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CFA Level III Essay Type Exam 2
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Revision 1

FinQuiz.com – 2nd Essay Type Exam 2018

2018 Level III CFA Essay Type Examination has 9 questions. For grading purposes, the maximum point value for each question is equal to the number of minutes allocated to that question.

Questions	**Topic**	**Minutes**
1	Portfolio Management – Individual Investor	31
2	Portfolio Management – Institutional Investors	12
3	Portfolio Management – Economics	21
4	Portfolio Management – Asset Allocation	16
5	Portfolio Management – Fixed-Income Investments	22
6	Portfolio Management – Equity Investments	15
7	Portfolio Management – Risk Management	18
8	Portfolio Management – Monitoring and Rebalancing	18
8	Portfolio Management – Execution of Portfolio Decision	12
10	Portfolio Management – Performance Evaluation	15
	Total:	**180**

QUESTION 1 HAS FOUR PARTS (A, B, C, D) FOR A TOTAL OF 31 MINUTES.

Jorge Andres is an electrical engineer in the city of Medellin, Colombia. He hopes to retire next year at the age of 60 and visit friends in the United States and Europe. When he retires, he will receive a one-time, taxable payment of COP250 million from his employer's pension fund and he will start receiving COP15 million from an annuity. The annuity will continue each year throughout his retirement with the proceeds growing at the rate of inflation and taxed as capital gains. His current after-tax salary of COP24 million fully covers living expenses.

Jorge Andres will also sell COP20 million of company stock that he has accumulated with an original basis of COP5 million. He is not married but has a son that will be entering a four-year college next year. He would like to help his son pay tuition but has talked about capping the amount he will pay at COP5 million per year. Tuition fees have been increasing at a rate of 5%.

Jorge currently has a portfolio of COP450 million with an allocation to 40% government bonds, 40% corporate bonds and 20% stocks, on which he earns 4% in interest and dividends and is estimated to grow by 3% per year. He estimates that his living expenses will increase by the general rate of inflation in Colombia of 5% each year. He owns his home, valued at COP210 million but would like to keep it separate from the rest of his plans and pass it to his son through the estate. He would like to maintain the value of his retirement assets.

Jorge Andres pays 25% taxes on income and dividends. There are no taxes on capital gains as long as the seller makes less than COP45 million per year. He is talking with his financial advisor, Joseph Hogue, to prepare an IPS and talk about next year.

During the interview, Jorge mentions that he has lost money in investments before and is reluctant to put too much risk in his portfolio. He has worked hard to build for his retirement and he does not want to jeopardize it. In order to maintain his asset value, he is willing to reduce expenses in retirement.

Mr. Hogue notices that Jorge's small portion of equities is fully invested in shares of the state-run oil company. He also questions Jorge on why 80% of the portfolio is in fixed-income. Jorge replies, "I work at the state-owned oil company and know first-hand that it is a great company. Profits are good and I believe in investing in what I know."

He concludes, "As for the allocation in bonds, the economy has been very weak and I think could be heading for a recession. Some manufacturing data from different regions of country has been weak." Jorge continues to hold this view even after Mr. Hogue points out that much more data has come out recently to support a growing economy, such as faster consumer spending and bank lending.

A. Formulate the return objective for Jorge Andres' IPS. Calculate the after-tax nominal rate of return that is required to achieve this objective for his first year of retirement. **Show your calculations.**

(10 minutes)

B. Describe Jorge Andres' as below average, average, or above average with respect to each of the three components of the risk objective in his IPS

i. Ability to take risk
ii. Willingness to take risk
iii. Overall risk tolerance

Justify each of your responses with one reason based on the case

Answer Question 1-B in the Template provided on page 5.

(6 minutes)

C. Formulate each of the following constraints for Jorge Andres' IPS

i. Time horizon
ii. Liquidity requirements
iii. Tax concerns

(9 minutes)

D.

i. Identify one bias associated with Jorge's investment in company stock and the problem it can lead to in a portfolio.

ii. Identify and describe one bias associated with Jorge's view on the economy.

