in value for a profit than pain in a decline in value for an equal loss.
- To avoid having the pain of loss, an investment holder will tend to hold onto losers too long but may sell winners too quickly. This tendency is called the disposition effect². Selling a losing stock crystalizes the loss and triggers negative emotions; to avoid this, investors tend to hold their losing investment in a hope that the losses will be recovered

in future periods. Winners are sold too early due to the fear that the profit may be eroded in the future.

- Trading too much by selling for small gains which raises transaction costs and lowers returns.
- Incurring too much risk by continuing to hold assets that have deteriorated in quality and lost value.
- If an initial decline in value occurs, then taking excessive risk in the hope of recovering. Investment managers can be particularly susceptible to this behavior.
- Allowing the framing of the reference point to determine if a position is seen as a gain or loss.
- Treating money that is made on a trade differently than other funds and taking excess risk with such money. Thaler and Johnson refer to this as the “house money effect.” Investors are willing to take on greater risk when reinvesting winnings than they would when investing their savings or wages. Investors mentally segregate their initial capital investment and profits earned. The profits are seen as free money (house money), and the investor is willing to take more risk when reinvesting it. Note that this is a form of mental accounting.

Myopic loss aversion (MLA) combines loss aversion, mental accounting, and time horizon-based framing. Investors Benartzi and Thaler³ use MLA to explain the equity premium puzzle. Over the past 100 years in the United States, equities have outperformed bonds by a large margin. The difference cannot be explained by plausible levels of risk aversion. MLA argues that investors are loss averse and evaluate their portfolios too frequently. In the short term, losses are experienced more frequently than when examining performance over a longer time horizon. This short-term focus results in over reaction to short-term losses. The over-focus on short-term losses means that investors require high return potential on equities to justify investing in equity, and explains the equity premium.

Loss aversion could be overcome by maintaining a disciplined well thought out process based on future prospects of an investment, not perceived gain or loss.

2. **Overconfidence bias** occurs when **market participants overestimate their own intuitive ability or reasoning**. It can show up as *illusion of knowledge* where they think they do a better job of predicting than they actually do. Combined with *self-attribution bias*, individuals will take personal credit when things go right (*self-enhancing*) but blame others or circumstances for failure (*self-protecting*). While it is both cognitive and emotional, it is more emotional in nature because it is difficult for most individuals to correct and is rooted in the desire to feel good.

Overconfidence arising from an illusion of knowledge is based a general feeling that the individual will be right. *Prediction overconfidence* leads individuals to underestimate uncertainty and standard deviation of their predictions while *certainty overconfidence* occurs when they overstate the probability they will be right.

Consequences and implications of overconfidence may include:

- Underestimate risk and overestimate return.
- Under-diversification.
- Excessive turnover and transaction costs resulting in lower return.

Trading records should be reviewed identifying both winners and losers over a minimum two-year time horizon. This review process will force investors to acknowledge losing investments and will also identify the amount of trading. When reviewing successful and unsuccessful investments, individuals should look at systematic patterns in their decision-making. Investors should carefully review their gains, asking whether they resulted from their decision-making or luck.

Gains may be made on investments in bull markets even if the underlying decision-making that led to the investment was faulty. The danger is that the investor views these gains as evidence of his superior decision-making ability.

“In a bull market, one must avoid the error of the preening duck that quacks boastfully after a torrential rainstorm, thinking that its paddling skills have caused it to rise in the world. A right-thinking duck would instead compare its position after the downpour to that of the other ducks on the pond.” - Warren Buffet, 1987

3. **Self-control bias** occurs when **individuals lack self-discipline and favor immediate gratification over long-term goals**. Self-control bias is evident when there is a conflict between short-term satisfaction and long-term goals. Often, individuals are not prepared to make short-term sacrifices to meet their long-term goals. The tendency for individuals to favor small payoffs now compared to larger payoffs in the future is known as hyperbolic discounting.

Self-Control Failure

Many CFA candidates fail the Level III exam the first time because they do not exercise sufficient self-control to study enough.

However, it is combining a failure of self-control with other biases that causes the more serious problems:

- Overconfidence due to assuming that passing Levels I and II will indicate success at Level III.
- Representativeness as they assume the way they studied and the exam skills required at Levels I and II will be sufficient at Level III.

Consequences and implications of self-control may include:

- Insufficient savings accumulation to fund retirement needs, resulting from favoring current spending over saving.
- Taking excessive risk in the portfolio to try and compensate for insufficient savings accumulation.
- An overemphasis on income producing assets to meet shorter-term income needs.



PROFESSOR'S NOTE

You should be noticing a number of references to the idea analyzing a portfolio on a total return basis and not income versus change in value. This theme will continue in later sessions. Total return is the general approach to take on the exam unless given specific direction otherwise.

Self-control bias might be overcome by establishing an appropriate investment plan (asset allocation) and a budget to achieve sufficient savings. Both should be reviewed on a regular basis.

4. **Status quo bias** occurs when comfort with the existing situation leads to an unwillingness to make changes. If investment choices include the option to maintain existing choices, or if a choice will happen unless the participant opts out; status quo

choices become more likely. Status quo bias is caused by the interaction of loss aversion bias, endowment bias, and regret aversion bias.

Thaler observed that automatically enrolling workers in pension schemes with the option of an opt-out increases participation in retirement schemes, compared requiring employees to opt into the pension scheme.

Consequences and implications of status quo may include:

- Holding portfolios with inappropriate risk.
- Not considering other, better investment options.

Status quo is very hard to overcome so education regarding reasonable risk/return combinations and the danger of overconcentration in an (employer's) stock is essential.



PROFESSOR'S NOTE

Status quo and the next two biases are very closely related. But status quo is maintaining a choice out of inertia, while endowment bias arises when some intangible value unrelated to investment merit is assigned to a holding, and regret-aversion is just what it says, if you make a change and it goes badly you will feel bad about it so do nothing and then you are not to blame. All three can lead to the same result (keep what you have) but the reason for doing so is slightly different.

5. **Endowment bias** occurs when an asset is felt to be special and more valuable simply because it is already owned. For example, when one spouse holds onto the securities their deceased spouse purchased for some reason like sentiment that is unrelated to the current merits of the securities. In studies individuals have been asked to state their minimum sale price for an asset they own (say \$25) and their maximum purchase price (say \$23). The fact that they will sell it at a price higher than they would pay has been explained as endowment. Once they own it, they act as if it is worth more than they would pay.

Consequences and implications of endowment may include:

- Failing to sell an inappropriate asset resulting in inappropriate asset allocation.
- Holding things you are familiar with because they provide some intangible sense of comfort.

Endowment is common with inherited assets and might be detected or mitigated by asking a question such as "Would you make this same investment with new money today?" If inherited assets are significant holdings in the portfolio it may be essential to address the bias. Starting a disciplined diversification program could be a way to ease the discomfort of sales. If the endowment bias means financial goals are unlikely to be met, then the emotional attachment to investments must be moderated (rather than adapted to). Rather than replacing all familiar investments with new ones in one go, small steps may be used (e.g., small purchases of unfamiliar securities) to move toward acceptable asset allocation over time.

6. **Regret-aversion bias** occurs when market participants **do nothing out of excess fear that actions could be wrong**. They attach undue weight to actions of commission (doing something) and don't consider actions of omission (doing nothing). Their sense of regret and pain is stronger for acts of commission.

Consequences and implications of regret-aversion may include:

- Excess conservatism in the portfolio because it is easy to see that riskier assets do at times underperform. Therefore, do not buy riskier assets and you won't

experience regret when they decline.

- This leads to long-term underperformance and a failure to meet goals.
- *Herding behavior* is a form of regret-aversion where participants go with the consensus or popular opinion. Essentially the participants tell themselves they are not to blame if others are wrong too.

Regret-aversion might be mitigated through effective communication on the benefits of diversification, the outcomes consistent with the efficient frontier tradeoff of risk/return, and the consequences of not meeting critical long-term investment goals.

Further Implications of Biases on Investment Policy and Asset Allocation

Investment practitioners who understand behavioral biases have a better chance of constructing and managing portfolios that benefit normal clients. By first acknowledging and then accommodating or modifying biases, more optimal results are likely. This starts with asking the right questions:

- What are the biases of the client?
- Are they primarily emotional or cognitive?
- How do they effect portfolio asset allocation?
- Should the biases be moderated or adapted to?
- Is a behaviorally modified asset allocation warranted?
- What are the appropriate quantifiable modifications?

Goals-Based Investing (GBI)



PROFESSOR'S NOTE

GBI will be similar to the layers in behavioral portfolio theory (BPT). BPT explained the layers as reflecting whether higher return or lower risk was important to the goal. GBI starts with the importance of achieving the goal.

GBI starts with establishing the relative importance to the client of each of the client's goals.

- Essential needs and obligations should be identified and quantified first. These would include essential living expenses and should be met with low risk investments as the base layer of the portfolio assets.
- Next might come desired outcomes such as annual giving to charity which can be met with a layer of moderate risk investments.
- Finally low priority aspirations such as increasing the value of the portfolio to leave it to a foundation at death could be met with higher risk investments.

GBI is consistent with the concept of loss-aversion in prospect theory. The client can see that more important goals are exposed to less risky assets and less potential loss. It is better suited to wealth preservation than to wealth accumulation. By utilizing the mental accounting of layers to meet goals, the client can better understand the construction of the portfolio.

Behaviorally Modified Asset Allocation (BMAA)

BMAA is another approach to asset allocation that incorporates the client's behavioral biases. A worst case scenario for many clients is to abandon an investment strategy during adverse periods. The outcome can be very detrimental because the change is likely to occur at a low point, right before a recovery for the strategy begins. Determining in advance a strategy the client can adhere to during adverse periods would be a better outcome. BMAA considers whether it is better to moderate or adapt to the client's biases in order to construct a portfolio the client can stick with. Moderating a bias attempts to reduce or eradicate the bias from the individual's decision-making. Adapting to biases involves acknowledging the bias and adjusting for the bias rather than attempting to minimize or eliminate the bias.

