

2022 CFALA Review Program Essay Writing Workshop

STUDY SESSION 3, Pages 382, 389 – The following information relates to Question 16

Viktoria Johansson is newly appointed as manager of ABC Corporation’s pension fund. The current market value of the fund’s assets is \$10 billion, and the present value of the fund’s liabilities is \$8.5 billion. The fund has historically been managed using an asset-only approach, but Johansson recommends to ABC’s board of directors that they adopt a liability-relative approach, specifically the hedging/return-seeking portfolios approach. Johansson assumes that the returns of the fund’s liabilities are driven by changes in the returns of index-linked government bonds. Exhibit 1 presents three potential asset allocation choices for the fund.

<u>Asset Class</u>	<u>Allocation 1</u>	<u>Allocation 2</u>	<u>Allocation 3</u>
Cash	15%	5%	0%
Index-linked government bonds	70%	15%	85%
Corporate bonds	0%	30%	5%
Equities	15%	50%	10%
Portfolio Statistics			
Expected return	3.4%	6.2%	3.6%
Expected standard deviation	7.0%	12.0%	8.5%

Determine which asset allocation in Exhibit 1 would be most appropriate for Johansson given her recommendation.

(circle one) Allocation 1 Allocation 2 Allocation 3

Justify your response.

Bullet Point Answers

Determine which asset allocation in Exhibit 1 would be most appropriate for Johansson given her recommendation.

- Allocation 3 is most appropriate.

Justify your response.

- To fully hedge the fund's liabilities, 85% (\$8.5 billion/\$10.0 billion) of the fund's assets would be linked to index-linked government bonds, assets whose returns are driven by the same factors that drive the returns of the liabilities.
- Residual \$1.5 billion surplus would be invested into a return-seeking portfolio, consisting of corporate bonds and equities.

Paragraph Answers

Determine which asset allocation in Exhibit 1 would be most appropriate for Johansson given her recommendation. Allocation 3 is most appropriate.

Justify your response.

The pension fund currently has a surplus of \$1.5 billion (\$10.0 billion – \$8.5 billion). To adopt a hedging/return-seeking portfolios approach, Johansson would first hedge the liabilities by allocating an amount equal to the present value of the fund's liabilities, \$8.5 billion, to a hedging portfolio, which must include assets whose returns are driven by the same factors that drive the returns of the liabilities – in this case, index-linked government bonds.

The residual \$1.5 billion surplus would then be invested into a return-seeking portfolio, consisting of corporate bonds and equities.

Initial Portfolio Choice.

Bullet Points versus Paragraph Style

STUDY SESSION 5, Pages 358-360, 363-365 – The following information relates to Questions 23–25

This Question has three parts.

Chaopraya is an investment advisor for high-net-worth individuals. One of her clients, Schuykill, plans to fund her grandson’s college education and considers two options:

Option 1 Contribute a lump sum of \$300,000 in 10 years.

Option 2 Contribute four level annual payments of \$76,500 starting in 10 years.

The grandson will start college in 10 years. Schuykill seeks to immunize the contribution today.

For Option 1, Chaopraya calculates the present value of the \$300,000 as \$234,535. To immunize the future single outflow, Chaopraya considers three bond portfolios given that no zero-coupon government bonds are available. The three portfolios consist of non-callable, fixed-rate, coupon-bearing government bonds considered free of default risk. Chaopraya prepares a comparative analysis of the three portfolios, presented in Exhibit 1.

Exhibit 1 Results of Comparative Analysis of Potential Portfolios

	<u>Portfolio A</u>	<u>Portfolio B</u>	<u>Portfolio C</u>
Market value	\$235,727	\$233,428	\$235,306
Cash flow yield	2.504%	2.506%	2.502%
Macaulay duration	9.998	10.002	9.503
Convexity	119.055	121.498	108.091

Chaopraya evaluates the three bond portfolios and selects one to recommend to Schuykill.

Recommend the portfolio in Exhibit 1 that would *best* achieve the immunization. **Justify** your response.

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Portfolio A is the best choice for Schuylkill.

Justification:

Portfolio A is the most appropriate portfolio because it is the only one that satisfies the three criteria for immunizing a single future outflow (liability), given that the cash flow yields are sufficiently close in value:

1 Market Value: Portfolio A's initial market value of \$235,727 exceeds the outflow's present value of \$234,535. Portfolio B is not appropriate because its market value of \$233,428 is less than the present value of the future outflow of \$234,535. A bond portfolio structured to immunize a single liability must have an initial market value that equals or exceeds the present value of the liability.

2 Macaulay Duration: Portfolio A's Macaulay duration of 9.998 closely matches the 10-year horizon of the outflow. Portfolio C is not appropriate because its Macaulay duration of 9.503 is furthest away from the investment horizon of 10 years.

3 Convexity: Although Portfolio C has the lowest convexity at 108.091, its Macaulay duration does not closely match the outflow amount. Of the remaining two portfolios, Portfolio A has the lower convexity at 119.055; this lower convexity will minimize structural risk.

Default risk (credit risk) is not considered because the portfolios consist of government bonds that presumably have default probabilities approaching zero.

Schuylkill and Chaopraya now discuss Option 2.

Chaopraya estimates the present value of the four future cash flows as \$230,372, with a money duration of \$2,609,700 and convexity of 135.142. She considers three possible portfolios to immunize the future payments, as presented in Exhibit 2.

Exhibit 2	Data for Bond Portfolios to Immunize Four Annual Contributions		
	Portfolio 1	Portfolio 2	Portfolio 3
Market value	\$245,178	\$248,230	\$251,337
Cash flow yield	2.521%	2.520%	2.516%
Money duration	2,609,981	2,609,442	2,609,707
Convexity	147.640	139.851	132.865

After selecting a portfolio to immunize Schuylkill's multiple future outflows, Chaopraya prepares a report on how this immunization strategy would respond to various interest rate scenarios. The scenario analysis is presented in Exhibit 3.

