Level I Sample Exam

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You got *65* of *200* possible points.
Your score: *33* %

Question Results

Question: Score 0 of 1

1 Jerry Rodgers, CAIA, is an equity analyst for a regional investment firm based in Wyoming. Based on extensive research and his prior tenure on the board of a competitor, Mr. Rodgers has determined that JB Barbeque Restaurants, Inc., is an excellent investment and purchases some of JB's shares for his personal account. He then recommends JB to his largest clients by phone and to his other clients by e-mail. With respect to the Code and Standards, how would Mr. Rodgers's actions best be described?

Response:

Correct Answer

A Mr. Rodgers has violated Standard VI(B): Priority of Transactions

Feedback:

Learning Objective: A.6

Advisers cannot trade ahead of, or "front-run," their recommendations.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard VI(B): Priority of Transactions.

B Mr. Rodgers has violated Standard III(B): Fair Dealing

C Mr. Rodgers has violated Standard II(A): Material Nonpublic Information

Your Answer: Incorrect

D There is no evidence that Mr. Rodgers has violated any standards

Question: Score 0 of 1

2 Mike Hall, CAIA, works for a large brokerage house as a portfolio manager. One of his firm's clients, NetWorks, has offered him a small quantity of shares in NetWorks' oversubscribed initial public offering (IPO) with the stipulation that the shares must not be sold for nine months. With respect to the Code and Standards, how would Mr. Hall's acceptance of NetWork's shares best be described?

Response:

A Mr. Hall has violated Standard III(B): Fair Dealing

Your Answer: Incorrect

B Mr. Hall has violated Standard I(A): Knowledge of the Law

Correct Answer

C Mr. Hall has violated Standard I(B): Independence and Objectivity

Feedback:

Learning Objective: A.1

By accepting the shares, Mr. Hall is creating a situation in which his independence and objectivity potentially can be compromised since this transaction creates a conflict of interest with his clients. Thus, Mr. Hall has violated Standard I(B): Independence and Objectivity.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard I(B): Independence and Objectivity.

D There is no evidence that Mr. Hall has violated any standards

Question:

Score 0 of 1

3 Ernest Mudgett, CAIA, is analyzing a large manufacturer in the clothing industry. After interviewing a number of key suppliers and retailers, Mr. Mudgett determines that several of the manufacturer's key lines for the upcoming spring season are expected to have weak sales. Mr. Mudgett is reasonably certain that a stock price decline is imminent. He advises clients who hold the stock to sell it. With respect to the Code and Standards, how would Mr. Mudgett's actions best be described?

Response:

Correct Answer

A There is no evidence that Mr. Mudgett has violated any standards

Feedback:

Learning Objective: A.2

The actions taken by Mr. Mudgett are acceptable under the "mosaic theory." This is not inside information. The conclusion was reached by proper due diligence and research on Mr. Mudgett's part.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard II(A): Material Nonpublic Information and Standard V(A) Diligence and Reasonable Basis.

B Mr. Mudgett has violated Standard II(A): Material Nonpublic Information

Your Answer: Incorrect

C Mr. Mudgett has violated Standard V(A): Diligence and Reasonable Basis

D Mr. Mudgett has violated both Standard II(A) and Standard V(A)

Question:

Score 1 of 1

4 Consider an employee behind an information barrier known as firewall. According the Code and Standards, what should this employee do first if she encounters a need to share confidential information with someone on the other side of the firewall?

Response:

A Run a market simulation to determine whether sharing the information will significantly alter the mix of total information currently available

B Determine if the information to be shared concerns a security on a watched or restricted list

Your Answer: Correct

C Consult a designated compliance officer to determine whether sharing the information is necessary

Feedback:

Learning Objective: A.2

If an employee behind a firewall believes that he or she needs to share confidential information with someone on the other side of the firewall, the employee should consult a designated compliance officer to determine whether sharing the information is necessary and how much information should be shared.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard II(A): Material Nonpublic Information.

D Make sure that no previous trading violations have been filed against the person on the other side of the firewall

Question:

Score 0 of 1

5 Why does the Code and Standards recommend that investment personnel not participate in initial public offerings (IPOs) in their personal accounts?

Response:

Correct Answer

A Participation in IPOs may have the appearance of appropriating an attractive investment opportunity from clients for personal gain

Feedback:

Learning Objective: A.6

Purchases of IPOs by investment personnel create conflicts of interest in two particular ways. First, participation in an IPO may have the appearance of taking away an attractive investment opportunity from clients for personal gain—a clear breach of the duty of loyalty to clients. Second, it may look as if the investment opportunity is being bestowed as an incentive to make future investment decisions for the benefit of the party providing the opportunity. Members and candidates can avoid these conflicts or appearances of conflicts of interest by not participating in IPOs.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard VI(B): Priority of Transactions.

B Participation in IPOs, although providing short-term gains, are usually not prudent long-term investments

Your Answer: Incorrect

C Investments in IPOs carry substantial systematic risk such that they usually fall outside the limits established in the investor policy statement

D IPOs are often illiquid, making it difficult for investors to sell the shares quickly at a fair price

Question:

Score 0 of 1

6 Matthias Knopfer, CAIA, runs the MKF merger arbitrage fund. Mr. Knopfer is soliciting a small business owner named Mr. Smith to be an investor in the MKF fund. Mr. Knopfer tells Mr. Smith that several wealthy individuals, who are investors in the MKF fund, run charitable foundations. These individuals would consider making direct private investments in Mr. Smith's firm in exchange for a donation to their charities. Mr. Knopfer asks Mr. Smith whether he would commit to investing in the MKF fund if these wealthy clients were to give him permission to share their names with Mr. Smith. At this point, which of the following best describes Mr. Knopfer's compliance with the Code and Standards?

Response:

A He has violated Standard VI(A): Disclosure of Conflicts

B He has violated Standard III(E): Preservation of Confidentiality

Your Answer: Incorrect

C He has violated Standard III(B): Fair Dealing

Correct

D He has not violated any of these three standards

Answer

Feedback:

Learning Objective: A.3

No confidential client-specific information has been conveyed. Because of this, no unfair dealing has occurred. Neither of the other two standards mentioned are violated.

For further discussion, see Standards of Practice Handbook, 11th edition, Standard III: Duties to Clients, Section III(B) Fair Dealing.

Question:

Score 0 of 1

7 According to the Code and Standards, which of the following best describes appropriate conduct related to the acceptance of gifts from clients?

Response:

Correct Answer

A Members may accept gifts from clients if they are disclosed to the employer

Feedback:

Learning Objective: A.1

In a client relationship, the client has already entered into some type of compensation agreement with the member, the candidate, or his or her firm. A gift from a client could be considered supplementary compensation. The potential for obtaining influence to the detriment of other clients, although present, is not as great as in situations in which no compensation agreement exists. When possible, prior to accepting "bonuses" or gifts from clients, members and candidates should disclose to their employers such benefits offered by clients. If notification is not possible prior to acceptance, members and candidates MUST disclose to their employers benefits previously accepted from clients. Disclosure allows the employer of a member or candidate to make an independent determination about the extent to which the gift may affect the member's or candidate's independence or objectivity.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard I(B): Independence and Objectivity.

B Members may accept gifts from clients so long as their market value is less than $100

Your Answer: Incorrect

C Members cannot accept gifts from clients under any circumstances, to avoid even the appearance of a conflict

D Members cannot accept gifts from clients under any circumstances because research has shown that any gift from clients, large or small, impairs ethical judgment

Question:

Score 1 of 1

8 Which of the following represent procedures of compliance with respect to Standard I(B): Independence and Objectivity?

I. Protecting the integrity of opinion

II. Restricting special cost arrangements

III. Creating restricted lists

IV. Reporting unethical trading behavior

Response:

A II, III, and IV only

B I, III, and IV only

C I, II, and IV only

Your Answer: Correct

D I, II, and III only

Feedback:

Learning Objective: A.1

The Code and Standards recommends the following procedures to minimize the probability of incidents in which Standard I(B) is violated:

- Protect the integrity of opinions
- Create a restricted list
- Restrict special cost arrangements
- Limit gifts
- Restrict investments
- Review procedures
- Establish an independence policy
- Appoint an officer with oversight responsibilities for compliance with the firm's code of ethics

For further discussion, see Standards of Practice Handbook, 11th edition, Standard I(B): Independence and Objectivity.

Question: Score 1 of 1

9 According to the Code and Standards, which of the following actions is proper with regard to investing in shares of oversubscribed issues?

Response:

A Orders for the smallest subscribers get filled first

B Orders for institutional subscribers get filled first

Your Answer: Correct

C Orders should be prorated to all subscribers

Feedback:

Learning Objective: A.3

All clients should be treated fairly, and all oversubscribed issue shares should be prorated to all subscribers.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard III(B): Fair Dealing.

D Orders for subscribers not filled in the previous issue get filled first

Question: Score 1 of 1

10 Adrian Allard, CAIA, believes that reports published by his firm and used as part of presentation materials contain sections that are in violation of the Code and Standards. He has brought the conduct to the attention of the firm's legal counsel, whose opinion is that the reports can be presented because they are not in violation of any law. He has brought the activity to the attention of the firm's compliance officer, whose recommendation is to trust the opinion of legal counsel. He has taken his concerns to his supervisor, who also concludes that there is nothing to be concerned about, given the counsel's advice. According to the Code and Standards, what should Mr. Allard do?

Response:

A Maintain current files for protection in the event of a formal complaint

Your Answer: Correct

B Dissociate from the conduct through whatever means necessary

Feedback:

Learning Objective: A.1

If a member or candidate has reasonable grounds to believe that imminent or ongoing client or employer activities are illegal or unethical, the member or candidate must disassociate, or separate, from the activity. In extreme, cases, disassociation may require a member or candidate to leave his or her employment.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard I(A): Knowledge of the Law.

C Stay informed about changes in the law

D Communicate the Code and Standards to each of his supervisors with a specific reference to the violations so that his actions are on file

Question:

Score 0 of 1

11 Martin Castillo, CAIA, is the manager of the Intervention activist fund. After thorough analysis, he establishes a short position in a target that, in his view, is substantially overpriced. He mentions this new position on social media, along with his belief that the target will decline at least 50% within three months. Based on this information, which of the following best describes Mr. Castillo's compliance with the Code and Standards?

Response:

Correct Answer

A He is in compliance because he has invested consistently with his beliefs

Feedback:

Learning Objective: A.3

Mr. Castillo has upheld the requirements of the code and standards. His actions are based on diligent analysis and he has invested in accordance with his resulting views.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard III: Duties to Clients, Section III(B) Fair Dealing.

B He is not in compliance because he alleges overpricing without providing proof

Your Answer: Incorrect

C He is not in compliance because he has attempted to manipulate the market

D He is not in compliance because he predicted the time horizon and the price decline

Question:

Score 0 of 1

12 Ela Zomek, CAIA, is a research analyst for a fund of hedge funds. She learns that a portion of the firm's research, prepared by another department, is affected by survivorship bias such that some of the firm's performance is exaggerated. Ms. Zomek presents the research report to prospective clients in order to solicit new business but avoids making any reference to the exaggerated performance. Which of the following statements regarding Ms. Zomek's actions is consistent with the Code and Standards?

Response:

Correct Answer

A Ms. Zomek violated the Code and Standards because she failed to inform her clients of the bias in the report

Feedback:

Learning Objective: A.1

Even though Ms. Zomek may not have been directly responsible for the production of the report, she knows about the bias present in it. Her duty is to inform her clients of the bias present. By not doing so, she has violated Standard I(C).

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard I(C): Misrepresentation.

B Ms. Zomek violated the Code and Standards because the report was prepared by multiple sources and she failed to explicitly acknowledge those sources

C Ms. Zomek did not violate the Code and Standards because she did not include the biased data in her presentation

Your Answer: Incorrect

D Ms. Zomek did not violate the Code and Standards because she has never included such bias in her own research

Question:

Score 0 of 1

13 Gustavo Villa, CAIA, is an investment adviser working for a multinational investment company located in the United States. Mr. Villa is registered in, does business in, and lives in an emerging country with laws and regulations that are less strict than those in the Code and Standards. His home country's regulations do not allow advisers to hold short positions on behalf of their clients or in their personal account. Which of the following best describes what is required of Mr. Villa by the Code and Standards?

Response:

	A Mr. Villa is required to apply the Code and Standards in all aspects of his business, is not allowed to hold short positions in his clients' accounts, but can hold short positions in his personal account as long as they are disclosed
Your Answer: Incorrect	B Mr. Villa is required to apply the Code and Standards in all aspects of his business, and is allowed to hold short positions in both his clients' accounts and his personal account
Correct Answer	C Mr. Villa is required to apply the Code and Standards in all aspects of his business, and is not allowed to hold short positions in either his clients' accounts or his personal account

Feedback:

Learning Objective: A.1

According to Standard I(A), members and candidates are required to apply the Code and Standards in all aspects of their business. In the case when either the Code and Standards or the local regulations are stricter than the other, the stricter standard prevails.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard I(A): Knowledge of the Law.

Question:

Score 0 of 1

14 Sanjay Kapadia, CAIA, a research analyst specializing in the pharmaceutical industry, has recommended that his clients take an equity interest in CISDA, a small biotechnology firm. After writing and publishing his initial report, Mr. Kapadia purchases CISDA stock for his own portfolio. Soon after, he is asked to write a second report on CISDA. What action should Mr. Kapadia take to be compliant with the Code and Standards?

Response:

	A Sell his CISDA stock as soon as possible after releasing the second report
	B Restrict any additional purchase of CISDA stock
Correct Answer	C Disclose his CISDA holdings in the second report

Feedback:

Learning Objective: A.6

Mr. Kapadia must disclose his holdings in the second report and to his employer before writing the report because the gain for him might be substantial if the market responds strongly to his report. The fact that he has only recently purchased the stock adds to the appearance that he might not be entirely objective.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard VI(A): Disclosure of Conflicts.

Your Answer: Incorrect	D Remove himself as a CISDA analyst

Question:

Score 1 of 1

15 The U.S. Food and Drug Administration's (FDA's) decision not to approve the marketing of Centurion's new drug Xilex was both unexpected and bad news for Centurion. Centurion was first to receive the news, via fax from the FDA late Friday, after trading was closed. Over the weekend, Centurion's president leaked the news to a select few family members and friends. One of those friends, Bruce Barton, called his broker, informed him of the news, and instructed him to liquidate all of Mr. Barton's Centurion shares. In addition to placing the trade requested by Mr. Barton, the broker placed an order to short Centurion shares for his own personal account. Which of the following describes the actions of Mr. Barton's broker with respect to the Code and Standards?

Response:

A There is no violation, as the broker owes no duty to Centurion's shareholders

B There is no violation under the "mosaic theory"

C The broker violated the Code and Standards because he placed a trade without first consulting his other clients

Your Answer: Correct

D The broker violated the Code and Standards by initiating a transaction based on material nonpublic information

Feedback:

Learning Objective: A.2

The broker has violated the Code and Standards by trading on material nonpublic information.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard II(A): Material Nonpublic Information.

Question:

Score 0 of 1

16 Anja Weber, CAIA, an analyst with Weber Investment Advisers, is making a presentation praising the firm's performance to potential clients. As part of her presentation, she explains that performance represents a weighted composite of all of the firm's portfolios, and that returns are shown prior to fees and taxes. She is careful to note that some of the performance history includes terminated accounts, while some of the history does not. She also states that the performance presentation is in compliance with Global Investment Performance Standards (GIPS). Which of the following best describes the performance presentation with respect to the Code and Standards?

Response:

Correct Answer

A The presentation is not in compliance because it does not include terminated accounts in all cases

Feedback:

Learning Objective: A.3

Members and candidates can also meet their obligations under Standard III(D) by including terminated accounts as part of performance history with a clear indication of when the accounts were terminated.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard III(D): Performance Presentation.

Your Answer: Incorrect

B The presentation is in compliance with the Code and Standards

C The presentation is not in compliance because it reports performance prior to management fees and taxes

D The presentation is not in compliance because it reports performance as a weighted composite

Question:

Score 0 of 1

17 Which of the following standards admonishes members and candidates against professional dishonesty, fraud, and deceit and committing any act that reflects adversely on their professional reputation, integrity, or competence?

Response:

A Standard I(A): Knowledge of the Law

Your Answer: Incorrect — B Standard I(B): Independence and Objectivity

C Standard I(C): Misrepresentation

Correct Answer — D Standard I(D): Misconduct

Feedback:

Learning Objective: A.1

Standard I(D): Misconduct states, "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."

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard I(D): Misconduct.

Question:

Score 1 of 1

18 Quan Yang, CAIA, has terminated her professional relationship with Ten Peller Investments (TPI) and has started her own hedge fund. Ms. Yang clearly served as an independent contractor for TPI, working from her home, and her written agreement with TPI clearly allows her to solicit TPI clients and retain client information. Ms. Yang has called several TPI clients using the contact information she received from TPI and saved on her home computer while she was a contractor for them. According to the Code and Standards, which of the following statements best summarizes Ms. Yang's duties to TPI?

Response:

Your Answer: Correct — A Since Ms. Yang was an independent contractor, not an employee, she is not subject to the "Duties to Employers" section of the Code and Standards

Feedback:

Learning Objective: A.4

A member's or candidate's duties within an independent contractor relationship are governed by the oral or written agreement between the member and the client. Once the member or candidate establishes a relationship with the client, the member or candidate has a duty to abide by the terms of the agreement.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard IV(A): Loyalty.

B Ms. Yang is subject to all of the provisions in the "Duties to Employers" section of the Code and Standards but, like an employee, is free to use the client contact information after leaving the firm

C Ms. Yang violated the standards by not erasing all client contact information from her home computer when the relationship was terminated

Question:

Score 0 of 1

19 Alternative investments can be defined by inclusion. What alternative investment category includes both mezzanine and distressed debt?

Response:

A Hedge funds

B Real assets

Correct Answer — C Private equity

Feedback:

Learning Objective: 1.2

Private equity investments include venture capital (funding new ventures), leveraged buyouts (LBOs) of existing businesses, mezzanine financing of LBOs or other ventures, and distressed debt investing.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 1: What Is an Alternative Investment?, section 1.2 Alternative Investments by Inclusion.

Your Answer: Incorrect

D Structured products

Question:

Score 0 of 1

20 A fund has a stated goal of earning absolute returns. According to the absolute return standard, this fund's historical returns should be evaluated relative to which of the following?

Response:

A Peer group

Correct Answer

B Zero return

Feedback:

Learning Objective: 1.7

An absolute return standard means that returns are evaluated relative to the riskless rate, or zero, and therefore independently of performance in equity markets, debt markets, or any other markets.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 1: What Is an Alternative Investment?, section 1.7 Goals of Alternative Investing.

Your Answer: Incorrect

C Passive index

D Active index

Question:

Score 0 of 1

21 An investment adviser who works with high-net-worth individuals is making a presentation to a group of prospective clients on the advantages of separately managed accounts (SMAs) versus pooled investment arrangements, such as funds. What are the key advantages of SMAs?

Response:

Correct Answer

A SMAs offer transparency to the investor and promote individually tailored objectives

Feedback:

Learning Objective: 2.1

Separately managed accounts (SMAs) offer advantages to investors over funds, including transparency and the ability to promote individually tailored objectives.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 2: The Environment of Alternative Investments, section 2.1.1 The Participants.

B SMAs offer reduction in systemic risk and fewer licensing requirements for investment firms

Your Answer: Incorrect — C SMAs offer tax minimization benefits and avoid regulation because they establish a partnership

Question: Score 0 of 1

22 FirstAlpha is a successful global macro hedge fund headquartered in the United States. FirstAlpha is seeking to expand into the European market and is looking to form a hedge fund investment pool that conforms to European regulations for funds offered to retail investors. Which of the following types of funds should FirstAlpha form?

Response:

Correct Answer — A An Undertakings for Collective Investment in Transferable Securities (UCITS)

Feedback:

Learning Objective: 2.3

Regulation of hedge funds in Europe centers on the concept of Undertakings for Collective Investment in Transferable Securities (UCITS). In effect, a UCITS is a hedge fund–like investment pool that conforms to European regulations such that the product can be sold throughout the various members of the EU. Because UCITS funds are intended for retail investors, they are subject to very strict investment restrictions and diversification requirements.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 2: The Environment of Alternative Investments, section 2.3 Regulatory Environment.

