300Hours: CFA Level 3 Mock Exam

This Chartered Financial Analyst (CFA®) Mock Exam has 44 item set questions, courtesy of IFT.

To best simulate the exam day experience, candidates are advised to allocate a total of 2 hours 12 minutes for this session of the exam.

Once completed, please submit your answers at https://3h.rs/CFAL3Mock to get your score, performance benchmark and answer explanations.

Questions 1-4 relate to Ethical and Professional Standards.

Titan Case Scenario

Titan Asset Management is a well-managed firm that offers various kinds of mutual funds and investment plans for private and institutional clients. The board of directors of Titan had adopted the CFA Institute Asset Manager Code of Professional Conduct (Asset Manager Code) a year ago to establish and promote ethical behavior within the firm. The board has just instituted a review of each manager's ability to ensure his department's compliance with the Asset Manager Code. Amara Bhatia, CFA, the recently appointed chief compliance officer, is responsible for reviewing and evaluating each department's compliance.

Bhatia meets with Tom Preston, CEO of Titan, to discuss how well the procedures have been implemented over the last year to address the Manager's responsibility outlined in the Asset Manager Code's six principles.

Preston responds, "We tried to address the following principles while implementing the policies and procedures of the Code:

Principle 1: Act for the benefit of clients and be professional and ethical in all our dealings at all times.

Principle 2: Act with skill, competence, and diligence. Communicate accurately and promptly with our clients while maintaining independence and objectivity.

Principle 3: Stay abreast of all rules of the capital markets."

Bhatia then reviews three current compliance procedures of the firm that were under Preston's supervision before her appointment:

Risk management process	The risk profile of a client's investment matches his risk appetite and ability. A comprehensive risk management process is administered for portfolios and investment strategies, identifying, measuring, and managing risk. The risk management techniques implemented are consistent with the investment style and philosophy of our portfolio managers.
Portfolio information review	Accurate and complete portfolio information is provided to clients. The investment committee regularly does a review to confirm the accuracy of such information.

Business-continuity plan review	Procedures for safeguarding client accounts and handling inquiries in case of emergencies or market disruptions. The current plan requires to back up all of the firm's computer systems and client records daily. The backups are stored in an offsite storage facility. Titan employs the services of an external recovery firm to carry out specific emergency plans. The recovery firm is responsible for the coverage of critical business functions. It implements plans to communicate with employees, critical vendors, and suppliers in the event of a facility or communication disruption. The same firm also provides plans for contacting and communicating with clients in an extended disruption.

Bhatia next discusses the client disclosure policies with Shiras Nathan, head of customer relations. Nathan states, "Regarding the Asset Manager Code relating to client services, we ensure the following policies: All disclosures are accurate and complete, and we show all our calculations, including the complicated ones. We communicate with clients regularly and provide performance reports whenever they request them. All conflicts of interests arising due to the firm or employee holdings in the same securities as clients, allocation of investments among similar portfolios, use of soft dollars, and directed brokerage arrangements are disclosed."

Finally, Bhatia asks about disclosures regarding management fees. Nathan responds that the disclosures contain the following information:

"Titan charges a 2% asset-based management fee. In addition to the management fee, clients pay distribution and service fees to buy and sell shares in a fund that cannot exceed 0.75 percent of a fund's average net assets per year. Titan charges fees that may not exceed 0.25 percent for marketing material or prospectuses sent to potential investors."

After completing her evaluations, Bhatia works on her report suggesting recommendations before presenting them in the upcoming board meeting.

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1. Which of the principles is inconsistent with the Asset Manager Code of Professional Conduct?

   A. Principle 1.
   B. Principle 2.
   C. Principle 3.

2. Which of the principles is inconsistent with the Asset Manager Code of Professional Conduct?

   A. The risk management process.
   B. Portfolio information.
   C. Business-continuity plan.

3. Which of Nathan's client service policies is consistent with the Asset Manager Code of Professional Conduct?

   A. Performance reports frequency.
   B. Complete, accurate disclosures, including complex calculations.
   C. Conflicts of interests' disclosures.

