All Liquidity Needs Questions (CRQ + Mock Exam)

Kaplan Mock Exam 1

TOPIC: PORTFOLIO MANAGEMENT FOR INSTITUTIONAL INVESTORS

TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Donna Harding is a U.K.-based investment adviser whose institutional clients include a defined benefit pension plan sponsored by Flexible Fabricators Plc (FF Plc), a long-established U.K.-based engineering conglomerate. The FF Plc defined benefit pension plan is not available to new joiners to the company, who are only eligible to participate in the company's defined contribution scheme. Harding is aware that the pension plan has seen a declining ratio of plan assets to plan liabilities, and she has decided to compare company, workforce, and pension plan data for FF Plc with similar information for an average company in the UK engineering industry. Her comparison is given in Exhibit 1.

The pension plan is managed by a board of trustees whose duty under trust law is to act solely in the best financial interests of the beneficiaries, and the assets and liabilities of the pension plan are legally separate from FF Plc. The plan's portfolio is invested in U.K. government fixed-coupon bonds and U.K. equities, with dividends received by the portfolio being taxable. A recent extended period of uncertainty, with correspondingly weak equity markets, has resulted in poor returns. For actuarial purposes, the assumed annual long-term rate of return on plan assets is 6%, and the current discount rate applied to the plan liabilities is 5%.

The trustees have asked Harding to evaluate the pension plan's current investment policy statement. They are particularly concerned about the plan's risk tolerance and two of the plan's constraints: the liquidity requirement and the time horizon. The trustees have also asked Harding to assess the plan's actuarial assumptions.

Question 2 of 102

Question ID: 1614134

State, for the FF Plc pension plan, relative to the average engineering company pension plan, whether the FF Plc pension plan's liquidity need is lower, similar, or higher. **Justify** your response with *two* reasons.

Grading Guide

The FF Plc plan has a higher liquidity need.

Reasons (2 required):

- The older-than-average workforce will lead to higher cash outflows sooner.
- The higher-than-average ratio of retired lives to active lives implies higher cash outflows.
- The higher-than-average years of service implies higher cash outflows sooner.

Scoring key: (3 points possible)

1 point for the correct liquidity need, 1 point (up to a maximum of 2) for each valid reason that supports the choice.

(Module 22.2, LOS 22.e)

Kaplan Mock Exam 2

Kaplan Mock Exam 3

TOPIC: PORTFOLIO MANAGEMENT FOR INSTITUTIONAL INVESTORS

TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Lightning Bikes, Inc. (Lightning), a British-based manufacturer of premium motorcycles, was founded 20 years ago.

Eloise Fitzallen conducted an analysis of Lightning's defined benefit (DB) pension plan at the start of the calendar year. She found that demand for the company's motorcycles had been strong over the last few years, contributing to rising profits and negligible debt on the balance sheet. Despite revenues being negatively affected by the economic downturn four years ago, the company continued to make regular contributions to its DB pension plan to offset investment losses. As a result, the plan had a funded ratio of 100%.

Lightning uses a discount rate of 3.5% to calculate the plan's liabilities, which had a duration of 15 years. The average age of the company's workforce was 43 years, and the plan was not making any pension payments at that time.

Six months later, Lightning's DB pension plan has a small surplus equal to 4% of the plan's DB obligation. The company decides to offer a one-time early retirement option to its employees who are age 55 or older. An employee taking this early retirement option will receive a lump-sum payment in one year's time. The company expects 5% to 10% of its workforce to take the offer of early retirement.

Question 79 of 113

Question ID: 1606260

Determine whether the acceptance of the early retirement option is *most likely* to increase or decrease the liquidity needs of the plan.

Explanation

It is most likely that they would increase.

Scoring key: (1 point possible)

1 point for the correct answer.

(Module 22.2, LOS 22.e)

Question 80 of 113

Question ID: 1606261

Justify your answer to the previous question with *one* reason.

Grading Guide

Because 5% to 10% of the workforce is expected to accept the early retirement option and receive a lump-sum payment in one year's time, more cash is needed sooner and, therefore, the liquidity needs of the plan will increase.

Scoring key: (2 points possible)

2 points for a valid justification.

(Module 22.2, LOS 22.e)

Kaplan Mock Exam 4

TOPIC: PRIVATE WEALTH MANAGEMENT

TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Jane Guthrie is a social media coach. For several years, she has been exclusively retained by a financially stable public corporation to provide support to its executives and advice in designing the company's social media message and presentation strategy. She is 36 years old, believes her skills are highly marketable and, if needed, she could find comparable employment elsewhere. However, her relationship with the corporation is on an annual renewable employment contract. Her goal is to retire at age 58. When pressed for an answer, Guthrie believes that she is not much of a risk taker.