Determine the *most appropriate* immunization portfolio in Exhibit 2. **Justify** your decision.

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Portfolio 2 is the best choice for Schuykill.

Justification:

Portfolio 2 is the most appropriate immunization portfolio because it is the only one that satisfies the following two criteria for immunizing a portfolio of multiple future outflows:

1 Money Duration: Money durations of all three possible immunizing portfolios match or closely match the money duration of the outflow portfolio. Matching money durations is useful because the market values and cash flow yields of the immunizing portfolio and the outflow portfolio are not necessarily equal.

2 Convexity: Given that the money duration requirement is met by all three possible immunizing portfolios, the portfolio with the lowest convexity that is above the outflow portfolio's convexity of 135.142 should be selected. The dispersion, as measured by convexity, of the immunizing portfolio should be as low as possible subject to being greater than or equal to the dispersion of the outflow portfolio. This will minimize the effect of non-parallel shifts in the yield curve. Portfolio 3's convexity of 132.865 is less than the outflow portfolio's convexity, so Portfolio 3 is not appropriate. Both Portfolio 1 and Portfolio 2 have convexities that exceed the convexity of the outflow portfolio, but Portfolio 2's convexity of 139.851 is lower than Portfolio 1's convexity of 147.640. Therefore, Portfolio 2 is the most appropriate immunizing portfolio.

The immunizing portfolio needs to be greater than the convexity (and dispersion) of the outflow portfolio. But, the convexity of the immunizing portfolio should be minimized in order to minimize dispersion and reduce structural risk. The convexity statistic can be used to improve the estimate for the change in portfolio market value following a change in interest rates than is provided by duration alone. That is, convexity is the second-order effect, whereas duration is the first-order effect.

Exhibit 3	Projected Portfolio Response to Interest Rate Scenarios				
	Immunizing Portfolio		Outflow Portfolio		Difference
<i>Upward parallel shift</i>					
Δ Market value	-6,410		-6,427		18
Δ Cash flow yield	0.250%		0.250%		0.000%
Δ Portfolio BPV	-9		-8		-1
<i>Downward parallel shift</i>					
Δ Market value	6,626		6,622		4
Δ Cash flow yield	-0.250%		-0.250%		0.000%
Δ Portfolio BPV	9		8		1
<i>Steepening twist</i>					
Δ Market value	-1,912		347		-2,259
Δ Cash flow yield	0.074%		-0.013%		0.087%
Δ Portfolio BPV	-3		0		-3
<i>Flattening twist</i>					
Δ Market value	1,966		-343		2,309
Δ Cash flow yield	-0.075%		0.013%		-0.088%
Δ Portfolio BPV	3		0		3

Discuss the effectiveness of Chaopraya's immunization strategy in terms of duration gaps.

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Chaopraya's strategy immunizes well for parallel shifts, with little deviation between the outflow portfolio and the immunizing portfolio in market value and BPV. Because the money durations are closely matched, the differences between the outflow portfolio and the immunizing portfolio in market value are small and the duration gaps (as shown by the difference in Δ Portfolio BPVs) between the outflow portfolio and the immunizing portfolio are small for both the upward and downward parallel shifts.

Chaopraya's strategy does not immunize well for the non-parallel steepening and flattening twists (i.e., structural risks) shown in Exhibit 3. In those cases, the outflow portfolio and the immunizing portfolio market values deviate substantially and the duration gaps between the outflow portfolio and the immunizing portfolio are large.

Structural risk is reduced by minimizing the dispersion of the bond positions, going from a barbell design to more of a bullet portfolio that concentrates the component bonds' durations around the investment horizon.

STUDY SESSION 7, Pages 173-174, 175-176 – The following information relates to or has used Questions 1–8 as a basis

This Question has two parts.

Moose Construction is an Alaska-based, locally-owned construction company, operating primarily above the Artic Circle. It builds affordable housing and some dormitories that are used to house a seasonal workforce in the summer months, when the weather is conducive to its building activity. It has embraced “green technology” and makes extensive use of solar energy in its construction, which is handy in summer days that last 20 hours. Typically, site preparation, foundation work, framing, and roofing are finished in that order; interior finishing is left until the sheathing is all in place. Moose has a small administrative office in Anchorage that is staffed on a year-round basis.

The Moose pension plan is managed from this office. It is a defined benefit plan, and has been significantly underfunded until just recently. Its plan participants are predominantly middle-aged, having worked for Moose for twenty years or more. After a series of financially successful years, management of Moose has decided to add \$4 million to the pension fund, which will increase assets to \$18 million, leaving it only \$2 million underfunded. Albright Investment Management Company (Albright) has been its outside investment advisor for many years, and had expressed concern about the pension funds status. Currently, the fund has \$8 million in equity investments, \$5 million in fixed income investments, and \$1 million in cash and equivalents. Its Investment Policy suggests an asset mix of 60% equities, 30% fixed income, 5% “risk” investments, and 5% cash and equivalents to meet short-term needs.

The Moose pension plan is going to use Albright to recommend investments for the \$4 million capital infusion and review the overall portfolio in light of its objectives and needs. All of the equities are actively managed currently. Three years ago, Albright added four new funds—the Barboa Fund, the Caribou Fund, the DoGood Fund, and the Elmer Fund—to its existing fund offering. Albright’s new funds are described below in Exhibit 1. The CIO of Moose likes the fact that there now is a three-year performance record for the funds. Hans Smith, an Albright portfolio manager makes a presentation to the CIO of the Moose pension fund and has convinced her to use Albright’s newer funds in the portfolio. Albright will make a final presentation to the Board of the pension fund.