BMAA starts with identifying an optimal strategic asset allocation consistent with traditional finance. It then considers the relative wealth of the client and the emotional versus cognitive nature of the client's biases to adjust that allocation.

- A high level of wealth versus lifestyle and what the client considers essential needs would be a low standard of living risk (SLR). With a low SLR the client can afford to deviate from an optimal portfolio. The rich can afford to be eccentric.
- Biases that are primarily cognitive in nature are easier to moderate because they are based on faulty reasoning, which can be corrected. Working with the client can accomplish this and allow for less deviation from a traditionally efficient portfolio mix.
- In contrast, emotionally based biases are generally harder to moderate because they are deep-seated emotional dispositions of the individual and may have to be adapted to, resulting in a less efficient portfolio.
- Finally, the amount of deviation to accept from a traditional optimal allocation should be established. Typically this would be done by setting a range in which an asset class can deviate from optimal before it must be adjusted back. For example suppose an optimal allocation would call for 60% equity for the client.

The following table demonstrates how the process could be implemented in order to create an asset allocation that the client will be able to adhere to over the long run.

Figure 8.3: When to Adapt vs. When to Moderate

Relative Wealth (RW) and SLR:	Biases Are Primarily:	Adapt to or Moderate the Biases of the Client:	Allowable Deviations Up or Down From Optimal Weight:
High RW and low SLR	Emotional	Adapt to	10 to 15%
High RW and low SLR	Cognitive	Some of both	5 to 10%
Low RW and high SLR	Emotional	Some of both	5 to 10%
Low RW and high SLR	Cognitive	Moderate	0 to 3%

- The specific deviation numbers chosen are arbitrary and are intended to show that low SLR and emotional biases can be adapted to with large deviations from the optimal weights. The client can afford to allow their emotions to be adapted to.
- In contrast high SLR and cognitive errors require the biases be addressed with the client and moderated to achieve a near optimal asset allocation. Those with low wealth

cannot afford to deviate and cognitive errors are easier to overcome.

- The other two cases fall in between.

Case Study, Ms. Z:

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Ms. Z is a new client of BF Advisers. BF begins each client relationship with an extensive set of interviews. These interviews determined Ms. Z has very low needs in relation to her wealth. With even modest diversification there is no reasonable likelihood she could outlive her assets. In addition she is expected to inherit large sums from her mother's estate. The estate settlement is expected in the next year.

BF also uses a set of standardized questions to identify the biases of each client. Ms. Z shows strong tendencies to conservatism, sample-size neglect, framing, endowment, and availability biases. After completing the questions she meets with her BF portfolio manager and asks for further information regarding the biases. She has always enjoyed studying new areas and learning new approaches to life.

Recommend whether her biases should be adapted to or moderated, and whether her portfolio will deviate from a traditional optimal allocation.

Answer:

Ms. Z has very low SLR which would allow her biases to be adapted to; however, her biases are primarily cognitive (except for endowment bias). In addition, she likes to learn, suggesting that it may be easy to moderate her biases. Therefore, a mix of adapt and moderate is appropriate, though in her case we will lean toward moderation and smaller deviations from a traditional optimal asset allocation.



MODULE QUIZ 8.1, 8.2

To best evaluate your performance, enter your quiz answers online.

1. Which of the following would *most likely* be classified as an emotional bias? The investor:
 - A. has difficulty interpreting complex new information.
 - B. only partially adjusts forecasts when he receives new information.
 - C. has a tendency to value the same assets higher if he owns them than if he does not own them.
2. Which of the following would *most likely* indicate that an investor is subject to an emotional bias?
 - A. Regularly basing decisions on only a subset of available information.
 - B. Reacting spontaneously to a negative earnings announcement by quickly selling a stock.
 - C. Remaining invested in a profitable technology stock even though new information indicates its PE ratio is too high.
3. A cognitive error is *best* indicated by which of the following?
 - A. A client who is the chief executive officer of a now public company that she founded and insists she will not diversify her holding of the company stock.
 - B. The spouse of a now deceased company founder who becomes upset when it is recommended the portfolio holdings in that company need to be diversified.
 - C. A client who initially resists recommendations to diversify the portfolio but then thanks the manager for explaining the benefits of diversification.
4. Don Henry has just received new information regarding his investment in Orange, Inc. The new information appears to conflict with his earlier forecast of what the stock price should be at this point. Nonetheless, he is unwilling to incorporate the new information into his forecast and to revise it accordingly. What behavioral trait is Henry displaying?
 - A. Conservatism bias.
 - B. Confirmation bias.
 - C. Anchoring and adjustment.
5. Abby Lane has investments scattered across many different accounts, from bank savings to before- and after-tax retirement accounts to taxable nonretirement accounts. She has multiple investing goals ranging from important short-term goals to longer-term "wish list" goals. She looks at her financial assets and views each holding as designed to meet specific

goals. Lane has been very successful in her investment decisions for several decades and believes she can continue to achieve reasonable results. Lane *most likely* exhibits:

- A. framing bias.
- B. mental accounting.
- C. overconfidence bias.

6. Twenty years ago, Jane Ivy set up her initial asset allocation in her defined contribution plan by placing an equal amount in each asset class and never changed it. Over time, she increased her contribution by 1% per year until she reached the maximum amount allowed by law. Due to her steadfastness and good fortune, coupled with matching funds from her employer, she now finds herself in her early 40s with a million-dollar retirement account.

Which of the following biases does Ivy suffer from, and how should she remedy that bias?

- A. Representativeness; make sure the sample size is correct and new information is interpreted correctly.
- B. Status quo bias; educate the investor on tradeoffs between risk and return and subsequent proper asset allocation.
- C. Availability bias; develop an investment policy statement through diligent research rather than information that is readily available.

KEY CONCEPTS

LOS 8.a

Cognitive errors result from the inability to analyze information or from basing decisions on partial information. Individuals try to process information into rational decisions, but they lack the capacity or sufficient information to do so. Cognitive errors can be divided into belief perseverance errors and processing errors. **Emotional biases** are caused by the way individuals frame the information and the decision rather than the mechanical or physical process used to analyze and interpret it. Emotional bias is more of a spontaneous reaction.

LOS 8.b, 8.c

Cognitive Errors: Belief Perseverance

- Conservatism bias.
- Confirmation bias.
- Representativeness bias.
- Control bias.
- Hindsight bias.

Cognitive Errors: Information Processing

- Anchoring and adjustment.
- Mental accounting bias.
- Framing bias.
- Availability bias.

Emotional Biases

- Loss aversion bias.
- Overconfidence bias.
- Self-control bias.
- Status quo bias.
- Endowment bias.
- Regret-aversion bias.

LOS 8.d

Conservatism Bias

Impact: Slow to react to new information or avoid the difficulties associated with analyzing new information. Can also be explained in terms of Bayesian statistics; place too much weight on the base rates.

Mitigation: Look carefully at the new information itself to determine its value.

Confirmation Bias

Impact: Focus on positive information about an investment and ignore or dismiss anything negative. Can lead to too much confidence in the investment and to overweighting it in the portfolio.

Mitigation: Actively seek out information that seems to contradict your opinions and analyze it carefully. Obtain more information to support your views.

Representativeness Bias

Impact: Place information into categories utilizing an if-then heuristic. Place too much emphasis on perceived category of new information. Likely to change strategies based on a small sample of information.

Mitigation: Consciously take steps to avoid base rate neglect and sample size neglect. Consider the true probability that information fits a category. Use the Periodic Table of Investment Returns, and hold a well-diversified portfolio.

Illusion of Control Bias

Impact: The illusion of control over one's investment outcomes can lead to excessive trading with the accompanying costs. Can also lead to concentrated portfolios.

Mitigation: Seek opinions of others. Maintain a long-term perspective and recognize that many factors are outside of your control. Keep records of trades to see if you are successful at controlling investment outcomes.

Hindsight Bias

Impact: Overestimate accuracy of their forecasts and take too much risk.

Mitigation: Keep detailed record of all forecasts, including the data analyzed and the reasoning behind the forecast. Recognize your past mistakes honestly and try to learn from them.

Anchoring and Adjustment

Impact: Tend to remain focused on and stay close to their original forecasts or interpretations.

Mitigation: Give new information thorough consideration to determine its impact on the original forecast or opinion.

Mental Accounting Bias

Impact: Portfolios tend to resemble layered pyramids of assets. Subconsciously ignore the correlations of assets. May consider income and capital gains separately rather than as parts of the same total return.

Mitigation: Look at all investments as if they are part of the same portfolio to analyze their correlations and determine true portfolio allocation. Focus on total return, rather than income or price appreciation in isolation.

Framing Bias

Impact: Narrow a frame of reference; individuals focus on one piece or category of information and lose sight of the overall situation or how the information fits into the overall scheme of things.

Mitigation: Investors should focus on expected returns and risk, rather than on gains or losses. That includes assets or portfolios with existing gains or losses. Investors should focus

on whether they are framing decisions as gains or losses and be aware of the impact of loss aversion on their willingness to take risk.

Availability Bias: Four causes are retrievability, categorization, narrow range of experience, and resonance.

Impact: Select investments based on how easily their memories are retrieved and categorized. Narrow range of experience can lead to concentrated portfolios.

Mitigation: Develop an IPS to promote long-run focus and construct a suitable portfolio through diligent research.

Loss Aversion Bias

Myopic loss aversion combines the effects of time horizon and framing.

Impact: Focus on current gains and losses. Continue to hold losers in hopes of breaking even. Sell winners to capture the gains.

Mitigation: Perform a thorough fundamental analysis. Overcome mental anguish of recognizing losses.

Overconfidence Bias

Impact: Hold under-diversified portfolios; underestimate the downside while overestimating the upside potential. Trade excessively.