Guthrie has never been married, but 10 years ago, she accepted sole responsibility for her sister's daughters (twins) when her sister and her sister's husband were killed in a car accident. A relatively substantial trust was funded by her sister's life insurance proceeds and has provided for the children's needs to date and it will continue to do so all the way through four years of college. It is quite certain that both children will start their undergraduate college education in exactly two years. Guthrie plans to establish an additional trust to provide for postgraduate education needs and contribute a one-time amount of USD 175,000 from one of her existing portfolios to the additional trust within the next year. Additionally, Guthrie's mother, age 70, is widowed, and her health is slowly declining. Due to rising rents in the city and rising health care costs, her mother's modest pension income may soon become insufficient to meet her living expenses. Therefore, once the children move out and begin college, Guthrie plans to have her mother move in with her so that the elimination of the rent expense will reduce her mother's cash flow burden.

Guthrie has a moderately aggressive stock and bond portfolio held in a tax-exempt account worth USD 450,000. The funds were accumulated from after-tax contributions, and any withdrawals made before age 60 would be subject to a very high tax penalty. Guthrie lives in a tax jurisdiction that has favorable tax treatment for capital gains. Dividend income is taxed at regular rates, and interest income above USD 10,000 is subject to an additional tax above regular rates.

Guthrie also has USD 400,000 in a fully taxable portfolio. Included in the portfolio is USD 200,000 of money market assets. Guthrie is in the 28% income tax bracket (progressive tax structure).

Guthrie has annual after-tax employment income of USD 150,000 and current living expenses of USD 100,000. She plans to contribute the difference to her tax-exempt portfolio annually up to the limit allowed. The balance will go into her taxable portfolio at the end of each year.

Question 3 of 102

Question ID: 1606394

Discuss Guthrie's liquidity needs.

Grading Guide

Liquidity need: USD 175,000 within the next year for the education trust (it should come from the taxable account, and not the tax-exempt account, to avoid the high tax penalties of the latter).

Save USD 50,000 annually, with the maximum allowed going into the tax-exempt portfolio and the balance to the taxable portfolio. The savings may be reduced in the current year or in future years depending on if and when Guthrie needs to cover any of her mother's living expenses.

Scoring key: (2 points possible)

2 points for either of USD 175,000 and USD 50,000. For liquidity, because the case facts explicitly mention the high tax penalty, then the correct location for the USD 175,000 withdrawal is required to receive full points. This is a good example of integrating the information provided in

the case facts and demonstrates the critical reading skills required to be successful on the CFA Level III exam.

(Module 19.3, LOS 19.d)

Kaplan Mock Exam 5

TOPIC: INSTITUTIONAL INVESTORS

TOTAL POINT VALUE OF THIS QUESTION SET IS 12 POINTS

Continental Insurance (Continental) is a multiline global insurer based in the United States. Accounting records are maintained in the U.S. dollar (USD). Company assets are managed by business lines and those lines include the following.

Life insurance: Both annual term and whole life policies are offered. Term policies provide coverage for a stated amount only. Whole life policies include a stated amount plus a savings component that offers a wide variety of investment options for the policyholder. The company maintains a *reserve* portfolio and a *surplus* portfolio.

Due to increased competition, the company recently began adding a borrowing provision to some of their policies. The borrowing provision allows the policyholder to borrow 90% of the cash value of the policy. A fixed borrowing rate is set at 1.5% above the AA-rated corporate bond rate at the time the policy is issued. Policyholders can then borrow at that predetermined fixed rate at any time during the life of the policy. (The rate is set when the policy is purchased, not when a loan is taken out.)

Annuities: Two categories are offered:

1. Variable annuities that are indexed to the rate of increase in the Consumer Price Index in order to provide inflation protection to the annuitants.
2. Fixed annuities, some of which allow early cash payout to the annuitant and others that do not allow early cash payout.

Property and casualty (P&C) insurance: Policies are written for a maximum of a 12-month period and insure the replacement value of the covered properties. A policy can be renewed at the end of the insurance period but at the market price for the coverage. Company policy is to match the expected duration of the liabilities but allow +/–10% discretion in setting asset duration.

Current data as well as historical data from three years ago for the P&C business line are provided in Exhibit 1.

Premium income/surplus ratio	18.7%

Continental uses a variety of asset classes for investment purposes and for matching the liability characteristics of its various business lines. For both lines, the company may use:

- Equity.
- Fixed-rate (nominal-rate) bonds.
- Floating-rate (variable-rate) bonds.
- Real-rate (real-return) bonds.