B A limited partnership investment vehicle (LPIV)

Your Answer: Incorrect — C A separately managed account (SMA)

D A Depository Trust and Clearing Corporation (DTCC)

Question: Score 1 of 1

23 If an investor earns a nominal return of 8% compounded continuously for one year, what is the equivalent simple (or effective) annual return?

Response:

A 8.00%

B 8.10%

Your Answer: Correct — C 8.33%

Feedback:

Learning Objective: 3.1

The simple (effective) annual rate is computed as follows: 1 - e1x0.08 = 8.33%

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 3: Quantitative Foundations, section 3.1 Return and Rate Mathematics.

D 8.52%

Question: Score 1 of 1

24 The funds analyzed by a quantitative analyst for a large fund of hedge funds report performance using different time intervals (e.g., weekly versus monthly). In this situation, what type of return calculation is recommended to ensure internal consistency when aggregating performance data for the various funds?

Response:

A Simple returns

Your Answer: Correct

B Log returns

Feedback:

Learning Objective: 3.1

Log returns, or continuously compounded returns, allow for modeling of different time intervals in a process that is internally consistent.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 3: Quantitative Foundations, section 3.1 Return and Rate Mathematics.

C Normal returns

D Discrete returns

Question:

Score 0 of 1

25 A statistical arbitrage manager in the alternative investments group of a large global bank has computed a Jarque-Bera statistic of 10.0 for a test with a critical value of 7.38. Which of the following best describes the proper interpretation of this test result?

Response:

A Accept normality at the stated level of confidence

Correct Answer

B Reject normality at the stated level of confidence

Feedback:

Learning Objective: 4.5

The Jarque-Bera test is a popular test for normality. The critical value indicates the level of confidence for the Jarque-Bera test. If the test statistic measured is greater than the critical value, the null hypothesis of normality is rejected at the stated level of confidence.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 4: Statistical Foundations, section 4.5 Testing for Normality.

Your Answer: Incorrect

C Fail to accept normality at the stated level of confidence

D Fail to reject normality at the stated level of confidence

Question:

Score 1 of 1

26 As evidenced by the Fama-French-Carhart model, which three of the following are important factors in describing equity returns?

I. Value

II. Size

III. Breadth

IV. Momentum

Response:

A II, III, and IV only

B I, III, and IV only

Your Answer: Correct

C I, II, and IV only

Feedback:

Learning Objective: 6.3

The Fama-French-Carhart model does not reference breadth as a factor. The factors referenced are the market, growth versus value, size, and momentum.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 6: Foundations of Financial Economics, section 6.3 Multifactor and Empirical Models.

D I, II, and III only

Question:

Score 1 of 1

27 A venture capitalist is using cash flow projections and the current appraised value to assess the viability of participating in an existing venture capital investment that is expected to last for another 10 years. The capitalist plans to exit this investment in five years. Which internal rate of return (IRR) method is recommended if cash flows are measured from the beginning of the current valuation to the planned exit in five years?

Response:

A Interim IRRs

B Lifetime IRRs

Your Answer: Correct

C Point-to-point IRRs

Feedback:

Learning Objective: 3.3

Point-to-point IRRs are used if the CF(0) and CF(T) are both appraised values or other values during the lifetime of the investment (i.e, after inception and before termination).

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 3: Quantitative Foundations, section 3.3 Internal Rate of Return.

D Residual IRRs

Question:

Score 0 of 1

28 Which of the following provisions within a private equity fund's limited partnership agreement is best described as setting forth how fund distributions are split and how payouts are prioritized?

Response:

A Compensation structure

Correct Answer

B Waterfall

Feedback:

Learning Objective: 3.5

Both private equity funds and hedge funds have provisions that define how distributions from the fund will be split and prioritized. These provisions are referred to as waterfalls.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 3: Quantitative Foundations, section 3.5 Distribution of Cash Waterfall.

C Clawback

Your Answer: Incorrect

D Tranching

Question:

Score 1 of 1

29 Flathead River Partners, LP, has the following compensation structure and net asset value (NAV) history.

Management fee: 0%

Incentive fees: 20%

Hard hurdle rate: 10%

Tenure of the fund: 1 year

Initial size of fund: $50 million

Terminal NAV (before ees): $60 million

What incentive fee would the fund manager/general partner (GP) receive?

Response:

A $0

Your Answer: Correct

B $1,000,000

Feedback:

Learning Objective: 3.5

The fund manager/GP collects an incentive fee on profits in excess of the hard hurdle rate. Since the hard hurdle rate is stated as 10%, the GP can collect incentive fees for earnings in excess of $5 million (10% of $50 million). Thus, the incentive fee can be calculated as ($10 million – $5 million) × 20%, or $5 million × 20% = $1 million.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 3: Quantitative Foundations, section 3.5 Distribution of Cash Waterfall.

C $2,000,000

D $6,000,000

Question:

Score 0 of 1

30 *Use the following information to answer the next TWO questions.*

An analyst is comparing the past year's performance of three funds in a client's portfolio. The analyst is using the capital asset pricing model (CAPM). Assume that the expected return of the market portfolio is 12%, the volatility of the market is 15%, the risk-free rate is 2%, and the actual return of the market is 7%.

	Expected Return	Beta	Realized Return	Volatility
Fund A	8%	0.4	12%	20%
Fund B	8%	0.8	-2%	25%
Fund C	8%	1.2	0%	30%

What is the Treynor ratio of Fund B, based on expected returns?

Response:

Correct Answer

A 0.0750

Feedback:

Learning Objective: 5.3

The Treynor ratio is calculated as follows:

(Expected Return – Risk-Free Rate) / Beta = (8% – 2%) / 0.8 = 0.0750

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 5: CMeasures of Risk and Performance, section 5.3 Ratio-Based Performance Measures.

Your Answer: Incorrect
B 0.1000

C 0.2400

D 0.3200

Question:

Score 0 of 1

31 An analyst is comparing the past year's performance of three funds in a client's portfolio. The analyst is using the capital asset pricing model (CAPM). Assume that the expected return of the market portfolio is 12%, the volatility of the market is 15%, the risk-free rate is 2%, and the actual return of the market is 7%.

	Expected Return	Beta	Realized Return	Volatility
Fund A	8%	0.4	12%	20%
Fund B	8%	0.8	-2%	25%
Fund C	8%	1.2	0%	30%

What are the ex ante alpha and ex post alpha, respectively, of Fund A?

Response:

Correct Answer
A 2% and 8%

Feedback:

Learning Objective: 8.4

CAPM predicts 6% return for Fund A (expected excess return of the market × beta of the fund + the risk-free rate). However, the analyst's prediction is 8%. Thus, ex ante alpha for Fund A is 2%. Basing ex post alpha estimation on the CAPM would result in 8% ex post alpha (realized fund return less the return expectation based on the realized market return:

12% – [(7% – 2%) × 0.4 + 0.02] = 8%

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 8: Alpha, Beta, and Hypothesis Testing, section 8.4 Return Attribution, Alpha, and Beta.

Your Answer: Incorrect
B 2% and 5%

C –4% and 8%

D –4% and 5%

Question:

Score 0 of 1

32 An analyst estimates a fund's ex ante alpha and ex post alpha. The analyst then proceeds to estimate what portion of the ex post alpha is explained by skill and attempts to adjust for systematic risk. What is the term for this approach?

Response:

A Style analysis

B Comprehensive analysis

Correct Answer

C Return attribution analysis

Feedback:

Learning Objective: 8.4

The goal of return attribution analysis is to distinguish between the effects of beta, the effects of skill, and the effects of idiosyncratic risk, or luck.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 8: Alpha, Beta, and Hypothesis Testing, section 8.4 Return Attribution, Alpha, and Beta.

Your Answer: Incorrect

D Hedonic regression analysis

Question:

Score 0 of 1

33 Which of the following is the term for the tendency of systematic risk exposures of a fund or asset to increase due to changes in general economic conditions?

Response:

A Beta creep

Correct Answer

B Beta expansion

Feedback:

Learning Objective: 8.4

Beta expansion is typically observed during down market cycles and is primarily attributed to higher correlation between the hedge fund's returns and market returns.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 8: Alpha, Beta, and Hypothesis Testing, section 8.4 Return Attribution, Alpha, and Beta.

Your Answer: Incorrect

C Beta nonstationarity

D Beta cyclicality

Question:

Score 0 of 1

34 A quantitative analyst with a small regional hedge fund is testing whether a particular investment strategy is truly market neutral and, therefore, whether its beta is truly zero. The analyst has stated the following hypotheses:

H_0	The beta is zero
H_1	The beta is nonzero

Assuming that the analyst has set the significance level of the test at 1% and calculated the *p*-value to be 2%, what is the appropriate conclusion regarding this hypothesis test?

Response:

Your Answer: Incorrect — A Accept that the beta is nonzero

B Fail to reject that the beta is nonzero

C Accept that the beta is zero

Correct Answer — D Fail to reject that the beta is zero

Feedback:

Learning Objective: 8.7

If the test determines that a variable is not found to be statistically different from the predictions of the null hypothesis, we can only fail to reject the null hypothesis. We are not able to accept it, since we cannot definitively prove it. The purpose of statistical tests is to disprove what might be true, rather than to attempt to confirm what we hope to be true.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 8: Alpha, Beta, and Hypothesis Testing, sections 8.7 Using Statistical Methods to Locate Alpha.

Question:

Score 0 of 1

35 Which of the following terms best describes the use of an excessive number of statistical tests, resulting in assigning statistical significance to spurious historical patterns?

Response:

Correct Answer — A Data dredging

Feedback:

Learning Objective: 8.8

Data dredging, or data snooping, refers to the overuse and misuse of statistical tests to identify historical patterns. The difference between data dredging and data mining is that data dredging involves performing too many tests, especially regarding historical relationships for which there are not a priori reasons for believing that the relationships reflect true causality. The problem with data dredging is not so much the number of tests performed as the failure to take the number of tests performed into account when analyzing the results. The potential error in data dredging is to place too much confidence in findings without regard to the number of tests that led to the finding.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 8: Alpha, Beta, and Hypothesis Testing, section 8.8 Sampling and Testing Problems.

B Data smoothing

Your Answer: Incorrect — C Data mining

D Data overfitting

Question:

Score 1 of 1

36 An analyst is using a statistical technique that adds and deletes variables until an optimal model is identified. What are the terms for the technique and the criterion this analyst is using, respectively?

Response:

A Principal components analysis; *R*-squared

B Principal components analysis; *t*-statistic

C Stepwise regression; *R*-squared

Your Answer: Correct

D Stepwise regression; *t*-statistic

Feedback:

Learning Objective: 9.2

When multicollinearity is present, a stepwise regression approach is best for determining an optimal model. At each step, variables with the greatest t-statistic are added to or retained in the model, and variables with insignificant t-statistics are deleted.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 9: Regression, Multivariate, and Nonlinear Methods, section 9.2 Multifactor Models and Regression.

Question:

Score 0 of 1

37 An analyst is applying a multiple regression model to assess the potential of performance persistence among a number of hedge funds. The analyst finds both positive risk-adjusted return performance and positive serial correlation within a particular hedge fund and concludes that skill is persistent. Which of the following constitutes the best alternative explanation of these findings?

Response:

Correct Answer

A The return series suffered from smoothed pricing

Feedback:

Learning Objective: 9.6

Positive serial correlation may be an indication of persistent skill. However, positive serial correlation can also be caused by smoothed or managed pricing or be a statistical outlier. In these cases, positive serial correlation cannot be used as an indicator of persistent skill.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 9: Regression, Multivariate, and Nonlinear Methods, section 9.6 Evidence on Fund Performance Persistence.

B The return series suffered from mean reversion

Your Answer: Incorrect

C The regression model suffered from heteroskedasticity

D The regression model suffered from multicollinearity

Question:

Score 0 of 1

38 An analyst performs a multiple linear regression of the returns of a hedge fund on a variety of potential independent variables. The analyst finds that two of the explanatory variables behave in a highly similar fashion. Which of the following is the term for this statistical concern?

Response:

Correct Answer

A Multicollinearity

Feedback:

Learning Objective: 9.2

Multicollinearity is when independent variables in a regression model have high correlation to each other. When two independent variables are highly correlated, it can be difficult to estimate the slope coefficients for each variable accurately, as the standard errors are inflated by the simultaneous presence of the two correlated variables. With multi-collinearity, even when the r-square of a regression is high it can be difficult to find independent variables with coefficients that have significant t-statistics.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 9: Regression, Multivariate, and Nonlinear Methods, section 9.2 Multifactor Models and Regression.

B Spurious correlation

Your Answer: Incorrect — C Heteroskedasticity

D Autocorrelation

Question: Score 0 of 1

39 A private equity fund is structured as deal-by-deal carried interest for determining profits and distributing incentive fees. What is a key advantage of such an incentive scheme?

Response:

A It best protects the limited partners from paying fees on unsuccessful funds

B It best aligns the interests of limited and general partners

Correct Answer — C It is effective in attracting talented managers

Feedback:

Learning Objective: 3.5

With the deal-by-deal carried interest setup, the general partner can make successful investments while having little exposure to unsuccessful transactions. As the limited partners take the bulk of the capital risk, this incentive fee approach is more effective in attracting talented managers than the fund-as-a-whole approach.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 3: Quantitative Foundations, section 3.5 Distribution of Cash Waterfall.

Your Answer: Incorrect — D It is effective in discouraging general partners from taking risks

Question: Score 0 of 1

40 A fund is organized to deliver beta as cheaply as possible through a passive product tied to a broad financial market benchmark. How would this fund's strategy be described?

Response:

Correct Answer — A As an asset gatherer

Feedback:

Learning Objective: 8.6

Asset gatherers are managers striving to deliver beta as cheaply and efficiently as possible, and include the large-scale index trackers that produce passive products tied to well recognized financial market benchmarks. These managers build value through scale and processing efficiency.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 8: Alpha, Beta, and Hypothesis Testing, section 8.6 Return Drivers.

B As a process driver

Your Answer: Incorrect

C As a product innovator

Question:

Score 1 of 1

41 An investor is considering options for improving an undeveloped parcel of land and has determined that her construction costs and the eventual value of the property are highly dependent on future states of the economy. Assuming a strong economy, the land can be improved at an $80,000 construction cost, resulting in an improved property with a value of $130,000. In a weak economy, the construction costs would drop to $50,000 and the improved property would have a value of $90,000. Comparable improved properties currently sell for $112,000. What is the risk-neutral probability of a weak economy?

Response:

A 35%

Your Answer: Correct

B 45%

Feedback:

Learning Objective: 10.2

The way to compute the probabilities is as follows:

$112,000 = ($130,000 x UpProb) + [$90,000 x (1 – UpProb)]

UpProb = 55%, thus DownProb = 45%

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 10: Natural Resources and Land, section 10.2 Land.

C 55%

D 65%

Question:

Score 0 of 1

42 Consider a farmland investment with the following characteristics:

Value	$250,000
Annual revenues	$125,000
Annual real estate taxes	$18,000
Annual insurance cost	$8,000
Other annual operating expenses	$69,000

Which of the following comes closest to the capitalization rate (also known as the cap rate or yield) on this farmland investment?

Response:

Correct Answer

A 12.0%

Feedback:

Learning Objective: 10.4

The capitalization rate is found as the ratio of operating income and total assets:

Operating Income / Assets = ($125,000 – $18,000 – $8,000 – $69,000) / $250,000 = 12.0%

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 10: Natural Resources and Land, section 10.4 Farmland.

Your Answer: Incorrect — B 15.2%

C 19.2%

D 22.4%

Question: Score 0 of 1

43 A timberland investment management organization (TIMO) manages a property on behalf of an investor. What is the term for the economic dispersion resulting from the organization making decisions contrary to the investor's interests?

Response:

A Counterparty risk

Correct Answer — B Agency risk

Feedback:

Learning Objective: 10.4

Agency risk is the economic dispersion resulting from the consequences of having another party (the agent) making decisions contrary to the preferences of the owner (the principal).

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 10: Natural Resources and Land, section 10.4 Farmland.

Your Answer: Incorrect — C Rotation risk

D Economic risk

Question: Score 0 of 1

44 An analyst has been assigned to evaluate the economic viability of some farmland purchased by an investor. The investor purchased 20 acres at a cost of $5,000 per acre. The investor financed the property at a 50% loan-to-value ratio, with an annual interest rate of 6%. The investor receives annual rent of $500 per acre. Annual property taxes are $100 per acre. Insurance costs total $1,000 per year. What are the operating income and net income for this investment, respectively?

Response:

A $4,000 and $4,000

Correct Answer — B $7,000 and $4,000

Feedback:

Learning Objective: 10.4

The operating income is found by subtracting taxes and insurance cost from the annual revenues; the net income is found by subtracting interest from the operating income:

Annual revenues	$10,000
Less taxes	$2,000
Less insurance	$1,000
Operating income	**$7,000**
Less interest	$3,000
Net income	**$4,000**

For further discussion, see Alternative Investments: CAIA Level I, 3rd Edition, Chapter 10: Natural Resources and Land, section 10.4 Farmland.

Your Answer: Incorrect

C $8,000 and $5,000

D $14,000 and $11,000

Question: Score 0 of 1

45 Assume a borrower takes out a mortgage in the amount of $130,000 at 4% per annum. If it is a 10/15 interest-only mortgage, which of the following pairs is closest to the monthly payments in Years 5 and 20, respectively?

Response:

A $433 and $433

Your Answer: Incorrect

B $621 and $686

Correct Answer

C $433 and $962

Feedback:

Learning Objective: 14.2

The monthly payments are computed using a financial calculator as follows:

Years 1–10	$130,000 × 4% / 12 = $433.33

Years 11-25	*n*	=	12 × 15 = 180
	i	=	4% / 12 = .333%
	PV	=	$130,000
	FV	=	$0

PMT	=	$961.59

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 14: Liquid and Fixed-Income Real Estate, section 14.2 Residential Mortgages.

D $621 and $621

Question: Score 0 of 1

46 An adviser is working with a high-net-worth client who is considering the purchase of a large tract of land to construct a major auto racetrack. The total cost of the project is estimated to be $3.5 million over three years. The racing sanctioning body will make a decision in one year as to whether the proposed facility will qualify as a venue for races. Further, the sanctioning body requires that the track be ready for racing in three years. Should the facility qualify as a venue, the value of the facility will be twice the total investment; otherwise, the facility value will be $2 million. There is a 60% chance that the racetrack will qualify as a venue. Budget specifics are as follows:

Year 1	Purchase of land, permits	$750,000
Year 2	Construction of grandstand, parking lots	$1,500,000
Year 3	Construction of racetrack	$1,250,000

Assuming a discount rate of zero for simplicity, what is the expected profit of the project?

Response:

Correct Answer

A $1.80 million

Feedback:

Learning Objective: 15.1

The profit expectation is computed as follows:

[60% x ($7.0 million – $3.5 million)] + (40% x –$750,000) = $1.8 million

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 15: Real Estate Equity Investments, section 15.1 Real Estate Development.

Your Answer: Incorrect

B $1.50 million

C $0.95 million

D $0.50 million

Question:

Score 0 of 1

47 An adviser is consulting a real estate investor regarding a potential acquisition of a small commercial office building. In the first year of operation, the potential gross income of the building is expected to be $150,000, while the expected vacancy loss rate is 5%. Fixed and variable expenses are estimated at $15,000 and $35,000, respectively. For the first year, what are the expected effective gross income and net operating income, respectively?

Response:

Correct Answer

A $142,500 and $92,500

Feedback:

Learning Objective: 15.2

The effective gross income is found by subtracting vacancy loss from the potential gross income. Net operating income is found by subtracting operating expenses from the effective gross income:

	Year 1
Potential gross income	$150,000
Vacancy loss	$7,500
Effective gross income	**$142,500**
Operating expenses	$50,000
Net operating income (NOI)	**$92,500**

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 15: Real Estate Equity Investments, section 15.2 Valuation and Risks of Real Estate Equity.