4. Are the firm's disclosures regarding management fees consistent with the required and recommended standards of the Asset Manager Code?

   A. Yes.
   B. No, because the average or expected expenses or fees clients are likely to incur are not mentioned.
   C. No, because complicated language is used.

Questions 5-8 relate to Economics.

Gaytee Jaffer Case Scenario

Gaytee Jaffer, CFA, works as an analyst at an investment firm, AvaVea Partners which serves local as well as international clients. Jaffer develops capital market expectations using various forecasting approaches. She prefers to use models based on regression analysis on macroeconomic variables. She is an advocate of models that are not particularly connected to theory compared to those that involve parameters derived from the underlying economic theory. Jaffer's colleague, Luc Arnaud considers a whole range of economic data to assess the economy's future position. His technique is centered around asking questions about components of spending and then aggregating the information gathered to reach a conclusion about the outlook for the economy.

Helen Wu, director capital markets' desk, recommends combining a forecasting model with a simpler approach that uses data involving typically under ten variables such as share prices,

manufacturing metrics, inflation, interest rates, consumer expectations, and monetary data to give an overall economic reading. During the morning meeting, she briefs her team of analysts as follows:

“I have observed summer – second quarter retail sales’ figures of past several years which has made me believe that current expectations should be likewise subdued. I visited Leisure Mall just last weekend and noticed a significant reduction in the number of shoppers. The last time I saw a retail giant that had so few shoppers was in the second quarter of 2001, and that turned into one of the lowest holiday sales periods over the last few decades. Thus, there will be no overall year- over-year retail sales growth this summer.”

At the end of the meeting Wu asks Jaffer to assess the effects of inflation on various asset classes of emerging market countries as some of their clients have funds invested in those regions. Jaffer decides to analyze the bonds, stocks and real estate of various EM countries based on the “horizon structure” of inflation expectations. She defines long-term inflation to be at expectations level, and short horizon (term) inflation to be higher than expectations level then examines their effect on these asset classes. She makes the following notes:

Note I Real Estate: When long-term inflation at expectations level – rental income to be steady to rising slightly, returns to equate to long- term average. Market to be in general equilibrium.

When short horizon inflation at higher than expectations level – Asset values to increase; increased rental income and higher returns to be expected.

Note II Stocks: When long-term inflation at expectations level –stocks to be bullish and market to be in equilibrium.

When short horizon inflation at higher than expectations level – effect negative for stocks, less negative for companies/industries that are able to pass on inflated costs.

Note III Bonds: When long-term inflation at expectations level –short-term yields to be steady.

When short horizon inflation at higher than expectations level – long-term yields to rise slowly as the inflation effects are incorporated via the yield curve.

Later in the day Jaffer is informed that one of the firm’s clients in the Eurozone country is concerned about a deflationary shock. Jaffer observes the growth and inflation rates of the country and after reviewing various research reports concludes that growth is 0.8% below trend and inflation is 1% below the central bank’s target. She further discovers that the country’s central bank usually responds in accordance with the Taylor Rule and the fiscal policy is well coordinated. Jaffer, after further research, forms her expectations for growth, inflation, and market interest rates if the central bank does respond to the shock.

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5. The economic forecasting approaches Jaffer and Arnaud most likely use are:

   A. checklist approach and LEI.
   B. reduced-form models and checklist approach.
   C. structural models and LEI.

6. Which of the following biases does Wu exhibit?

   A. Status quo, confirmation, overconfidence.
   B. Prudence, availability, look-ahead.
   C. Survivorship, time period, availability.

7. Regarding the effect of the "horizon structure" of inflation on various assets, which of Jaffer's notes is least likely correct?

   A. Note I.
   B. Note II.
   C. Note III.

8. If the Eurozone country's central bank responds with a reaction function based on the Taylor Rule and correctly calibrates the policy rate, which of the following will most likely occur?