Exhibit 1 Albright Investment Management Company New Funds

<u>Fund</u>	<u>Fund Description</u>
Barboa Fund	Invests solely in the equity of companies in oil production and transportation industries in many countries.
Caribou Fund	Uses an aggressive strategy focusing on relatively new, fast-growing companies in emerging industries.
DoGood Fund	Fund Investment universe includes all US companies and sectors that have favorable environmental, social, and governance (ESG) ratings and specifically excludes companies with products or services related to aerospace and defense.
Elmer Fund	Investments selected to track the S&P 500 Index. Minimizes trading based on the assumption that markets are efficient.

Smith, the Albright portfolio manager, makes the following notes after examining these funds:

- Note 1 The fee on the Caribou Fund is a 15% share of any capital appreciation above a 7% threshold and the use of a high-water mark.
- Note 2 The DoGood Fund invests in Fleeker Corporation stock, which is rated high in the ESG space, and Fleeker’s pension fund has a significant investment in the DoGood Fund. This dynamic has the potential for a conflict of interest on the part of Fleeker Corporation but not for the DoGood Fund.
- Note 3 The DoGood Fund’s portfolio manager has written policies stating that the fund does not engage in shareholder activism. Therefore, the DoGood Fund may be a free-rider on the activism by these shareholders.
- Note 4 Of the four funds, the Elmer Fund is most likely to appeal to investors who want to minimize fees and believe that the market is efficient.

Smith discusses asset allocation for the pension fund and its basic characteristics with the junior analyst, Kolton Frey so that Frey can assist in the analysis of the portfolio and the selection of assets. Frey tells Smith the following:

- Statement 1 All of the equity portion of Moose's portfolio is actively managed which may be out-of-line with current industry practice. Since Moose has not been able to keep up with annual funding, perhaps fund expenses should be a consideration. Every little bit of savings helps the bottom line.
- Statement 2 We should use an asset allocation in our presentation that is rounded to the nearest \$1 million so it is easy for the pension Board to understand the recommendation and changes.

Evaluate which of the new Albright Funds are appropriate to add to the Moose pension fund portfolio.

Recommend an asset allocation for the Moose pension plan using an additional contribution of \$4 million in cash.

Evaluate which of the new Albright Funds are appropriate to add to the Moose pension fund portfolio.

Three Albright funds that are appropriate for inclusion are the Caribou Fund, the DoGood Fund, and the Elmer Fund. The Barboa Fund would subject the pension fund to additional risk since it invests in the same industry – only oil drilling and their attending companies operate above the Arctic Circle in Alaska – and, as such, it is not a good fit.

The Caribou Fund is a good fit because the fund focuses on new companies that are generally classified as small firms, and the fund has a style classified as aggressive. A widely used approach to segment the equity universe incorporates two factors: size and style. It can satisfy the “risk” portion of the asset allocation better than the other choices and the existing portfolio. The fee for the Caribou Fund is a 15% share of any capital appreciation above a 7% threshold, with the use of a high-water mark, thus, a performance fee. Performance fees serve as an incentive for portfolio managers to achieve or outperform return objectives, to the benefit of both the manager and investors.

The DoGood fund would also be useful since it excludes companies based on specified activities, which is a process of negative screening, the practice of excluding certain sectors or companies that deviate from accepted standards in areas such as human rights or environmental concerns. The diversification benefits from a different security selection and the environmental and social aspects of the DoGood screening would have appeal to Moose. Moose appears to be more socially conscious – they build affordable housing, are “locally” owned, located again, above the Arctic Circle, with a native population and environmental concerns.

The Elmer fund is managed assuming that the market is efficient, and investments are selected to mimic an index. Compared with active strategies, passive strategies generally have lower turnover and generate a higher percentage of long-term gains. An index fund that replicates its benchmark can have minimal rebalancing. For passively managed portfolios, management fees are typically low because of lower direct costs of research and portfolio management relative to actively managed portfolios. This would give Moose a portion of equity investments that are across all markets.

Recommend an asset allocation for the Moose pension plan using an additional contribution of \$4 million in cash.

With the existing portfolio of \$8 million in equities, \$5 million in fixed income and \$1 million in cash and equivalents, the asset allocation is near its targets. The contribution to the pension fund would serve the fund best by investing \$2 million in the Elmer fund, \$1 million in the DoGood fund, and \$1 million in the Caribou fund (which is the “risk” part of the portfolio). The existing equity portfolio will be better diversified by the additions. The existing fixed income and the cash portfolios would remain the same as they are now.

The asset allocation after the contribution and investment of the funds would be:

Equity			
	Current	\$8 million	
	DoGood	\$1 million	
	Elmer	<u>\$2 million</u>	
	Total	60%	(currently 57%)
Fixed Income			
	Total	<u>\$5 million</u>	
		28%	(currently 36%)
Risk			
	Caribou	<u>\$1 million</u>	
	Total	6%	(currently 0%)
Cash			
	Total	\$1 million	
		6%	(currently 7%)
		=====	
	Grand Total	\$18 million	
		100%	

The consideration for the Elmer fund is that it is a passively managed portfolio, providing an alternative to the current active management and having a lower expense ratio, that is, a low-fee instrument, which will help offset the high-fee Caribou fund. Moose’s environmental affinity and its local ownership make the investment in DoGood an easy recommendation that will further diversify its holdings. While the plan is closer to being fully-funded, there still is a gap, and the lack of contributions for years suggests a business that sometimes does not make profits, therefore, to have the pension portfolio “work a little harder” to make up the shortfall is appropriate.

During the Board meeting, Smith should offer to waive the investment management fee calculated on the overall portfolio for the Caribou, DoGood and Elmer funds, since Albright is paid a management fee imbedded in each of the funds and should not “double charge”.

STUDY SESSION 10, Pages 254-255, 262-263 – The following information relates to Questions 1–3

This Question has three parts.

Henlopen McZhao is a private wealth manager. After a successful introductory meeting with Nescopeck Cree, she is meeting again with this new client to plan a wealth management strategy. McZhao seeks additional personal information from Cree.