Mitigation: Keep detailed records of trades, including the motivation for each trade. Analyze successes and losses relative to the strategy used.

Self-Control Bias

Impact: Lack discipline to balance short-term gratification with long-term goals. Tend to try to make up the shortfall by assuming too much risk.

Mitigation: Maintain complete, clearly defined investment goals and strategies. Budgets help deter the propensity to over-consume. Asset allocation focused on achieving long-term goals and a savings plan should be implemented.

Status Quo Bias

Impact: Risk characteristics of the portfolio change. Investor loses out on potentially profitable assets.

Mitigation: Education about risk and return and proper asset allocation. Difficult to mitigate.

Endowment Bias

Impact: Value of owned assets higher than same assets if not owned. Stick with assets because of familiarity and comfort or were inherited.

Mitigation: Determine whether the asset allocation is appropriate. Consider moving toward an acceptable asset allocation via a series of small, unfamiliar purchases rather than all in one go.

Regret Aversion Bias

Impact: Stay in low-risk investments. Portfolio with limited upside potential. Stay in familiar investments or “follow the herd.”

Mitigation: Education regarding the benefits of diversification, proper asset allocation, and the long-term benefits of holding risky assets within a portfolio are the primary mitigation tools.

Goals-based investing recognizes that individuals are subject to loss aversion and mental accounting. Builds a portfolio in layers, each consisting of assets used to meet individual goals. Pyramiding: bottom layer made of assets designated to meet the investor’s most important goals. Each successive layer consists of increasingly risky assets used to meet less and less important goals. Provides investor with ability to see risk more clearly. Although portfolio probably won’t be efficient, it will tend to be fairly well diversified.

Behaviorally Modified Asset Allocation

- Emotional biases are more often adapted to through deviations from the rational asset portfolio allocation.
- Higher wealth relative to lifestyle needs allows for greater deviations from the rational portfolio.
- The emotional biases of the lower-wealth individual are treated about the same as the cognitive biases of the wealthier individual.
- The amount of deviation is also affected by the number of different asset classes in the portfolio.
- The lower the suggested deviation from the rational portfolio asset allocation, the greater the need to moderate the investor’s behavioral biases.
 - Due to significant standard of living risk, for example, the cognitive biases of the low-wealth investor must be moderated.

¹ Terminology used throughout this topic review is industry convention as presented in Reading 7 of the 2020 Level III CFA exam curriculum.

¹ <https://www.brown.edu/Research/Shapiro/pdfs/premiumgasoline.pdf>

² Shefrin, Hersh, and Meir Statman. 1985. “The Disposition to Sell Winners Too Early and Ride Losers Too Long: Theory and Evidence.” *Journal of Finance*, vol. 40, no. 3:77–90.

³ Benartzi, Shlomo, and Richard H. Thaler. 1995. “Myopic Loss Aversion and the Equity Premium Puzzle.” *Quarterly Journal of Economics*, vol. 110, no. 1:73–92.

ANSWER KEY FOR MODULE QUIZZES

Module Quiz 8.1, 8.2

1. **C** This describes the *endowment bias*, where individuals place a higher value on assets they own than if they did not own those same assets. The other two answer choices describe cognitive errors that are due to the inability to analyze all the information. (Module 8.2, LOS 8.b)
2. **B** Emotional biases tend to elicit more of a spontaneous reaction than a cognitive error would. Making a decision based only on partial information is indicative of a cognitive error. Ignoring a high PE ratio could be indicative of the conservatism bias, which is reacting slowly to new information or avoiding analyzing new information. It could also indicate the confirmation bias, where the investor focuses on positive information and ignores negative information. Both conservatism and confirmation biases are cognitive errors of belief perseverance. (Module 8.2, LOS 8.a, 8.b, 8.c)
3. **C** There are rational reasons a CEO may want to hold a large block of her company's stock. Those include legal restrictions on sale or a desire to take concentrated risk in a situation where she does have a lot of control over the company. A rational decision is not an error. Alternatively, the *insists* comment could indicate an emotional bias. Overall, this looks most like rational behavior, not an error.

The widow who becomes upset at a rational recommendation to diversify is more likely showing an emotional bias.

The client who initially resists a rational recommendation but then reverses their thoughts when given more information is showing an ability to correct a mistake. This is an indication of a cognitive error. Individuals making cognitive errors are likely to respond rationally when new information is provided. (Module 8.2, LOS 8.a)
4. **A** This describes the conservatism bias where individuals mentally place more emphasis on the information they used to form their original forecast than on new information. Anchoring and adjustment is closely related to the conservatism bias but is characterized as individuals being stuck on a particular forecasting number and is not associated with how investors relate new information to old information as the conservatism bias does. The confirmation bias is when individuals notice only information that agrees with their perceptions or beliefs. They look for confirming evidence while discounting or even ignoring evidence that contradicts their beliefs. (Module 8.2, LOS 8.b, 8.c, 8.d)
5. **B** Viewing each asset in light of meeting a specific goal is mental accounting. There was no indication of framing (the way data is provided overly affects the decision process). An investor with decades-long success who expects to produce reasonable results is acting rationally with no indication of a bias. (Module 8.2, LOS 8.b, 8.c)
6. **B** Ivy is suffering from the *status quo bias*, where investors leave their asset allocation alone and don't change it according to changing market conditions or changes in their own circumstances. The other two answer choices correctly describe ways of mitigating those behavioral traits. (Module 8.2, LOS 8.b, 8.c, 8.d)

The following is a review of the Behavioral Finance principles designed to address the learning outcome statements set forth by CFA Institute. Cross-Reference to CFA Institute Assigned Reading #9.

READING 9: BEHAVIORAL FINANCE AND INVESTMENT PROCESSES¹

Study Session 3

EXAM FOCUS

This topic review focuses on the influence of behavioral traits on all aspects of the investment process—creating the investment policy statement, the client/adviser relationship, portfolio construction, analyst forecasts, and market anomalies. Be able to discuss the benefit to both clients and advisers of incorporating behavioral finance into the client’s investment policy statement and the limitations of classifying investors into behavioral types. Be able to explain how behavioral finance influences the client/adviser relationship and to discuss the benefits to both of incorporating the behavioral aspects of investing into the relationship. Understand how investors tend to construct portfolios from a behavioral perspective. Be able to explain how behavioral biases affect analysts in their forecasting and the remedial actions that should be taken to reduce the influence of those biases. Also, know how behavioral biases affect the decision-making processes of investment committees. Lastly, be able to discuss the influence of behavioral biases on entire markets.

MODULE 9.1: CLASSIFYING INVESTORS

LOS 9.a: Explain the uses and limitations of classifying investors into personality types.



Video covering this content is available online.

CFA[®] Program Curriculum, Volume 2, page 112

Financial market participants, both investors and financial advisers, have found that when the psychology of investing is recognized in creating the client’s investment policy statement and subsequent implementation, the outcome is likely to be favorable. Applying a strictly traditional finance perspective can lead to pitfalls and unpleasant surprises for both the client and adviser. For example, investors who are overly risk averse or risk seeking react more emotionally to investing than would be expected of the typical, average investor. The adviser will have better success by addressing these clients’ emotional biases rather than ignoring them and taking a more traditional finance perspective.

The traditional finance perspective seeks to educate clients based on more quantitative measures of investing, such as standard deviation and Sharpe ratios, and these are of little interest to the client who reacts more emotionally to investing. The goal of viewing the client/adviser relationship from a psychological perspective as compared to a purely traditional finance perspective is for the adviser to better understand his client and to make better investment decisions. By incorporating behavioral biases into clients’ IPSs, clients’ portfolios will tend to be closer to the efficient frontier, and clients will be more trusting and satisfied and tend to stay on track with their long-term strategic plans. Ultimately, since

everyone is happy, the result is a better overall working relationship between client and adviser.

Behavioral Models

We will discuss three behavioral models: (1) the Barnewall two-way model, (2) the Bailard, Biehl, and Kaiser five-way model, and (3) the Pompain model.

The **Barnewall two-way behavioral model**² was developed in 1987 and classifies investors into only two types: passive and active. *Passive investors* are those who have not had to risk their own capital to gain wealth. For example they might have gained wealth through long, steady employment and disciplined saving or through inheritance. As a result of accumulating wealth passively, they tend to be more risk averse and have a greater need for security than their “active” counterparts. *Active investors* risk their own capital to gain wealth and usually take an active role in investing their own money. Active investors are much less risk averse than passive investors and are willing to give up security for control over their own wealth creation. Active investors gather large amounts of information about their investments to establish the feeling of control over their investments. This feeling can lead to overconfidence and the belief that they are taking less risk than they truly are. When active investors perceive a loss of control, their risk tolerance declines dramatically.



PROFESSOR'S NOTE

The causal relationship between steadily accumulating wealth over time and a high aversion to risk could go in either direction. Either one can lead to the other.

The **Bailard, Biehl, and Kaiser (BB&K) five-way model**,³ developed in 1986, classifies investors along two dimensions according to how they approach life in general. The first dimension, *confidence*, identifies the level of confidence usually displayed when the individual makes decisions. Confidence level can range from confident to anxious. The second dimension, *method of action*, measures the individual's approach to decision-making. Depending on whether the individual is methodical in making decisions or tends to be more spontaneous, method of action can range from careful to impetuous.