B $142,500 and $107,500

Your Answer: Incorrect — C $150,000 and $100,000

D $150,000 and $115,000

Question: Score 1 of 1

48 What is the preferred valuation method for owner-occupied single-family residences?

Response:

A Equity residual approach

B Discounted cash flow approach

C Profit approach

Your Answer: Correct — D Comparable sale prices approach

Feedback:

Learning Objective: 15.2

For non-income-producing properties, such as an owner-occupied single-family residence, a discounted cash flow (DCF) approach is not viable. In these cases, in which sufficient transaction data are available, valuations are typically based on the comparable sale prices approach. The comparable sale prices approach requires collecting data on comparable properties that have been traded as recently as possible.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 15: Real Estate Equity Investments, section 15.2 Valuation and Risks of Real Estate Equity.

Question: Score 1 of 1

49 What action is most likely to be triggered when the long side of a futures position fails to meet the maintenance margin requirement?

Response:

A The short side absorbs the loss under counterparty risk

B The long side sees its margin percentage increased for future trades

Your Answer: Correct — C The long side’s position is closed into the market and a new counterparty steps in

Feedback:

Learning Objective: 11.1

If one party has no resources to meet the mark-to-market requirement and the maintenance margin is exhausted, the nonperforming party's position is closed into the market and a new counterparty steps in.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 11: Commodity Forward Pricing, section 11.1 Forward Contracts versus Futures Contracts.

D The long side is permanently excluded from trading the contract underlying this position

Question: Score 0 of 1

50 Which of the following characteristics of forward contracts best distinguishes them from futures contracts?

Response:

Correct Answer — A Greater customizability

Feedback:

Learning Objective: 11.1

One major difference between forward contracts and futures contracts is that forward contracts are typically over-the-counter contracts, while futures contracts are exchange traded. Since futures contracts are exchange traded, they share the same advantages as stock exchanges: a central marketplace, transparent pricing, clearinghouse security, uniform contract size and terms, and daily liquidity. Forward contracts between two parties contain the terms and conditions agreed on by those two parties, including how much, if any, collateral is required, the size of the contract, and the delivery details (including time, quality, and location). Thus, forward contracts offer greater customizability.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 11: Commodity Forward Pricing, section 11.1 Forward Contracts versus Futures Contracts.

B Longer duration

Your Answer: Incorrect — C Greater volatility

D Lower optionality

Question: Score 0 of 1

51 One of the most popular methods for obtaining exposure to commodities is through positions in futures contracts and forward contracts. However, investors can also purchase and physically hold commodities. Which of the following is considered a marginal benefit of physical ownership as opposed to investing in futures and forwards?

Response:

A Pure play

B Roll yield

Your Answer: Incorrect — C Liquidity

Correct Answer — D Convenience yield

Feedback:

Learning Objective: 12.3

Convenience yield is a market-consensus yield, balancing the supply and demand for physical ownership of commodities. Physical ownership of commodities offers the benefit of convenience yield but exposes the owner to the costs of storage and transportation.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 12: Commodities: Applications and Evidence, section 12.3 Investing in Commodities without Futures.

Question: Score 1 of 1

52 A pension fund seeking exposure to commodities is restricted from investing in leveraged products. What is the most likely reason why this fund would choose to invest in commodity-linked notes (CLNs) rather than commodity futures?

Response:

A CLNs with high credit ratings are risk-free

B CLNs offer inflation protection

Your Answer: Correct

C CLNs are considered debt instruments

Feedback:

Learning Objective: 12.3

Some investors, such as pension funds, are not permitted to directly invest in futures contracts but may still desire commodity exposure. Commodity-linked notes are debt instruments (bonds). A pension fund can circumvent the restriction of investing in futures by obtaining commodity exposure through CLNs.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 12: Commodities: Applications and Evidence, section 12.3 Investing in Commodities without Futures.

D CLNs can be purchased on margin

Question: Score 0 of 1

53 A real option analysis is conducted on a project that can be broken into separate stages. In the analysis, the stage at the project's end is resolved first, and then, by moving to earlier stages, each stage along the project's path is resolved. The analysis is concluded when the present time is reached and a final decision (reject or accept) is made. What is this type of process called?

Response:

A Bayesian approach

B Mean reversion

Your Answer: Incorrect

C Bottom-up approach

Correct Answer

D Backward induction

Feedback:

Learning Objective: 15.1

Backward induction is a valuation process that, through the use of a decision tree, works from the tree's final decision nodes back toward the tree's first decision node. A valuation analysis is performed at each decision node.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 15: Real Estate Equity Investments, section 15.1 Backward Induction and Decision Trees.

Question:

Score 1 of 1

54 Which of the following statements are most accurate with respect to real estate investment trusts (REITs)?

I. REIT income distributed as dividends is taxed at the corporate level

II. REIT income distributed as dividends is taxed at the investor level

III. REITs trade at prices determined by the market

IV. REITs trade at prices determined by appraisals

Response:

A I and III only

B I and IV only

Your Answer: Correct

C II and III only

Feedback:

Learning Objective: 14.5

REITs avoid corporate income taxation as long as they pass a specified amount of income and capital gains to shareholders. Because REITs are exchange traded, their prices are determined by the market.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 14: Liquid and Fixed-Income Real Estate, section 14.5 Liquid Alternatives: Real Estate Investment Trusts.

D II and IV only

Question:

Score 0 of 1

55 With respect to residential mortgages, what are idiosyncratic prepayments?

Response:

A Prepayments that have zero correlation with the market portfolio

B Prepayments that occur in entirely unpredictable patterns

Correct Answer

C Prepayments that are not motivated by interest rates or economic activity

Feedback:

Learning Objective: 14.4

Factors affecting prepayment decisions other than interest rates or other systemic factors are known as idiosyncratic prepayment factors.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 14: Liquid and Fixed-Income Real Estate, section 14.4 Mortgage-Backed Securities Market.

Your Answer: Incorrect

D Prepayments that are not correlated with the maturity of the mortgage

Question:

Score 0 of 1

56 Consider a real estate investment project for which depreciation is immediately and fully expensed for tax purposes. The project's pre-tax internal rate of return (IRR) is 20%, and the tax rate is 25%. Which of the following is true of the after-tax IRR?

Response:

A After-tax IRR < 15%

B After-tax IRR = 15%

Your Answer: Incorrect

C 15% < after-tax IRR < 20%

Correct Answer

D After-tax IRR = 20%

Feedback:

Learning Objective: 15.4

When capital expenditures are allowed to be immediately and fully expensed for income tax purposes, the IRR of the pre-tax and after-tax cash flows are the same.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 15: Real Estate Equity Investments, section 15.4 Real Estate and Depreciation.

Question:

Score 1 of 1

57 To which of the following CAIA categories of hedge fund strategies does the volatility arbitrage strategy belong?

Response:

A Equity

B Event-driven

Your Answer: Correct

C Relative value

Feedback:

Learning Objective: 16.3

CAIA classifies convertible arbitrage, volatility arbitrage, fixed-income arbitrage, and relative value multistrategy as relative value hedge funds.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 16: Structure of the Hedge Fund Industry, section 16.3 Hedge Fund Classification.

D Multistrategy

Question:

Score 0 of 1

58 Based on strategy characteristics and historical evidence, which of the following fund strategies would most likely meet the goals of absolute returns, including low standard deviation, low drawdowns, and low correlation to equity markets?

Response:

A Convertible bond arbitrage

B Distressed

Your Answer: Incorrect

C Short bias

Correct Answer

D Equity market neutral

Feedback:

Learning Objective: 16.4

Equity market neutral and market defensive funds of funds come close to meeting the goals of absolute returns.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 16: Structure of the Hedge Fund Industry, section 16.4 Hedge Fund Returns and Asset Allocation.

Question:

Score 1 of 1

59 Which of the following is the most important reason why analysts should be concerned with survivorship bias?

Response:

A This bias increases the standard deviation of returns by unsmoothing the return values

B This bias reduces the precision of the performance attribution calculation

Your Answer: Correct

C This bias adds substantially to estimated average returns from most hedge fund databases

Feedback:

Learning Objective: 16.7

Hedge fund databases contain survivorship bias, and this bias (combined with other biases) can add from 70 to 450 basis points to the estimated total annual return of hedge funds.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 16: Structure of the Hedge Fund Industry, sections 16.7 Hedge Fund Indices.

D This bias increases the estimated correlation between hedge fund strategy indices

Question:

Score 1 of 1

60 A global macro manager is evaluating an asset with the following 10 daily prices:

Day	-10	-9	-8	-7	-6	-5	-4	-3	-2	-1	0
Closing Price	107	99	87	89	90	94	89	94	96	100	

Which of the following values is closest to the five-day weighted moving average price on Day 0?

Response:

A 94.4

B 94.6

Your Answer: Correct

C 95.9

Feedback:

Learning Objective: 17.6

Weighted moving average, as opposed to simple moving average, puts more weight on more current days:

$[(100 \times 5) + (96 \times 4) + (94 \times 3) + (89 \times 2) + (94 \times 1)] / 15 = 95.9$

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 17: Macro and Managed Futures Funds, section 17.6 Systematic Trading Strategies.

D 97.3

Question:

Score 0 of 1

61 What is the primary disadvantage of using commodity pool operators (CPOs), rather than commodity trading advisers (CTAs), to gain exposure to managed futures?

Response:

Correct Answer

A A double layer of fees

Feedback:

Learning Objective: 17.7

The second layer of fees charged by CPOs eliminates most of the benefits associated with managed futures.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 17: Macro and Managed Futures Funds, section 17.7 Evidence on Managed Futures Returns.

B Low correlation with managed futures indices

Your Answer: Incorrect

C A pass-through on CPO taxation

D Typically restricted in most investment policies

Question:

Score 0 of 1

62 Based on the nature of event-driven hedge fund strategies and an examination of their long-term historical returns, which of the following most accurately describes the returns of event-driven hedge funds?

Response:

A Positively skewed and positively correlated with equity returns

B Positively skewed and negatively correlated with equity returns

Correct Answer

C Negatively skewed and positively correlated with equity returns

Feedback:

Learning Objective: 18.2

Event-driven activist strategies have returns that tend to be negatively skewed and leptokurtic, and have returns that are highly correlated with equity returns.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 18: Event-Driven Hedge Funds, section 18.2 Activist Investing.

Your Answer: Incorrect

D Negatively skewed and negatively correlated with equity returns

Question:

Score 0 of 1

63 An investor specializing in distressed debt purchases a bond at 30% of face value. The company subsequently enters bankruptcy proceedings. After a six-month holding period, 45% of the bond's face value is recovered. Which of the following comes closest to the investor's annualized return, ignoring compounding?

Response:

A 15%

B 30%

Your Answer: Incorrect | C 50%

Correct Answer | D 100%

Feedback:

Learning Objective: 18.4

The investor's annualized return is computed as follows:

15% gain on a 30% investment = 50% gain. 50% x (12 months / 6 months) = 100%

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 18: Event-Driven Hedge Funds, section 18.4 Distressed Securities Funds.

Question: Score 0 of 1

64 When is a classic convertible bond arbitrage strategy most profitable?

Response:

A When the bond has a low conversion premium and an asymmetric payoff profile

Your Answer: Incorrect | B When the bond has a high conversion premium combined with positive moneyness

Correct Answer | C When the underlying equity's realized volatility exceeds the convertible bond's implied volatility

Feedback:

Learning Objective: 19.2

A typical convertible bond arbitrage trade is to buy a convertible bond and hedge away the equity risk. Thus, the arbitrageur is left with mostly a long exposure to the option component of the original instrument. The option gains value as volatility increases. This effect is mitigated by theta, though, as the option's time value decays over time.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 19: Relative Value Hedge Funds, section 19.2 Convertible Bond Arbitrage.

D When the gamma of the underlying equity exceeds the gamma of the convertible bond

Question: Score 0 of 1

65 The term "busted convertibles" refers to convertible bonds with which of the following characteristics?

Response:

Correct Answer | A Very high conversion premiums

Feedback:

Learning Objective: 19.2

Convertible bonds with very high conversion premiums are frequently referred to as busted convertibles, which contain embedded stock options far out of the money. In this stage, convertibles behave very much like straight bonds, providing a cheap option on the firm's equity.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 19: Relative Value Hedge Funds, section 19.2 Convertible Bond Arbitrage.

B Deep-in-the-money strike prices

C Very high conversion value

Your Answer: Incorrect

D High likelihood of default

Question:

Score 1 of 1

66 Which of the following would be most likely to generate the highest profits if an arbitrageur established a classic dispersion trade?

Response:

A High levels of realized correlation

B High levels of volatility

Your Answer: Correct

C Low levels of realized correlation

Feedback:

Learning Objective: 19.3

Dispersion trades speculate on correlation. A classic dispersion trade is a market-neutral, short correlation trade that generates profits from low levels of realized correlation. This usually happens when realized volatilities on the index are relatively low while realized volatilities on individual instruments are relatively high.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 19: Relative Value Hedge Funds, section 19.3 Volatility Arbitrage.

D Low levels of volatility

Question:

Score 0 of 1

67 A company has a $10 million increase in revenue and a $15 million increase in accounts receivable. Based on behavioral finance and empirical research regarding accounting accruals, which of the following best describes the expected consequence of these attributes?

Response:

Your Answer: Incorrect

A Accruals increase, which is a positive signal for the company's equity price

B Accruals decrease, which is a positive signal for the company's equity price

Correct Answer

C Accruals increase, which is a negative signal for the company's equity price

Feedback:

Learning Objective: 20.2

The change in accruals is found as follows:

Total Accruals	=	ΔCA – ΔCL – ΔCash + ΔSTDEBT – D&A
	=	$5 million

Bradshaw, Richardson, and Sloan conduct an empirical analysis that indicates that firms with especially large accruals, in which net income is significantly higher than operating cash flow, tend to have negative future earnings surprises, which lead to stock price underperformance. The implication is that equity hedge managers can buy stocks with negative accruals (higher free cash flow/net income) and sell short stocks with positive accruals (lower free cash flow/net income).

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 20: Equity Hedge Funds, section 20.2 Market Anomalies.

D Accruals decrease, which is a negative signal for the company's equity price

Question:

Score 1 of 1

68 An analyst is evaluating a portfolio using the fundamental law of active management (FLOAM). The information coefficient (IC) of the portfolio is estimated to be reduced by half following increased market efficiency. How does the analyst need to change the breadth to keep the information ratio (IR) constant?

Response:

A Reduce breadth by 50%

B Reduce breadth by 75%

C Double the breadth

Your Answer: Correct

D Quadruple the breadth

Feedback:

Learning Objective: 20.3

Information ratio (IR) is determined by the following relationship:

$$IR = IC \times \sqrt{Breadth}$$

Thus, if IC is halved, and the analyst wants to have the same IR, the breadth needs to quadruple to compensate for the reduction in IC.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 20: Equity Hedge Funds, section 20.3 The Fundamental Law of Active Management.

Question:

Score 1 of 1

69 An asset allocator has a portfolio with equal holdings in 16 hedge funds. The funds have equal return volatilities and uncorrelated returns (zero correlation between each fund pair). If the QUARTERLY return volatility of each fund is 10% and the fund returns have zero auto-correlation, which of the following numbers is closest to the ANNUAL volatility of the portfolio?

Response:

A 1.25%

B 2.50%

Your Answer: Correct

C 5.00%

Feedback:

Learning Objective: 21.1

The standard deviation of the portfolio's rate of return will be directly related to the number of funds.

$$\sigma_{p,quarterly} = \frac{\sigma_f}{\sqrt{N}} = \frac{0.1}{\sqrt{16}} = 2.5\%$$

$$\sigma_{p,annual} = \sigma_{p,quarterly} \times \sqrt{n_{quarters}} = 2.5\% \times \sqrt{4} = 5\%$$

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 21: Funds of Hedge Funds, section 21.1 Overview of Funds of Hedge Funds.

D 10.00%

Question:

Score 0 of 1

70 Which of the following statements most accurately contrasts fee structures of funds of funds with those of multistrategy (single-manager) funds?

Response:

	A Aggregate fees tend to be higher in multistrategy funds than in funds of funds
Correct Answer	B Unlike funds of funds, multistrategy funds offer fee netting across strategies

Feedback:

Learning Objective: 21.2

A disadvantage of fund of funds investing versus investing in a multistrategy fund is that the managers of fund of funds charge an extra layer of management and performance fees on top of fees charged by the managers of the underlying funds. Also, in fund of funds arrangements there is no netting of profits and losses across hedge fund strategies. Fee netting is a distinct advantage of multistrategy funds.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 21: Funds of Hedge Funds, section 21.2 Investing in Multistrategy Funds.

Your Answer: Incorrect	C The fees of multistrategy funds are not taxable, whereas the fees of funds of funds are subject to double taxation
	D Funds of funds charge incentive fees, whereas multistrategy funds do not

Question: Score 0 of 1

71 A due diligence manager observes that a fund is earning small, regular profits. However, the manager is concerned that these regular profits are being earned by taking on risks of catastrophic losses. Which of the following exposures is consistent with the pattern of small, regular profits being earned by taking on risks of catastrophic losses?

Response:

Correct Answer	A Short volatility

Feedback:

Learning Objective: 16.4

Short volatility risk can be harmful to investors. Losses can be quite large, even if there is a low probability of losses occurring.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 16: Structure of the Hedge Fund Industry, section 16.4 Hedge Fund Returns and Asset Allocation.

	B Long gamma
Your Answer: Incorrect	C High beta

Question: Score 0 of 1

72 Given the current regulatory environment, which of the following most accurately describes how the performance of liquid alternative strategies should compare to the performance of their counterpart private placement strategies?

Response:

Correct Answer	A The liquid alternative strategy should have lower return and lower risk

Feedback:

Learning Objective: 21.5

On average, private placement funds will have higher returns and higher risks due to the extra freedom allowed in the portfolio management process. Exchange traded liquid alternatives will generally have lower returns and lower risks than private placements trading similar strategies, as the regulatory restrictions reduce investment manager flexibility.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 21: Funds of Hedge Funds, section 21.5 Multialternatives and Other Hedge Fund Liquid Alternatives.

B The liquid alternative strategy should have lower return and higher risk

Your Answer: Incorrect — C The liquid alternative strategy should have higher return and lower risk

D The liquid alternative strategy should have higher return and higher risk

Question: Score 0 of 1

73 Which of the following best describes how private equity funds are managed?

Response:

A Private equity funds are managed by limited partners, which are usually institutional investors

B Private equity funds are managed by limited partners, which are usually private equity firms

Your Answer: Incorrect — C Private equity funds are managed by general partners, which are usually institutional investors

Correct Answer — D Private equity funds are managed by general partners, which are usually private equity firms

Feedback:

Learning Objective: 22.1

Private equity firms serve as general partners of private equity funds. Private equity firms invest their own capital and sometimes fully own the underlying business enterprises. However, private equity firms usually obtain additional capital through forming limited partnerships that attract limited partners (e.g., institutions) to coinvest in a series of ventures.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 22: Introduction to Private Equity, section 22.1 Private Equity Terminology and Background.

Question: Score 0 of 1

74 The manager of a venture capital fund raised $75 million in committed capital. In Year 1, $25 million of the capital was invested in start-ups; in Year 2, an additional $15 million was invested in start-ups. The management fee was set at 2%. What management fees did the limited partners pay in Years 1 and 2, respectively?

Response:

A $0.5 million; $0.3 million

Your Answer: Incorrect — B $0.5 million; $0.8 million

C $0.8 million; $0.8 million

Correct Answer

D $1.5 million; $1.5 million

Feedback:

Learning Objective: 23.3

The management fee is paid on the amount of committed capital rather than invested capital; thus, 2% × $75 million = $1.5 million for each year.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 23: Equity Types of Private Equity, section 23.3 Venture Capital Fees.

Question:

Score 0 of 1

75 Venture capital shares important characteristics with which of the following investments?

Response:

Correct Answer

A Compound options and real estate development

Feedback:

Learning Objective: 23.4

A compound option, or an option on an option, allows the venture capital investor the right to invest at various stages in a venture. Like real estate development, the compound option view of venture capital is as a string of real options.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 23: Equity Types of Private Equity, section 23.4 The Dynamics of Venture Capital.