McZhao learns that Cree is 45 years old and is currently employed as an attorney. Because he has been investing for 20 years, Cree is comfortable with moderate levels of market volatility. His employment provides for his current expenses, so Cree's liquidity requirements are minimal. Cree prefers to have his environmental and social concerns reflected in his investment choices.

Cree has a number of specific financial goals that he wishes to achieve in the future but has no particular return objective for his portfolio. McZhao then focuses on Cree's financial goals:

- Cree wants to fund university expenses for his three children, with the first payment starting in 10 years. Cree does not know what to expect in terms of college costs.
- Cree plans to retire at age 62 and expects to need \$80,000 per year to fund his retirement lifestyle. He is concerned that an increasing level of medical expenses for himself and his wife may reduce his financial assets.
- Cree expects to purchase an apartment building in three years and plans to use the rental income from this investment property to help fund his retirement needs.
- Cree's wife enjoys donating to philanthropic causes. She currently donates \$10,000 per year, but by the time Cree retires, she hopes to increase this amount to \$30,000 per year.
- Cree collects antique furniture and budgets \$15,000 per year for additions to his collection. He mentions that this year's antique purchase will be his next large expense and currently has the highest priority of all his goals.

McZhao continues the discussion with Cree in order to evaluate his degree of risk tolerance associated with each of the following individual goals:

- | | |
|-----------------------------|--|
| Retirement: | Cree considers retirement a long-term goal and is willing to endure a 10% drop in expected Retirement spending. However, he is very concerned with having sufficient funds to cover medical expenses. |
| Investment property: | Cree sees the investment property as a source of stable income, so it is very important to him to purchase the building. He realizes that maintenance and repair expenses will be necessary, and he also considers those very important. |
| Philanthropy: | Cree's wife strongly influences him to fund her philanthropic causes, and he wants to maintain some level of annual contribution. Cree believes that his wife would be willing to maintain her \$10,000 per year contributions and not increase that amount. |
| Antique furniture: | Cree is willing to reduce or eliminate his spending on antique furniture. |

Discuss additional personal information that McZhao should gather from Cree in order to properly advise this new client.

Discuss additional personal information that McZhao should gather from Cree in order to properly advise this new client.

Now that Cree has become a private client, a starting point of the relationship is for McZhao to learn about his client's family situation, such as marital status, children and grandchildren, and ages of family members. McZhao should also obtain proof of client identification (copy of driver's license or passport). McZhao should obtain the following additional personal information from Cree:

- Family situation: Marital status, children and grandchildren, ages of family members
- Identification: Copy of driver's license or passport
- Additional career information: Future aspirations for career, business, and retirement
- Investment background
- More details on financial goals and risk tolerance

Cree's employment and career information is important, as is discussion about his future career, business, and retirement aspirations. In addition, wealth managers should assess the client's investment background. As part of the investment background conversation, the wealth manager should determine whether the client has an explicit return objective or specific investment preferences. Finally, a detailed conversation about the client's financial objectives/goals and risk tolerance is part of the personal- information- gathering process.

Discuss the issues relating to Cree's:

- i. goal quantification.
- ii. goal prioritization.

Discuss the issues relating to Cree's:

- i. goal quantification.
- ii. goal prioritization.

With respect to goal quantification, Cree has quantified his retirement spending needs, the cost to maintain his antique purchases, and his wife's philanthropic support. McZhao should work with Cree to help estimate the costs for his children's university expenses and what he expects to pay for the investment property.

With respect to goal prioritization, even though Cree believes that his highest priority is his next big expense (\$15,000 for this year's additions to his antique collection), the timing of that expense should not be the sole determinant of its priority. McZhao needs to discuss with Cree which of his goals are most important. The purchases of expensive antiques and the large philanthropic contributions may adversely affect Cree's ability to fund his retirement lifestyle. Therefore, McZhao should help Cree consider reevaluating his priorities.

Determine Cree's degree of risk tolerance associated with each of his individual goals, either lower or higher.

Justify each response.

Determine Cree's degree of risk tolerance associated with each of his individual goals, either lower or higher.

Justify each response.

Goal of Retirement: Cree's Degree of Risk Tolerance is Higher. Retirement is a long-term goal. Cree is willing to incur a moderate drop in his planned expenses, so he likely has a higher risk tolerance for that goal. Cree is concerned about paying future medical expenses in retirement, and since his retirement is still 17 years in the future, he likely has a higher risk tolerance with the medical expenses goal.

Goal of Investment Property: Cree's Degree of Risk Tolerance is Lower. Because the investment property is an important near-term goal, Cree likely has a lower risk tolerance with this goal. Similarly, he likely has a lower risk tolerance with the goal of funding maintenance and repairs for the property.

Goal of Philanthropy: Cree's Degree of Risk Tolerance is Higher. Cree's wife's influence regarding their philanthropic giving makes Cree unwilling to stop his contributions completely, but he believes she will accept maintaining their contributions rather than increasing them substantially. As a result, Cree likely has a higher risk tolerance with this goal.

Goal of Antique Furniture: Cree's Degree of Risk Tolerance is Higher. Cree is likely highly risk tolerant with his goal of purchasing antique furniture, because he is willing to cut that expense altogether.

STUDY SESSION 12, Pages 106, 112-113 – The following information relates to Questions 15–17

This Question has three parts.

The Prometheo University Scholarship Endowment (the Endowment) was established in 1950 and supports scholarships for students attending Prometheo University. The Endowment’s assets under management are relatively small, and it has an annual **spending policy of 6%** of the five- year rolling asset value.

Prometheo University recently hired a new chief investment officer (CIO). The CIO directs her small staff of four people to implement an investment policy review. Historically, the endowment has invested 60% of the portfolio in US equities and 40% in US Treasuries. The CIO’s expectation of annual **inflation for the next 10 years is 2.5%**. The CIO develops nominal 10- year return assumptions for US Treasuries and US equities, which are presented in Exhibit 1.