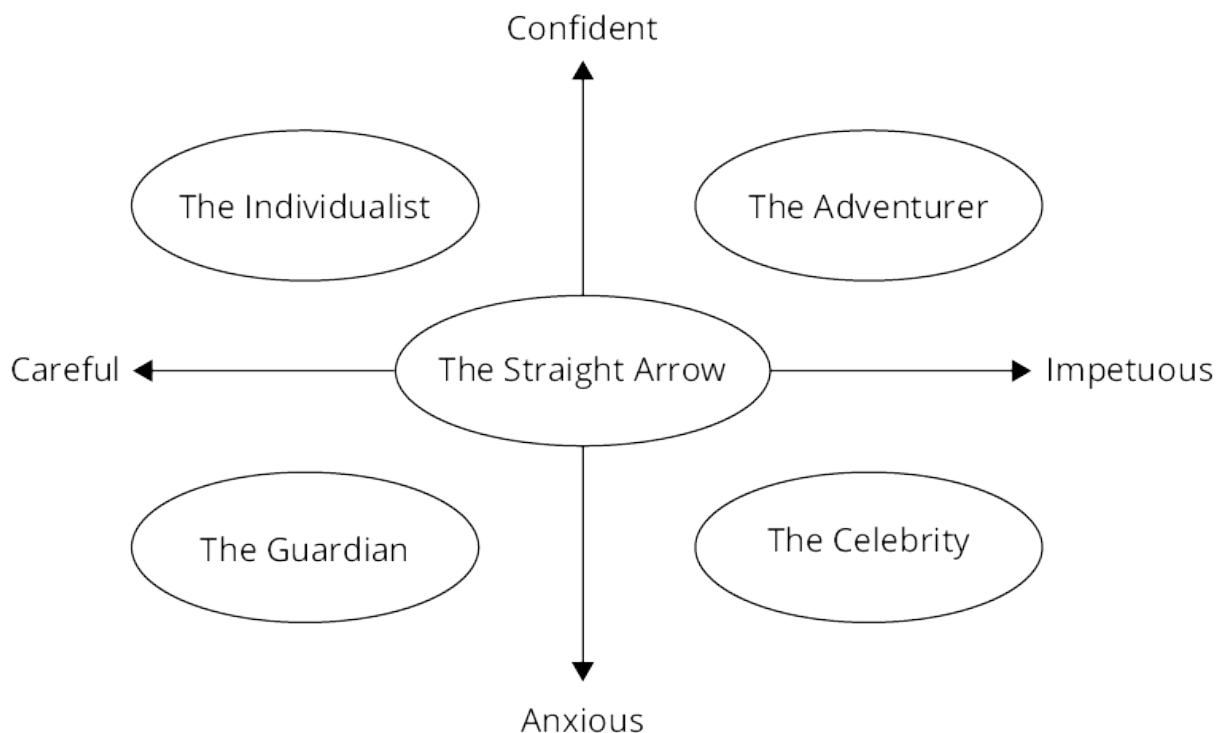
BB&K categorize investors into five behavioral types, which lie at different points in a grid formed by confidence/method of action. For example, the “straight arrow” investor would lie in the center of the grid, with the other four behavioral types scattered around the center.

Using the two dimensions like axes on a graph, the five behavioral types of the BB&K model are summarized in the following according to confidence and method of action, as indicated next in [Figure 9.1](#).

1. The **adventurer** has the following traits:
 - Confident and impetuous (northeast quadrant).
 - Might hold highly concentrated portfolios.
 - Willing to take chances.
 - Likes to make own decisions.
 - Unwilling to take advice.
 - Advisers find them difficult to work with.
2. The **celebrity** has the following traits:

- Anxious and impetuous (southeast quadrant).
 - Might have opinions but recognizes limitations.
 - Seeks and takes advice about investing.
3. The **individualist** has the following traits:
- Confident and careful (northwest quadrant).
 - Likes to make own decisions after careful analysis.
 - Good to work with because they listen and process information rationally.
4. The **guardian** has the following traits:
- Anxious and careful (southwest quadrant).
 - Concerned with the future and protecting assets.
 - May seek the advice of someone they perceive as more knowledgeable than themselves.
5. The **straight arrow** has the following traits:
- Average investor (intersection of the two dimensions).
 - Neither overly confident nor anxious.
 - Neither overly careful nor impetuous.
 - Willing to take increased risk for increased expected return.

Figure 9.1: Classification of Investors According to the BB&K Behavioral Model⁴



The **Pompian behavioral model**,⁵ developed in 2008, identifies four behavioral investor types (BITs). Pompian suggests that the adviser go through a 4-step process to determine the investor's BIT.

1. Interview the client to determine if she is active or passive as an indication of her risk tolerance.

2. Plot the investor on a risk tolerance scale.
3. Test for behavioral biases.
4. Classify the investor into one of the BITs.

[Figure 9.2](#) shows the results of the Pompian method of classifying investors. You will notice that both the *Passive Preserver* and the *Active Accumulator* tend to make emotional decisions. The *Friendly Follower* and *Independent Individualist* tend to use a more thoughtful approach to decision-making. The most common cognitive and emotional biases associated with each investor type are listed following [Figure 9.2](#).

Figure 9.2: Four Investor Types, Investment Styles, and Behavioral Biases⁶

Investor Type	Risk Tolerance	Investment Style	Decision Making
Passive Preserver	Low	Conservative	Emotional
Friendly Follower	↓	↓	Cognitive
Independent Individualist			Cognitive
Active Accumulator	High	Aggressive	Emotional

Most common *emotional* biases exhibited:

- **Passive Preserver:** Endowment, loss aversion, status quo, regret aversion.
- **Friendly Follower:** Regret aversion.
- **Independent Individualist:** Overconfidence, self-attribution.
- **Active Accumulator:** Overconfidence, self-control.

Most common *cognitive* biases exhibited:

- **Passive Preserver:** Mental accounting, anchoring and adjustment.
- **Friendly Follower:** Availability, hindsight, framing.
- **Independent Individualist:** Conservatism, availability, confirmation, representativeness.
- **Active Accumulator:** Illusion of control.

Behavioral Investor Types (BITs)

As previously mentioned, the last step in Pompian's process of determining which behavioral bias the investor is exhibiting is to categorize the investor into a behavioral investor type (BIT). There are four BITs, ranging from conservative to aggressive investing.

The first BIT is the **Passive Preserver**, characterized as having low risk tolerance, an emotional bias, not willing to risk his own capital, usually not financially sophisticated, and possibly difficult to advise because he is driven by emotion. Passive preservers respond to high-level overviews; they do not respond to quantitative details such as Sharpe ratios and standard deviations. The trust of their advisers needs to be won over time; however, once they trust their advisers, they are likely to value the advisers' expertise.

The **Friendly Follower** would also be considered a passive investor who has low to moderate risk tolerance and suffers mainly from cognitive errors, which are errors resulting from faulty reasoning and not emotional biases. Friendly followers follow tips from friends, colleagues,

and advisers. The Friendly Follower tends to overestimate her risk tolerance and wants to be in the most popular investments with little regard to market conditions or how the investment fits into her overall long-term investment plan. Since a Friendly Follower tends to approach investing from a more cognitive (thinking) perspective, the best course of action in advising her is to use more quantitative methods in educating her on the benefits of portfolio diversification.

The **Independent Individualist** is an active investor who is willing to risk his own capital and give up security to gain wealth. He has moderate to high risk tolerance and suffers from cognitive biases. He is strong-willed, likes to invest, does his own research, and tends to be a contrarian. The Independent Individualist tends to be difficult to advise but will listen to sound advice. Therefore, the best approach to advising him is regular education on investing concepts relevant to the investor.

The **Active Accumulator** is an active investor with a high tolerance for risk who approaches investing from an emotional perspective. The Active Accumulator is an aggressive investor who often comes from an entrepreneurial background and likes to get deeply involved in her investing. She is strong-willed, confident, and likes to control her investing, making her the most difficult of all the BITs to advise. Thus, the best course of action for the adviser is to take control of the investment process and not let the investor control the situation.

Limitations on Classifying Investors Into Behavioral Types

Many times, individuals act irrationally at unpredictable moments, making it difficult to apply the different behavioral investor traits consistently for any one investor over a period of time. This leads to several limitations of classifying investors into the various behavioral investor types:

- Many individuals may simultaneously display both emotional biases and cognitive errors. This can make it difficult and inappropriate to try and classify them as to whether their biases are emotional or cognitive; they are both.
- An individual might display traits of more than one behavioral investor type, making it difficult to place the individual into a single category.
- As investors age, they will most likely go through behavioral changes, usually resulting in decreased risk tolerance along with becoming more emotional about their investing.
- Even though two individuals may fall into the same behavioral investor type, the individuals should not necessarily be treated the same due to their unique circumstances and psychological traits.
- Individuals tend to act irrationally at unpredictable times because they are subject to their own specific psychological traits and personal circumstances. In other words, people don't all act irrationally (or rationally) at the same time, and trying to predict when they will act irrationally is extremely challenging.

MODULE 9.2: IMPLICATIONS: CLIENTS AND THEIR PORTFOLIOS

LOS 9.b: Discuss how behavioral factors affect adviser–client interactions.



Video covering this content is available online.

The goal of the client/adviser relationship is constructing a portfolio that the client is comfortable with and will be happy staying in over the long term. This is more easily accomplished once the adviser recognizes the need to incorporate behavior biases into the investment decision-making process.

The success of the typical client/adviser relationship can be measured in four areas, and each one is enhanced by incorporating behavioral finance traits:

1. *The adviser understands the long-term financial goals of the client.* Behavioral finance helps the adviser understand the reasons for the client's goals. The client/adviser relationship is enhanced because the client feels the adviser truly understands him and his needs.
2. *The adviser maintains a consistent approach with the client.* Behavioral finance adds structure and professionalism to the relationship, which helps the adviser understand the client before giving investment advice.
3. *The adviser acts as the client expects.* This is the area that can be most enhanced by incorporating behavioral finance into the client/adviser relationship. Once the adviser thoroughly understands the client and her motivations, the adviser knows what actions to perform, what information to provide, and the frequency of contact required to keep the client happy.
4. *Both client and adviser benefit from the relationship.* The primary benefit of incorporating behavioral finance into the client/adviser relationship is a closer bond between the two. This results in happier clients and an enhanced practice and career for the adviser.