(6 minutes)

Template for Question 1-B

	Describe Jorge Andres as below average, average, or above average with respect to each of the three components of the risk objective in his IPS
i. Ability to take Risk	
ii. Willingness to take Risk	
iii. Overall Risk Tolerance	

QUESTION 2 HAS 1 PART (A) FOR A TOTAL OF 12 MINUTES.

Lawrence Stammers is a pension consultant working with three companies to manage the assets and liabilities in their plans.

ClaroTV is a Spanish language broadcasting company with revenues in the United States and Latin America. The company has been profitable in recent years and the outlook is positive for years to come. The company's defined benefit pension plan has $1 billion in assets and a surplus of $95 million due to strong investment performance.

The plan is closed to new participants and has a growing ratio of inactive to active members. Benefits are not inflation-adjusted.

A. Identify three factors that affect the plan's ability to tolerate risk. Determine whether each factor increases or decreases ability to tolerate risk and justify your response with one reason.

Answer Question 2-A in the Template provided on page 8.

(12 minutes)

Template for Question 2A

Identify three factors that affect the plan's ability to tolerate risk	Determine whether each factor increases or decreases ability to tolerate risk	Justify each response with one reason
	Increase Decrease	
	Increase Decrease	
	Increase Decrease	

QUESTION 3 HAS TWO PARTS (A, B) FOR A TOTAL OF 21 MINUTES.

Senator Rutherford and Congressman Hayes are debating the need for accommodative and restrictive policy tools. Senator Rutherford contends that the country is still in recession and needs strongly accommodative monetary policy. Congressman Hayes argues that fiscal policy has gotten too accommodative in the past and needs to remain restrictive.

Currently, steep cuts to social programs and the defense budget has led to a restrictive fiscal policy. The central bank is on its third round of rate cuts since the recession and is talking about other methods of injecting money into the economy.

A freshman Senator Burley enters the conversation late and asks the two gentlemen to explain to him how monetary and fiscal policy affects the shape of the yield curve and the economy.

A. Characterize the shape of the yield curve for each combination of policy tools and justify your response with one reason for each policy combination.

Answer Question 3-A in the Template provided on page 10.

(12 minutes)

The three senators all seek the aid of economic forecasters in the area.

The economist recommends forecasting economic growth based on variables that may preview changes in the economy.

A second economist thinks the first approach is too simple and recommends a more formal and mathematical approach, modeling growth against available data.

The third economist says that a simple approach using subjective analysis of various data points has always worked for him.

B. Identify each recommended approach to economic forecasting and describe one advantage for each approach.

(9 minutes)

Template for Question 3-A

Policy Tools	**Shape of Yield Curve**	**Justify your answer with one reason for each policy combination**
Both Monetary and Fiscal policy restrictive	Flat Steeply Upward Sloping Inverted Moderate Upward Sloping	
Both Monetary and Fiscal policy expansionary	Flat Steeply Upward Sloping Inverted Moderate Upward Sloping	
Restrictive Monetary policy and expansionary Fiscal policy	Flat Steeply Upward Sloping Inverted Moderate Upward Sloping	
Expansionary Monetary policy and restrictive Fiscal policy	Flat Steeply Upward Sloping Inverted Moderate Upward Sloping	

QUESTION 4 HAS THREE PARTS (A, B AND C) FOR A TOTAL OF 16 MINUTES

Latex Solutions is a US based investment management firm which manages the investment accounts of individuals and institutions. Fredrich Gibson is a portfolio manager at Latex Solutions overseeing the investment accounts of private high net worth clients.

Gibson has accepted four new clients in the current year and is hosting a meeting with each client individually. The purpose of his meeting is to devise a suitable asset allocation for each client. The notes below summarize important findings with respect to each client's demands for his or her asset allocation:

Samuels: "My professional career has just started and so I believe I can afford a heavier allocation to equities."

Lindsay: "Asset classes with a lower contribution to portfolio risk should be given a higher allocation compared to asset classes with a higher contribution. In this way, each asset class will contribute the same proportional amount to total portfolio risk."