Exhibit 1	Asset Class Return Assumptions
Asset Class	10- Year Return Assumptions (Nominal)
US Treasuries	4.0%
US Equities	7.4%

Upon completion of the investment policy review by her four- person staff, the CIO makes some recommendations to the Endowment’s board regarding the investment objectives and asset allocation. One of her recommendations is to adopt the endowment model as an investment approach. She recommends investing 20% in private equity, 40% in hedge funds, 25% in public equities, and 15% in fixed income.

Formulate the investment objectives section of the investment policy statement for the Endowment.

Formulate the investment objectives section of the investment policy statement for the Endowment.

The mission of the Prometheo University Scholarship Endowment is to provide scholarships for students attending the university. In order to achieve this mission, the Endowment must maintain the purchasing power of the assets in perpetuity while achieving investment returns sufficient to sustain the level of spending necessary to support the scholarship budget. Therefore, the investment objective of the endowment should be to achieve a total real rate of return (after inflation) of at least 6% with a reasonable level of risk.

Discuss whether the current investment policy is appropriate given the Endowment's annual spending policy.

Discuss whether the current investment policy is appropriate given the Endowment's annual spending policy.

The policy is not appropriate.

- The expected real return of 3.54% is less than the spending policy rate of 6%.
- Therefore, the current allocation and investment objectives are not sustainable.

The nominal expected return on the current portfolio, according to the nominal return assumptions in Exhibit 1, is 6.04% per year ($0.6 \cdot 7.4\% + 0.4 \cdot 4.0\% = 6.04\%$). The expected real return is approximately 3.54% ($6.04\% - 2.5\% = 3.54\%$), which is below the 6% spending rate and the stated objective of a 6% real return.

Therefore, this real return is not sufficient to meeting the spending policy, which makes the Endowment's goals unsustainable. The Endowment will need to change its asset allocation to earn higher returns and/or lower its spending policy rate.

Determine whether the board should accept or reject the CIO's recommendation. **Justify** your response.

Determine whether the board should accept or reject the CIO's recommendation. **Justify** your response.

The board should reject the CIO's recommendation. This recommendation is a significant departure from current practice and entails a much higher level of risk. The size of the investment team is small, with only four people, and it may not have adequate access to or experience in alternative investments. Given the relatively small size of the Endowment, it is unlikely that it has access to top managers in the hedge fund and private equity spaces.

STUDY SESSION 14, Pages 338-366

QUINCO CASE: BACKGROUND

Rationale: to analyze asset allocation and portfolio construction in relation to liquidity needs and risk and return requirements and recommend actions to address identified needs.

Quadrivium University (QU) is an independent liberal arts college located in a vibrant mid-sized city with a growing and diverse population. The university was founded in 1916 by James Greaves and Colin Healey, two entrepreneurs with a passion for astronomy and mathematics who settled in the area in the early 1900s. Over time, the university has built an outstanding reputation as one of the top schools in the country. Consistent with the founders' interests, the programs in astronomy and mathematics are highly regarded, attracting applicants from all over the world.

This case is one of the “big” portfolio management cases in the Study Guide, however, it is cumbersome to break it down and turn it into a Portfolio Management Essay question. I suggest reviewing the case in the book and familiarizing yourself with all of the parts and pieces. Note how the case progresses from one topic to the next, which will mimic how a case on the Exam will be presented.

STUDY SESSION 14, Pages 370, 376 – The following information relates to Question 8

Mason Dixon, CFA, a portfolio manager with Langhorne Advisors (Langhorne), has just completed the request for proposal (RFP) for the Academe Foundation's (the Foundation) \$20 million fixed-income mandate. In the performance section of the RFP, Dixon indicated that Langhorne Advisors is a member firm of CFA Institute and has prepared and presented this performance report in compliance with the Global Investment Performance Standards (the GIPS. standards). The performance report presented Langhorne's fixed-income composite returns on the actual net-of-fees basis and benchmark returns net of Langhorne's highest scheduled fee (1.00% on the first \$5 million; 0.60% thereafter). The report also indicated that as of the most recent quarter, the composite comprised 10 portfolios totaling \$600 million of assets under management (AUM).

Upon returning the completed RFP, Dixon thanked the Foundation's chief investment officer, who is also a charterholder, for considering Langhorne. Dixon also indicated that regardless of the outcome of the manager search, he would like to have the CIO and the Foundation's president join him on Langhorne's corporate jet to spend a day at an exclusive California golf club where the firm maintains a corporate membership.

Identify the ethical concerns posed by Dixon's actions and conduct.

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Dixon's actions and conduct pose multiple ethical concerns. Dixon's claim of compliance statement and cover letter, along with Langhorne's performance report, violate both the CFA Institute Code of Ethics and Standards of Professional Conduct (Code and Standards) and the GIPS standards.

Regarding the Code and Standards, Dixon's statement improperly asserts that CFA Institute has designated Langhorne as a 'member firm.' Membership is held by practitioners as individuals, with no related rights extended to the firms at which they work. With this assertion, Dixon has misrepresented Langhorne's claim of compliance, Standard I(C): Professionalism, Misrepresentation; engaged in conduct that compromised the reputation or integrity of CFA Institute, Standard VII(A): Responsibilities as a CFA Institute Member or CFA Institute Candidate, Conduct as Participants in CFA Institute Programs; and misrepresented or exaggerated the meaning or implications of membership in CFA Institute, Standard VII(B): Responsibilities as a CFA Institute Member or CFA Institute Candidate, Reference to CFA Institute, the CFA Designation, and the CFA Program.