   A. Short term rates will fall faster, but growth and inflation may decline less.
   B. Short term rates, growth and inflation will decline rapidly.
   C. Short term rates will fall rapidly but growth and inflation rates will remain steady.

Questions 9-12 relate to Portfolio Management.

Katherine Hult Case Scenario

Katherine Hult, CFA, works for Rocky Road Investments in New York. She works as a financial consultant and helps individuals manage their investments and savings. It is her company's policy to review the client's IPS once a year to monitor any change in risk-taking ability and willingness, the individual's circumstances, and any behavioral biases they may have. The following paragraphs detail profiles of three of her clients.

Client 1: Mrs. Wentworth

Mrs. Wentworth is retired and lives alone in New York. She has no children and donates a considerable amount of her retirement earnings to charity. In the annual client-advisor meeting, Katherine tried to convince Mrs. Wentworth to invest in international stocks (given her risk-taking ability), but she refused. Mrs. Wentworth believes that all international stocks are risky, even though Katherine has shown her several research reports stating otherwise.

Client 2: Mr. Jack Black

Mr. Jack Black belongs to a wealthy entrepreneurial family and has several investments in startup companies. He prides himself on knowing good investments and having a keen sense of the market. As a result, Black keeps investing in a new startup every month. When a startup succeeds, he tells all his friends about his superior investment skills; he blames it on unexpected market conditions when a startup fails.

Client 3: Mr. Henry Tillman

Mr. Henry Tillman is in his mid-forties and an executive in a pharmaceutical company. He started his investment in his early 20s and since then has made little change to his portfolio despite Katherine's insistence. Henry's portfolio is mainly invested in pharmaceutical and oil company stocks. He does not want to change the portfolio mix. He tells Katherine that his parents left him this portfolio, and he will not sell it off.

Next month, Katherine prepares a presentation on behavioral biases and investor types for newly hired internees at her firm. One of the internees asks about mental accounting bias and its consequences, which Katherine then explains. Katherine then explains the different investor types.

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9. Which of the following behavioral bias is most likely demonstrated by Mrs. Wentworth?

    A. Conservatism bias.
    B. Confirmation bias.
    C. Availability bias.

10. Which of the following behavioral bias is most likely demonstrated by Jack Black?

    A. Illusion of knowledge bias.
    B. Self-attribution bias.
    C. Hindisight bias.

11. Which of the following bias(es) did Henry Tillman NOT demonstrate?

    A. Anchoring and adjustment bias.
    B. Status quo bias.
    C. Endowment bias.

12. Which of the following is not a typical consequence of mental accounting bias?

    A. Allocating funds to different 'buckets'.
    B. Neglecting to focus on total return and total risk.
    C. A higher risk profile in the portfolio due to pursuit of higher returns.

Questions 13-18 relate to Portfolio Management.

Minnah Shah Case Scenario

Minnah Shah, CFA, is a portfolio manager who works with institutional and high net worth clients. Shah meets with a potential new client, Carl Warner, to discuss his portfolio allocations.

Warner's investment assets are taxable; interest income is taxed at 40%, dividend income, and capital gains at 25%. His portfolio's asset classes include investment-grade (IG) bonds, high-yield (HY) bonds and equity. Warner would like to stay invested in the same asset classes. Shah determines Warner's risk and return objectives and ascertains his constraints. Then she runs a mean-variance portfolio optimization based on the expected returns, volatilities, and correlations of these asset classes and attains a pre-tax optimal mix for Warner's portfolio. Shah assumes that the returns of IG bonds and HY bonds are comprised of 100% interest income and employs portfolio optimization again to obtain the after-tax asset mix for Warner's portfolio. She shows Warner both results (given below).