Question 2 of 119

Question ID: 1606518

State how the borrowing provision will *most likely* affect the company's liquidity needs during a period of *increasing* interest rates.

Grading Guide

Increasing interest rates will increase the company's liquidity needs as policyholders have a greater incentive to borrow at the fixed policy rate and invest those funds at higher market interest rates.

Scoring key: (1 point possible)

1 point for stating that liquidity needs increase with increasing interest rates.

(Module 22.1, LOS 22.c)

Kaplan Mock Exam 6

Constructed Response Quiz

INDIVIDUAL PORTFOLIO MANAGEMENT

THE TOTAL POINT VALUE FOR THIS QUESTION SET IS 18 POINTS

Javier and Emilia Fernandez live in a major city in Chile with their two children, ages five and three. Javier is aged 30, and Emilia will celebrate her 30th birthday later this month. Javier is a manager in a distribution center, and Emilia is an administrator for the local ballet company.

Javier and Emilia's annual salaries total 19 million Chilean pesos (CLP) after tax. Their salaries just cover their living expenses. The average annual inflation rate is 3%, and their salaries and expenses are expected to increase at this rate. They are healthy, and they believe their jobs and earning potential are secure. The salaries, dividends, and interest of the Fernandezes are taxed at 20%, and capital gains at 15%.

Emilia's parents have significant wealth and have funded an irrevocable personal trust for her, the current value of which is CLP 242 million. Chile has a wealth transfer tax that applies to transfers into trusts and to inheritances. The terms of the trust state that when Emilia reaches age 30, she will receive a tax-free distribution of half its value. The balance of the trust will remain invested and will be distributed in total to her when she reaches age 45. Because she does not have access to the remaining balance for 15 years, this balance will not be considered a part of investable assets for the Fernandezes, but it is part of their total net worth. In addition, Emilia expects to inherit a substantial sum of money upon the death of both parents.

The Fernandezes have CLP 83 million in investable assets, currently all in short-term bank deposits. It is their intention to maintain at least this amount in investable assets, on an inflation-adjusted basis, in the future.

The Fernandezes currently live with Emilia's parents, but they are in the process of purchasing a home—the purchase price of which is CLP 137 million. The down payment is 30% of the cost of the home, to be funded from the trust distribution. They will take out a fixed-rate mortgage for the balance of the price. The after-tax mortgage cost will be fixed at CLP 8.9 million (principal and interest) annually for 30 years, with the first annual payment due one year from now.

The immediate investment goal of the Fernandezes is to have their investment portfolio cover the cost of the mortgage, while maintaining the portfolio's inflation-adjusted value. They plan to retire at age 60, and their long-term goal is to have an investment portfolio that will provide an annual income comparable to their current salaries adjusted by inflation. Their family health insurance is provided by Javier's employer, both now and in retirement. They are hopeful their two children will attend the local university at no cost. The university does not charge tuition fees for qualified students who pass its entrance exam. Those who do not pass the exam are required to pay full tuition, which is high relative to the living expenses of the Fernandezes.

To meet their investment goals, the Fernandezes realize they need to consider investments other than short-term bank deposits, so the Fernandezes hire Catalina Mateo, CFA, to manage an investment portfolio to be funded with their CLP 83 million in bank deposits and the net proceeds of Emilia's trust distribution at age 30.

Question 4 of 50

Question ID: 1609245

Describe the liquidity need of the Fernandezes.

Grading Guide

The Fernandezes need their investment portfolio to provide CLP 8.9 million for next year's mortgage payment, but other than that, there are no other specific known liquidity needs—given that their living expenses are said to be covered by their salaries, so they will not need to be drawn from their portfolio.

Scoring key:

2 points for liquidity need (1 point max if fail to quantify it).

(Module 19.6, LOS 19.i)

(Module 19.6, LOS 19.j)

(Module 19.6, LOS 19.k)

TOPIC: PRIVATE WEALTH MANAGEMENT

TOTAL POINT VALUE OF THIS QUESTION SET IS 14 POINTS

Barney Smythe, 40, and his wife Heather, 39, are considering what to do with a recent windfall they received after the untimely death of Heather's mother. The windfall is estimated to be $2,500,000 (after taxes). Barney is currently a supervising mechanic at a local luxury car dealership and has a salary of $48,750 annually. Heather has been a stay-at-home mom since she was injured. The Smythes have two children, Lenny, 12, and Buford, 10. By design, the Smythes owe no debt and pay their expenses on a monthly basis. Family expenses last year amounted to approximately $150,000.