Risk Tolerance Questionnaires

As one of the first steps in the client/adviser relationship, the adviser has the client fill out a risk tolerance questionnaire. Unfortunately, the same individuals can give different answers to the same set of questions depending on their frame of mind or current circumstances. In addition, most questionnaires are not structured to measure behavioral biases. This means there are a number of limitations to the traditional questionnaire.

First, since an individual's responses are affected by the wording of questions (framing), the same questions can produce different results if the structure of the questions is changed only slightly. Then, since client answers reflect all their behavioral biases, and those in turn are affected by the client's circumstances, administering a questionnaire only during the initial meeting is insufficient. Since the client's IPS should be analyzed annually for appropriateness, the questionnaire should also be administered annually.

Advisers also may interpret what the client says too literally, when client statements should only act as indicators. The successful adviser is able to determine the client's intent, for example, when he states a minimum allowable return in a given year. Rather than interpret the minimum allowable return literally, the adviser should use the statement as an indicator of the client's attitude toward risk and return. As a consequence, risk tolerance questionnaires are probably better suited to institutional investors, where less interpretation is required. Institutional investors are generally more pragmatic and tend to approach investing from a thinking/cognitive approach with a better understanding of risk and return.

BEHAVIORAL FACTORS AND PORTFOLIO CONSTRUCTION

LOS 9.c: Discuss how behavioral factors influence portfolio construction.

CFA® Program Curriculum, Volume 2, page 124

Research on defined contribution and 401k retirement plans in the U.S. indicates ways behavioral finance influences portfolio construction and how the insight gained might be applied in portfolio construction to achieve results more consistent with traditional finance theory. The studies show evidence of the following.

Status quo bias as investors do not make changes to their portfolio even when transaction costs are zero. Portfolio theory would clearly suggest that as time passes and the investors are aging, their optimal portfolio mix will shift. These changes are not being made. In addition, the investors generally accept whatever default investor option is offered by the employer and the contribution default rate. Neither is optimal as the asset mix is usually heavily weighted to money market funds and the contribution rate is lower than allowable.

To counteract this bias some companies have autopilot options such as target date funds. A target date fund has a stated retirement date and the manager of the fund automatically shifts the asset mix in ways suitable for investors planning to retire on that date. Once the investor picks the target date fund, the manager makes the adjustments for passage of time and the client does not need to take any action. Target date funds tend to reduce the individual's exposure to equity and increase the exposure to fixed income as the individual approaches retirement. This change in asset allocation is referred to as the glide path.

Naïve diversification as investors equally divide their funds among whatever group of funds is offered. According to a study, when offered a stock and bond fund, investors allocated 50/50. Then, if offered a stock and balanced fund, investors still allocated 50/50. Others suggest investors follow **conditional naïve diversification**. They select a smaller number of funds (e.g., three to five), and then allocate equally. In either case some argue this is motivated by seeking to avoid regret. Owning equal amounts of all, investors did not miss the best performer.

Excessive **concentration in employer stock** is also evident. This will be discussed in a later study session but it is very risky as retirement fund performance is now linked to compensation at an underlying source, the company. This could be based on *familiarity and overconfidence*. Employees may think, "I know the company and see it every day; surely it is a good investment." If past performance has been good and you are familiar with it that would be *naïve extrapolation of past results*. *Framing and status quo effect of matching contributions* is exhibited as if the employer's contribution is made in employer stock. In such cases the employees then increase the amount they chose to place in the employer stock. *Loyalty effect* is simply a desire to hold employer stock as a sign of loyalty to the company. When *financial incentives* are offer by the employer to invest in employer stock, the decision may be rational, but the holdings are in excess of what can be justified.

Excessive trading of holdings is evident in the brokerage account holdings of individuals even though individuals show status quo in retirement funds. This could be due to *overconfidence* as the individuals think they have superior stock selection skills or *self-selection* as trading-oriented investors put their money in brokerage accounts and others put money in retirement portfolios at their company. Investors also show a *disposition effect* in

selling stocks that appreciate (e.g., winners) but holding on to stocks that depreciate (e.g., losers).

Home bias is seen in under diversification and failing to invest outside the investor's home country. Home bias can be caused by familiarity with domestic assets. Other behavioral biases that contribute are availability, confirmation, endowment, status quo, and illusion of control biases.

LOS 9.d: Explain how behavioral finance can be applied to the process of portfolio construction.

CFA® Program Curriculum, Volume 2, page 124

Behavioral Portfolios vs. Mean Variance Portfolios

Behavioral portfolio theory (BPT) has been discussed earlier in Readings 7 and 8. Investors exhibit behavioral biases when they construct portfolios in *layers*, comprising a pyramid with each layer having a specific purpose in achieving a different goal. This is also referred to as **mental accounting** because the assets in each layer of the pyramid are viewed separately from each other with no regard to how they are correlated. Traditional mean variance analysis considers the portfolio as a whole, only considering the portfolio's expected return and variance. This contrasts sharply with the BPT's division of the portfolio into layers, each with separate return goals and risk tolerances. Covariance of asset returns is a primary driver of portfolio risk in traditional theory.

In the pyramid structure, the most pressing goals are placed on the bottom layer and are met using low-risk, conservative investments. Each successive layer going toward the top of the pyramid is made of riskier assets to accomplish less immediate or less important goals. The top of the pyramid is composed of risky, more speculative assets to meet "wish list" types of goals. Behavioral finance can be applied and benefit the portfolio management process by:

- Leading managers and clients to discuss the relative importance of goals and perceived risk.
- Layering investment portfolios that the client can understand and maintain could be superior to traditional portfolios that consider correlation but that the client is unwilling to stay with.



MODULE QUIZ 9.1, 9.2

To best evaluate your performance, enter your quiz answers online.

1. **Identify** three uses and three limitations of classifying investors into behavioral types.
2. **List** and **explain** two areas that are considered critical to a successful client/adviser relationship and how incorporating behavioral finance can enhance the relationship.
3. Which of the following is *least* indicative of the pyramid structure seen when individuals create portfolios?
 - A. The correlation between the assets in the pyramid is ignored.
 - B. Individuals subconsciously view the pyramid as having a single level of risk.
 - C. People tend to place their money into different "buckets," which is referred to as mental accounting.
4. Behavioral finance would support building portfolios using which of the following techniques?
 - A. In a pyramid with low priority investment goals funded with low risk assets.
 - B. In a balanced fund with stocks and bonds.

C. Using target date funds.

MODULE 9.3: IMPLICATIONS: OTHER



LOS 9.e: Discuss how behavioral factors affect analyst forecasts and recommend remedial actions for analyst biases.

Video covering this content is available online.

CFA[®] Program Curriculum, Volume 2, page 129

Research has shown that experts in varying fields make forecasting errors as a result of behavioral biases, and financial analysts are subject to those same biases. Surprisingly, it is analysts' superior skills in analyzing companies that makes them vulnerable to forecasting errors. An understanding of their weaknesses can help analysts limit the degree of their forecasting inaccuracies.

There are three primary behavioral biases that can affect analysts' forecasts: (1) overconfidence, (2) the way management presents information, and (3) biased research.

Overconfidence

Analysts can be susceptible to overconfidence as a result of undue faith in their own forecasting abilities caused by an inflated opinion of their own knowledge, ability, and access to information. Analysts also tend to remember their previous forecasts as being more accurate than they really were (a form of hindsight bias). As a result, they overestimate their accuracy and understate potential risk. There are several behavioral biases that contribute to overconfidence.

Analysts are subject to the *illusion of knowledge bias* when they think they are smarter than they are. This, in turn, makes them think their forecasts are more accurate than the evidence indicates. The illusion of knowledge is fueled when analysts collect a large amount of data. This leads them to think their forecasts are better because they have more and better information than others. Gathering additional information could add to an analyst's overconfidence without necessarily making the forecast more accurate. The *illusion of control bias* can lead analysts to feel they have all available data and have reduced or eliminated all risk in the forecasting model; hence, the link to overconfidence.

Complex financial models can increase overconfidence and the illusion of control. Careful consideration of the models' underlying assumptions is required. Analysts should avoid reliance on a particular historic data set to avoid models that optimize the data set but perform poorly out of sample. A model's performance out of sample is referred to as its robustness.

Exhibiting *representativeness*, an analyst judges the probability of a forecast being correct on how well the available data represent (i.e., fit) the outcome. The analyst incorrectly combines two probabilities: (1) the probability that the information fits a certain information category, and (2) the probability that the category of information fits the conclusion.

An analyst exhibits the *availability bias* when he gives undue weight to more recent, readily recalled data. Being able to quickly recall information makes the analyst more likely to "fit" it with new information and conclusions. The *representativeness* and *availability biases* are commonly exhibited in reactions to rare events.

To subconsciously protect their overconfidence, analysts utilize **ego defense mechanisms**. One ego defense mechanism is the *self-attribution bias*. Analysts take credit for their

successes and blame others or external factors for failures. Self-attribution bias is an ego defense mechanism, because analysts use it to avoid the cognitive dissonance associated with having to admit making a mistake.

The relationship between self-attribution bias, illusion of knowledge, and overconfidence are fairly obvious. By aligning past successes with personal talent, the analyst adds to the feeling of complete knowledge, which in turn fuels overconfidence.

Hindsight bias is another ego defense mechanism. In effect, the analyst selectively recalls details of the forecast or reshapes it in such a way that it fits the outcome. In this way, the forecast, even though it technically was off target, serves to fuel the analyst's overconfidence. Hindsight bias then leads to future failures. By making their prior forecasts fit outcomes, analysts fail to properly recalibrate their models.

Note that cognitive dissonance reinforces both self-attribution and hindsight biases. Cognitive dissonance is the feeling of discomfort an individual feels when presented with information that contradicts a belief or opinion. To avoid the discomfort, the individual is likely to dismiss or downplay the significance of the contradicting information.