B Compound options and small-cap equities

Your Answer: Incorrect

C Put options and real estate development

D Put options and small-cap equities

Question:

Score 0 of 1

76 Which three of the following are the main risks of venture capital investing?

I. Business risk

II. Excessive leverage

III. Liquidity risk

IV. Poor diversification

Response:

A II, III, and IV only

Correct Answer

B I, III, and IV only

Feedback:

Learning Objective: 23.5

First, there is the business risk of a start-up company. Second, there is substantial liquidity risk. Third, there is an additional risk due to the lack of diversification (increased specialization) associated with VC portfolios. Typically, venture capital investing does not involve leverage.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 23: Equity Types of Private Equity, section 23.5 Venture Capital Risks and Returns.

Your Answer: Incorrect — C I, II, and IV only

D I, II, and III only

Question: Score 0 of 1

77 Compared to venture capital investments, what is one of the main advantages of investing in mezzanine debt?

Response:

Correct Answer — A Immediate cash-on-cash return

Feedback:

Learning Objective: 24.1

Many venture capital investments generate losses initially. With a mezzanine fund, the J-curve effect is not a factor. One of the distinct advantages of mezzanine financing is its immediate cash-on-cash return. Mezzanine debt has a coupon that pays interest twice a year to investors and also contains an equity kicker.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 24: Debt Types of Private Equity, section 24.1 Mezzanine Debt.

B Liquidity through public markets

C Capital gains in early years

Your Answer: Incorrect — D Pronounced J-curve effect

Question: Score 0 of 1

78 A company has the following initial capital structure:

Equity	40% of capital structure
Cost of equity	25%
Bank debt	60%
Cost of debt	10%

The weighted average cost of capital of this capital structure is 16%. Assume that the firm is able to recapitalize to 30% equity and 10% mezzanine debt without changing any other costs. What cost of mezzanine debt would lower the weighted average cost of capital to 15.5%?

Response:

A 10.00%

B 15.05%

Your Answer: Incorrect — C 15.50%

Correct Answer — D 20.00%

Feedback:

Learning Objective: 24.1

The weighted average cost of capital is computed as follows:

(60% × 10%) + (10% × **20%**) + (30% × 25%) = 15.5%

Mezzanine financing is typically less costly than straight equity, and there is a limit on the amount of bank debt a firm can typically take on.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 24: Debt Types of Private Equity, section 24.1 Mezzanine Debt.

Question:

Score 1 of 1

79 A company has mezzanine debt with two specific features. The first feature prevents the mezzanine investor from receiving interest payments while there is still senior debt outstanding. The second feature allows the mezzanine investor to purchase the senior debt once it has been repaid to a specified level. What are these features called?

Response:

A Springing subordination and acceleration

B Blanket subordination and acceleration

C Springing subordination and takeout provision

Your Answer: Correct

D Blanket subordination and takeout provision

Feedback:

Learning Objective: 24.1

Blanket subordination prevents any payment of principal or interest to the mezzanine investor until after the senior debt has been fully repaid. A takeout provision allows the mezzanine investor to purchase the senior debt once it has been repaid to a certain level.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 24: Debt Types of Private Equity, section 24.1 Mezzanine Debt.

Question:

Score 0 of 1

80 As a distressed debt investment strategy, how are fulcrum securities best characterized?

Response:

Correct Answer

A As junior debt

Feedback:

Learning Objective: 24.2

Fulcrum securities are junior to senior debt, and are very likely to be converted into equity once the company reorganizes. Note that even though mezzanine debt has very similar characteristics to fulcrum securities, in bankruptcy proceedings, mezzanine debt will be wiped out unless it has the fulcrum claim.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 24: Debt Types of Private Equity, section 24.2 Distressed Debt.

Your Answer: Incorrect

B As mezzanine debt with an equity kicker

C As leveraged loans

D As bullet bonds

Question:

Score 1 of 1

81 Which of the following is a key characteristic of reduced-form credit models?

Response:

A They model the behavior of the assets underlying the credit risk in condensed fashion

B They model the option-like characteristics of cash flows and use option theory to perform valuation

Your Answer: Correct

C They model a specific event's implied probability and insert this probability into a pricing equation

Feedback:

Learning Objective: 26.2

Reduced-form credit models take specific events, assign a probability, and model that probability by inserting it into a pricing equation.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 26: Credit Risk and Credit Derivatives, section 26.2 Reduced-Form Modeling of Credit Risk.

Question:

Score 0 of 1

82 *Use the following information to answer the next TWO questions.*

An analyst is evaluating expected credit loss on a particular one-year zero-coupon client bank loan, using a reduced-form credit model. The loan has a market value of $65 million and the client has a BB credit rating. The credit spread of the loan is 6%, and the risk-free rate is 2%. Historical data demonstrate that the one-year probability of default for firms with a BB credit rating is 4% and that investors are generally able to recover 45% of the notional value of an unsecured loan to such firms.

Which of the following is closest to the exposure at default (EAD) of the loan?

Response:

A $60.2 million

Your Answer: Incorrect

B $65.0 million

Correct Answer

C $70.2 million

Feedback:

Learning Objective: 26.2

EAD = $65 million × (1 + 0.06 + 0.02) = $70.2 million

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 26: Credit Risk and Credit Derivatives, section 26.2 Reduced-Form Modeling of Credit Risk.

D $74.6 million

Question:

Score 0 of 1

83 An analyst is evaluating expected credit loss on a particular one-year zero-coupon client bank loan, using a reduced-form credit model. The loan has a market value of $65 million and the client has a BB credit rating. The credit spread of the loan is 6%, and the risk-free rate is 2%. Historical data demonstrate that the one-year probability of default for firms with a BB credit rating is 4% and that investors are generally able to recover 45% of the notional value of an unsecured loan to such firms.

The analyst is also examining a larger BB-rated loan that has a exposure at default (EAD) of $100 million. What is the expected credit loss of this second loan?

Response:

	A $1.8 million
Correct Answer	B $2.2 million

Feedback:

Learning Objective: 26.2

ECL is computed as follows:

ECL = 0.04 × $100 million × (1 – 0.45) = $2.2 million

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 26: Credit Risk and Credit Derivatives, section 26.2 Reduced-Form Modeling of Credit Risk.

Your Answer: Incorrect	C $45.0 million
	D $55.0 million

Question: Score 1 of 1

84 An analyst is pricing a one-year zero-coupon corporate bond. Assume the risk-free rate is 2% per year and the bond yields 4% per year. Further assume the recovery rate is 80% on the corporate bond. Which of the following is closest to the risk-neutral probability of default?

Response:

	A 2.50%
	B 5.00%
Your Answer: Correct	C 10.00%

Feedback:

Learning Objective: 26.2

The risk-neutral probability of default is computed as follows:

$$\lambda = \frac{1}{1-R}\left(\frac{s}{1+r+s}\right)$$
$$= \frac{1}{1-0.80}\left(\frac{[0.04-0.02]}{[1+0.04]}\right) = 9.61\% \approx 10\%$$

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 26: Credit Risk and Credit Derivatives, section 26.2 Reduced-Form Modeling of Credit Risk.

	D 20.00%

Question: Score 0 of 1

85 What is the term for the process of establishing the values for key parameters, including probability of default or anticipated volatility of an asset, when valuing bonds using a reduced-form model?

Response:

	A Risk adjustment
Correct	B Calibration

Answer

Feedback:

Learning Objective: 26.2

To calibrate a model means to establish values for the key parameters in a model, such as a default probability or an asset return volatility. For example, the volatility of short-term interest rates might be calibrated by using the implied volatility of highly liquid at-the-money options on short-term bonds.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 26: Credit Risk and Credit Derivatives, section 26.2 Reduced-Form Modeling of Credit Risk.

Your Answer: Incorrect — C Quantification

D Structuring

Question: Score 0 of 1

86 Which of the following best describes the cash flows for the credit protection buyer in a credit default swap?

Response:

A The buyer pays a variable fee and receives a lump sum cash payment if a credit event occurs

B The buyer pays a variable fee and receives a stream of cash payments if a credit event occurs

Your Answer: Incorrect — C The buyer pays a fixed fee and receives a stream of cash payments if a credit event occurs

Correct Answer — D The buyer pays a fixed fee and receives a lump sum cash payment if a credit event occurs

Feedback:

Learning Objective: 26.4

A credit default swap is a bilateral contract in which the credit protection buyer pays a periodic fee (analogous to an insurance premium) to the credit protection seller in exchange for a contingent payment if a credit event occurs with respect to an underlying credit-risky asset.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 26: Credit Risk and Credit Derivatives, section 26.4 Credit Default Swaps.

Question: Score 0 of 1

87 Glacier Bank enters into a credit default swap (CDS) with Forwarder Hedge Fund. The referenced asset is a $20 million loan to a commercial real estate investor. Forwarder is selling the protection, and Glacier is purchasing the protection. Glacier purchases four years of protection through the CDS at a spread of 120 bps per year. One year later, the market premium (the spread) on the same protection, now with three years remaining, has widened to 130 bps per year. What are the specifics of Glacier Bank's mark-to-market (MTM) adjustment?

Response:

Correct Answer — A MTM gain in the amount of the present value of an annuity of the 10 bps for three years, adjusted upward because the possibility of a trigger event has increased

Feedback:

Learning Objective: 26.4

The bank is the protection buyer and the premium has widened, thus the gain. If the market premium moves wider than the contract premium, a protection buyer experiences a mark-to-market gain because the protection was bought at a lower cost than is currently available in the market. Calculating the mark-to-market adjustment is essentially the same as calculating the cost of entering into an offsetting position. The link with the possibility of a trigger event is implied by the widening spread; wider spreads mean a riskier environment.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 26: Credit Risk and Credit Derivatives, section 26.4 Credit Default Swaps.

B MTM gain in the amount of the present value of an annuity of the 10 bps for three years, adjusted upward because the possibility of a trigger event has decreased

Your Answer: Incorrect

C MTM loss in the amount of the present value of an annuity of the 10 bps for three years, adjusted downward because the possibility of a trigger event has increased

D MTM loss in the amount of the present value of an annuity of the 10 bps for three years, adjusted downward because the possibility of a trigger event has decreased

Question:

Score 0 of 1

88 Which one of the following credit derivatives requires a single payment from the credit protection buyer to the credit protection seller and leads to an asymmetric one-time payout?

Response:

A Credit default swap

Correct Answer

B Credit option

Feedback:

Learning Objective: 26.5

A credit option is a credit derivative that can lead to a large payment from the credit protection seller to the credit protection buyer.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 26: Credit Risk and Credit Derivatives, section 26.4 Credit Default Swaps.

C Credit-linked note

Your Answer: Incorrect

D Total return swap

Question:

Score 0 of 1

89 An investor owns four exotic put options, summarized below, all of which have the same underlying asset and the same expiration date.

Quantity	Type	Strike Price	Barrier Price
1	Up-and-In	$100	$105
1	Up-and-Out	$100	$105
1	Down-and-In	$100	$95
1	Down-and-Out	$100	$95

The options were created with the underlying asset trading at $100 per share. Since then, the underlying asset has steadily declined. The options are about to expire, and the underlying asset is trading at $90 per share. What is the combined value of the four put options?

Response:

A $5

Your Answer: Incorrect — B $10

Correct Answer — C $20

Feedback:

Learning Objective: 28.3

1. Up-and-in expires worthless since the asset has declined never reaching the barrier of $105.
2. Up-and-out is worth $10 (Strike price – The current price) since the barrier of $105 was never reached
3. Down-and-in is worth $10 (Strike price – The current price) since, the barrier of $95 was reached
4. Down-and-out expires worthless since the asset has declined below the barrier price of $95.

Thus, the combined value of the 4 put positions = $20 = $0 + $10 + $10 + $0

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 28: Equity-Linked Structured Products, section 28.3 Structured Products with Exotic Option Features.

D $30

Question: Score 0 of 1

90 A hedge fund establishes a position in a credit default swap (CDS) on the debt of XYZ Corporation. The fund's position in the CDS generates a cash inflow for the fund if XYZ Corporation defaults. Which of the following best describes the fund's position in the CDS?

Response:

A The fund is a credit protection buyer in a funded credit instrument

Correct Answer — B The fund is a credit protection buyer in an unfunded credit instrument

Feedback:

Learning Objective: 26.3

Unfunded credit derivatives involve exchanges of payments that are tied to a notional amount, but the notional amount does not change hands until a default occurs. An unfunded credit derivative is similar to an interest rate swap in which there is no initial cash purchase of a promise to receive principal but rather an agreement to exchange future cash flows. The most common unfunded credit derivative is the CDS.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 26: Credit Risk and Credit Derivatives, section 26.3 Credit Derivatives Markets.

C The fund is a credit protection seller in a funded credit instrument

Your Answer: Incorrect — D The fund is a credit protection seller in an unfunded credit instrument

Question: Score 0 of 1

91 A structural model can be used to illustrate the "option-like" feature of risky debt, such as corporate debt. Which of the following best describes corporate debt?

Response:

Correct Answer

A Owning riskless debt and writing a put on the assets of the firm

Feedback:

Learning Objective: 25.5

Owning risky debt can be viewed as owning riskless debt and writing a put option that allows the stockholders to "put" the assets of the firm to the debt holders without further liability.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 25: Introduction to Structuring, section 25.5 Structural Model Approach to Credit Risk.

B Owning riskless debt and buying a put on the assets of the firm

Your Answer: Incorrect

C Owning riskless debt and writing a call on the assets of the firm

D Owning riskless debt and buying a call on the assets of the firm

Question:

Score 0 of 1

92 Which of the following best describes owning a credit-linked note?

Response:

A Purchasing credit protection using a binary credit option

B Purchasing credit protection resulting in a lower yield

Correct Answer

C Selling credit protection resulting in a higher yield

Feedback:

Learning Objective: 26.5

The holder of the CLN has sold some credit insurance (i.e., served as a credit protection seller) to the issuer of the note (i.e., the credit protection buyer). If a credit event occurs, the CLN holder must forgo some of the coupon or principal value to make the seller of the note whole. If there is no credit event, the holder of the CLN collects an insurance premium in the form of a higher yield.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 26: Credit Risk and Credit Derivatives, section 26.5 Other Credit Derivatives.

Your Answer: Incorrect

D Selling an option that triggers higher coupons if a specified credit event occurs

Question:

Score 0 of 1

93 Consider a firm with three-month debt that has a face value of $100. The equity may be viewed as a call option and has a value of $5. A three-month put option on the firm's assets that has a strike price of $100 has a price of $3. Assuming that the price of a three-month T-bill is $99 and using Merton's structural model, which of the following is closest to the fair price of the firm's assets?

Response:

A $105

B $103

Correct Answer

C $101

Feedback:

Learning Objective: 25.5

Stock price = $5 (Price of Call) - $3 (Price of Put) + $99 (Price of Risk Free Asset) = $101.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 25: Introduction to Structuring, section 25.5 Structural Model Approach to Credit Risk.

Your Answer: Incorrect — D $99

Question: Score 0 of 1

94 In risk management, what is the term for strategic behavior that is designed to produce gains at the expense of others within the confines of a specific system's rules?

Response:

A Conflict of interest

B Rogue trading

Your Answer: Incorrect — C Operational fraud

Correct Answer — D Gaming

Feedback:

Learning Objective: 30.4

Gaming refers to strategic behavior designed to generate gains at the expense of others within the rules of a particular system. In the context of a fund manager as an economic agent, gaming includes a sequence of efforts intended to generate gains to the agent from flaws in the compensation structure without regard for losses to the investors.

A lot of gaming is done to maximize compensation incentive systems.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 30: Investment Process, Operations, and Risk, section 30.4 Operational Risk.

Question: Score 0 of 1

95 A portfolio contains one share of XYZ Company, a long position in a put, and short position in a call. Both options are on XYZ stock. Assuming that the put and call have the same strike prices and expiration dates, which of the following statements is correct?

Response:

A The portfolio will contain gamma risk but no vega risk

B The portfolio will contain vega risk but no gamma risk

Your Answer: Incorrect — C The portfolio will contain both vega risk and gamma risk

Correct Answer — D The portfolio will contain neither vega nor gamma risk

Feedback:

Learning Objective: 30.6

A call and put with identical strike prices and identical expiration dates have identical gammas and vegas. The reason that the gamma and vega values are the same is that a portfolio that is long the put and short the call must be gamma and vega neutral. The logic is as follows: if the underlying asset (stock) is gamma and vega neutral, and if (+Stock +Put – Call) is gamma and vega neutral, then the difference (Put-Call) must also be gamma and vega neutral.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 30: Investment Process, Operations, and Risk, section 30.6 Controlling Risk of Portfolios with Options.

Question:

Score 0 of 1

96 A portfolio manager wishes to hedge the systematic risk of a portfolio using S&P 500 futures contracts. Assume an S&P 500 futures index value of $2,000 and a multiplier of 250. What is the notional value of the futures hedging position, and how many futures contracts would be required to completely hedge the portfolio's systematic risk? Ignore the basis and use the information in the following table.

	Value	Alpha	Beta	Volatility
Portfolio	$40,000,000	50 bps	1.25	40%
Futures	N/A	N/A	1.00	20%

Response:

A Notional value: $80,000,000; 160 contracts

Your Answer: Incorrect

B Notional value: $70,000,000; 140 contracts

Correct Answer

C Notional value: $50,000,000; 100 contracts

Feedback:

Learning Objective: 32.4

The notional value of the futures position that fully hedges the systematic risk is calculated as follows:

40,000,000 × 1.25 = 50,000,000
The number of contracts required is calculated as follows: 50,000,000 / (2,000 × 250) = 100 contracts

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 32: Portfolio Management, Alpha, and Beta, section 32.4 Portable Alpha.

D Notional value: $40,000,000; 80 contracts

Question:

Score 1 of 1

97 Which of the following is typically used by hedge fund managers to avoid mandatory investment-adviser registration?

Response:

A Limited liability structures

B Side pockets

Your Answer: Correct

C High subscription amounts

Feedback:

Learning Objective: 31.8

Hedge fund managers use certain safe harbor provisions to avoid mandatory investment-adviser registration. These safe harbor provisions limit the number of accredited and/or qualified investors a fund may have. In order to stay within the limits of the number of investors, fund managers set high subscription amounts.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 31: Due Diligence of Fund Managers, section 31.8 Legal Review.

D Gate provisions

Question: Score 0 of 1

98 A thorough due diligence process performed on Bernie Madoff's investment-related activities would have revealed which of the following red flags?

Response:

A Massive use of leverage

Correct Answer B A hedging strategy reporting excessive returns

Feedback:

Learning Objective: 29.3

The trading strategy Madoff claimed to follow was, in essence, a hedging strategy. Hedging strategies cannot be expected to earn persistently high returns over extended periods of time. Also, competitors trying to replicate Madoff's reported strategy were not able to achieve similar performance.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 29: Cases in Tail Events, section 29.3 Failures Driven by Fraud.

Your Answer: Incorrect C Market manipulation

D Concentrated positions in exotic securities

Question: Score 0 of 1

99 Assume that a fund, leveraged 2 to 1 (assets/equity = 2), holds a portfolio of assets with annual return volatility (σ) of 20% and expected return of 0%. The portfolio's returns are normally distributed. According to the table below, the probability that the fund's assets will lose more than 20% is 7.9%, and the probability that the fund's assets will lose more than 40% is 1.1%.

Normal distribution	
Distance from the mean	Probability for higher losses
$-2.0\times\sigma$	1.1%
$-1.0\times\sigma$	7.9%

Which of the following is closest to the probability that the equity of the leveraged fund will lose more than 40% in a year?

Response:

A The same as the probability of a 2-sigma event for assets (1.1%)

B Twice the probability of a 2-sigma event for assets (2.2%)

Your Answer: Incorrect

C Four times the probability of a 2-sigma event for assets (4.4%)

Correct Answer

D The same as the probability of a 1-sigma event for assets (7.9%)

Feedback:

Learning Objective: 31.7

Due to leverage of 2:1, in order for the fund's equity to lose 40%, the fund's assets only need to lose 20%. Thus, the probability that this fund's equity will lose 40% is equal to 7.9% . Note that this probability is almost 8 times higher than the probability of losing more than 40% without leverage.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 31: Due Diligence of Fund Managers, section 31.7 Portfolio Risk Review.