Exhibit 1: Expected Returns and Risk

	Pre-Tax		Post-Tax	
Asset Classes	**Return**	**Standard Deviation**	**Return**	**Standard Deviation**
IG bonds	2.0%	3.0%	1.20%	1.80%
HY bonds	4.0%	10.0%	2.40%	6.0%
Equity	9.0%	20.0%	6.75%	15.0%
Correlation between IG bond & Equity	0			

Correlation between IG bonds & HY bonds	0.2	
Correlation between HY bonds & Equity	0.8	

Exhibit 2: Optimal Pre-Tax Asset Mixes and After-Tax Asset Mixes*

IG bonds	20%	30%
HY bonds	22%	5%
Equity	58%	65%

**Note: Both pre-tax & after-tax optimal mixes meet the total return and risk guidelines of the client. Total return range = 4% - 5%, total portfolio risk = 13% - 14%.*

Shah talks with Mike Horan, the investment committee (IC) president for Minerva Corp's defined-benefit pension plan. The pension assets are 70% invested in investment-grade intermediate duration bonds and 30% in global equities. The duration of pension liabilities is approximately 25 years. The company has maintained a fully funded status but would like to reduce long-term expected future cash contributions. Horan explains that the IC is willing to tolerate higher risk but wants to limit contribution risk and risk to the plan funded status. Horan suggests three asset allocation proposals for the pension plan:

Allocation 1: Maintain 70%/30% of investment-grade bonds/global equities with the same bond portfolio duration.

Allocation 2: 55%/45% and lengthen the bond portfolio duration to increase the hedge of the duration risk in the liabilities.

Allocation 3: Maintain 70%/30% of bonds/global equities but increase the bonds' duration.

Shah also proposes tactically adjusting Minerva's asset-class weights to profit from short-term return opportunities. Horan asks about the approaches to tactical asset allocation (TAA) decisions. Shah explains that there are two approaches to TAA – discretionary and quantitative. She makes the following comments about discretionary TAA:

Comment 1: Discretionary TAA involves a qualitative interpretation of political, economic, and financial market conditions.

Comment 2: Short-term forecasts consider data points such as valuation measures, term and credit spreads, central bank policy, GDP growth, earnings, inflation expectations, etc.

Comment 3: Short-term forecasts also use signals such as value and momentum factors that offer asset class return predictability.

Later, Shah receives a call from another client who is worried about the stock price of Zemco pharmaceuticals. The company has strong earnings, but recently it has been having some difficulties with its angiotensin converting enzyme inhibitors (ACEI) drug research. However, over the last three decades, Zemco has had few failures in this category of drugs. There has been recent news about certain pharmaceuticals pulling out of this market. She feels that her equity allocations with a higher allocation to Zemco should have a tactical shift to the lowest allowable policy range. Shah contacts the research department for more information on the drug and the pharmaceutical industry. She also investigates Zemco's drug research and reviews the client's asset allocations. Shah fears that her client may be exhibiting certain behavioral biases.

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13. In Shah's portfolio optimization proposals, which model inputs may be used with no adjustment?

    A. Correlation of returns.
    B. Expected returns.
    C. Standard deviation of returns.

14. Based on Exhibits 1 & 2, a significant reduction in the high-yield (HY) bonds' in the after-tax asset mix may be because of:

    A. lower income returns of the HY bonds.
    B. heavier tax burden imposed on HY bonds.
    C. lower correlation between HY bonds and IG bonds.

15. Based on Exhibits 1 & 2, a higher allocation to investment-grade (IG) bonds in the after-tax asset mix may be because of:

    A. lower income returns of the IG bonds.
    B. lower risk than HG bonds and lower correlation with equity.
    C. higher correlation with HG bonds than equity.

16. Given its funding objectives, which asset allocation is *most appropriate* for Minerva's defined-benefit pension plan?

    A. Allocation 1.
    B. Allocation 2.

C. Allocation 3.

17. Regarding discretionary TAA, Shah is *least likely* correct with respect to:

A. Comment 1.
B. Comment 2.
C. Comment 3.

18. Regarding the immediate tactical asset allocation demand, the behavioral bias *most likely* exhibited by the client is:

A. Loss aversion.
B. Home bias.
C. Representativeness bias.

Questions 19-23 relate to Portfolio Management.