There are several actions analysts can take to minimize (mitigate) overconfidence in their forecasts. For example, they can self-calibrate better. *Self-calibration* is the process of remembering their previous forecasts more accurately in relation to how close the forecast was to the actual outcome. Getting prompt and immediate feedback through self evaluations, colleagues, and superiors, combined with a structure that rewards accuracy, should lead to better self-calibration. Analysts' forecasts should be unambiguous and detailed, which will help reduce hindsight bias. Documenting the reasons behind decisions at the time of decision-making allows for an objective assessment at a later date.

To help counteract the effects of overconfidence, analysts should seek at least one counterargument, supported by evidence, for why their forecast may not be accurate. Analysts should also consider *sample size*. Basing forecasts on small samples can lead to unfounded confidence in unreliable models. Lastly, Bayes' formula is a useful tool for reducing behavioral biases when incorporating new information. Bayes' formula is discussed in the topic review, *The Behavioral Finance Perspective*.

Influence by Company Management

The way a company's management presents (frames) information can influence how analysts interpret it and include it in their forecasts. The problem stems from company managers being susceptible to behavioral biases themselves. There are three cognitive biases frequently seen when management reports company results: (1) framing, (2) anchoring and adjustment, and (3) availability.

Framing refers to a person's inclination to interpret the same information differently depending on how it is presented. We know, for example, that simply changing the order in which information is presented can change the recipient's interpretation of the information. In the case of company information, analysts should be aware that a typical management report presents accomplishments first.

Anchoring and adjustment refers to being "anchored" to a previous data point. Being influenced by (anchored to) the previous forecast, analysts are not able to fully incorporate or make an appropriate adjustment in their forecast to fully incorporate the effect of new

information. The way the information is framed (presenting the company's accomplishments first), combined with anchoring (being overly influenced by the first information received), can lead to overemphasis of positive outcomes in forecasts.

Availability refers to the ease with which information is attained or recalled. The enthusiasm with which managers report operating results and accomplishments makes the information very easily recalled and, thus, more prominent in an analyst's mind. The more easily the information is recalled, the more emphasis (weight) it is given in the forecasting process.

Analysts should also look for **self-attribution bias** in management reports that is a direct result of the structures of management compensation packages. For example, management typically receives salary increases and bonuses based on operating results. Management is thus inclined to overstate results (overemphasize the positive), as well as the extent to which their personal actions influenced the operating results. Thus, self-attribution naturally leads to excessive optimism (overconfidence).

Analysts must also be wary of recalculated earnings, which do not necessarily incorporate accepted accounting methods. Again, since management compensation is based largely on operating results, there is a motivation to present the best possible data. The analyst should be particularly sensitive to earnings that are restated in a more favorable light than originally presented.

To help avoid the undue influence in management reports, analysts should focus on quantitative data that is verifiable and comparable rather than on subjective information provided by management. The analyst should also be certain the information is framed properly and recognize appropriate base rates (starting points for the data) so the data is properly calibrated.

Analyst Biases in Research

Biases specific to analysts performing research are usually related to the analysts' collecting too much information, which leads to the illusions of knowledge and control and to representativeness, all of which contribute to overconfidence. Two other common biases found in analysts' research are the *confirmation bias* and the *gambler's fallacy*.

The **confirmation bias** (related to *confirming evidence*) relates to the tendency to view new information as confirmation of an original forecast. It helps the analyst resolve cognitive dissonance by focusing on confirming information, ignoring contradictory information, or interpreting information in such a way that it conforms to the analyst's way of thinking. The confirmation bias can also be seen in analysts' forecasts where they associate a sound company with a safe investment, even though the stock price and the current economic environment would indicate otherwise.

The **gambler's fallacy**, in investing terms, is thinking that there will be a reversal to the long-term mean more frequently than actually happens.

The hot hand fallacy may lead individuals to incorrectly predict the continuation of a recent trend. Both mean reversion and the hot hand fallacy lead to bias in predicting the probability of statistically independent events. A *representative bias* is one in which the analyst inaccurately extrapolates past data into the future. An example of a representative bias would be classifying a firm as a growth firm based solely on previous high growth without considering other variables affecting the firm's future.



PROFESSOR'S NOTE

The gambler's fallacy can be effectively demonstrated with a coin toss example. Consider an individual who is watching a coin being tossed. He knows intellectually that the probability of heads or tails turning up in any single toss is 50%. Before the coin is tossed the first time, he maintains this 50%/50% prior probability. Now, assume the coin is tossed five times, and heads turns up all five times. Knowing that the long-term mean is 50% heads and 50% tails, the individual starts to feel the probability of tails turning up on the next toss has increased above 50%. In fact, if the run of heads increases, the individual's subjective probability that tails will come up on the next toss will also increase, even though the probability of either heads or tails stays at 50% with every toss.

There are many actions an analyst can take to prevent biases in research, some of which are the same as when they are interpreting management reports. For example, analysts should be aware of the possibility of *anchoring and adjustment* when they recalibrate forecasts given new information. They should use metrics and ratios that allow for comparability to previous forecasts. They should take a systematic approach with prepared questions and gather data before forming any opinions or making any conclusions.

Analysts should use a structured process by incorporating new information sequentially and assigning probabilities using Bayes' formula to help avoid conclusions with unlikely scenarios. They should seek contradictory evidence, formulating a contradictory opinion instead of seeking more information that proves their initial hypothesis. They should get prompt feedback that allows them to re-evaluate their opinions and gain knowledge for future insight, all the while documenting the entire process.

INVESTMENT COMMITTEES

LOS 9.f: Discuss how behavioral factors affect investment committee decision making and recommend techniques for mitigating their effects.

CFA® Program Curriculum, Volume 2, page 141

Many investment decisions are made in a group setting (e.g., stock recommendations by research committees, analysts working in a team setting, pension plan decisions being approved by a board of trustees, or an investment club deciding which stocks to buy). The thinking is that the collective expertise of the individual members will contribute to better investment decision-making. In a group setting, the individual biases mentioned before can be either diminished or amplified with additional biases being created.

Social proof bias is when a person follows the beliefs of a group. Either consciously or subconsciously, individuals may seek the endorsement or favorable judgment of others within the group. Research has shown that the investment decision-making process in a group setting is notoriously poor. To reach a consensus opinion by the group, work to narrow the range of options considered. Some group dynamics may inhibit individuals to share relevant information. Many groups show overconfidence bias, having reached decisions by consensus. Committees do not learn from past experience because feedback from decisions is generally inaccurate and slow, so systematic biases are not identified.

Committees are typically formed with people with similar backgrounds, who therefore approach problems in the same manner. In a group setting, individuals may feel uncomfortable expressing their opinion if it differs with others or a powerful member of the group. Alternatively, sometimes the group members (without proper consideration and

evaluation) can support a dominant member's views or opinions. The remedy is for committees to have the following features:

- Individuals with diverse backgrounds and cultures.
- Members who are not afraid to express their opinions even if they differ from others' views.
- A committee chair who encourages members to speak out even if the member's views are contrary to the group's views.
- A mutual respect for all members of the group.
- Collecting individuals' views before a discussion can ensure a wider range of opinions are considered, particularly if individuals feel inhibited from expressing their views in group discussions.

BEHAVIORAL FINANCE AND MARKET BEHAVIOR

LOS 9.g: Describe how behavioral biases of investors can lead to market characteristics that may not be explained by traditional finance.

CFA® Program Curriculum, Volume 2, page 144

In an efficient market, one should not be able to consistently generate excess returns using any form of information. Once information is known to investors, it should be instantaneously and fully incorporated into prices. But this does not mean that all apparent pricing exceptions to the efficient market hypothesis are anomalies.

- An excess return before fees and expenses that disappears after properly reflecting all costs required to exploit it is not an anomaly.
- Some apparent anomalies are simply a reflection of an inadequate pricing model. If another model with an additional risk factor removes the excess return, it may not be an anomaly. Academics have yet to agree on a multifactor model, which adequately explains all sources of systematic risk reliably. As a result, abnormal returns may result from a systematic risk factor that has not been incorporated.
- Apparent anomalies may be explained by small sample sizes or sample selection bias. Data mining can lead to the detection of spurious correlations. Without a rational logic behind the correlation, spurious correlations inevitably break down when forecasting out of sample.
- An anomaly may exist for only the short-run and disappear once it becomes known and exploited.
- Some apparent anomalies are a rational reflection of relevant economic factors. Year-end trading anomalies may just reflect rational behavior to reduce taxes.

But other deviations from the EMH and rationality do persist and behavioral finance can offer insight into these.

Momentum Effect

All forms of the EMH assert technical-price-based trading rules should not add value. Yet studies continue to show evidence of correlation in price movement. A pattern of returns that is correlated with the recent past would be classified as a **momentum effect**. This effect can

last up to two years, after which it generally reverses itself and becomes negatively correlated, with returns reverting to the mean. This effect is caused by investors following the lead of others, which at first is not considered to be irrational. The collective sum of those investors trading in the same direction results in irrational behavior, however. There are several forms of momentum that can take place, which are discussed in the following.

Herding is when investors trade in the same direction or in the same securities, and possibly even trade contrary to the information they have available to them. Herding sometimes makes investors feel more comfortable because they are trading with the consensus of a group. Two behavioral biases associated with herding are the *availability bias* (a.k.a. the *recency bias* or *recency effect*) and *fear of regret*. In the availability bias, recent information is given more importance because it is most vividly remembered. It is also referred to as the availability bias because it is based on data that are readily available, including small data samples or data that do not provide a complete picture. In the context of herding, the recent data or trend is extrapolated by investors into a forecast.

Regret is the feeling that an opportunity has passed by and is a *hindsight bias*. The investor looks back thinking they should have bought or sold a particular investment (note that in the availability bias, the investor most easily recalls the recent positive performance). Regret can lead investors to buy investments they wish they had purchased, which in turn fuels a **trend-chasing effect**. Chasing trends can lead to excessive trading, which in turn creates short-term trends. The **disposition effect**, which incorporates loss aversion, stems from overconfidence in mean reversion, resulting in selling winners too early and holding onto losers for too long.