Regarding the GIPS standards and the performance report, presenting composite returns on a net-of-fees basis is acceptable under the GIPS standards. However, it is not appropriate to adjust benchmark returns with a hypothetical fee for comparative purposes (i.e., composite gross-of-fees returns should be compared to unadjusted benchmark returns). This adjustment of Langhorne's performance report is invalid under the GIPS standards under Section 4.a.1: Disclosure—Requirements. The 1.00% hypothetical fee deducted from benchmark returns is surely greater than the average fee deducted in arriving at composite net-of-fees returns. An average portfolio size of \$60 million implies a composite fee percentage of roughly 0.63%, or: $\{(0.0100 \times \$5 \text{ million}) + [0.0060 \times (\$60 \text{ million} - \$5 \text{ million})]\} / \$60 \text{ million} = 0.0063$ or 0.63%. **So, on a relative basis, deducting a larger cost against the benchmark will show Langhorne with a phantom outperformance.**

In terms of the Code and Standards, at a minimum, Dixon has presented an inaccurate performance comparison—Standard III(D): Duties to Clients, Performance Presentation—and **may have engaged in misrepresentation to the point of misconduct—Standard I(D): Professionalism, Misconduct**—since it may be deceitful to cast a more favorable light on the Langhorne composite net-of-fees returns (Section 0.A.7 under Fundamentals of Compliance—Requirements of the GIPS standards).

Dixon's cover letter invitation for an all-expenses paid outing to an exclusive golf destination can be construed as an attempt to influence the independence and objectivity of the Foundation's CIO and president—Standard I(B): Professionalism, Independence and Objectivity. While Dixon's invitation was extended 'regardless of the outcome of the manager search, **the offer could be interpreted as a quid pro quo,** with future attractive personal benefits available to the Foundation's executives if a continuing relationship was established by their hiring of Langhorne as a manager.

STUDY SESSION 14, Pages 379-425

EUROLANDIA CASE: BACKGROUND

Rationale: Giving advice on risk management to individuals and families raises a number of challenges. These challenges include the extent to which identified and evaluated risks can be reduced and/or addressed using insurance policies or self-insurance. Families' financial circumstances and risks evolve over time, and financial advisers should review and update the solutions addressing these risks accordingly. Risk management solutions recommended by advisers should consider the family's overall health, wealth, and long-term goals.

This case study explores some of the risk management issues for a married couple living in a hypothetical country in the Eurozone, Eurolandia. The case spans several decades and follows the couple through different stages of life from their early career phase, when they are in their late twenties, all the way to retirement. We will show how risk management methods need to change as the family's circumstances evolve. The assumptions used are drawn from what is typical for many countries in Europe. The circumstances and risks that this married couple face are influenced by the environment in which they find themselves. Despite the differences between Europe and other parts of the world, however, their goals, the risks they face, and the assessment of their circumstances, as well as the suggested methods, are by no means unique to the region. The risk analysis methodology and its application would therefore be valid in a much broader context.

This case is the other of the "big" portfolio management cases in the Study Guide. It, too, is cumbersome to break it down and turn it into a Portfolio Management Essay question. I suggest reviewing the case in the book and familiarizing yourself with all of the parts and pieces. Note how the case progresses from one topic to the next, which will mimic how a case on the Exam will be presented.

STUDY SESSION 14, Pages 428, 432 – The following information relates to Question 6

James and Wendy Chang, both age 58, plan to retire in nine years. James is a human resource manager for a large US company with a defined contribution (DC) pension plan to which he regularly contributes. Wendy is a freelance computer programmer who works out of a home-based office. She contributes to a private DC plan. Both expect to start receiving Social Security income benefits when they retire at age 67. Their long-term goal is for a comfortable retirement and to provide an inheritance for their two children. The Changs believe they will need to maintain, in real terms, their current level of spending of \$100,000 when they retire.

The Changs meet with their financial adviser, Lucie Timan, to discuss the risks to their retirement lifestyle goal. She estimates their Social Security benefit amounts at age 67. In her estimation calculations, Timan assumes a 25% tax rate and a 3% inflation rate. Based on his estimates, the Changs will have total annual pretax retirement income, including Social Security benefits, of \$194,500 when they retire at age 67. The Changs tell Timan that they plan to use their DC plans' balances at age 67 to buy an immediate fixed annuity with no inflation adjustment.

Timan wants to be candid and straightforward with the Changs. She identifies three risks which she addresses with her clients that might affect their future plans: inflation risk; loss of employment; and, poor investment returns.

Discuss how each of the following risk factors could affect the Changs' projected retirement income:

- i. inflation risk
- ii. loss of employment
- iii. poor investment returns

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Part i: inflation risk. The Changs are in a good position to maintain their current lifestyle in retirement. Their total annual pretax retirement income of \$194,500 will leave them with after-tax income of about \$145,875 (given the assumption of a 25% tax rate). This expected after-tax income exceeds the expected nominal level of spending in their retirement year of \$130,477 (given the assumption of a 3% inflation rate and nine years until retirement). One particular risk that could affect the Changs' projected retirement income, however, is that inflation may reduce the purchasing power of their after-tax income over time. This risk is of particular concern given the expectation that the retirement plan balances are expected to be used to purchase an annuity with no inflation adjustment. Thus, purchasing the fixed annuity with no inflation adjustment should be reconsidered.

Part ii: loss of employment. Another risk factor that could adversely affect the Changs' projected retirement income is the potential loss of employment. If James were to lose his job or Wendy's freelance work were to decrease unexpectedly, and they were unable to obtain comparable levels of compensation, their projected retirement income would likely be lower.

Part iii: poor investment returns. A third risk factor that could affect the Changs' projected retirement income is poor investment returns. Lower returns resulting from poor market conditions in the equity and bond markets would adversely impact the Changs' pension fund balances at retirement and likely result in lower retirement income.

STUDY SESSION 16, Pages 214-219

LIONSGATE LIMITED & BANK OF AUSTRALIA CASE: TONY HILL AND TEAM

Rationale: evaluate practices, policies, and conduct relative to the CFA Institute Code of Ethics and Standards of Professional Conduct, and, explain how the practices, policies, or conduct does or does not violate the CFA Institute Code of Ethics and Standards of Professional Conduct.