Chris Connors Case Scenario

Chris Connors, CFA, is a financial advisor to Mike, 40, and Sara Johnson, 42. During their meeting with Connors, the Johnsons ask for a financial plan. They need specific recommendations on how best to provide for their daughter Becky's college education in four years, grow their current wealth, and save for retirement. They also show an intention of leaving an inheritance for Becky.

The Johnsons provide Connors with the following information about their personal and financial background.

Note 1: Mike Johnson is a private physician with an annual salary of $205,000 before taxes and financial wealth of $350,000, consisting of 30% stocks and 70% investment-grade bonds. He wants to maintain their current living standard when he retires at the age of 60. He considers his risk tolerance as moderate.

Note 2: Sara Johnson is an equity trader with an average annual income of $150,000. She plans to retire at age 60 also. Her financial wealth is valued at $300,000, which is invested in stocks. She asks Connors to explain life insurance and its relationship to her job. She describes herself as a risk seeker but is concerned about outliving their assets and not maintaining their current lifestyle in the later years of retirement. She wants an annuity for later years (beginning in 40 years) to provide the greatest supplemental, level income stream relative to the cost.

Connors discusses different life insurance types and explains how an advanced life deferred annuity (ALDA) can act as pure longevity insurance.

After meeting with the Johnsons, Connors turns his attention to Bob Hendricks, a 45-year-old criminal lawyer with a stable annual income of $175,000 per annum. He has moderate risk tolerance; his human capital is risky but uncorrelated with the stock market. Hendricks prefers investing in global stocks and investment-grade developed markets bonds.

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19. Following the discussion between Johnsons and Connors and Note 1, Connors is *most likely* to recommend to Mike to increase his exposure to:

    A. risk-free assets.
    B. risky assets.
    C. lifetime insurance.

20. Considering the discussion and Note 2, Connors is *least likely* to recommend which of the following investments to Sara?

    A. Equities.
    B. Bonds.
    C. Life insurance.

21. Which of the following statements best answers Sara's question about life insurance and her job?

    A. Life insurance and her job have a similar payoff.
    B. Life insurance is a perfect hedge for her human capital in the event of death.
    C. Her need for life insurance increases as she gets closer to retirement.

22. An advanced life deferred annuity (ALDA) would provide the greatest supplemental level income relative to the cost because:

    A. it involves the permanent exchange of a lump sum for an insurance contract that promises to pay an income in a down market.
    B. payments begin later when life expectancy is shorter, and some policyholders will die without receiving payments.

C. it provides many potential investment options for an individual to choose from in exchange for a lump sum of money today.

23. Which of the following strategies should Connors recommend to Hendricks?

A. 100% stocks, 0% bonds
B. 70% stocks, 30% bonds
C. 10% stocks, 90% bonds

Questions 24-28 relate to Derivatives.

Benton Asset Management Case Scenario

One month ago, Benton Asset Management, a US-based investment firm, fully hedged the exposure of its Aggressive Growth Fund to the ARS (Argentine peso) with a long position in a two-month ARS/USD forward contract. The following table provides the relevant information.

	One Month Ago	Today
Value of assets (in ARS)	15,000,000	14,500,000
ARS/USD spot rate (bid-offer)	8.6359/8.6439	8.1844/8.5924
One-month forward points (bid-offer)	620/635	645/660
Two-month forward points (bid-offer)	870/895	895/945

Benton also has a US-domiciled fund that invests in foreign-currency assets of Australia and Germany. The fund is equally invested in one-year Australian and German Treasury bills (both weights $w_i = 0.5$). Because the foreign-currency return on these Treasury bill assets is risk-free and known in advance, their expected $\sigma(R_{FC})$ is equal to zero. Benton wants to calculate the USD-denominated returns and risk on this portfolio. The following information is collected by the firm:

Expected Values	Australia	Germany
Foreign-currency asset return R_{FC}	5.0%	3.0%
Foreign-currency return R_{FX}	4.0%	4.0%
Asset risk $\sigma(R_{FC})$	0%	0%
Currency risk $\sigma(R_{FX})$	8.0%	6.0%
Correlation (USD/AUD, USD/EUR)	+0.5	