Gavin: "To simplify the asset allocation process, I recommend that you allocate 14% to each of the seven asset classes in my investment portfolio."

A. Identify the heuristic which is driving each client's asset allocation mandate. Your answer should identify a benefit of each approach to asset allocation.

(6 minutes)

B. The Dereggio Pension Plan is a defined benefit pension plan sponsored by Dereggio Snacks Ltd. The plan's policy portfolio is being managed by Earl Watson, a portfolio manager at Latex Solutions. Watson collects important data with respect to the plan in the exhibit. The plan's allocation was designed by Watson using the hedging/return seeking portfolio approach. He is now revisiting the portfolio to evaluate its suitability.

Exhibit: Dereggio Pension Plan Data

Current funding ratio	0.80
Cash allocation (%)	5
Corporate bond allocation (%)	15
Equities allocation (%)	55
Real estate allocation (%)	18
Hedge fund allocation (%)	7
Expected annual cash contribution	($25 million)

Using the data in the exhibit, identify one factor which makes the application of the hedging/return-seeking portfolio approach unsuitable and one approach which can be used to overcome this lack of suitability.

(4 minutes)

C. Watson is asked why he has not relied on traditional MVO techniques to construct the Dereggio Pension Plan (DPP) allocation. He responds by giving the following criticisms of the technique:

Criticism 1: "MVO can only be applied when the returns of two assets are perfectly correlated."

Criticism 2: "MVO allocations are not designed to address an investor's liability funding requirements."

Criticism 3: "MVO employs a risk measure which is unsuitable for evaluating DPP's portfolio as some asset classes have a non-normal return distribution."

C. Determine which statement is correct and incorrect. Support your answer with one reason.

Answer Question 1C in the Template provided below.

(6 minutes)

Template for Question 4- Part C

Criticism	Correct or Incorrect (Circle the Correct Answer)	Support your answer with *one* reason
1: "MVO can only be applied when the returns of two assets are perfectly correlated."	Correct Incorrect	
2: "MVO allocations are not designed to address an investor's liability funding requirements."	Correct Incorrect	
3: "MVO employs a risk measure which is unsuitable for evaluating DPP's portfolio as some asset classes have a non-normal return distribution."	Correct Incorrect	

QUESTION 5 HAS FOUR PARTS (A, B, C AND D) FOR A TOTAL OF 22 MINUTES

Selena Gore, CFA, is a fixed-income portfolio manager at a UK based investment management firm. Gore's portfolio is concentrated in domestic investment-grade corporate bonds. Gore is seeking to expand portfolio holdings by including an allocation to foreign high-yield issues.

Gore is primarily interested in American and Russian bonds based on her forecast that real GDP growth in both countries will be above average. Next, Gore narrows her analysis to the cyclical automobile sector which is forecasted to respond positively to an above average economic growth projection. Gore decides to select high yield automobile bonds based on her personal belief that these securities will generate attractive excess returns due to a narrowing in credit spreads, higher bid-ask spreads, and lower risk of default.

A. Determine which credit strategy Gore has employed to select American and Russian bonds. Explain your choice.

(3 minutes)

B. Identify the factor which *least* strongly supports an increase in the allocation to American and Russian high-yield bonds. Your answer should identify the least appropriate factor and explain why the other two factors are appropriate.

(5 minutes)

C. Six months after making the allocation decision, Gore evaluates the Russian and US yield and spread projections for high-yield automobile sector bonds provided by Star Gates' in-house economic department. The exhibit below highlights these projections.

Exhibit: Yield Projections for High-Yield Automobile Sector Bonds

Country of Issuance	Current OAS (bps)	Forecasted Change in OAS (%)	Current Yield (%)	Projected Yield (%)
US	46	- 13	4.50	3.20
Russia	55	+ 10	7.82	8.30

Based on the data in the Exhibit, identify the country bond which should be overweighed and underweighted. Justify each response with one reason.