Question:

Score 1 of 1

100 In the context of hedge fund investing, which of the following is most likely to cause the returns of new investors to differ from the returns of existing investors?

Response:

A Master trust accounts

B Equity kickers

C Safe harbor provisions

Your Answer: Correct

D Side pockets

Feedback:

Learning Objective: 31.3

In a side pocket arrangement, illiquid investments held by a hedge fund are segregated from the rest of the portfolio. Future investors do not participate in the returns to investments in the side pocket.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 31: Due Diligence of Fund Managers, section 31.3 Structural Review.

Question:

Score 0 of 1

101 An internal investigation of Seneca Securities Corp. has revealed the following information.

Allison posted false projections on various web sites that Keuka Industries was going to announce lower earnings. The postings caused the firm's share price to decline. Allison did not intend to benefit financially from trading, either directly or indirectly. She merely was curious to see the extent to which her internet postings could influence pricing.

Burt traded several small closed-end funds. Each December, he traded relatively large positions in those shares surrounding their ex-dividend dates, to avoid potential income taxation of distributions. Burt knew that his trading altered the share prices, but he was only interested in minimizing his taxes.

Carmen traded the stock of Cayuga Cosmetics near the expiration dates of options on the stock. Since Carmen's trades involved an equal number of buys and sells, they did not disrupt prices. However, she hoped that the large volume of transactions would help increase the market value of her position in options on Cayuga Cosmetics.

Who most likely violated the Code and Standards with regard to market manipulation?

Response:

Your Answer: Incorrect

A Allison and Burt only

B Burt and Carmen only

Correct Answer

C Allison and Carmen only

Feedback:

Learning Objective: A.2

Standard II(B): Market Manipulation states that members and candidates must not engage in practices that distort prices or artificially inflate trading volume with the intent to mislead market participants. In the cases presented, the behavior of both Allison and Carmen violate the standard with intent, but the behavior of Burt does not.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard II: Integrity of Capital Markets, Section II(B) Market Manipulation.

D Allison, Burt, and Carmen

Question:

Score 1 of 1

102 Chet Wellington, CAIA, is a famous hedge fund manager. His reputation is unrivaled and his clients are quite happy, as Mr. Wellington has reported high returns with very low volatility. After growing assets for more than 20 years, inquiries into his fund by individuals and regulators uncover a Ponzi scheme, in which no trades were ever executed. Mr. Wellington is convicted and sent to prison. For which of the following is there evidence of violation of the Standards of Practice by Mr. Wellington?

I. Standard I(D): Misconduct

II. Standard II(B): Market Manipulation

III. Standard III(A): Loyalty, Prudence, and Care

IV. Standard V(B): Communication with Clients and Prospective Clients

Response:

A II, III, and IV only

Your Answer: Correct

B I, III, and IV only

Feedback:

Learning Objective: A.2

Of the standards to be considered, the only standard Mr. Wellington has not violated is Standard II(B): Market Manipulation, which states that members and candidates must not engage in practices that distort prices or artificially inflate trading volume with the intent to mislead market participants. He has never traded and therefore has not committed market manipulation.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard II: Integrity of Capital Markets, Section II(B) Market Manipulation.

C I, II, and IV only

D I, II, and III only

Question:

Score 0 of 1

103 Which of the following procedures are recommended by Standard III(A): Loyalty, Prudence, and Care?

I. Carrying out regular reviews of investment decisions

II. Establishing termination policies for internal portfolio managers

III. Voting proxies of assets under custody

IV. Diversifying investments in client portfolios

Response:

A II, III, and IV only

Correct Answer

B I, III, and IV only

Feedback:

Learning Objective: A.3

The procedures for compliance with Standard III(A): Loyalty, Prudence, and Care do not include establishing termination policies for internal portfolio managers.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard III: Duties to Clients, Section III(A) Loyalty, Prudence, and Care.

Your Answer: Incorrect

C I, II, and IV only

D I, II, and III only

Question:

Score 0 of 1

104 Franny Britt, CAIA, advises the High Forks pension plan and was asked by the plan's investment committee to prepare and maintain its investment policy. Given the plan's need for liquidity, Ms. Britt has specified several investment types that she believes are unsuitable for the plan. However, the investment committee decides to include one of these investment types and asks Ms. Britt to incorporate some of these investments in a recommendation. With respect to the Code and Standards, what should Ms. Britt do?

Response:

Correct Answer

A She should refuse to prepare the recommendation and, if necessary, dissociate from the account

Feedback:

Learning Objective: A.3

Standard III(C): Suitability requires members to ensure the adequacy of investments for each client. In this case, since the adviser has determined that the investment types in question are unsuitable for the investor, she should refuse to prepare the recommendation and, if necessary, dissociate from the account.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard III: Duties to Clients, Section III(C) Suitability.

Your Answer: Incorrect

B She should agree to prepare the recommendation but require that the investment committee specify in writing that the recommendation goes against her advice

C She should agree to prepare the recommendation without further action, as the committee, rather than Ms. Britt, is responsible for the plan's investments

Question:

Score 0 of 1

105 Michael Wu, CAIA, is the general partner in a venture capital fund. Mr. Wu was named to the board of directors of a prominent non-profit organization; a nomination that was widely covered in the national financial press. The organization is now launching its annual fundraising campaign, designed to fund scholarships to promising low-income students. Mr. Wu knows that several of his clients are prominent donors to various charities. He contacts all of his clients to inform them of the fundraising campaign. Which of the following best describes Mr. Wu's compliance with the Standards of Practice?

Response:

Correct

A Mr. Wu is compliant with the Code and Standards

Answer

Feedback:

Learning Objective: A.6

In this case, Mr. Wu is compliant. The nature of the communication is not related to investment analysis or recommendations. Moreover, he has taken the time and made the effort to contact all of his clients.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard VI: Conflicts of Interest, Section VI(A) Disclosure of Conflicts.

B Mr. Wu has violated Standard III(E): Preservation of Confidentiality

C Mr. Wu has violated Standard V(B) : Communication with Clients and Prospective Clients

Your Answer: Incorrect

D Mr. Wu has violated Standard VI(A) : Disclosure of Conflicts

Question:

Score 0 of 1

106 Marie Martel, CAIA, is part of an acquisitions team for a private equity fund. She has a colleague preparing a research report on TargetCo, a firm that may soon be acquired by the fund. Based on conversations with other colleagues, Ms. Martel suspects that material nonpublic information was used to prepare the research report. Ms. Martel did not participate in the preparation of the research report in any way and does not have access to its contents. According to the Standards of Practice, which of the following would be Ms. Martel's best action?

Response:

A As she did not participate in the wrongdoing herself, she does not need to take action

Correct Answer

B She should inform her compliance officer of the situation before taking further action

Feedback:

Learning Objective: A.1

According to the guidance section for Standard I(A): Knowledge of the Law, the recommended action in the case of suspicion of a violation (rather than knowledge of a violation) is to follow the firm's policies and procedures for reporting potential unethical activity, which may include discussions with supervisors and/or the designated compliance department.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard I: Professionalism, Section I(A) Knowledge of the Law.

Your Answer: Incorrect

C She should dissociate from the wrongdoing, including possibly even resigning

Question:

Score 0 of 1

107 Tatiana Sikorska, CAIA, works at LaneCo, a statistical arbitrage hedge fund. Although Ms. Sikorska has no plans to terminate her employment with LaneCo, she is preparing to start an independent practice. She would operate the practice on her own time, and it would not compete in any way with LaneCo. Which of the following best describes Ms. Sikorska's responsibilities under Standard IV(A): Loyalty in this situation?

Response:

A She may start her independent practice, and no specific compliance action is needed

Correct Answer

B She must obtain her employer's authorization to start her independent practice

Feedback:

Learning Objective: A.4

Standard IV(A): Loyalty does not preclude one from opening an independent practice. However, before opening such a practice, one should obtain authorization from his or her current employer. Thus, Ms. Sikorska must obtain authorization.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard IV: Duties to Employers, Section IV(A) Loyalty.

Your Answer: Incorrect

C She must not create an independent practice while employed at LaneCo

Question:

Score 1 of 1

108 Chiara Braga, CAIA, is the founding partner of a successful infrastructure fund. Most, but not all, employees of the fund are bound by the Code and Standards. Ms. Braga decides to delegate her supervisory responsibilities by hiring a compliance officer. After delegation, which of the following best describes her responsibilities under the Code and Standards?

Response:

Your Answer: Correct

A Ms. Braga retains all compliance-related supervisory responsibilities for all employees

Feedback:

Learning Objective: A.4

Standard IV(C): Responsibilities of Supervisors specifies that the delegation of responsibilities is possible but does not relieve one of supervisory responsibilities. This applies to all employees, whether these employees are covered by the Code and Standards or not. Thus, in this case, Ms. Braga retains all compliance-related supervisory responsibilities for all employees.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard IV: Duties to Employers, Section IV(C) Responsibilities of Supervisors

B Ms. Braga retains all compliance-related supervisory responsibilities for only those employees bound by the Code and Standards

C Ms. Braga no longer has compliance-related supervisory responsibilities

Question:

Score 0 of 1

109 Narendra Desai, CAIA, is the chief investment officer of a large retirement plan. He has recently moved the plan's emerging market equity mandate to a firm owned and managed by a longtime friend, who solicited him to do so. The performance of this manager has been in the first quartile of emerging market managers over the past five years, and the fees charged are below the industry average. Mr. Desai considers his decision justified by the performance and fee advantage of the manager. The manager change is mentioned only in the plan's annual report, and there is no mention of Mr. Desai's friendship with the manager. The annual report is available to clients, but it is not distributed to them directly. With respect to the Code and Standards, which of the following best represents Mr. Desai's situation?

Response:

Your Answer: Incorrect

A He is compliant

B He has violated Standard III(A): Loyalty, Prudence, and Care

C He has violated Standard V(B): Communication with Clients and Prospective Clients

Correct Answer

D He has violated Standard VI(A): Disclosure of Conflicts

Feedback:

Learning Objective: A.6

Standard VI(A): Disclosure of Conflicts states that members and candidates must make full and fair disclosure of all matters that could reasonably be expected to impair the independence and objectivity or interfere with respective duties to their clients, prospective clients, and employer. In this case, even if Mr. Desai considers his decision justified by performance and fee advantages, he should have disclosed his relationship with the manager.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard VI: Conflicts of Interest, Section VI(A) Disclosure of Conflicts.

Question: Score 1 of 1

110 Amparo Gutierrez, CAIA, is the chief investment officer of a major hedge fund. Her role includes supervising a team of traders. Ms. Gutierrez is concerned that one of her traders may be trading on the basis of material nonpublic information. Although she has no proof of misconduct, Ms. Gutierrez has taken two steps: she has notified the employee of her concern, and she has alerted her supervisor to the situation. Which of the following best represents Ms. Gutierrez's situation with respect to the Code and Standards?

Response:

A She is compliant

B She has violated Standard II(A): Material Nonpublic Information

Your Answer: Correct — C She has violated Standard IV(C): Responsibilities of Supervisors

Feedback:

Learning Objective: A.4

Standard IV(C): Responsibilities of Supervisors states that 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. In this case, as a direct supervisor of the trader in question, Ms. Gutierrez should launch an investigation into the matter in order to ascertain the extent of wrongdoing (if any). Warning the employee to cease the activity and reporting the misconduct up the chain of command is insufficient.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard IV: Duties to Employers, Section IV(C) Responsibilities of Supervisors.

D She has violated Standard V(A): Diligence and Reasonable Basis

Question: Score 1 of 1

111 Manfred Kohl, CAIA, is forced to resign from his role as portfolio manager at the AlphaGamma Fund, a market-neutral equity hedge fund. The resignation leads to threatened legal action and ultimately a settlement specifying that Mr. Kohl cannot work with AlphaGamma clients for two years. The settlement is confidential and precludes revealing any aspect of the resignation. Eighteen months later, Mr. Kohl, working at the BetaDelta Fund, is asked by a partner to solicit Jack Roberts, a client of the AlphaGamma Fund. According to the Code and Standards, which of the following actions is appropriate for Mr. Kohl to take?

Response:

A Solicit Mr. Roberts now under the condition that no investment take place for at least six months

B Inform the partner that he cannot solicit Mr. Roberts because of the settlement agreement

Your Answer: Correct — C Inform the partner that he cannot solicit Mr. Roberts but not reveal why this is so

Feedback:

Learning Objective: A.4

In this case, Mr. Kohl is bound by his prior legal settlement and cannot solicit Mr. Roberts. And due to the confidential nature of the settlement, Mr. Kohl cannot reveal to his employer the reason for his refusal to solicit Mr. Roberts.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard IV: Duties to Employers, Section IV(A) Loyalty.

Question:

Score 0 of 1

112 Marie-Claire Dugas, CAIA, is senior hedge fund analyst at a leading investment consulting firm. After thorough analysis, she recommends Fund A, which has consistently outperformed its peers, to her clients. However, at the same time that she recommends Fund A, she liquidates her position in Fund A to cover a cash shortfall in her personal account. Clients have not been disadvantaged by her actions. Has Ms. Dugas violated any standard, and if so, which one?

Response:

Correct Answer

A No, she is compliant

Feedback:

Learning Objective: A.6

Because clients have not been disadvantaged by her actions, there is no evidence that Ms. Dugas violated any of the listed standards.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard VI(B): Priority of Transactions,

B Yes, she has violated Standard III(A): Loyalty, Prudence, and Care

Your Answer: Incorrect

C Yes, she has violated Standard III(B): Fair Dealing

D Yes, she has violated Standard VI(B): Priority of Transactions

Question:

Score 1 of 1

113 Mark Malone, CAIA, is the portfolio manager of FutureGains, a managed futures fund. After joining the fund, Mr. Malone developed a proprietary short-term, high-frequency model and implemented it as the fund's trading engine. Mr. Malone has recently revised the model, changing several key parameters. These changes will markedly alter the risk of the fund. He has informed his supervisor, the CEO of the firm, of the model changes but has not informed investors or their advisers personally. Ultimately, the firm does not inform anyone of the model changes. According to Standard IV(C): Responsibilities of Supervisors, are Mr. Malone's actions appropriate?

Response:

A No, he cannot change model parameters without first verifying with his compliance officer or legal counsel

B No, he should have ensured that the model changes were known to the investors or their advisers

Your Answer: Correct

C Yes, the responsibility for informing investors and advisers ultimately rests with the CEO, who was duly informed

Feedback:

Learning Objective: A.4

Standard IV(C): Responsibilities of Supervisors states that 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. Mr. Malone has committed no violation. He has informed his supervisor, the CEO, of the model changes. It is the CEO's responsibility to inform the investors.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard IV: Duties to Employers, Section IV(C) Responsibilities of Supervisors.

D Yes, because of the proprietary nature of the model, the investors do not need to be informed of the model changes

Question:

Score 0 of 1

114 Ryuichi Yamamoto, CAIA, manages Miyagi LLC, a fund of hedge funds. Adhira Dutta is the CEO of HyperReturns, Inc., a long/short equity hedge fund. Ms. Dutta invites Mr. Yamamoto to use her private yacht, anchored in a resort destination, for one week. Mr. Yamamoto wishes to accept the offer but suspects it is a substantial gift, even though his accepting the invitation would cause no additional expense to Ms. Dutta. Which of the following would be the recommended procedure for Mr. Yamamoto to follow based on the Code and Standards?

Response:

	A Accept the offer after informing HyperReturns' compliance officer
	B Accept the offer after informing Miyagi's compliance officer
Your Answer: Incorrect	C Inform Miyagi's compliance officer and wait for his or her judgment
Correct Answer	D Decline the offer

Feedback:

Learning Objective: A.1

According to the guidance section for Standard I(B): Independence and Objectivity, members and candidates who are responsible for hiring and retaining outside managers should not accept gifts, entertainment, or travel funding that may be perceived as impairing their decisions.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard I: Professionalism, Section I(B) Independence and Objectivity.

Question: Score 1 of 1

115 Hanfeng Guo, CAIA, is a portfolio manager at a major hedge fund. He is considering referring several of the hedge fund's clients to Mary Massena, a landscaping architect, for landscaping services. In return, Mr. Guo would receive landscaping services from Ms. Massena at no charge. With respect to the Standards of Practice, what should Mr. Guo do before referring any clients to Ms. Massena?

Response:

	A He may proceed without informing his clients or his employer
	B He must inform only his clients of the services that would be received from Ms. Massena and their estimated value
	C He must inform only his employer of the services that would be received from Ms. Massena and their estimated value
Your Answer: Correct	D He must inform both his clients and his employer of the services that would be received from Ms. Massena and their estimated value

Feedback:

Learning Objective: A.6

According to Standard VI(C): Referral Fees, members and candidates must inform their clients and employer about services that would be received as well as an estimate of the value of those services. In this case, general disclosure (to the clients and to the employer) is recommended.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard VI: Conflicts of Interest, Section VI(C) Referral Fees.

Question: Score 0 of 1

116 Maxwell Chalmers, CAIA, is the founder of and a partner in a quantitative hedge fund. He has developed a proprietary factor model that tracks social media patterns to identify market supply and demand trends. His model was developed and tested using 12 months of data. Based on the evidence, he concludes that the model will generate trading signals that will result in outperformance over the coming 24 months. Mr. Chalmers has prepared a research report in which he clearly explains these elements, and he has distributed the report to the fund's partners, but not to his clients. In the report, he makes a recommendation that the fund implement the model. Which of the following standards has Mr. Chalmers violated?

Response:

	A Standard I(C): Misrepresentation
Your Answer: Incorrect	B Standard III(B): Fair Dealing
	C Standard III(D): Performance Presentation
Correct Answer	D Standard V(A): Diligence and Reasonable Basis

Feedback:

Learning Objective: A.5

Standard V(A): Diligence and Reasonable Basis states that members and candidates must have a reasonable and adequate basis, supported by appropriate research and investigation, for any investment analysis, recommendation, or action. In this case, because Mr. Chalmers used only 12 months of data (a time horizon that is likely to be too short to incorporate both positive and negative market cycles) to project over the coming 24 months, he has failed to exercise a reasonable basis in his analysis.

For further discussion, see *Standards of Practice Handbook, 11th edition*, Standard V: Investment Analysis, Recommendations, and Actions, Section V(A) Diligence and Reasonable Basis.

Question:

Score 1 of 1

117 Jens Karlsson, CAIA, is a senior analyst at a major private equity LLC. During business hours, he meticulously conserves notes, data, and calculations, upon which he bases his investment advice and recommendations. With the approval of his employer, he stores this documentation only in a personal account established on the cloud from his office computer. Which of the following most accurately describes the ownership of the documentation, with respect to the Code and Standards?

Response:

	A The documentation is the joint property of the employer and Mr. Karlsson
	B The documentation is the property of Mr. Karlsson
Your Answer: Correct	C The documentation is the property of the employer

Feedback:

Learning Objective: A.5

The documents belong to his employer. Karlsson must ask his employer before retaining any copy of these documents as he leaves his former employer. If the employer does not allow document retention, he should not be able to retrieve the information off the cloud, from another computer.

For further discussion, see Standards of Practice Handbook, 11th edition, Standard V: Investment Analysis, Recommendations, and Actions, Section V(C) Record Retention.

Question:

Score 1 of 1

118 Which of the following best contrasts forward contracts with futures contracts?

Response:

	A Forward contracts generally have more price transparency
	B Forward contracts generally have more liquidity
	C Forward contracts generally have more standardized terms
Your Answer: Correct	D Forward contracts generally have more counterparty risk

Feedback:

Learning Objective: 11.1

Futures are standardized exchange-traded products, whereas forwards are typically customized over-the-counter contracts between two parties. As such, forward contracts carry more counterparty risk compared to futures contracts.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 11: Commodity Forward Pricing, section 11.1 Forward Contracts versus Futures Contracts.

Question:

Score 0 of 1

119 Fund XYZ opens a brokerage account to trade grain futures contracts. Each grain futures contract calls for delivery of 1,000 bushels of grain and has an initial margin requirement of $1,000 per contract. Fund XYZ places $10,000 in cash in the account, after which time the fund does not add or withdraw any other cash. Fund XYZ enters a long position in 10 grain futures contracts at a futures price of $10 per bushel.