In addition to the inheritance they will receive, the Smythes have an additional $1,250,000 in cash equivalents. The savings are what remain from a large settlement the Smythes received when Heather was injured on the job five years ago. Barney and Heather have approached Net Worth Enhancers, PC, for assistance in managing their portfolio. The Smythes made the following statements at a recent client discovery meeting:

- "One of our goals at this stage in our lives is to pay for our children's college education. We would like both of them to go to Heather's alma mater, which is a prestigious liberal arts institution."
- "We expect our annual expenses to increase at the general rate of inflation of 2%."
- "We want to retire at 65 and be able to live comfortably, but not extravagantly."
- "We believe our portfolio should never suffer an annual loss of more than 5%. In addition, we do not want to invest in any individual investment or security that is too risky."
- "We do not foresee any unusual expenses over the short term. As always, we would like to have enough cash on hand for emergencies."

Question 26 of 50

Question ID: 1554409

State the Smythes' liquidity needs.

Grading Guide

Liquidity:

- They want an unspecified emergency reserve.
- Cover annual distribution needs.

1 point for stating the need to meet ongoing distributions or the desire for a cash reserve. No specific reserve amount was requested so no number was given in the answer.

((Module 21.5, LOS 21.i))

INSTITUTIONAL INVESTORS

THE TOTAL POINT VALUE FOR THIS QUESTION SET IS 15 POINTS

Meyer Weintraub, CEO, and Joshua Ellington, CFO, have called a meeting to discuss the pension plan for Downstate Manufacturing, makers of high-end hardware and plumbing fixtures. Downstate has been privately held and managed by the Weintraub family for several generations.

Cost increases for copper, steel, and other metals have put pressure on Downstate's profitability in recent years. An economic recession is likely, and it will cause a dramatic decline in sales for the firm. Although profits reached $50 million last year, the upcoming recession could cause the firm to lose money for the next two years.

Most of the firm's employees have more than 20 years of service and are vested in the pension plan. The average age of the workforce is 57, and the retirement age is 60. There are 40% of plan participants who are retired, with an average age of 65.

Weintraub and Ellington are concerned about the company's ability to meet its pension obligations. The pension plan has $120 million in assets but is currently underfunded by $20 million. The discount rate assumed for pension liabilities is 7%. Although that is less than the 11% the fund has earned on assets in recent years, the upcoming recession is expected to reduce the plan's return.

Ellington is concerned about the liquidity requirements of the fund in the event of a recession and declining markets. He suggests offering early retirement or lump-sum payments to employees to reduce liquidity requirements. Weintraub doesn't like the idea of losing his most experienced employees. He counters with the argument, "If more people retire, that is going to increase the liquidity requirements of the plan."

Weintraub states, "We should increase the risk of our investments to make up some of the shortfall in the pension fund." Ellington adds, "The fact that the firm is likely to lose money over the next couple of years also means we should take on greater risk." The two decide to increase the risk level of the investments in Downstate's pension fund.

Question 34 of 50

Question ID: 1554418

Statement 3: "If more people retire, that is going to increase the liquidity requirements of the plan."

Question 35 of 50

Question ID: 1609264

Justify your answer to the previous question.

Grading Guide

Increasing the number of retired lives increases the liquidity needs of the fund because higher outgoings will be required from the fund to meet the higher pension payments.

Scoring key:

1 point for the explanation of how the factor has the effect that it does, but 0 points if correct/incorrect decision is wrong.

(Module 22.2, LOS 22.e)

INSTITUTIONAL INVESTORS

THE TOTAL POINT VALUE FOR THIS QUESTION SET IS 11 POINTS

Greg Stiles has been hired to develop an insurance and banking management unit for a U.S.-based asset management firm. The firm already manages pensions, foundations, and endowments. Stiles is actively soliciting a life insurance company (offering only life insurance) and a property and casualty (P&C) insurance company that covers large, geographically diversified commercial real estate throughout the United States.

Question 48 of 50

Question ID: 1609274

Discuss how the liquidity needs and investment time horizons of the two prospective insurance company clients will differ.

Grading Guide

Liquidity needs

Liquidity needs for life insurance are usually low as the liabilities are longer term and, in aggregate, fairly predictable. P&C have shorter-term liabilities with higher and less predictable liquidity needs.

Time horizon

Because the liabilities of a life insurance company are long term, the investment time horizon is long term (20–40 years). P&C companies have shorter-term liabilities; thus, the investment time horizon is short term.

Candidate discussion: *Explain or discuss suggests more than just saying one is higher or lower than the other. Discussing how the nature of the liabilities determines the answers is a way to do this, which is consistent with the assigned readings.*

Scoring key:

1 point each for correctly identifying the relative liquidity needs and investment time horizons of the two companies.

(Module 22.5, LOS 22.c)