Answer Question 1C in the Template provided below.

(4 minutes)

D. Gore realizes that the new bond holdings will require her to consider the differences between developed US markets and emerging Russian credit markets as well as the general global factors which influence credit securities.

i) Identify whether each of the following factors is higher, lower or nonexistent in emerging markets compared to developed markets:

- Percentage of government ownership;
- Concentration in commodities and banking; and
- Recovery rates.

Explain your answer. Answer D. (i) in the Template provided below.

(9 minutes)

D.ii) List one factor which needs to be considered when managing a global credit portfolio.

(1 minute)

Template for Question Part C

Country Bonds	Weighting (Circle the most appropriate response)	Justify your Response with One Reason
US	Overweight Underweight	
Russia	Overweight Underweight	

Template for Question 5-D (i)

Factor	Higher, Lower or Nonexistent in Emerging Markets (Circle the most appropriate choice)	Explain your answer
Percentage of government ownership	Higher Lower Non-existent	
Concentration in commodities and banking	Higher Lower Non-existent	
Recovery rates	Higher Lower Non-existent	

QUESTION 6 HAS TWO PARTS (A, B) FOR A TOTAL OF 15 MINUTES.

Jim Pilsen is trying to decide between two advisory firms for management of his family's equity portfolio. Friends have generally given favorable reviews of each but New Trail Advisors has come up more times for its high active return over the benchmark.

Jim prefers an analytical approach so he collects the active return and tracking risk for the two managers, as provided below.

	Bay Street Advisors	**New Trail Advisors**
Active Return	0.45%	0.59%
Tracking Risk	5.30%	8.20%

A. Calculate the information ratio for each advisor and identify which has a higher risk-adjusted return.

(6 minutes)

Jim decides to let Bay Street Advisors manage his money but has an active risk target of no more than 1.75% and wants to target an information ratio of at least 0.9

According to these constraints, Bay Street makes the following allocations to two indexes and three managers. Assume that the correlation between managers is zero.

	Expected Active Return	**Expected Active Risk**	**Allocation**
Passive Index	0%	0%	15%
Enhanced Index	1.35%	2.30%	35%
Active Manager 1	1.80%	2.50%	30%
Active Manager 2	3.05%	4.45%	15%
Active Manager 3	3.40%	6.50%	5%

B. Calculate the portfolio's active return and determine if it has met the targeted active risk and information ratio. **Show your calculations.**

(9 minutes)

QUESTION 7 HAS TWO PARTS (A, B) FOR A TOTAL OF 18 MINUTES.

Becky Thanos is the new Chief Risk Officer at Omega Assets, a €20 billion asset management firm in Greece. The firm has never managed the risk in its portfolios and the investment board has asked Becky to do some preliminary analysis and report back to them.

Becky first turns her attention to the €100 million Epsilon Portfolio which holds high growth, cyclical equities. The portfolio has an expected one-day return of 0.00085 and a historical standard deviation of daily returns of 0.0011. An Alternative z-table (partial) is provided below.

	0	**0.01**	**0.02**	**0.03**	**0.04**	**0.05**
0	0.0000	0.0040	0.0080	0.0120	0.0160	0.0199
0.1	0.0398	0.0438	0.0478	0.0517	0.0557	0.0596
0.2	0.0793	0.0832	0.0871	0.0910	0.0948	0.0987
0.3	0.1179	0.1217	0.1255	0.1293	0.1331	0.1369
1.5	0.4332	0.4345	0.4357	0.4370	0.4382	0.4394
1.6	0.4452	0.4463	0.4474	0.4484	0.4495	0.4505
1.7	0.4554	0.4564	0.4573	0.4582	0.4591	0.4599

A. Calculate the daily value at risk for the portfolio at a 5% significance. Show your calculations.

(4 minutes)

In her assessment to the board, Becky explains that this means that there is a 5% chance that the most the portfolio will lose in a day is €96,500. She also explains that the analytical VAR is a good measure of risk for the company's options portfolio.

