ESSAY 1 of 7 • Reading 1.2

ID: 1152

An institutional investor believes that environmental, social, and governance (ESG) issues meet broad objectives of society and affect the performance of investment portfolios. Accordingly, the investor has committed to the Principles for Responsible Investment and is using the "Technical Guide for Limited Partners: Responsible Investing in Private Equity" to develop an approach to responsible investment with respect to its private equity investment strategy.

QUESTION A • Learning Objective 1.2.1

State two Principles for Responsible Investment, and describe actions that private equity fund limited partners and general partners may take to apply these two Principles to private equity.

GUIDELINE RESPONSE

Principles for Responsible Investment & actions - *state two.*

1. PRI Principle: We will incorporate ESG issues into investment analysis & decision-making.
   - LPs' actions – Include RI considerations in fund selection, terms, and monitoring.
   - GPs' actions – Identify material ESG factors in pre-investment processes that may affect returns, and ensure that ESG is rooted in the investment approach.

2. PRI Principle: We will be active owners and incorporate ESG issues into our ownership policies & practices.
   - LPs' actions – Establish parameters for how LPs can engage with portfolio company management, and engage with the GP on ESG considerations in their corporate policies. Post-acquisition, remain engaged via monitoring and GP reporting.
   - GPs' actions – Establish processes to understand & manage material ESG risks & opportunities with portfolio company management.

3. PRI Principle: We will seek appropriate disclosure on ESG issues from the entities in which we invest.
   - LPs' actions – Request information from GPs about their RI practices and the ESG characteristics of underlying fund investments.
   - GPs' actions – Implement monitoring processes to assess portfolio companies' management of ESG factors.

5. PRI Principle: We will work together to enhance our effectiveness in implementing the Principles
   - LPs' actions – Collaborate with peers & GPs to build consensus around RI practices in PE, leveraging PRI resources
   - GPs' actions – Collaborate with peers & LPs to build consensus around RI practices in PE, leveraging PRI resources.

QUESTION B • Learning Objective 1.2.1

Discuss whether top-quartile general partners of private equity funds are less likely to select fund investors who enquire about the general partners' ESG principles and practices.

GUIDELINE RESPONSE

0.5pts: It is a myth that top-quartile GPs tend to avoid fund investors who ask about or are interested in ESG practices.
1pts: ESG is actively considered by numerous GPs, so ESG questions are no longer unusual. Also, GPs of leading PE firms play a key role in raising awareness about responsible investing with LP investors and convincing them that responsible investing is standard in good PE fund operations.

QUESTION C • Learning Objective 1.2.1

At the initial stages of the ESG due diligence process of a private equity fund, the institutional investor reviews the fund's marketing materials and offering memorandum, and identifies that the fund mandate includes ESG considerations. The investor then reviews the private equity fund's public Transparency Report, located on the PRI website. In the more detailed due diligence process, what does the PRI recommend that the investor use as a starting point for assessment and as a tool to establish dialogue with the private equity fund manager?

GUIDELINE RESPONSE

PRI Limited Partners' Responsible Investment Due Diligence Questionnaire

QUESTION D • Learning Objective 1.2.3

Briefly describe considerations for the ESG due diligence process when investing in private equity using a fund of fund and using private equity secondaries.

GUIDELINE RESPONSE

Due diligence process for a FoF – **1pt**

- LPs should check that the FoF has a thorough process to assess and monitor its underlying funds based on their responsible investing approach.
- LPs may ask the FoF manager to complete the LP Responsible Investment DDQ as a basis for ESG due diligence on the underlying funds or during fundraising.

Due diligence process for PE secondaries – **1.5pts**

- LPs can perform ESG due diligence on the portfolio companies before investing (since the PE portfolio is known).
- LPs should ensure that the secondary fund has an appropriate process to screen for material ESG risks and to monitor its underlying investments for ESG risk.
- LPs may ask secondary fund manager to complete the LP Responsible Investment DDQ during fundraising.