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24. One month ago, Benton *most likely* sold:

    A. ARS 14,500,000 forward at an all-in forward rate of ARS/USD 8.7229
    B. ARS 15,000,000 forward at an all-in forward rate of ARS/USD 8.7334
    C. ARS 15,000,000 forward at an all-in forward rate of ARS/USD 8.7074

25. To rebalance the hedge today, the firm would *least likely* need to:

    A. buy ARS 500,000 forward.
    B. engage in a mismatched FX swap.
    C. sell ARS500,000 forward.

26. The roll yield on this hedge at the forward contracts' maturity date is *most likely* to be:

    A. positive
    B. negative
    C. zero

27. The expected domestic currency return R_{DC} on the equally weighted foreign-currency asset portfolio is *closest* to:

    A. 8.2%
    B. 8.5%
    C. 7.9%

28. The expected risk $\sigma(R_{DC})$ of the equally-weighted portfolio is *closest* to:

A. 6.8%
B. 6.3%
C. 7.1%

Questions 29-34 relate to Fixed Income.

Jim Jones Case Scenario

Jim Jones is a portfolio manager for Astor Asset Management, headquartered in London. Astor primarily invests in equities and fixed income. Investments in fixed-income securities consist of investment-grade domestic (UK) bonds and international investment-grade bonds. Jones asks Andy Stevens, an analyst at Astor, to review the expected return of the international bond portfolio over one year. Stevens collects the following financial data for this purpose presented in Exhibit 1.

Exhibit 1: Selected Financial Information of the International Investment-Grade Bond Portfolio

Notional principal of portfolio (in millions)	$300
Average bond coupon payment (per $100 par value)	$2.50
Coupon frequency	Annual
Current average bond price	$97.50
Expected average bond price in one year (assuming an unchanged yield curve)	$97.68
Average bond convexity	0.20
Average bond modified duration	4.72
Expected average benchmark yield-to-maturity change	0.20%
Expected change in credit spread (widening)	0.10%
Expected currency gains ($ appreciation vs. £)	0.78%

While discussing the domestic bond portfolio with Stevens, Jones makes the following statements.

> **Statement 1**: "The UK bond portfolio has a total return mandate, which is a current objective of tracking the benchmark index. The manager is allowed some flexibility in the securities' weights relative to the benchmark. However, risk factors such as duration, credit risk, etc., must closely match the benchmark index with tracking error expected to be closer to zero per year."

> **Statement 2**: "The objectives for the domestic bond portfolio include diversification, to fund future liabilities, and to provide short-term hedging of inflation for both the principal and coupon payments. The Astor investment committee (IC) wants to change its return objective to an outperformance of 35bps relative to the benchmark and allow minor risk factor mismatches in sector or quality bets with a target active risk of around 40bps per year. It will continue to allow small deviations in holdings from the benchmark index."

> **Statement 3**: "The IC plans to reduce the equity allocation of Astor's equity portfolio and increase the allocation of its bond portfolio with the following alternatives.
>
> > **Alternative 1**: Purchase higher investment-grade fixed-coupon corporate bonds with a modified duration of four years and a correlation coefficient with the equity portfolio of –0.20.
> >
> > **Alternative 2**: Purchase UK index-linked short-dated gilts with a duration of two years and a correlation coefficient with the equity portfolio of –0.15."

Jones asks Stevens, "Which alternative would you suggest for our domestic bond portfolio?"

Later, Jones discusses portfolio measures of risk and return, specifically convexity, with Stevens. He asks him how to increase the convexity of his corporate bond portfolio, given the expectations of increased interest rate volatility. Stevens replies with three statements.

> **Statement 1**: We can change the portfolio's convexity by shifting the duration of bonds or using derivatives within the investment constraints.
>
> **Statement 2**: Convexity is costly. We should pay for increased convexity only when we expect yields to change by more than the amount given up in yields.
>
> **Statement 3**: We can invest in callable bonds if allowed in the portfolio's investment mandate.