Financial Bubbles and Crashes

Financial bubbles and subsequent crashes are periods of unusual positive or negative returns caused by panic buying and selling, neither of which is based on economic fundamentals. The buying (selling) is driven by investors believing the price of the asset will continue to go up (down). A bubble or crash is defined as an extended period of prices that are two standard deviations from the mean. A crash can also be characterized as a fall in asset prices of 30% or more over a period of several months, whereas bubbles usually take much longer to form.

Typically, in a bubble, the initial behavior is thought to be rational as investors trade according to economic changes or expectations. Later, the investors start to doubt the fundamental value of the underlying asset, at which point the behavior becomes irrational. Recent bubbles were seen in the technology bubble of 1999–2000 and increased residential housing prices in the United Kingdom, Australia, and the United States in the lead-up to the financial crash of 2007–2008.

In bubbles, investors sometimes exhibit rational behavior—they know they are in a bubble but don't know where the peak of the bubble is. Or, there are no suitable alternative investments to get into, making it difficult to get out of the current investment. For investment managers, there could be performance or career incentives encouraging them to stay invested in the inflated asset class.

There are several different types of behavior that are evident during bubbles. Investors usually exhibit *overconfidence*, leading to excessive trading and underestimating the risk involved. Portfolios become concentrated, and investors reject contradictory information. Overconfidence is linked to the *confirmation bias*, in which investors look for evidence that confirms their beliefs and ignore evidence that contradicts their beliefs. *Self-attribution bias*

is also present when investors take personal credit for the success of their trades (they make no attempt to link ex post performance to strategy).

Hindsight bias is present when the investor looks back at what happened and says, “I knew it all along.” *Regret aversion* is present when an investor does not want to regret missing out on all the gains everyone else seems to be enjoying.

The *disposition effect* is prevalent when investors are more willing to sell winners and hold onto losers, leading to the excessive trading of winning stocks.

As the bubble unwinds in the early stages, investors are anchored to their beliefs, causing them to under-react because they are unwilling to accept losses. As the unwinding continues, the disposition effect dominates as investors hold onto losing stocks in an effort to postpone regret.

Value vs. Growth

Two anomalies discussed by Fama and French⁷ are associated with value and growth stocks. Value stocks have low price-to-earnings ratios, high book-to-market values, and low price-to-dividend ratios, with growth stocks having the opposite characteristics. In their 1998 study, Fama and French found that value stocks historically outperformed growth stocks in 12 of 13 markets over a 20-year period from 1975 to 1995. They also found that small-capitalization stocks outperformed large-caps in 11 of 16 markets. Additionally, they contend that in their three factor model, consisting of size, value, and market beta, the value stock mispricing anomaly disappears and is instead due to risk exposures of companies with a particular size and book-to-market value being more vulnerable during economic downturns.

Other studies have offered behavioral explanations, identifying the value and growth anomalies as a mispricing rather than an adjustment for risk. For example, in the **halo effect**, the investor transfers favorable company attributes into thinking that the stock is a good buy. A company with a good record of growth and share price performance is seen as a good investment with continued high expected returns. This is a form of representativeness in which investors extrapolate past performance into future expected returns, leading growth stocks to become overvalued.

The **home bias** anomaly is one where investors favor investing in their domestic country as compared to foreign countries. This also pertains to companies that are located closer to the investor. This bias can be related to a perceived information advantage or the comfort one feels from being closer to the home office or executives of the company. Analysts may see this as having easier access to those individuals, or a desire of the investor to invest in their community.



MODULE QUIZ 9.3

To best evaluate your performance, enter your quiz answers online.

1. **Explain** why and how hindsight bias is used in an analyst forecasts.
2. Which of the following is the *least* desirable trait to have in an investment committee?
 - A. The committee members come from diverse backgrounds.
 - B. The committee members are generally in consensus with one another.
 - C. The chairperson of the committee encourages individuals to speak out.
3. **Explain** what causes bubbles and crashes and **list** two ways of quantitatively identifying them.

KEY CONCEPTS

LOS 9.a

Incorporating behavioral biases into the client's IPS should result in the following:

- Portfolios that are closer to the efficient frontier.
- More satisfied clients.
- Clients who are better able to stay on track with their long-term strategic plans.
- Better working relationships between the client and adviser.

Limitations of classifying investors into behavioral types include the following:

- Individuals can display emotional and cognitive errors at the same time.
- The same individual may display traits of more than one behavioral investor type.
- As investors age, they become more risk averse and emotional toward investing.
- Individuals who fall into the same behavioral type shouldn't necessarily be treated the same.
- Unpredictably, individuals tend to act irrationally at different times.

LOS 9.b

There are four areas of the client/adviser relationship that can be enhanced by incorporating behavioral finance into the relationship:

1. Behavioral finance helps the adviser understand the reasons for the client's goals.
2. Behavioral finance adds structure and professionalism to the relationship.
3. The adviser is better equipped to meet the client's expectations.
4. A closer bond between them results in happier clients and an enhanced practice for the adviser.

LOS 9.c

Behavioral biases exhibited by defined contribution (DC) plan participants:

- *Status quo bias*: Investors make no changes to their initial asset allocation.
- *Naïve diversification (1/n naïve diversification)*: Employees allocate an equal proportion of their retirement funds to each mutual fund in the plan.

Reasons employees invest in their own company's stock.

- *Familiarity*: They underestimate its risk; they become overconfident in their estimate of the company's performance.
- *Naïve extrapolation*: The company's recent good performance is extrapolated into expected future performance.
- *Framing*: If the employer's contribution is in company stock, employees tend to keep it rather than sell it and reallocate.
- *Loyalty*: Employees hold company stock in an effort to help the company (e.g., to prevent a takeover by another firm).

- *Financial incentive*: Tax incentives or the ability to purchase the stock at a discount lead to holding too much company stock.

Due to *overconfidence*, retail investors trade their brokerage accounts excessively. The result can be lower returns due to trading costs. *Disposition effect*: Investors tend to sell winners too soon and hold losers too long.

Home bias is closely related to *familiarity*. It leads to staying completely in or placing a high proportion of assets in the stocks of firms in their own country.

Mental accounting: Investors tend to construct portfolios in layers (pyramids). Each layer is used to meet a different goal. Investors see each layer as having a separate level of risk and ignore correlations of assets in the different layers.

LOS 9.d

Behavioral finance insights could lead to portfolio construction using:

- Target funds to overcome status quo bias.
- Layered portfolios that accommodate perceptions of risk and importance of goals to build portfolios the client will stay with.

LOS 9.e

Analysts typically exhibit three biases: (1) overconfidence; (2) interpreting management reports; and (3) biases in their own research.

Behavioral biases that contribute to overconfidence:

- The illusion of knowledge bias.
- The self-attribution bias.
- Representativeness.
- The availability bias.
- The illusion of control bias.
- Hindsight bias.

Actions analysts can take to minimize overconfidence:

- Get feedback through self evaluations, colleagues, and superiors, combined with a structure that rewards accuracy, leading to better self-calibration.
- Develop forecasts that are unambiguous and detailed, which help to reduce hindsight bias.
- Provide one counterargument supported by evidence for why their forecast may not be accurate.
- Consider sample size and model complexity.
- Use Bayes' formula.

Reporting by company management is subject to behavioral biases:

- Framing.
- Anchoring and adjustment.
- Availability.

Analysts should be aware of the following when a management report is presented:

- Results and accomplishments are usually presented first, giving more importance to that information.
- Self-attribution bias in the reports.
- Excessive optimism.
- Recalculated earnings.

Actions the analyst can take to prevent undue influence in management reports:

- Focus on verifiable quantitative data.
- Be certain the information is framed properly.
- Recognize appropriate base rates so the data is properly calibrated.

Analyst biases in research:

- Usually related to collecting too much information.
- Leads to illusions of knowledge and control as well as representativeness.
- Inaccurately extrapolate past data into the future.
- Can suffer from *confirmation bias* and *gambler's fallacy*.

To prevent biases in research:

- Ensure previous forecasts are properly calibrated.
- Use metrics and ratios that allow comparability to previous forecasts.
- Take a systematic approach with prepared questions and gathering data first before making conclusions.
- Use a structured process; incorporate new information sequentially assigning probabilities using Bayes' formula.
- Seek contradictory evidence and opinions.

LOS 9.f

Committees often make poor decisions. They reflect the biases of the individual members as well as *social proof bias* (members are reluctant to say what they think, and they feel obligated to go along with the group to avoid giving offense).

To mitigate these problems, seek members with diverse backgrounds who are not afraid to express their opinions and who respect the other members of the group.

LOS 9.g

Market anomalies:

- *Momentum effect*. Patterns in returns that are caused by investors following the lead of others; they tend to trade in the same direction, which is referred to as *herding*.
- *Financial bubbles and crashes*. Periods of unusual positive or negative returns caused by panic buying or selling. They can be defined as a period of prices two standard deviations from their historical mean. A crash can also be characterized as a fall in asset prices of 30% or more over a period of several months; bubbles usually take much longer to form. Behavioral biases exhibited during bubbles are overconfidence, confirmation bias, self-attribution bias, hindsight bias, regret aversion, and the disposition effect.

- *Value stocks*. Low price-to-earnings, high book-to-market, low price-to-dividend ratios. Growth stocks have the opposite characteristics.
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¹ Terminology used throughout this topic review is industry convention as presented in Reading 9 of the 2020 Level III CFA exam curriculum.

² Barnewall, Marilyn. 1987. "Psychological Characteristics of the Individual Investor." *Asset Allocation for the Individual Investor*. Charlottesville, VA: The Institute of Chartered Financial Analysts.

³ Bailard, Brad M., David L. Biehl, and Ronald W. Kaiser. 1986. *Personal Money Management*, 5th ed. Chicago: Science Research Associates.

⁴ Based on Exhibit 1, 2020 Level III curriculum, vol. 2, p 109.