QUESTION E • Learning Objective 1.2.1

The general partner (GP) of a private equity fund plans to create value for a new portfolio company via responsible investing. The GP has identifed a couple of new, sustainable product lines for the company and is encouraging the company to be more efficient in its use of resources such as energy. Other than these approaches, give examples of how else the company can create value by: i) increasing its revenue and ii) reducing costs and liabilities. Give two examples for each approach.

GUIDELINE RESPONSE

Ways to create portfolio company value via responsible investing - *state two from each set (except the entries in italics, which were given in the question).* **0.5pts each**

Increasing revenue

- *Identify new, sustainable product lines.*
- Attract & retain top talent via strong company values.
- Acquire new customers via better brand image.
- Increase the company's competitiveness via brand positioning.
- Increase engagement and thus productivity of the workforce.

Reducing costs and liabilities

- Reduce potential liabilities (e.g., from environmental contamination).
- *Use resources more efficiently.*
- Avoid increased capital or operating expenses by identifying damaging environmental or social conditions.
- Increase the company's resiliency to avoid disrupted operations.
- Ensure access to capital.

ESSAY 2 of 7 • Reading 1.8

ID: 1057

Mateo Fernandez is recently-hired strategy consultant for the Distributed Ledger Technology Program at Damon Banking Group, a large U.S. financial institution headquartered in Chicago. Fernandez is charged wtih developing a strategy and architectural framework for distributed ledger technology at Damon. At his first meeting with several department heads, he makes an introductory presentation on distributed ledger technology and its application in the financial services industry.

QUESTION A • Learning Objective 1.8.1

Briefly describe a distributed ledger **(1.5pts)**, and indicate two ways in which it improves on a traditional database **(1pt)**.

GUIDELINE RESPONSE

A distributed ledger is a decentralized database **(0.5pts)** with a network of users/members who may read from and write to the database **(0.5pts)**, and each user/member keeps a copy of the ledger's data **(0.5pts)**.
1pt: Compared to traditional databases, a distributed ledger's key benefits are broad accessibility and no centralized control.

QUESTION B • Learning Objective 1.8.1

Describe two regulatory challenges associated with implementing distributed ledger technology.

GUIDELINE RESPONSE

Regulatory challenges of DLT –

1. Uncertainty – This refers to uncertainty regarding rules across different regulatory agencies. Existing regulations may present significant challenges for DLTs.
2. Currency control – This refers to the need for central banks to set up mechanisms to oversee and control digitized currencies.

QUESTION C • Learning Objective 1.8.1

Distributed ledger technology can provide considerable efficiency gains in the form of automated transactions and fraud control in different types of businesses. State two key characteristics of distributed ledger technology that can enable these gains.

GUIDELINE RESPONSE

Traits of distributed ledgers that can enable efficiency gains – *state two.*

1. Ledger's distributed nature
2. Ledger's immutability
3. Agreed-upon consensus mechanism

QUESTION D • Learning Objective 1.8.1

State two key benefits of distributed ledger technology for the financial services industry, as discussed in Lewis, McPartland, and Ranjan's "Blockchain and Financial Market Innovation" article.

GUIDELINE RESPONSE

Benefits of DLT for the financial services industry –

1. Reduced post-trade settlement periods
2. Shorter settlement times for global payments

QUESTION E • Learning Objective 1.8.1

Discuss the challenges of liquidity, security, and immutability associated with using distributed ledger technology for the financial services industry.

GUIDELINE RESPONSE

Challenges of liquidity, security, and immutability –

1. Liquidity – This is important when using DLR for title transfers, because funds and assets need to be readily available in the proper form and location for expedited settlements.
2. Security – This is a challenge due to the number of users/members in a distributed ledger network, since each user represents a potential point of attack for cybercriminals.
3. Immutability – This is an issue if trades need to be reversed (e.g., in the case of mistakes such as fat-finger trades), which essentially cannot be done in an immutable framework.