The next day, Jones meets with the investment manager of Sayner Pension Fund (SPF), a tax-exempt client. He informs Jones that the pension fund will need £2,000,000 cash to meet liabilities. Jones asks Stevens to analyze the following bonds presented in Exhibit 2 for possible liquidation.

Exhibit 2: Selected data of Bond A and Bond B

	Bond A	**Bond B**
Current market value	£2,000,000	£2,000,000
Capital gain/loss	£160,000	-£160,000
Coupon rate	1.50%	1.50%
Remaining maturity	5 years	5 years
Investment view	Overvalued	Undervalued
Income tax rate	40%	
Capital gains tax rate	30%	

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29. Based on Exhibit 1, the total expected return of the international bond portfolio is *closest* to:

A. 2.74%
B. 2.48%
C. 2.10%

30. Which approach to its total return mandate is the domestic bond portfolio currently using?

A. Enhanced indexing.
B. Active management.
C. Pure indexing.

31. Based on statement 2, the IC is most likely recommending which approach for its domestic bond portfolio?

    A. Enhanced indexing.
    B. Active management.
    C. Pure indexing.

32. Alternative 1 is *least likely* superior to Alternative 2 for:

    A. providing diversification.
    B. hedging inflation.
    C. providing funding for future liabilities.

33. Which of Stevens's statements is *least likely* correct regarding adding convexity?

    A. Statement 3.
    B. Statement 2.
    C. Statement 1.

34. Based on Exhibit 2, the optimal strategy for SPF for meeting its cash requirements is the sale of:

    A. Bond A.
    B. Bond B.
    C. 60% of Bond A and 40% of Bond B.

Questions 35-40 relate to Equity Investments.

Terra Aqua Aeris Investment Company (TAA) Case Scenario

Terra Aqua Aeris Investment Company (TAA) invests in various funds globally to serve its individual and institutional clients. Ray Bendt, a candidate in the CFA Program who will be writing the CFA LIII Exam soon, has recently joined TAA as a junior analyst. Bendt is asked to evaluate the following funds for investment. The following table gives their description:

Fund	Description
Fund RY	Focuses on relatively large, mature companies in developed market industries.
Fund BX	Invests mainly in US and European companies and sectors with favorable environmental, social, and governance (ESG) ratings, specifically investing in companies (within sectors) that promote energy-efficient products and tackle climate change risks.
Fund BF	Invests in US small-cap value securities, which are deemed highly undervalued. Management and research costs are high.
Fund VA	Invests solely in the equities of large-cap emerging market companies.

Bendt makes the following preliminary assessments about the funds:

Observation 1: Fund RY invests in large regular dividend-paying companies.

Observation 2: Fund BX is a hedge fund that has representation on the board of energy-efficient companies with a very high ESG focus. This has the potential for a conflict of interest.

Observation 3: The BF fund charges a fee that is 20% of any capital appreciation above an 8% threshold and uses a high-water mark.

Observation 4: Adding investment-grade bonds will lower the risk of Fund VA.

In the afternoon, Bendt meets with his supervisor, Keri Stone, to discuss securities lending by some investors to generate additional income for their portfolios. Stone makes the following statements regarding stock lending:

Statement 1: We earn a modest fee on our stock loans, usually 0.3%, but fees on "specials" can be as high as 7%-8%.

Statement 2: Our index funds tracking S&P500 are stock lenders.

Statement 3:We reinvest the cash collateral in dividend-paying stocks but miss out on dividends from lent stocks.

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35. Which of the following statements is *least likely* correct regarding the dividend income of Fund RY?

A. RY attracts investors who are not typically growth-oriented.

B. RY promotes the stability of dividend returns over shorter and longer-term relative to capital gains.
C. RY considers the taxation of investors when reinvesting dividends.