If the maintenance margin is $400 per contract, which of the following prices is closest to the price that would trigger a margin call to Fund XYZ?

Response:

Correct Answer

A $9.40 per bushel

Feedback:

Learning Objective: 11.1

A margin call would be triggered when the account value falls below 10 x $400 = $4,000. This implies an aggregate loss of $6,000 for the position taken, or a per-bushel price decline of $0.60. Thus, the price that would trigger a margin call would be equal to $10 – $0.60 = $9.40 per bushel.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 11: Commodity Forward Pricing, section 11.1 Forward Contracts versus Futures Contracts.

B $9.60 per bushel

Your Answer: Incorrect

C $10.40 per bushel

D $10.60 per bushel

Question:

Score 0 of 1

120 Fund XYZ opens a brokerage account to trade grain futures contracts. Each grain futures contract calls for delivery of 1,000 bushels of grain and has an initial margin requirement of $1,000 per contract. Fund XYZ places $10,000 in cash in the account, after which time the fund makes no changes to the account's balance. Fund XYZ enters a long position in 10 grain futures contracts at a futures price of $10 per bushel.

The futures price of the grain contracts rises to $12 per bushel on the delivery date. Assuming no margin calls and no other trades and ignoring commissions, how much money must Fund XYZ add to the account on the delivery date in order to take delivery of the 10,000 bushels of grain and leave the account with a cash balance of zero?

Response:

Correct Answer

A $90,000

Feedback:

Learning Objective: 11.1

The account would have been marked-to-market to reflect the delivery date value of the grain. The mark-to-market amount would be equal to the price difference multiplied by the position size, or 10 x 1,000 x ($12 – $10) = $20,000. Thus, the delivery date account value would be equal to $20,000 + the starting value of $10,000 = $30,000. In order to be able to take delivery of the full position at the delivery date price of $12 per bushel, the investor would have to add $90,000 to the account, as $120,000 – $30,000 = $90,000.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 11: Commodity Forward Pricing, section 11.1 Forward Contracts versus Futures Contracts.

Your Answer: Incorrect — B $100,000

C $110,000

D $120,000

Question: Score 0 of 1

121 Which of the following commodity instruments tend to have the least counterparty risk?

Response:

A Commodity forward contracts

Your Answer: Incorrect — B Commodity-linked notes

Correct Answer — C Commodity exchange-traded funds

Feedback:

Learning Objective: 12.3

One of the easiest ways to invest in commodities is through an exchange-traded fund, or ETF. Because ETFs can be purchased or sold through organized exchanges, they offer substantial protection from counterparty risk through clearinghouse structures.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 12: Commodities: Applications and Evidence, section 12.3 Investing in Commodities Without Futures.

D Commodity exchange-traded notes

Question: Score 0 of 1

122 Under which of the following conditions will an investor with positions in futures contracts receive a margin call?

Response:

A The collateral falls below the initial margin requirement

Your Answer: Incorrect — B The variation margin becomes equal to or less than zero

Correct Answer — C The maintenance margin becomes greater than the collateral

Feedback:

Learning Objective: 11.1

If the collateral of a market participant falls below the maintenance margin requirement, a margin call is issued.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 11: Commodity Forward Pricing, section 11.1 Forward Contracts versus Futures Contracts.

Question:

Score 0 of 1

123 Assume that financial markets are perfect and in equilibrium, such as that described by the capital asset pricing model (CAPM). How should risk-tolerant investors select an asset allocation to commodities?

Response:

A All investors should allocate to commodities such that the portfolio of risky assets has maximum expected return

Your Answer: Incorrect

B All investors should allocate equally among all investment opportunities

Correct Answer

C All investors should allocate the same percentage to commodities within their portfolio of risky assets

Feedback:

Learning Objective: 12.1

In a perfect capital market , all investors should invest in all commodities according to market weights to obtain optimal diversification. Thus, if a particular commodity represents x% of the world's total wealth, then every investor should place x% of his or her risky assets in that commodity.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 12: Commodities: Applications and Evidence, section 12.1 Commodity Investing for Diversification.

Question:

Score 1 of 1

124 An investor attempts to enhance portfolio returns by allocating a portion of the portfolio to commodities. The investor's rationale is that commodity returns, like the returns from other asset classes, contain a premium for bearing economy-wide risks. Which of the following most accurately describes the source of this anticipated return enhancement?

Response:

A Alpha in equilibrium

B Alpha in disequilibrium

Your Answer: Correct

C Beta in equilibrium

Feedback:

Learning Objective: 12.2

The expected returns from commodities and any other assets in a competitive equilibrium depend solely on the amount of systematic risk being borne. Thus, in an efficient market, high expected returns to commodities will be generated only by taking high levels of systematic risk. Because the question provides no evidence of the investor viewing commodity beta as being cheaper than betas of other assets with comparable risk, the source of return is beta in equilibrium.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 12: Commodities: Applications and Evidence, section 12.2 Commodity Investing for Return Enhancement.

D Beta in disequilibrium

Question:

Score 1 of 1

125 Why would a commodity investor roll a futures position?

Response:

A To terminate the investor's exposure prior to the delivery date

Your Answer: Correct

B To maintain a continuous long-term commodity exposure

Feedback:

Learning Objective: 11.2

The rolling of contracts is an important part of maintaining long-term commodity exposures or hedges through futures and forward markets.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 11: Commodity Forward Pricing, section 11.2 Rolling Contracts.

C To benefit from long positions when the market is in contango

D To avoid the consequences of having the account marked-to-market

Question:

Score 0 of 1

126 When a futures market is in backwardation, which of the following best describes the roll return of a long position in a futures contract that is held until delivery?

Response:

A Convergence causes the roll return to be negative

Your Answer: Incorrect

B Convergence causes the roll return to be zero

Correct Answer

C Convergence causes the roll return to be positive

Feedback:

Learning Objective: 12.4

Roll return can be defined as the portion of the return of a futures position from the change in the contract's basis through time. When a futures market is in backwardation, prices are higher for closer-to-maturity contracts. As a long position in a futures contract is maintained through time,the time to maturity of the position will shorten, leading to positive roll return. This, however, does not necessarily mean that the total return for the long position will be positive.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 12: Commodities: Applications and Evidence, section 12.4 Commodity Exposure through Futures Contracts.

Question:

Score 0 of 1

127 Consider a forward contract on a fixed-income index. The spot price of the index is $1,000. Assuming a risk-free rate of 1% and a 5% continuously paid coupon yield, what is closest to the arbitrage-free six-month forward price, and is the market in backwardation or contango?

Response:

A $980.20 and in contango

Correct Answer

B $980.20 and in backwardation

Feedback:

Learning Objective: 11.3

Use the price of a forward contract formula:$F(T) = S \times e^{(r - d)T}$

6 month: $\$1,000 \times e \times e^{(.01 - .05) / 2} = \$980.20$

Market backwardation takes place when the forward price is less than the current spot price, due to the fact that the coupon yield is greater than the risk-free rate.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 11: Commodity Forward Pricing, section 11.3 The Term Structure of Forward Prices on Commodities.

Your Answer: Incorrect — C $970.45 and in contango

D $970.45 and in backwardation

Question: Score 0 of 1

128 Chicago Mercantile Exchange (CME) corn futures contracts call for the short position to deliver to the long 5,000 bushels at a specified date. A trader establishes a short position of 10 contracts at the price of $6.50 per bushel. At the end of the trading day, the market price of the futures contract drops to $6.49. If the trader initially posts collateral of $0.50 per bushel, what will be the trader's ending cash balance?

Response:

A $2,450

B $2,550

Your Answer: Incorrect — C $24,500

Correct Answer — D $25,500

Feedback:

Learning Objective: 11.1

The price decline results in an increase to the short side:

- Initial collateral: 10 contracts x 5,000 bushels x $0.50 per bushel = $25,000
- Short side increases $0.01 per bushel x 5,000 bushels x 10 contracts = $500
- Ending cash / collateral position: $25,000 + $500 = $25,500
  For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 11: Commodity Forward Pricing, section 11.1 Forward Contracts versus Futures Contracts.

Question: Score 0 of 1

129 Consider a film project with a probability of success of 5% and cash flows that are expected to diminish each year by 10%. Suppose that the project's potential first year cash inflow is four times the project's value. Which of the following comes closest to the project's total rate of return?

Response:

A 8.00%

Correct Answer — B 10.00%

Feedback:

Learning Objective: 13.4

The perpetual growth model can be used to estimate the value of intellectual property (IP). Note that the model adjusts the expected first year cash inflow by the probability of first-year success and that the growth rate, typically positive when valuing common stock, is negative when valuing IP:

$$r = p \times \frac{CF_1}{V_{ip,0}} - g$$
$$= 5\% \times \frac{4}{1} - 10\% = 10\%$$

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 13: Operationally Intensive Real Assets, section 13.4 Intellectual Property.

Your Answer: Incorrect

C 20.00%

D 30.00%

Question:

Score 0 of 1

130 A commercial mortgage includes a cross-collateral provision. Which of the following describes a potential shortcoming of such a provision to the borrower?

Response:

A Recourse is not permitted within cross-collateral provisions

B Interest rates are usually higher on a loan with a cross-collateral provision

Correct Answer

C The sale of a property that serves as collateral can be disallowed by the lender

Feedback:

Learning Objective: 14.3

A drawback of a cross-collateral provision is that the lender can disallow sale of the property that serves as the collateral.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 14: Liquid and Fixed-Income Real Estate, section 14.3 Commercial Mortgages.

Your Answer: Incorrect

D Mortgages with cross-collateral provisions require balloon payments

Question:

Score 0 of 1

131 One characteristic of intellectual property (IP) is that it must be excludable. Which of the following best describes an excludable good?

Response:

Correct Answer

A A good that others can be prevented from enjoying

Feedback:

Learning Objective: 13.4

An excludable good is a good others can be prevented from enjoying.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 13: Operationally Intensive Real Assets, section 13.4 Intellectual Property.

B A good that only high-income earners can realistically enjoy

C A good that is extremely difficult to own

Your Answer: Incorrect — D A good that has limited private use

Question: Score 0 of 1

132 How are investments in portfolios of early stage intellectual properties (IPs) best characterized?

Response:

A As convertible preferred stocks, with relatively high and stable dividend yields

Your Answer: Incorrect — B As option collars, with income defined over a narrow band and protection of large losses

C As fixed-income instruments, generating income over an uncertain number of years

Correct Answer — D As call options, with a small number of market successes generating most of the return

Feedback:

Learning Objective: 13.4

Early-stage IP investments are similar to call options, with most instances failing to recapture initial costs; but in a small number of instances, they generate large return on investment.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 13: Operationally Intensive Real Assets, section 13.4 Intellectual Property.

Question: Score 0 of 1

133 Consider three properties (A, B, and C), all of which have the same volatility and provide similar returns. Properties A, B, and C all have true volatilities of 0.20 and true correlations with each other of 0.5. Properties A and B are market traded. Property C's returns are smoothed. Which of the following best describes the observed volatility of property C and its observed correlation with properties A and B?

Response:

Correct Answer — A Observed volatility is less than 20, and observed correlation is less than 0.5

Feedback:

Learning Objective: 10.5

Return smoothing generally translates into both lower observed volatility and lower observed correlations when compared to what would be observed if true returns were used.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 10: Natural Resources and Land, section 10.5 Valuation and Volatility of Real Assets.

Your Answer: Incorrect — B Observed volatility is less than 20, and observed correlation is more than 0.5

C Observed volatility more than 20, and observed correlation more than 0.5

D Observed volatility more than 20, and observed correlation less than 0.5

Question:

Score 0 of 1

134 Which of the following best characterizes the short selling of distressed equities?

Response:

Correct Answer — A Writing naked calls on the firm's assets, generating a negatively skewed return distribution

Feedback:

Learning Objective: 18.4

The short selling of distressed securities is analogous to writing naked calls on the firm’s assets. This strategy generates a negatively skewed return distribution.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 18: Event-Driven Hedge Funds, section 18.4 Distressed Securities Funds.

B Writing naked calls on the firm's assets, generating a positively skewed return distribution

Your Answer: Incorrect — C Writing naked puts on the firm's assets, generating a negatively skewed return distribution

D Writing naked puts on the firm's assets, generating a positively skewed return distribution

Question:

Score 0 of 1

135 Acquisition Corporation has made an offer to purchase Targeted Corporation. The market is not convinced that the merger will take place, but Alex Heng, the manager of a merger arbitrage fund, believes that it will be completed. Which of the following option-based strategies is consistent with a merger arbitrage strategy and Mr. Heng's beliefs?

Response:

A Buy call options on Acquisition and sell call options on Targeted

B Buy call options on Acquisition and sell put options on Targeted

Correct Answer — C Buy put options on Acquisition and buy call options on Targeted

Feedback:

Learning Objective: 18.3

The views of Mr. Heng are consistent with shorting Acquisition and establishing a long position in Targeted. Note that shorting is accomplished through buying put options (options to sell), while going long is accomplished through buying call options (options to buy).

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 18: Event-Driven Hedge Funds, section 18.3 Merger Arbitrage.

Your Answer: Incorrect — D Sell call options on Acquisition and buy put options on Targeted

Question:

Score 1 of 1

136 Which of the following types of hedge fund strategies is most likely to have substantial short volatility exposure?

Response:

A Directional

B Absolute return

Your Answer: Correct

C Event risk

Feedback:

Learning Objective: 16.4

Event risk strategies have inherently short volatility exposure. This is due to the fact that they have negative event exposure and because events tend to generate market volatility.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 16: Structure of the Hedge Fund Industry, section 16.4 Hedge Fund Returns and Asset Allocation.

D Diversified

Question:

Score 0 of 1

137 The historical performance of hedge funds reporting to a hedge fund database is more affected by survivorship bias than is the performance of funds of funds reporting to the same database. Which of the following is most consistent with this observation?

Response:

A Funds of funds are more diversified

Your Answer: Incorrect

B Funds of funds tend to survive longer

Correct Answer

C Funds of funds performance includes failed funds

Feedback:

Learning Objective: 21.3

A snapshot of historical hedge fund performance reported by a database tends to show performance only of the funds that are alive at the time the snapshot is done. Thus, this snapshot will be subject to survivorship bias. However, the historical performance of funds of funds reported by the same database will have the performance of the failed funds embedded in it. Thus, the reported performance of funds of funds will be less affected by survivorship bias.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 21: Funds of Hedge Funds, section 21.3 Investing in Funds of Hedge Funds.

D Funds of funds do not have an incubation period

Question:

Score 0 of 1

138 Which of the following determines the hedge ratio in a typical stock-for-stock merger arbitrage trade?

Response:

A The ratio between the volatilities of the two stocks

B The return correlation between the target and the market

Your Answer: Incorrect

C The return correlation between the target and the acquirer

Correct Answer

D The ratio between the number of shares to be exchanged

Feedback:

Learning Objective: 18.3

The hedge ratio in a typical stock-for-stock merger arbitrage trade is determined by the ratio between the number of shares to be exchanged.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 18: Event-Driven Hedge Funds, section 18.3 Merger Arbitrage.

Question:

Score 1 of 1

139 The yield on a 5-year Treasury bond is 4%, and the yield on a 10-year Treasury bond is 5%. The modified durations of the two bonds are four and eight years, respectively. A fixed-income arbitrage manager expects the yield curve to flatten in the short term. Which investment strategy is consistent with this expectation while hedging the risk of a parallel up or down shift in the yield curve?

Response:

A Buy one unit of the 5-year bond and short 0.5 units of the 10-year bond

B Buy one unit of the 5-year bond and short 2.0 units of the 10-year bond

C Buy one unit of the 10-year bond and short 0.5 units of the 5-year bond

Your Answer: Correct

D Buy one unit of the 10-year bond and short 2.0 units of the 5-year bond

Feedback:

Learning Objective: 19.4

Hedging the risk of a parallel shift in the yield curve can be accomplished through establishing a duration-neutral portfolio, defined as having the aggregated durations of the short positions equal the aggregated durations of the long position, weighed by value. Since the durations of the long-term and short-term bonds have a ratio of 2:1 (8/4 = 2), a portfolio in which one long position will be balanced with two short positions will be duration neutral. Should the yield curve flatten, the value of the long-term bond will increase by a larger amount than the increase in two units of the short-term bond.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 19: Relative Value Hedge Funds, section 19.4 Fixed-Income Arbitrage.

Question:

Score 1 of 1

140 Mahan Co. has two zero-coupon bonds outstanding, each with a face value of $1,000. Mahan's non-convertible bond is a four-year senior bond that sells for 90.0% of face value. Mahan's other bond is a four-year convertible bond with a conversion ratio of 25. A call option on Mahan stock with a four-year expiration and a strike price of $40.00 has a price of $6.00. Which of the following is closest to the price of the convertible bond?

Response:

A $940.00

B $1,040.00

Your Answer: Correct

C $1,050.00

Feedback:

Learning Objective: 19.2

We can determine the value of this convertible bond by unbundling the bond into its straight bond and embedded call option components. The value of the straight bond is given as $900 (90% of the face value of $1,000). The value of an at-the-money call option with the same expiration as the convertible bond is given as $6. Since the conversion ratio is 25, the convertible bond embeds 25 call options with a total value of 25 x $6 = $150. Adding the two components gives us the value of the convertible bond as $900 + $150 = $1,050.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 19: Relative Value Hedge Funds, section 19.2 Convertible Bond Arbitrage.

D $1,150.00

Question: Score 1 of 1

141 In the context of evaluating performance of a particular hedge fund for the purpose of determining incentive fees, which of the following best defines high-water mark?

Response:

A The highest overall net asset value (NAV)

Your Answer: Correct

B The highest NAV recorded on an incentive fee computation date

Feedback:

Learning Objective: 16.2

High-water marks are set on the dates when incentive fees are computed. NAV levels between the incentive fee computation dates do not typically impact high-water marks.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 16: Structure of the Hedge Fund Industry, section 16.2 Hedge Fund Fees.

C The highest NAV prior to distribution of the fund's first incentive fee

D The highest NAV prior to the fund's lowest NAV

Question: Score 0 of 1

142 Which of the following is an advantage of funds of funds in comparison to multi-strategy funds?

Response:

A Enhanced strategy allocation

Your Answer: Incorrect

B Lower incentive fees

Correct Answer

C Broader manager selection

Feedback:

Learning Objective: 21.2

Funds of funds tend to diversify across several managers in each strategy represented in the portfolios. Multistrategy funds, on the other hand, tend to have only a single team trading in each strategy.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 21: Funds of Hedge Funds, section 21.2 Investing in Multistrategy Funds.

Question:

Score 0 of 1

143 Everything else being the same, a convertible arbitrage manager would prefer to invest in convertible bonds that have which of the following characteristics?

Response:

A Low delta

Correct Answer

B High gamma

Feedback:

Learning Objective: 19.2

High gamma is a characteristic desired by convertible arbitrage managers. High gamma implies that a delta-neutral classical convertible arbitrage trade will experience a slowdown in losses as the stock price declines, whereas the profits will accelerate as the stock price rises. If a large price change in the underlying asset takes place, the hedged position earns a profit, and the positions are adjusted to being delta-neutral based on the new price levels.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 19: Relative Value Hedge Funds, section 19.2 Convertible Bond Arbitrage.

C High theta

Your Answer: Incorrect

D Low vega

Question:

Score 0 of 1

144 Which of the following outcomes is most beneficial for traditional capital structure arbitrage trades with long and short positions of equal dollar value in senior and junior debt?

Response:

A Both senior and junior debt experience full recovery

Correct Answer

B Senior debt fully recovers while junior debt has no recovery

Feedback:

Learning Objective: 18.4

In a traditional capital structure arbitrage trade, investors typically buy the more senior claim and sell short the more junior claim. Such a trade would benefit most if the senior debt fully recovers, driving the value of the long side of the trade up while the junior debt defaults, resulting in a gain on the short side of the trade.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 18: Event-Driven Hedge Funds, section 18.4 Distressed Securities Funds.