Becky is shown the table below of past daily returns for another portfolio and asked to estimate the 20% VAR for the portfolio. Becky says she can calculate the historical VAR but prefers the Monte Carlo VAR because of its advantage over the other methods.

Portfolio Daily Returns	
0.50%	-4.00%
1.20%	-1.10%
0.48%	3.20%
0.64%	1.90%
1.70%	2.20%

B.

i. Identify if Becky's explanations about the VAR is correct or incorrect. Provide one reason for each incorrect statement.
ii. Calculate the historical VAR for the €100 million portfolio. Show your calculations.
iii. Identify one advantage for each of the three VAR methods mentioned.

(14 minutes)

QUESTION 8 HAS TWO PARTS (A, B) FOR A TOTAL OF 18 MINUTES.

Roger Gilmartin, a trade specialist for Piven & Mathews, is talking with two large institutional clients about his trading experience and recent performance. The clients have just switched from another brokerage because they were concerned about different costs they were paying for their trades.

Client #1 is concerned that their high frequency of trading means they will be paying high fees and taxes

Client #2 is concerned about filling their complete order on a given day so as not to miss any price swings in their favor

A. Identify the cost element of implementation shortfall with which each client is most concerned.

(6 minutes)

To address their concerns, Roger makes an example of a recent trade he made for another client. The Monday before the trade, shares of Micron Tech closed at $25 per share. Before the market opened on Tuesday, Roger placed an order for 1,000 shares with a limit order of $24.90 but the order was not filled because the price did not meet the limit criteria that day and closed at $25.15 per share.

On Wednesday, Roger revised the order to a limit of $25.20 and 800 shares of the order are filled. The commission on the order was $20 and the shares closed the day at $25.55 with the rest of the order cancelled.

B. Calculate the overall implementation shortfall as well as the four separate costs. Show your calculations.

(12 minutes)

QUESTION 9 HAS ONE PART A FOR A TOTAL OF 12 MINUTES.

Information about the equity market of a hypothetical country 'Gammastan' is given below.

Characteristics of Gammastan Equity Market

1. A long list of companies with stocks trading above or below their intrinsic values.
2. Market participants have varied degree of information and opinion regarding investments.
3. Investors intending to place large orders generally split their orders.
4. Investors profitably trade on information only when the information is of great value.

From the information provided above, **determine** whether each market character is indicating high or low quality of equity market of Gammastan. **Justify** each response with one reason.

Note: Consider the effect of each market character independently.

Answer Question in the template provided.

(12 minutes)

Template for Question

Characteristics	**Market Quality Indication (circle one)**	**Justify your response with one reason**
A long list of companies with stocks trading above or below their intrinsic value.	High Low	
Market participants have varied degree of information and opinion regarding investments.	High Low	
Investors intending to place large orders generally split their orders.	High Low	
Investors profitably trade on information only when the information is of great value.	High Low	

QUESTION 10 HAS ONE PART (A) FOR A TOTAL OF 15 MINUTES.

The Financial Wizards, a small investment club in Toledo, are meeting to discuss how to measure their performance against a benchmark. Each member comments on their preferred benchmark type.

Member #1: I prefer a more analytical approach, designing a benchmark around sensitivities to the industry, company size and growth characteristics.

Member #2: Our holdings fit nicely in separate groups like large-cap growth and small-cap value so I think it would be easiest to measure performance against those groups in the general market.

Member #3: Why do we not just select other stocks that are representative of our own portfolio and use that to measure our performance? I think that would give us the most flexible and closest match to our own style.

Member #4: We already have the returns to our portfolio over a few periods, what if we compare those returns against that of different indices? I think then we could use that to construct a benchmark close to our own portfolio.

A. For each investor, select the benchmark type they are describing and describe one advantage and one disadvantage of each benchmark type discussed.

Answer Question 10-A in the Template provided on page 20.

(15 minutes)

Template for Question 10-A

Investor	Benchmark Type	Describe one advantage	Describe one disadvantage
Member #1			
Member #2			
Member #3			
Member #4			