Lionsgate Limited (LL) is a publicly listed Australian fund manager.¹ The firm has benefited greatly from the “Superannuation Guarantee” program that was created in 1992. This program requires all the country’s employees ages 18 to 70 to contribute a percentage of their earnings to a tax-advantaged retirement account or superannuation fund. In addition, legislation enacted in 2005 gives all employees the right to select a superannuation fund administered by a retail financial services company, such as LL. LL offers a range of mutual funds.

Tony Hill and Team

LL’s flagship fund is the Lionsgate Victory Capital Fund (VCF), an equity mutual fund that is managed by Tony Hill and his team of 16 analysts. In LL’s marketing material, Hill states, “For the period ending 31 December 2018, the Victory Capital Fund is the best-performing fund in Australian equities over the 10-year period. The VCF has delivered returns of 28.7%, gross of fees over the 1-year period, and 13.2% annually since inception in 2005. During this time, assets under management (AUM) in Australian dollars increased from \$18 million to \$14 billion.”

Hill has become the main media engagement person for the VCF and LL. He has a half-hour show on “Sky News Business Channel,” writes a weekly financial column for Australian Financial Review, and regularly appears on daytime and evening talk shows, where he talks about the VCF and its holdings. Like the other guests on these shows, Hill does not receive financial compensation for his appearances. Instead, the shows’ sponsors provide him with “thank you gift bags,” containing wine, retail gift cards, restaurant gift certificates, and travel discounts on hotels and airfare. Hill does not disclose the receipt of these gift bags to LL.

In 2006, Nicole Martin, CFA, was hired as an intern at LL to cover the paper, chemical, and publishing industries. After graduating at the top of her class from a prestigious university, Nicole accepted a full-time position on Hill’s team, covering the metals, mining, and energy industries. As Hill’s outside activities increased, Martin assumed more responsibility for security selection and investment decision making for the VCF. For the past three years, the performance of the VCF has been directly attributable to her and the other analysts, although both she and Hill still state publicly that he is in charge of all investment decision making for the VCF. As the VCF’s “star stock picker,” Hill is often invited to provide a fund update at LL’s quarterly board meetings. Hill uses the most recent board meeting to announce his resignation and to notify the board he is starting his own fund management firm.

Recognizing Hill’s departure could have a negative impact on LL’s stock price as well as cash flows into the VCF, the board asks Hill to keep his plans to resign confidential until the end of LL’s fiscal year (in two weeks) to give them time to find his replacement. Hill agrees. After the board meeting, Hill has a “closed door” meeting with his team and announces his plan to resign and start his own firm. He then asks the team if they want to join him. Ten of the analysts agree to resign with him and work in his new firm. Martin and the five remaining analysts tell him they will remain at LL and leave the meeting. Hill tells the analysts who will join him: “Team, we have a lot of work to do over the next two weeks. We’ll need to use time after work and on weekends to lease office space and to individually register with the government authorities in the name of our new firm. Since we have not signed a noncompete agreement with LL, we can begin soliciting former clients the day we open our new firm.”

Identify two violations of the Code and Standards.

Identify two violations of the Code and Standards.

Martin and Hill have both violated Standard V(B)1: Investment Analysis, Recommendations, and Actions, Communication with Clients and Prospective Clients. Both have failed to disclose to clients and prospective clients that Martin has assumed more responsibility for security selection and investment decision making at the fund and that she and the other analysts—not Hill—are primarily responsible for the fund's performance, a change that has a material effect.

Hill violated the Code and Standards by telling his team about his planned resignation after the board's request that he keep this information strictly confidential until fiscal year end (in two weeks). Despite the board's request, Hill informed his team the same day. Hill's conduct violates Standard IV(A): Duties to Employers, Loyalty. Hill was free to discuss his resignation with his team prior to the board's request for confidentiality.

In speaking about the fund's performance, Hill is stating facts, not false or opinion-based statements. In addition, Hill states the performance is gross of fees or "pre-fees." According to Standard III(D): Duties to Clients, Performance Presentation, "When communicating investment performance information, Members and Candidates must make reasonable efforts to ensure that it is fair, accurate, and complete. Hill is **not** in violation.

Hill's acceptance of the "thank you gift bags" does **not** create a conflict of interest between Hill and his employer or between Hill and his clients. Therefore, Hill's independence and objectivity are not compromised and Hill is **not** in violation of Standard I(B): Professionalism, Independence and Objectivity. Since there is no conflict of interest or "compensation" that competes with his employer's interest, he is **not** in violation of Standard IV(B): Duties to Employers, Additional Compensation Arrangements.

Discuss Tony Hill's actions on starting his new firm in light of the Code and Standards, giving two examples.

Discuss Tony Hill's actions on starting his new firm in light of the Code and Standards, giving two examples.

The Guidance to Standard IV(A): Duties to Employers, Loyalty states, "A departing employee is generally free to make arrangements or preparations to go into a competitive business before terminating the relationship with his or her employer as long as such preparations do not breach the employee's duty of loyalty." Hill can resign and asking his team to join him at his new firm is **not** a violation.

Further, it is **not** a violation for Hill to make office leasing arrangements and register with the government authorities under the same Standard, as long as his actions (and those leaving with him) are taking place during non-work hours and on weekends.

Finally, the Guidance to Standard IV(A): Duties to Employers, Loyalty states, "When members and candidates are planning to leave their current employer, they must continue to act in the employer's best interest. They must not engage in any activities that would conflict with this duty until their resignation becomes effective." The Guidance also states, "A member or candidate who is contemplating seeking other employment must not contact existing clients or potential clients prior to leaving his or her employer for purposes of soliciting their business for the new employer." By telling his team to begin solicitation on the new firm's opening day—not prior to its opening—there is **no conflict of interest or violation** of loyalty.