Your Answer: Incorrect

C Recovery rates are positive and equal for both senior and junior debt

D Neither senior nor junior debt experience any recovery

Question:

Score 0 of 1

145 Which of the following is the best example of a relative return product?

Response:

A Event-driven funds

Your Answer: Incorrect — B Global macro funds

C Relative value funds

Correct Answer — D Equity mutual funds

Feedback:

Learning Objective: 16.4

Relative return products typically have returns that are substantially driven by the broad market; thus, their performance is best measured relative to a broad market benchmark. This holds true as well for equity mutual funds.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 16: Structure of the Hedge Fund Industry, section 16.4 Hedge Fund Returns and Asset Allocation.

Question:

Score 1 of 1

146 Institutional investors who have identified undervalued securities are reluctant to take large positions in these securities right away because of the potential price impact of their trades. Instead, they establish positions gradually over time. This observation can be used to explain which type of market anomaly?

Response:

A Stock issuance

B Accounting accruals

Your Answer: Correct — C Price momentum

Feedback:

Learning Objective: 20.2

Price momentum is defined as an asset price trending upward or downward. A large institutional investor gradually increasing its position (long or short) in a particular asset will, in effect, exert a continuous directional price pressure in the market. This is one of the explanations behind the presence of momentum in financial markets.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 20: Equity Hedge Funds, section 20.2 Market Anomalies.

D Price reversals

Question:

Score 0 of 1

147 In which of the following markets are momentum traders most likely to experience a sequence of losses?

Response:

A Rising market

Correct Answer — B Sideways market

Feedback:

Learning Objective: 17.6

In sideways markets, asset prices are likely to be volatile without persistent direction. This type of market would not be beneficial to momentum trading systems that alternate between buy and sell signals.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 17: Macro and Managed Futures Funds, section 17.6 Systematic Trading Strategies.

Your Answer: Incorrect | C Falling market

Question: Score 1 of 1

148 It has been observed that index returns reported by hedge fund databases tend to overstate what a new investor can obtain in the hedge fund marketplace. Which of the following biases is the most likely cause of this?

Response:

Your Answer: Correct | A Fee bias

Feedback:

Learning Objective: 16.7

Hedge funds, as a form of private investing, often create investment terms that are not consistent across all investors. For example, new investors typically pay higher fees compared to existing investors. This can lead to fee bias, or returns reported by index providers that tend to be higher than what can be earned by new investors.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 16: Structure of the Hedge Fund Industry, section 16.7 Hedge Fund Indices.

B Expectation bias

C Participation bias

D Anchoring bias

Question: Score 0 of 1

149 A hedge fund commences operations with a $100 million net asset value (NAV) composed of 100% limited partner capital. The hedge fund has a 0% management fee, a 20% performance fee, a 10% soft hurdle rate, and a 100% catch-up rate provision.

The hedge fund ends year 1 with a $105 million asset value and year 2 with a $130 million asset value, before fees. Both asset values are stated before subtracting any fees. Assume that the fund raised no additional capital over the two years. How much will the fund's general partner receive in performance fees at the end of year 2?

Response:

A $1.8 million

Your Answer: Incorrect | B $4.0 million

C $5.0 million

Correct Answer | D $6.0 million

Feedback:

Learning Objective: 16.2

Because of the soft hurdle rate of 10%, the fund needs to earn at least 10% per year on average for the general partners to qualify for any profit sharing.
In year 1, the fund earns only 5% and the general partners receive no performance fee. In year 2, the fund's NAV grows to $130 million before fees. This implies, average annual return of 14% found as:

$$\bar{r} = \left(\frac{130}{100}\right)^{\frac{1}{2}} - 1 = 14\%$$

Since the soft hurdle rate has been exceeded, the general partners are eligible to receive performance fees in year 2.
Due to the full catch-up provision, the fee is assessed on all profits not just the profits earned in year 2. In other words, general partners receive 20% of $30 million or $6 million.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 16: Structure of the Hedge Fund Industry, section 16.2 Hedge Fund Fees.

Question:

Score 1 of 1

150 An equally weighted portfolio is composed of four assets exhibiting mutually uncorrelated returns. Each asset has a return variance of 0.04. Which of the following is closest to the variance of the portfolio?

Response:

A 0.0000

B 0.0025

Your Answer: Correct

C 0.0100

Feedback:

Learning Objective: 4.4

If the assets have mutually uncorrelated returns, the variance of a portfolio of such assets is simplified because all the covariances between the assets drop out, leaving:

$$\sigma^2_{R_p} = \sum_{i=1}^{n} w_i^2 \sigma^2_{R_i} .$$

In this case, we have four equally weighted assets. The weight for each asset = 25%, whereas the variance for each asset is given as 0.04. Thus, the variance of the portfolio is equal to (.0625*.04)*4 = 0.01.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 4: Statistical Foundations, section 4.4 Interpreting Standard Deviation and Variance.

D 0.0200

Question:

Score 0 of 1

151 Which of the following best describes heteroskedasticity in the context of regression analysis?

Response:

A Autocorrelation among regression errors

Correct Answer

B Variation in the variance of regression errors

Feedback:

Learning Objective: 9.1

In the context of statistics, heteroskedasticity describes a situation in which the variance of regression errors is not constant.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 9: Regression, Multivariate, and Nonlinear Methods, section 9.1 Single-Factor Models and Regression.

Your Answer: Incorrect — C Variation in the variance of the independent variables

D Autocorrelation among the independent variables

Question: Score 0 of 1

152 Which of the following is commonly used as an indicator of performance persistence?

Response:

Correct Answer — A Positive serial correlation

Feedback:

Learning Objective: 9.6

Positive serial correlation is an indicator of performance persistence. Positive serial correlation implies that positive returns tend to be followed by positive returns, and negative returns tend to be followed by negative returns.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 9: Regression, Multivariate, and Nonlinear Methods, section 9.6 Evidence on Fund Performance Persistence.

B Negative serial correlation

Your Answer: Incorrect — C Positive conditional correlation

D Negative conditional correlation

Question: Score 0 of 1

153 Which of the following describes soft dollar arrangements?

Response:

A Receiving marketing services from a dealer in exchange for transaction fees

B Receiving research services from a dealer in exchange for accrued Eurodollars

Correct Answer — C Receiving research services from a dealer in exchange for transaction fees

Feedback:

Learning Objective: 2.3

Soft dollar arrangements generally refer to an agreement by which an investment adviser receives research services from a broker-dealer in exchange for fees (such as commissions) paid out of the fund or client account.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 2: The Environment of Alternative Investments, section 2.3 Regulatory Environment.

Your Answer: Incorrect

D Receiving marketing services from a dealer in exchange for accrued Eurodollars

Question: Score 0 of 1

154 Why might the Spearman rank correlation statistic (Spearman) be preferred to the Pearson correlation statistic?

Response:

A Because Spearman measures the nonlinear association between two variables

Correct Answer

B Because Spearman lessens the impact of extreme values, or outliers

Feedback:

Learning Objective: 4.3

By using ranks in computing correlations the effects of outliers are lessened.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 4: Statistical Foundations, section 4.3 Covariance, Correlation, Beta, and Autocorrelation.

Your Answer: Incorrect

C Because Spearman is bounded by +1 from above and –1 from below

Question: Score 0 of 1

155 An investment fund begins with $100 in the current time period and earns a rate of return of 10% for three consecutive years. The fund then attracts an additional $100 in new investment at the beginning of year 4 and again at the beginning of year 5, but attracts no new investment at the beginning of year 6. The fund earns no returns (0%) in years 4, 5, and 6. Which of the following is closest to the time-weighted return of the fund through the end of year 6?

Response:

A 10.00%

Your Answer: Incorrect

B 7.90%

Correct Answer

C 4.90%

Feedback:

Learning Objective: 3.4

The time-weighted return for this investment is found as:

$$(1.1\times1.1\times1.1\times1.0\times1.0\times1.0)^{\frac{1}{6}}-1=\sqrt[6]{1.331}-1=4.9\%$$

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 3: Quantitative Foundations, section 3.4 Problems with Internal Rate of Return.

D 2.90%

Question:

Score 1 of 1

156 In the ex post capital asset pricing model (CAPM), what does the error term represent?

Response:

A The unexplained return attributable to misestimation of beta

B The unexplained return attributable to misestimation of the riskless rate

C The portion of the asset's excess return that is due to systematic risk

Your Answer: Correct

D The portion of the asset's excess return that is due to idiosyncratic risk

Feedback:

Learning Objective: 6.2

The error term represents the portion of the asset's excess return that cannot be explained by changes in systematic factors. Thus, the error term is the excess return that is due to idiosyncratic risk.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 6: Foundations of Financial Economics, section 6.2 Single-Factor and Ex Ante Asset Pricing.

Question:

Score 0 of 1

157 Alternative investment analysis differs from traditional investment analysis. What is the recommended focus of analysis in an alternative investment context?

Response:

A Valuation of securities in a long-term horizon framework

Correct Answer

B Evaluation of fund managers in a long-term horizon framework

Feedback:

Learning Objective: 1.5

The focus of analysis of alternative investment tends to be the evaluation of fund managers rather than the valuation of securities. A long-term horizon framework tends to work better when analyzing alternative investments compared with a short-term horizon framework.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 1: What Is an Alternative Investment?, section 1.5 Investments are Distinguished by Methods of Analysis.

Your Answer: Incorrect

C Valuation of securities in a short-term horizon framework

D Evaluation of fund managers in a short-term horizon framework

Question:

Score 0 of 1

158 In estimating alpha, the expected return of an investment must be adjusted for which of the following?

I. The risk-free rate

II. Systematic risk

III. Idiosyncratic risk

Response:

Correct Answer

A I and II only

Feedback:

Learning Objective: 8.1

Alpha refers to any excess return (or deficient return) after the return has been adjusted for the time value of money (the risk-free rate) and for the effects of bearing systematic risk.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 8: Alpha, Beta, and Hypothesis Testing, section 8.1 Overview of Beta and Alpha.

Your Answer: Incorrect — B I and III only

C II and III only

D I, II, and III

Question: Score 0 of 1

159 How does the information ratio (IR) differ from the Sortino ratio?

Response:

A Only the IR measures risk-adjusted performance

B Only the IR uses the asset's return in the numerator

Your Answer: Incorrect — C Only the IR subtracts a target return or benchmark from the asset's return

Correct Answer — D Only the IR uses tracking error as a measure of risk

Feedback:

Learning Objective: 5.3

As the formulas below show, the information ratio uses tracking error as a measure of risk, whereas the Sortino ratio does not.

$$\text{Sortino ratio} = \frac{\left[E\left(R_p\right) - R_{\text{Target}}\right]}{TSSD}$$

$$\text{Information ratio} = \frac{E\left(R_p - R_{\text{Benchmark}}\right)}{TE}$$

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 5: Measures of Risk and Performance, section 5.3 Ratio-Based Performance Measures.

Question: Score 1 of 1

160 Which of the following statements correctly describe the null and alternative hypotheses in statistical testing?

I. The null hypothesis is a statement that the analyst is attempting to reject

II. The null hypothesis is a statement that the analyst is attempting to accept

III. The alternative hypothesis is assumed true if the null hypothesis is rejected

IV. The alternative hypothesis is assumed true if the null hypothesis is accepted

Response:

Your — A I and III only

Answer: Correct

Feedback:

Learning Objective: 8.7

The null hypothesis is a statement that the analyst is attempting to reject, and the alternative hypothesis is assumed true if the null hypothesis is rejected.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 8: Alpha, Beta, and Hypothesis Testing, section 8.7 Using Statistical Methods to Locate Alpha.

B I and IV only

C II and III only

D II and IV only

Question: Score 1 of 1

161 An asset has returns that are uncorrelated through time. The asset's monthly return variance is constant and equal to 0.01. Which of the following is closest to the variance of the asset's yearly return?

Response:

A 0.035

B 0.038

Your Answer: Correct

C 0.120

Feedback:

Learning Objective: 4.4

If asset returns are uncorrelated through time and the variance observed over a shorter time period *t* is constant, the relationship between the variance for a longer time period *T* and the variance observed over a shorter time period *t* is $\sigma_T^2 = \frac{T}{t}\sigma_t^2$.

In this case, the variance of the yearly return would be determined by multiplying T/t = 12 by the asset's monthly return variance of 0.01 to get 0.12.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 4: Statistical Foundations, section 4.4 Interpreting Standard Deviation and Variance.

D 0.144

Question: Score 1 of 1

162 Which of the following institutions participates on the sell side of alternative investment markets?

Response:

A Hedge funds

B Foundations

Your Answer: Correct

C Large dealer banks

Feedback:

Learning Objective: 2.1

Sell-side institutions act as agents for investors when they trade securities. A good example of a sell-side institution is a large dealer bank, which focuses on facilitating transactions rather than managing money.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 2: The Environment of Alternative Investments, section 2.1 The Participants.

D Sovereign funds

Question:

Score 0 of 1

163 Which of the following outside service providers assist hedge funds through bookkeeping, third-party information gathering, and security valuation functions?

Response:

Correct Answer

A Fund administrators

Feedback:

Learning Objective: 2.1

Fund administrators assist hedge funds with bookkeeping, third-party information gathering, and security valuation.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 2: The Environment of Alternative Investments, section 2.1 The Participants.

B Depositories

Your Answer: Incorrect

C Prime brokers

D Custodians

Question:

Score 0 of 1

164 Suppose that on the day Romania joined the eurozone, managed futures funds exhibited significant return differences. An analyst constructs a model that attributes these return differences to a particular risk factor. Which of the following best describes this model?

Response:

A Normative and cross-sectional

Correct Answer

B Positive and cross-sectional

Feedback:

Learning Objective: 7.2

The model can be described as positive and cross-sectional. Cross-sectional models analyze behavior at a single point in time across various subjects, such as investors or investments. Positive models attempt to describe how markets work.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 7: Benchmarking and Performance Attribution, section 7.2 Types of Models.

C Normative and time series

Your Answer: Incorrect

D Positive and time series

Question:

Score 0 of 1

165 Alternative investment management differs from traditional investment management. Which of the following is typically associated with alternative investments?

Response:

A Active management evaluated against a relative return standard

Correct Answer

B Active management evaluated against an absolute return standard

Feedback:

Learning Objective: 1.7

Alternative investments are better known for active management, and active managers tend to be evaluated against an absolute return standard.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 1: What is an Alternative Investment?, section 1.7 Goals of Alternative Investing.

Your Answer: Incorrect

C Passive management evaluated against a relative return standard

D Passive management evaluated against an absolute return standard

Question:

Score 1 of 1

166 Two firms have daily first-order autocorrelation coefficients of returns equal to 0.90. What does this imply?

Response:

A The returns of these two firms on the same day are highly correlated

Your Answer: Correct

B The returns of either firm on consecutive days are highly correlated

Feedback:

Learning Objective: 4.3

First-order autocorrelation of 0.90 is highly positive (approaching its limit of +1.0) and implies that returns on consecutive days are likely to have the same sign. This means that a positive return is likely to be followed by another positive return, and a negative return is likely to be followed by another negative return.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 4: Statistical Foundations, section 4.3 Covariance, Correlation, Beta, and Autocorrelation.

C The returns of these two firms on the same day have a 90% chance of having the same sign

D The returns of either firm on consecutive days have a 90% chance of having the same sign

Question:

Score 1 of 1

167 A statistical test has a p-value of 2%. What does this indicate?

Response:

A Accept the null hypothesis for significance levels set above 2%

B Accept the null hypothesis for significance levels set below 2%

Your Answer: Correct

C Reject the null hypothesis for significance levels set above 2%

Feedback:

Learning Objective: 8.7

Statistical tests are designed to either reject or to fail to reject the null hypothesis. A p-value of 2% indicates that there is only a 2% chance that the estimated value would occur given the assumption that the null hypothesis is true. Thus, a p-value of 2% in a test with a significance level set higher than 2% would reject the null hypothesis.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 8: Alpha, Beta, and Hypothesis Testing, section 8.7 Using Statistical Methods to Locate Alpha.

D Reject the null hypothesis for significance levels set below 2%

Question: Score 0 of 1

168 An analyst is explaining features of a statistical test. Which of the following statements describes the concept of economic significance?

Response:

Correct Answer
A The model's independent variable has meaningful impact in a practical sense

Feedback:

Learning Objective: 8.7

Economic significance describes the extent to which a variable in an economic model has meaningful impact on another variable in a practical sense.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 8: Alpha, Beta, and Hypothesis Testing, section 8.7 Using Statistical Methods to Locate Alpha.

B The importance of the results need to be understood in light of the underlying assumptions

Your Answer: Incorrect
C It turns out that the forecasts made by the macro-economic committee were accurate

D We find a false indication of a true underlying relationship between variables

Question: Score 0 of 1

169 Which of the following terms best describes a distribution of returns exhibiting a high concentration of outlier events?

Response:

A Skewed

Your Answer: Incorrect
B High standard deviation

Correct Answer
C Leptokurtic

Feedback:

Learning Objective: 4.2

If a return distribution has positive excess kurtosis, meaning it has more kurtosis than the normal distribution, it is said to be leptokurtic, leptokurtotic, or fat tailed, and to exhibit leptokurtosis.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 4: Statistical Foundations, section 4.2 Moments of the Distribution: Mean, Variance, Skewness, and Kurtosis.

D Platykurtic

Question: Score 0 of 1

170 A hedge fund has average annual returns of 16.0%. Its quarterly returns have a variance of 0.0004. Assume that returns are normally distributed, are homoskedastic, and have no autocorrelation. Which of the following best represents the range in which two-thirds of annual returns will fall (within one standard deviation of the mean)?

Response:

A 8.00% to 24.00%

Correct Answer

B 12.00% to 20.00%

Feedback:

Learning Objective: 4.4

If returns were normally distributed, the standard deviation of the returns would help an investor know with precision what the probabilities of every outcome would be relative to its mean. Very roughly, two-thirds of the time the returns should lie within 1 standard deviation of the mean.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 4: Statistical Foundations, section 4.4 Interpreting Standard Deviation and Variance.

Your Answer: Incorrect

C 13.17% to 18.83%

D 15.92% to 16.08%

Question:

Score 1 of 1

171 Which of the following is best defined as an investor’s application to join a limited partnership?

Response:

A Private-placement memorandum

B Partnership agreement

Your Answer: Correct

C Subscription agreement

Feedback:

Learning Objective:2.1

A subscription agreement is an application submitted by an investor who desires to join a limited partnership.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 2: The Environment of Alternative Investments, section 2.1 The Participants.

D Management company operating agreement

Question:

Score 1 of 1

172 Suppose that the term structure of equity index futures prices is downward sloping and there are no arbitrage opportunities. Which of the following must be true?

Response:

A The equity index futures market is in contango

B The spot price of the equity index is expected to decline

Your Answer: Correct

C The index's dividend yield exceeds the riskless interest rate

Feedback:

Learning Objective: 6.5

The arbitrage-free relationship between a stock index spot price and futures on the same index is expressed as:

$$F(T) = S \times e^{(r-d)\times T}.$$

The downward sloping term structure implies that farther-out futures prices are lower than close-buy futures prices, leading to the following relationship:

$$S \times e^{(r-d)\times T} > S \times e^{(r-d)\times(T+1)} \Rightarrow (r-d)T > (r-d)\times(T+1) \Rightarrow$$
$$r-d<0 \Rightarrow d>r,$$

In other words, the dividend yield has to be higher than the risk-free rate.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 6: Foundations of Financial Economics, section 6.5 The Term Structure of Forward Contracts.

D The equity risk premium is less than the storage costs

Question: Score 1 of 1

173 According to the compound option view of venture capital (VC) investing, which of the following is a component of successful VC investing?

Response:

A Sequentially selling out-of-the-money puts at each VC investment stage

B Establishing new in-the-money option positions when the original ones expire

C Sequentially selling out-of-the-money calls at each VC investment stage

Your Answer: Correct — D Abandoning out-of-the-money option positions when they are expiring

Feedback:

Learning Objective: 23.4

According to the compound option view of VC investing, one of the keys to success is abandoning out-of-the-money option positions when they are expiring, thus allowing the firm to ignore sunk cost and to judiciously assess likely outcomes of success based on the objective analysis of new information.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 23: Equity Types of Private Equity, section 23.4 The Dynamics of Venture Capital.

Question: Score 0 of 1

174 A venture capital fund raised $200 million in committed capital. The fund invested $50 million in a start-up prior to the start of the calendar year. At the start of the calendar year, the fund called another $100 million from investors and invested the amount in another start-up.