⁵ Pompian, Michael. 2008. "Using Behavioral Investor Types to Build Better Relationships with Your Clients." *Journal of Financial Planning*, October 2008: 64-76.

⁶ Based on Exhibit 4, 2020. Level III curriculum, vol. 2, p. 113.

⁷ Fama, Eugene F. and Kenneth R. French, 1998. "Value Versus Growth: The International Evidence." *Journal of Finance*, vol 53, no. 6: 1975–1999.

ANSWER KEY FOR MODULE QUIZZES

Module Quiz 9.1, 9.2

1. Uses of classifying investors into behavioral types include:

- Portfolios that are closer to the efficient frontier and more closely resemble ones based on traditional finance theory.
- More trusting and satisfied clients.
- Clients who are better able to stay on track with their long-term strategic plans.
- Better overall working relationships between the client and adviser.

Limitations of classifying investors into behavioral types include:

- Individuals may display both emotional and cognitive errors at the same time, with either behavior appearing irrational.
- The same individual may display traits of more than one behavioral investor type at the same time; therefore, the investment adviser should not try to classify the individual into only one behavioral investor type.
- As investors age, they will most likely go through behavioral changes, usually resulting in decreased risk tolerance, along with becoming more emotional about their investing.
- Even though two individuals may fall into the same behavioral investor type, each individual would not be treated the same due to their unique circumstances.
- Individuals tend to act irrationally at different times, seemingly without predictability. (Module 9.1, LOS 9.a)

2. A successful client/adviser relationship can be defined in four areas, with each one being enhanced by an understanding of how behavioral finance can play an important part in the relationship.L3_W

- The adviser understands the long-term financial goals of the client. Behavioral finance helps the adviser understand the reasons for the client's goals, making the client feel like they are better understood.
- The adviser maintains a consistent approach with the client. Behavioral finance adds structure and professionalism to the relationship, which helps the adviser understand the client before investment advice is given.
- The adviser invests as the client expects. Once the adviser understands the motivations for the client's goals, the adviser is better equipped to meet the client's expectations.
- Both client and adviser benefit from the relationship. The primary benefit of incorporating behavioral finance into the client/adviser relationship is a closer bond between them, resulting in happier clients and an enhanced practice for the adviser. (Module 9.2, LOS 9.b)

3. **B** In the pyramid structure, investors view each separate layer or investment within that layer as having a separate level of risk associated with the goal they are trying to accomplish with that investment. It is in the traditional finance theory approach of portfolio construction where all the investor's assets are viewed as one complete portfolio with a single level of risk. In the pyramid structure, the correlation between

the assets in the pyramid is ignored, whereas in the traditional finance portfolio construction, the correlation between the assets is taken into consideration. In the pyramid structure, individuals tend to think of each layer separately, which is referred to as mental accounting. (Module 9.2, LOS 9.c)

4. **C** Target date funds overcome the status quo bias of individuals and adjust the portfolio as they age. A simple balanced approach does not make the adjustment and a pyramid approach is suggested, but low priority goals can be funded with higher risk assets. (Module 9.2, LOS 9.d)

Module Quiz 9.3

1. Hindsight bias is an ego defense mechanism analysts use to protect themselves against being wrong in their forecast. It is used by selectively recalling what actually happened, allowing the analyst to adjust their forecast accordingly and making it look like their forecast was more accurate than it actually was. Hindsight bias is possible when the original forecast is vague and ambiguous, a poor forecasting trait, allowing the forecast to be adjusted. (LOS 9.e)
2. **B** Committee members always being in consensus with each other is an undesirable trait of a committee, which could lead to poor investment decision-making. It is more desirable to have a committee formed of individuals with diverse backgrounds who are encouraged, and not afraid, to voice their opinions, even if the opinion differs from the others. These traits lead to better overall decisions being made. (LOS 9.f)
3. Financial bubbles and crashes are periods of unusual positive or negative returns *caused by panic buying and selling*, neither of which are based on economic fundamentals. In a bubble, the buying is due to investors believing the price of the asset will continue to go up. Another way of defining a bubble or crash is a period of prices for an asset class that is two standard deviations away from the price index's mean value. A crash can also be characterized as a fall in asset prices of 30% or more over a period of several months. (LOS 9.g)

TOPIC ASSESSMENT: BEHAVIORAL FINANCE

Use the following information for Questions 1 through 6.

Frank Brooks and Peter Timmons are portfolio managers for the largest mutual fund of Liberty Financial Advisers, which provides a variety of mutual funds for both individuals and institutions. Brooks has been a portfolio manager for eight years and has seen both bull and bear markets. Timmons is his assistant and has been at Liberty Financial Advisers for the two years following his graduation from a prestigious Master of Science in Finance program.

In their discussion over lunch, Brooks and Timmons discuss the latest quarterly earnings announcements for several firms in their portfolio. Despite optimistic projections for some firms, most announcements were quite disappointing. Timmons states that he is not convinced that their prospects are as grim as the announcements suggest.

The next day, Brooks and Timmons provide a presentation to Liberty Financial Advisers' clients. Their guest presenter is Stephen Davis, an economist at the local university who frequently provides economic commentary for national media outlets. During his presentation, Davis states that it is likely the United States will enter a recession next year. He recommends that the clients shift their assets into investment grade bonds and noncyclical stocks. He states that he has been successful in predicting recessions over the past 15 years and is certain of his forecasts. He states further that the only time he has been wrong in predicting the business cycle is when Congress unexpectedly increased spending beyond that expected. He states that if that had not happened, his prediction of a mild recession would have been correct, instead of the mild expansion that actually occurred.

During the afternoon session, Brooks discusses the various strategies at Liberty Financial Advisers. In the value/neglected firm strategy, Liberty Financial Advisers seeks out firms trading at reasonable valuations with no analyst following. Brooks states that several academic studies showed these firms to be good investments over a 3-year time horizon from July in year $t = 0$ to June 30 of year $t = +3$, following their identification on June 30 of year $t = 0$. Brooks states that he has adopted this strategy for his portfolio.

Later that evening at dinner, Brooks, Timmons, and Davis discuss the day's events. Commenting on investment strategies, Davis states that he focuses on growth stocks with 6-quarter earnings growth and monitors his portfolio on a quarterly basis. Davis also states that when the short-term moving average rises above the long-term moving average, this signals an opportune time to trade.

1. Which of the following *best* describes Timmons's behavioral characteristic? Timmons:
 - A. uses frame dependence.
 - B. uses anchoring.
 - C. is loss averse.
2. Which of the following *best* describes Davis's behavioral characteristic? Davis:
 - A. uses frame dependence.
 - B. is overconfident.
 - C. is loss averse.

3. Which of the following *most likely* explains Davis's behavioral characteristic? Davis:
- A. uses a bottoms-up approach to assess his skills.
 - B. is susceptible to cognitive dissonance.
 - C. is susceptible to feelings of regret.
4. Which of the following *best* explains Davis's defense of his past inaccurate forecast? Davis is exhibiting the behavioral bias of:
- A. self attribution.
 - B. representativeness.
 - C. illusion of knowledge.
5. Which of the following *best* describes Brooks's investment strategy regarding value/neglected firms? Brooks's strategy is based on:
- A. a support level.
 - B. a moving average.
 - C. a resistance level.
6. Which of the following *best* describes the trading signal indicated by Davis's investment strategy? Davis is describing:
- A. a resistance level in which the stock is thought to be overvalued, eventually reverting back to its mean.
 - B. a moving average where the short-term moving average is above the long-term moving average, indicating a "buy" signal.
 - C. a moving average where the short-term moving average is above the long-term moving average, indicating the stock is overvalued, and the investor should sell.

TOPIC ASSESSMENT ANSWERS: BEHAVIORAL FINANCE

1. **B** Timmons uses anchoring. Despite the disappointing earnings announcements, he states that he is not convinced that the firms' prospects are as grim. He under-adjusts to new information because his beliefs about the firms are anchored in his previous optimistic forecasts. (Study Session 3, Module 9.3, LOS 9.e)
2. **B** Davis is overconfident. He states that he is certain of his forecasts and reports a remarkable (and perhaps not fully disclosed) performance record. (Study Session 3, Module 8.2, LOS 8.b, 8.c)
3. **B** When professionals are overconfident, they tend to be susceptible to cognitive dissonance. The professional will ignore information that conflicts with his image of being successful. Davis admits only one past forecasting mistake in 15 years, which he then blames on an event outside of his control. (Study Session 3, Module 9.3, LOS 9.e)
4. **A** Davis states that if Congress had not unexpectedly increased spending above what he had expected, then his prediction would have been correct. He is exhibiting self attribution bias, in which the analyst takes credit for successes and blames external events for failures, by claiming their forecast would have been accurate if the factors that were incorporated into the forecasting model hadn't changed. The illusion of knowledge bias is when analysts think they are smarter than they actually are, which can be fueled by collecting a large amount of data. The representativeness bias is when the analyst judges the probability of a forecast being correct based on how much the available data represents the outcome. (Study Session 3, Module 9.3, LOS 9.e)
5. **A** This is the sort of odd question you do see occasionally on the exam. It is based more on the general CFA curriculum than on the specific reading. It is completely unpredictable, and the most important issue is to not spend too long on it. If you do not think of an answer, guess and move on.

First, recognize Brooks's strategy is to buy out of favor cheap stocks. Second, notice all of the answer choices are technical analysis charting terms. Third, think creatively to select or eliminate answers. A support level refers to a price moving down and then rallying back up. It vaguely fits in with buying a low-price stock. Nothing in the data or question relates to a moving average of price. So eliminate answer "B". A resistance level might refer to a ceiling or floor on a price chart. It is not a wrong answer but "A" is the best-fit answer. (Study Session 3, Module 7.3, LOS 7.d)
6. **B** Davis is describing the moving average trading tactic in which the short-term moving average is above the long-term average, indicating a buy signal. (Study Session 3, Module 7.3, LOS 7.d)

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