¹ Lionsgate Limited & Bank of Australia: Susan Morey and Michael G. McMillan, PhD, CFA. Ethics Cases. © 2018 CFA Institute. All rights reserved. Consistent with the 11th Edition of the Standards of Practice Handbook.

STUDY SESSION 16, Pages 247-248, 255-256 – The following information relates to Questions 36-41

Sebastian Riser, CFA, works as a portfolio manager for Swibank, a small private bank in Switzerland. Riser manages the accounts of his clients according to best practices, keeping clients' interests before those of the bank and his own. He allocates investments in a fair manner when he deems them consistent with the stated objectives and constraints of clients.

Swibank has a Luxembourg subsidiary, which distributes fund-of-funds products. Riser recently received a request to serve on the board of directors for the subsidiary. In this role, Riser would advise management on business strategies, market opportunities, potential clients, and current and prospective fund managers. For his role on the board, Riser would receive an annual payment directly from the subsidiary equivalent to 5% of his total portfolio manager salary in Switzerland.

The following month, Riser accepts the position on the board. The subsidiary registers each new fund-of-funds product with regulatory authorities in Luxembourg and discloses Riser's role as a board member in the required filings, which are public and readily available.

Riser serves as the contact person for the subsidiary's institutional clients in Switzerland and participates in the subsidiary's road shows in Switzerland. His role during these road shows varies. On some occasions, he simply attends the presentations while the operating management sells the products; on other occasions, he gives the actual presentation promoting the products. Riser's name does not appear in the promotional material distributed at the road shows.

Alexander Komm, a long-time colleague of Riser, is the founder of Komm Private Management, which provides asset management, advisory, and trust services to high-net-worth individuals. The firm has several well-managed proprietary funds. Komm offers Riser a position with the firm as managing partner. Riser is flattered but declines the offer, explaining that he is very happy working at Swibank.

That same week, the subsidiary informs Riser that it needs an experienced fund manager to manage a new publicly-traded Japanese equity product. Riser is convinced that Komm Private Management would be qualified and recommends the firm for the new product. After a thorough search process, the subsidiary hires Komm Private Management for the new product.

Six months later, after numerous discussions, Komm finally convinces Riser to join Komm Private Management as a managing partner. The following week, Riser submits his resignation to Swibank. His position on the board of the subsidiary is not dependent on his employment at the bank, and he agrees to serve the remaining three years of his term.

After signing and submitting his employment contract to Komm, Riser takes three weeks of vacation before starting his new position. During this time, he purchases 2,000 shares of the new Japanese equity product for his private account. When he begins working at Komm Private Management, he purchases a large block of shares in the Japanese equity product, which he allocates according to internal procedures to all accounts for which it is suitable.

Identify four ethical violations that Riser has committed in the course of his activities with Swibank and Komm/Komm Private Management.

Identify four ethical violations that Riser has committed in the course of his activities with Swibank and Komm/Komm Private Management.

- 1) According to Standard IV(B): Additional Compensation Arrangements, members must not accept compensation that competes with their employer's interest unless they obtain written consent from all parties involved. Thus, Riser must receive written, not verbal, consent from his employer before accepting the position on the subsidiary's board. According to the recommended procedures for compliance, Riser should make an immediate written report to his employer specifying the terms of the agreement, the nature of the compensation, the approximate amount of the compensation, and the duration of the agreement. The Standards do not require that members receive permission from clients before accepting board positions.
- 2) Riser, in his participation in the Switzerland road shows, may violate Standard I(B): Independence and Objectivity and Standard VI(A): Disclosure of Conflicts. Standard I(B) require that members use reasonable care and judgment to achieve and maintain independence and objectivity in their professional activities. Riser's role as board member could jeopardize his objectivity and create a conflict of interest.
- 3) In the same instance, Standard VI(A) requires that members 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 the clients and prospective clients. Full disclosure allows clients to judge motives and possible biases for themselves. Riser does not appear to make adequate disclosure of his relationship with the Swibank subsidiary.
- 4) Standard VI(A): Disclosure of Conflicts comes in to play again. All actual and potential conflicts of interest must be disclosed. Although Riser's recommendation of Komm and Komm Private Management for the Japanese equity fund may be based solely on his knowledge of the firm's track record, his prior relationship with Komm, including the job offer, should be disclosed so the subsidiary will have all the information needed to evaluate the objectivity of his recommendation.
- 5) Riser may, however, violate Standard II(A): Material Nonpublic Information and possibly Standard VI(B): Priority of Transactions when making his original purchase of 2,000 shares of the Japanese equity product. If, when trading for his own account, Riser knows that he will place a large block trade for Komm clients, he may be in possession of material nonpublic information.
- 6) Standard VI(A) requires that members 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 the clients and prospective clients. Riser's holdings of the Japanese equity product and his position on the board of the Swibank subsidiary could impair his objectivity and must be disclosed to clients.
- 7) Standard VI(B) covers the activities of all members who have knowledge of pending transactions that may be made on behalf of their clients or employers. Riser has accepted the position of managing partner, has recommended the manager for the product, and knows, or should know, that he will purchase the product for at least some Komm clients once he begins work at Komm. His purchase ahead of Komm's clients might be front-running. **Best practice would be to delay his private account purchase until after he purchases shares for clients.**
- 8) When participating in the road shows in Switzerland, Riser does NOT violate Standard IV(B): Additional Compensation Arrangements. Standard IV(B) provides guidance regarding the acceptance and disclosure of compensation that might conflict with an employer's interests. Participating in the road shows and receiving compensation from the subsidiary do not appear to conflict with his employer's interests. Riser's compensation from the subsidiary is not a referral fee.
- 9) When Riser resigns from Swibank, no violation occurred. Riser is not required to resign his position with the subsidiary. Riser did not engage in any activities that would conflict with his employer's interest before his resignation became effective.

10) Regarding his original purchase of 2,000 shares of the Japanese equity product, Riser does NOT violate Standard III(C): Suitability because he is purchasing shares for his own account.

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