36. Fund BX's approach to investing in companies that promote energy-efficient products is *best* described as:

A. positive screening.
B. impact screening.
C. thematic investing.

37. Fund BF is *most likely* to appeal to investors who prefer:

A. actively managed equity portfolios.
B. passively managed equity portfolios.
C. approaches that "demand liquidity" from the market.

38. The fee described in Observation 3 is *most likely* a:

A. management fee.
B. performance fee.
C. marketing/distribution fee.

39. Which of the statements regarding Fund VA is *most likely* correct?

A. Fund VA is segmented by geography and size.
B. Adding investment-grade bonds will lower the short-term risk of Fund VA.
C. Fund VA follows a market-oriented approach.

40. Which of Stone's statements regarding stock lending is NOT correct?

A. Statement 1.
B. Statement 2.
C. Statement 3.

Questions 41-44 relate to Alternative Investments.

BNY Endowment Case Scenario

BNY is a private university with an endowment valued at USD 1 billion invested primarily in traditional assets. During the investment committee's annual meeting, the chief investment officer (CIO), Rob Patrick, suggests changing allocations in alternatives, specifically in hedge funds and private equity. The investment committee (IC) hires external investment consultants to discuss their new asset allocation. Patrick asks Aadi Chandran, the senior investment consultant, to explain the risk factor-based asset allocation framework as the endowment follows the traditional approach to asset allocation. Chandran makes the following comments about the benefits and limitations of the risk-based approach.

"The risk-based approach helps in identifying common risk factors across all investments, whether public or private, passive or active. Investors can have an integrated risk management framework to quantify risk effectively. There are certain limitations. The risk-factor estimation may be sensitive to the historical sample, and it can sometimes lead to the overestimation of portfolio diversification."

Patrick shows Chandran the endowment fund's current asset given in Exhibit 1. The fund's spending rate is 5%, calculated as a percentage of the fund's trailing 5-year average value. The IC assumes capital calls for private investments to be about 20% of the current private asset net asset value over the coming year. The IC's return requirement is 7.5%, with 12% volatility of returns. In addition, it will tolerate a 1-year 99% CVaR of -22%.

Exhibit 1

	Strategic Asset Allocation Target	Rebalancing Ranges	Current Asset Allocation (with alternatives)
Cash	2%	0 – 5%	2%
Public Equities	32%	30 - 40%	34%
Government Bonds & High investment-grade Corporate Bonds* (70% Govt/30% Corp.)	10%	5 – 15%	15%
Hedge Funds	23%	15 – 25%	17%
Private Real Estate	10%	5 – 15%	10%
Private Equity	23%	20 – 30%	22%

**The high investment-grade corporate bonds are as liquid as the government bond investments.*

Chandran shows Patrick the following expected returns prepared by his team based on a stress scenario of the capital market for the next 12 months. The consultants predict inflation at expectations levels, short rates to be slightly up, bonds yields to be stable, and equities to be trending upwards.

Exhibit 2 Return Stress Scenario

Cash	2.5%
Public Equities	-3%
Government Bonds / High investment-grade Corporate Bonds	-1%
Hedge Funds	-2%
Private Real Estate	0%
Private Equity	-8%

Patrick asks Chandran to suggest tactical asset allocations for the fund.

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41. Which of the benefits or limitations of the risk-based approach is *least* accurate?

    A. The risk-based approach provides investors with an integrated risk management framework.
    B. The risk-factor estimation may be sensitive to the historical sample.
    C. The risk-factor approach may result in over-estimation of portfolio diversification.

42. Based on the current asset allocations, the total next 12-month liabilities of the fund are *closest* to:

    A. $50 million.
    B. $114 million.
    C. $160 million.

43. The sources of immediate liquidity for the fund are *most likely*:

    A. cash and equities.
    B. cash and government bonds.
    C. cash and government bonds.

44. Given the consultants' next 12-month outlook and based on Exhibit 2, the tactical asset allocation Chandran could *most likely* suggest is to:

    A. increase cash and private equity allocations.
    B. decrease hedge funds and public equities allocations.
    C. increase hedge funds and public equities allocations.