At the end of the calendar year, the net asset value of the fund's two investments stands at $130 million. The management fee is 2% per year. How much would the fund's manager collect in management fees for the calendar year?

Response:

A $1.4 million

Your Answer: Incorrect — B $2.6 million

C $3.0 million

Correct Answer D $4.0 million

Feedback:

Learning Objective: 23.3

Private equity management fees are based on the committed capital at the start of the period, not the invested capital. In this case, since the fund raised $200 million in committed capital at the start of the year, management fees are 2% of $200 million, or $4 million.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 23: Equity Types of Private Equity, section 23.3 Venture Capital Funds.

Question: Score 0 of 1

175 Story credits are associated with which of the following private equity investments?

Response:

A Venture capital

Correct Answer B Mezzanine debt

Feedback:

Learning Objective: 22.3

Mezzanine financing is a niche market, operating between so-called story credits and the junk bond market. A story credit is a debt with credit risk based on unusual circumstances. Story credits are private debt issues for special events, such as corporate reorganizations.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 22: Introduction to Private Equity, section 22.3 Private Equity as Debt Securities.

Your Answer: Incorrect C Distressed debt

D Seed capital

Question: Score 0 of 1

176 Company XYZ has the following current and proposed capital weights and costs:

	Initial Weight	Initial Cost	Proposed Weight	Planned Cost
Equity	60%	30%	?	35%
Bank debt	40%	5%	40%	5%
Mezzanine debt	0%	10%	?	15%

Which of the following comes closest to Company XYZ's initial weighted average cost of capital (WACC)?

Response:

A 12.50%

B 15.00%

Your Answer: Incorrect C 17.50%

Correct Answer D 20.00%

Feedback:

Learning Objective: 24.1

The initial WACC can be determined as a weighted average of the costs of equity and debt, respectively:

$$\begin{aligned} WACC_0 &= 30\% \times w_{equity} + 5\% \times w_{debt} \Rightarrow \\ &= 30\% \times 0.6 + 5\% \times 0.4 = 20\% \end{aligned}$$

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 24: Debt Types of Private Equity, section 24.1 Mezzanine Debt.

Question:

Score 1 of 1

177 Company XYZ has the following current and proposed capital weights and costs:

	Initial Weight	Initial Cost	Proposed Weight	Planned Cost
Equity	60%	30%	?	35%
Bank debt	40%	5%	40%	5%
Mezzanine debt	0%	10%	?	15%

The firm wants to lower its weighted average cost of capital (WACC) by replacing part of its current equity with mezzanine debt next year.

What proposed weight of mezzanine debt would lower the firm's WACC by 1%?

Response:

A 10%

Your Answer: Correct

B 20%

Feedback:

Learning Objective: 24.1

Initial WACC = 60% x 30% + 40% x 5% = 20%

Let Y be the proposed weight for mezzanine financing.

WACC with mezzanine financing = (1 - Y) x 35% + 40% x 5% + Y x 15% = 20% - 1% = 19%

Solving for Y finds that 20% allocation to mezzanine would result in lowering of WACC by 1%.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 24: Debt Types of Private Equity, section 24.1 Mezzanine Debt.

C 30%

D 40%

Question:

Score 0 of 1

178 Which of the following best describes merchant banking?

Response:

Correct Answer

A Financial institutions purchasing non-financial companies

Feedback:

Learning Objective: 22.2

Merchant banking is the practice whereby financial institutions purchase nonfinancial companies as opposed to acquiring or merging with other banks.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 22: Introduction to Private Equity, section 22.2 Private Equity as Equity Securities.

B Non-financial companies purchasing financial institutions

Your Answer: Incorrect

C Financial institutions financing operations of non-financial institutions

D Non-financial companies financing operations of other non-financial companies

Question:

Score 1 of 1

179 What is the most likely consequence of a death spiral associated with toxic private investment in public equity (PIPE)?

Response:

A Unlimited financial liability for limited partners

B An increase in conversion prices

C A breach of maintenance covenants

Your Answer: Correct

D Shareholder dilution

Feedback:

Learning Objective: 22.5

A toxic PIPE is a PIPE with adjustable conversion terms that can generate high levels of shareholder dilution in the event of deteriorating prices in the firm's common stock. The conversion price for toxic PIPEs adjusts downward whenever the underlying common stock declines. The drop in stock price leads to a drop in the conversion price, which can then lead to a substantial dilution of shareholder value.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 22: Introduction to Private Equity, section 22.5 Trends and Innovations in Private Equity.

Question:

Score 1 of 1

180 A creditor objects to a company's reorganization plan for emerging from a Chapter 11 bankruptcy. What is the most effective method for the creditor to block the plan?

Response:

A Filing an absolute priority claim

B Purchasing at least a 10% position in each debt class

Your Answer: Correct

C Obtaining at least a 1/3 position of any class of claimants

Feedback:

Learning Objective: 24.2

Any one creditor can block a reorganization plan if it holds one-third of the total dollar amount of any class of claimants. One-third ownership of any class of claimants is known as a blocking position. A blocking position forces the other parties to negotiate with the blocking creditor.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 24: Debt Types of Private Equity, section 24.2 Distressed Debt.

D Negotiating with other creditors and causing a cramdown

Question:

Score 0 of 1

181 Which of the following are among the sufficient conditions to make alpha a zero-sum game?

I. Market participants have the same investment horizon

II. Investors can divide assets and trade them at zero cost

III. Investors may access all asset classes, and markets are not segmented

IV. Market participants are equally divided between speculators and hedgers

Response:

	A II, III, and IV only
	B I, III, and IV only
Your Answer: Incorrect	C I, II, and IV only
Correct Answer	D I, II, and III only

Feedback:

Learning Objective: 32.5

Choices I, II, and III contain valid conditions that must be in place to make alpha a zero-sum game. Equal participation between speculators and hedgers (choice IV) is not a necessary condition.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 32: Portfolio Management, Alpha, and Beta, section 32.5 Alpha, Beta, and Portfolio Allocation.

Question: Score 1 of 1

182 The Bayou Management case is a well-known example of a hedge fund collapse. A thorough due diligence process performed on Bayou before its termination would have revealed which of the following red flags?

Response:

	A Massive redemptions
	B Excessive use of leverage
Your Answer: Correct	C Unreliable auditing practices

Feedback:

Learning Objective: 29.3

A thorough due diligence carried out on Bayou prior to its collapse would have revealed that the manager did not use a reputable auditor.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 29: Cases in Tail Events, section 29.3 Failures Driven by Fraud.

	D High employee turnover

Question: Score 0 of 1

183 When performing due diligence on a hedge fund, why is it recommended to postpone analysis of performance until other aspects of due diligence have been completed?

Response:

	A To use the most recent data
	B To prevent selection bias

Your Answer: Incorrect

C To minimize costs of due diligence

Correct Answer

D To prevent confirmation bias

Feedback:

Learning Objective: 31.6

Since a performance review is more quantitative and objective in nature than other aspects of due diligence, there is strong reason to believe that a performance review should be performed subsequent to the more subjective aspects of due diligence. The goal is to prevent confirmation bias, wherein an investor first identifies historically successful funds and then subconsciously favors those funds throughout the due diligence process.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 31: Due Diligence of Fund Managers, section 31.4 Strategic Review.

Question:

Score 1 of 1

184 Which of the following is a typical tax-related consequence of offshore master trust structures?

Response:

A Investors avoid taxation

B Investors are taxed only in the country of the hedge fund's domicile

Your Answer: Correct

C Investors are taxed only in their country of domicile

Feedback:

Learning Objective: 31.3

The purpose of an offshore master trust structure is to invest assets of both the onshore fund and the offshore fund in a consistent manner. This ensures that all investors benefit from the fund manager's insights while ensuring that investors get taxed only in their country of domicile.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 31: Due Diligence of Fund Managers, section 31.3 Structural Review.

D Investors are taxed in their country and in the fund's country of domicile

Question:

Score 0 of 1

185 Consider three instruments: a stock with an expected return of 10%, and a put and a call on that stock. Both the put and the call are at-the-money European options that expire on the same date. Assuming that the riskless rate is 5%, which of the following portfolios has expected returns consistent with that portfolio's characteristics?

	1 Share of Stock	1 Put	1 Call	Expected return
Portfolio A	long	long	no position	5%
Portfolio B	long	long	short	5%
Portfolio C	long	no position	short	10%
Portfolio D	short	short	long	10%

Response:

A Portfolio A

Correct Answer

B Portfolio B

Feedback:

Learning Objective: 30.6

Portfolio B, with an expected return of 5%, is consistent with the classical put-call parity portfolio that is long the underlying and long a put while shorting a call. Such a portfolio is expected to earn a rate of return equal to the risk-free rate of return.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 30: Investment Process, Operations, and Risk, section 30.6 Controlling Risk of Portfolios with Options.

Your Answer: Incorrect

C Portfolio C

D Portfolio D

Question:

Score 1 of 1

186 Which of the following is the most likely reason for a hedge fund to be closed to new investors?

Response:

A Decreased diversification

B Master-feeder constraints

Your Answer: Correct

C Alpha erosion

Feedback:

Learning Objective: 31.4

Generally, funds that experience capacity issues in the markets of their primary strategy do not accept new investors. Such capacity issues are associated with alpha erosion, or too much money chasing the same opportunities.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 31: Due Diligence of Fund Managers, section 31.4 Strategic Review.

D Tax optimization

Question:

Score 0 of 1

187 In the context of hedge fund due diligence, why is it important to learn about funds or accounts that have been terminated?

Response:

A To comply with regulations

Correct Answer

B To avoid selection bias

Feedback:

Learning Objective: 31.6

It is essential to learn about any funds or accounts that have been terminated to avoid selection bias in analyzing performance.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 31: Due Diligence of Fund Managers, section 31.6 Performance Review.

Your Answer: Incorrect

C To minimize costs of due diligence

D To avoid confirmation bias

Question:

Score 0 of 1

188 A hedge fund has a leverage factor (assets/equity) of 6. What is the fund's monthly cost of financing if the fund's assets generate a monthly return of 0.25% and the fund's equity generates a monthly return of 1.00%?

Response:

	A 0.02%
Your Answer: Incorrect	B 0.04%
	C 0.06%
Correct Answer	D 0.10%

Feedback:

Learning Objective: 29.1

Return on equity (ROE) can be expressed as a function of return on assets (ROA), cost of financing, and a leverage factor. Through this relationship, we can solve for *r*, the cost of financing:

$$\text{ROE} = (\text{ROA} \times \text{L}) - [r \times (\text{L} - 1)] \Rightarrow$$
$$r = \frac{(\text{ROA} \times \text{L}) - \text{ROE}}{L-1} = \frac{0.0025 \times 6 - 0.01}{5} = 0.1\%$$

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 29: Cases in Tail Events, section 29.1 Problems Driven by Market Losses.

Question:

Score 0 of 1

189 Consider a fixed-coupon mortgage-backed security that is backed by a pool of 30-year fixed-rate mortgages. The manager of a portfolio with a long-duration is considering an interest-only security (IO), which is a claim on the stream of the coupons associated with this mortgage-backed security. Which of the following positions will benefit from an increase in interest rates, and why?

Response:

	A A long position in the IO, because its maturity will contract when interest rates increase
Correct Answer	B A long position in the IO, because its maturity will extend when interest rates increase

Feedback:

Learning Objective: 25.4

When interest rates increase, the speed of prepayment declines and the IO security will live longer, thereby extending the annuity of stated interest payments.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 25: Introduction to Structuring, section 25.4 Collateralized Mortgage Obligations.

	C A short position in the IO, because its maturity will contract when interest rates increase
Your Answer: Incorrect	D A short position in the IO, because its maturity will extend when interest rates increase

Question:

Score 1 of 1

190 What is the term for a financial market with enough distinct securities to meet the needs and preferences of all participants?

Response:

A Blanket

B Tranched

Your Answer: Correct

C Complete

Feedback:

Learning Objective: 25.3

A complete market is a financial market in which enough different types of distinct securities exist to meet the needs and preferences of all participants.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 25: Introduction to Structuring, section 25.3 The Primary Economic Role of Structuring.

D Crowded

Question:

Score 0 of 1

191 Consider the following tranches of a CMO structure with fixed-rate underlying mortgages. Which of the tranches tends to perform best in a rising interest rate environment?

Response:

A Equity tranche

B Mezzanine tranche

Your Answer: Incorrect

C PO tranche

Correct Answer

D IO tranche

Feedback:

Learning Objective: 25.4

When interest rates increase, the speed of prepayments declines and the IO tranche receives a longer annuity of interest payments.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 25: Introduction to Structuring, section 25.4 Collateralized Mortgage Obligations.

Question:

Score 0 of 1

192 An investor uses an investment vehicle that defers all taxes until the funds are fully distributed at a future termination date.

The investor makes a single contribution today and anticipates fully withdrawing all funds from the vehicle in 30 years, when his tax rate will be 25%. Which of the following is closest to the investor's after-tax rate of return on this investment if the pre-tax annual return is 10%?

Response:

A 7.50%

Your Answer: Incorrect

B 8.27%

Correct

C 9.02%

Answer

Feedback:

Learning Objective: 28.2

$$r^* = \left\{1+\left[(1+r)^N - 1\right](1-T)\right\}^{1/N} - 1$$
$$= \left\{1+\left[(1.1)^{30} - 1\right](1-0.25)\right\}^{1/30} - 1$$
$$= 9.02\%$$

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 28: Equity-Linked Structured Products, section 28.2 Four Potential Tax Effects of Wrappers.

D 9.75%

Question: Score 0 of 1

193 Which of the following actions identifies an investor's position in a synthetic collateralized debt obligation (CDO)?

Response:

Correct Answer

A Selling credit protection on a referenced basket of assets

Feedback:

Learning Objective: 27.4

In the case of a synthetic CDO, the CDO trust sells credit protection on a referenced basket of assets.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 27: CDO Structuring of Credit Risk, section 27.4 Cash-Funded CDOs versus Synthetic CDOs.

B Selling credit protection on a standardized basket of assets

Your Answer: Incorrect

C Buying credit protection on a referenced basket of assets

D Buying credit protection on a standardized basket of assets

Question: Score 0 of 1

194 What does it mean to say that a special purpose vehicle (SPV) for a collateralized debt obligation (CDO) is "bankruptcy remote"?

Response:

A The equity tranche is so large that the chance of default of any other tranche is minimal

B The credit risk of the sponsoring bank is not affected by the health of the SPV or its CDO

Your Answer: Incorrect

C The government provides credit enhancement to the SPV to encourage business in the country of origin

Correct Answer

D The credit risks of the tranches are not affected by the financial health of the sponsoring bank of the SPV

Feedback:

Learning Objective: 27.1

Bankruptcy remote means that if the sponsoring bank or money manager goes bankrupt, the CDO trust is not affected. In other words, the trust assets remain secure from any financial difficulties suffered by the sponsoring entity so that investors in the CDO tranches have a direct claim on the collateral.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 27: CDO Structuring of Credit Risk, section 27.1 Overview of CDO Variations.

Question:

Score 1 of 1

195 Which of the following are three important advantages to banks of forming collateralized debt obligation (CDO) trusts to securitize portfolios of commercial loans?

I. Obtaining capital infusion

II. Earning tax credits

III. Reducing regulatory capital

IV. Mitigating credit exposure

Response:

A II, III, and IV only

Your Answer: Correct

B I, III, and IV only

Feedback:

Learning Objective: 27.4

There are several potential advantages to financial institutions of using cash-funded balance sheet CDOs. Banks are required by regulators to maintain a particular level of capital, depending on the risks of their assets. Reducing risk-based/regulatory capital is the single most important advantage to a bank of forming a CDO trust.

By selling existing loans into a CDO trust, a lending institution receives cash proceeds from the sale of its loans to a CDO trust. Additionally, the selling bank may be able to reduce its exposure to an industry or a group of borrowers (mitigate credit exposure).

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 27: CDO Structuring of Credit Risk, section 27.4 Cash-Funded CDOs versus Synthetic CDOs.

C I, II, and IV only

D I, II, and III only

Question:

Score 0 of 1

196 A collateralized debt obligation (CDO) has a portfolio composed of $100 million in corporate bonds, which is currently generating $10 million per year in coupon income. A particular tranche of that portfolio has an attachment point of 10% and a detachment point of 40%. Which of the following best describes the point at which the tranche will cease to have value?

Response:

A The tranche will cease to have value when the portfolio loses $1 million

B The tranche will cease to have value when the portfolio loses $4 million

Your Answer: Incorrect

C The tranche will cease to have value when the portfolio loses $10 million

Correct Answer

D The tranche will cease to have value when the portfolio loses $40 million

Feedback:

Learning Objective: 25.6

The first percentage loss in the collateral pool that begins to cause a reduction in the tranche is known as the attachment point, and the point at which the given tranche is completely wiped out is known as the detachment point. Given the problem's scenario, the detachment point is defined as 40% of $100 million = $40 million.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 25: Introduction to Structuring, section 25.6 Introduction to Collateralized Debt Obligations.

Question:

Score 1 of 1

197 Consider a collateralized debt obligation containing a collateral pool of moderately-risky corporate bonds. Which of the following pairs of weighted average rating factor (WARF) and diversity score would most likely benefit equity tranche holders at the expense of senior tranche holders?

Response:

A A lower WARF and a lower diversity score

B A lower WARF and a higher diversity score

Your Answer: Correct

C A higher WARF and a lower diversity score

Feedback:

Learning Objective: 27.1

Weighted average rating factor (WARF) and diversity scores have opposite scales. Higher WARF means higher credit risk. Higher diversity score means lower risk.

Higher WARF and lower diversity score would imply higher expected return for the equity tranche at the cost of higher risk for the senior tranches.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 27: CDO Structuring of Credit Risk, section 27.1 Overview of CDO Variations.

D A higher WARF and a higher diversity score

Question:

Score 0 of 1

198 Which of the following collateralized debt obligation (CDO) structures focuses on matching the maturity of liabilities and assets?

Response:

A Synthetic

Correct Answer

B Cash flow

Feedback:

Learning Objective: 27.5

Typically, there is a fixed tenor (maturity) for a cash flow CDO's liabilities that coincides with the maturity of the underlying CDO portfolio assets.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 27: CDO Structuring of Credit Risk, section 27.5 Cash Flow CDOs versus Market Value CDOs.

Your Answer: Incorrect

C Balance sheet

D Arbitrage

Question:

Score 1 of 1

199 A synthetic collateralized debt obligation (CDO) is being designed to obtain credit exposure to a reference portfolio through a total return swap. The sponsor of the CDO wishes to enhance the credit rating of the senior tranche. How can a higher investment rating on the senior tranche be achieved?

I. Diversifying the reference portfolio

II. Increasing the size of subordinated tranches

III. Increasing the sponsor's risk capital

IV. Obtaining external credit enhancement

Response:

A II, III, and, IV only

B I, III, and, IV only

Your Answer: Correct

C I, II, and, IV only

Feedback:

Learning Objective: 27.6

The higher investment rating can be achieved through diversification, subordination, or several other credit enhancements.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 27: CDO Structuring of Credit Risk, section 27.6 Credit Enhancements.

D I, II, and, III only

Question:

Score 1 of 1

200 A collateralized debt obligation (CDO) has a collateral pool consisting of $500 million in corporate bonds, with a total par value of $400 million and an average coupon rate of 7%. The CDO has only two tranches: a $400 million senior tranche with a 5% coupon, and a $100 million equity tranche. Assuming that there are no bond defaults, no principal payments, and no annual expenses such as fees, which of the following values is closest to the annual cash flow available to the equity tranche?

Response:

A $3 million

Your Answer: Correct

B $8 million

Feedback:

Learning Objective: 25.6

First, the coupon income paid on the par value of the pool is equal to $400 million x 7% = $28 million. Next, the amount of coupon income that goes to the senior tranche is $400 million x 5% = $20 million. Therefore, the amount of coupon income going to the equity tranche is the difference between the coupon income from the collateral and the amount paid to the senior tranche: $28 million – $20 million = $8 million.

For further discussion, see *Alternative Investments: CAIA Level I, 3rd Edition*, Chapter 25: Introduction to Structuring, section 25.6 Introduction to Collateralized Debt Obligations.

C $10 million

D $15 million

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