QUESTION F • Learning Objective 1.8.1

Distributed ledger technology applied in the financial services industry will most likely use private networks that have what other type of characteristic?

GUIDELINE RESPONSE

These networks will be permissioned.

ESSAY 3 of 7 • Reading 1.1

ID: 1163

A portfolio has a market value of $4 million. The portfolio's investment policy statement specifies a floor value of $3.4 million and a multiplier of 5. The portfolio manager intends to implement a constant proportion portfolio insurance (CPPI) strategy.

QUESTION A • Learning Objective Learning Objective L2

What dollar amount would initially be invested in stocks according to the CPPI strategy?

GUIDELINE RESPONSE

Initial amount invested in stocks = m x (A – F) = 5 x ($4m – $3.4m) = $3.
The remaining $1m would be invested in a risk-free asset.

QUESTION B • Learning Objective Learning Objective L2

If the equity market drops 10%, what would be the value of the portfolio assets and what action should the portfolio manager take according to the CPPI strategy?

GUIDELINE RESPONSE

Equity market drops 10%: value of stock will decrease to $3m × 0.9 = $2.7m. Value of risk-free asset will remain at $1m.
=> Total assets would be worth $2.7m + $1m = $3.7m, and the cushion would become $3.7m – $3.4m = $300,000.

According to CPPI, the desired stock position is: 5 × cushion = 5 × $300,000 = $1.5m.
So, the portfolio manager would need to sell $2.7m – $1.5m = $1.2m worth of stocks and put that amount in the risk-free asset.

QUESTION C • Learning Objective Learning Objective L2

How would your answer differ if the equity market dropped 20% instead?

GUIDELINE RESPONSE

Equity market drops 20%: value of stock will drop to $3m × 0.8 = $2.4m. Value of risk-free asset will remain at $1m.
=> Total assets would be worth $2.4m + $1m = $3.4, and the cushion would become $3.4m – $3.4m = $0.

According to CPPI, the desired stock position is: 5 × cushion = 5 × $0 = $0.
So, the portfolio manager would need to sell his entire risky position of ($2.4m) and put the proceeds in the risk-free asset.

QUESTION D • Learning Objective Learning Objective L2

What percentage drop in the equity market would result in the floor being breached?

GUIDELINE RESPONSE

When the equity market dropped 20%, the cushion became zero, which meant that the total assets were equal to the floor. So, any decrease greater than 20% would result in total assets being less than the floor (i.e., would result in the floor being breached).

Note:

- E.g., if market dropped 30%, stock value would drop to $3m × 0.7 = $2.1m. So, total assets would = $2.1m + $1m = $3.1m, which is less than the floor of $3.4m.
- In general, total assets (A) will be less than the floor (F) if the market drops by more than 1/m. In this case, that is 1/5 = 20%.
  - E.g., if m = 4, a market drop greater than 1/4 = 25% would result in total assets being less than the floor.

QUESTION E • Learning Objective Learning Objective L2

If the risk-free rate is 3%, what would be the value of the floor after 6 months?

GUIDELINE RESPONSE

Floor: $F = F_0 \exp(rt) = \$3.4m \times \exp(0.03 \times 0.5) = \$3.45m$.

Note: Remember that t in these formulas is in years. So, 6 months represents t=0.5.

QUESTION F • Learning Objective Learning Objective L2

Suppose, in 6 months, the equity market decreases 15%. Assuming that the risk-free rate is 3%, market volatility is 20%, and the payoff of the time-t CPPI strategy is given by the formula below, calculate the payoff of the CPPI strategy at that time.

$$A = F + (A_0 - F_0)\left(\frac{S}{S_0}\right)^m e^{(1-m)(r+0.5m\sigma^2)t}$$

GUIDELINE RESPONSE

Payoff of CPPI strategy in 6 months -

$$A = F + (A_0 - F_0)\left(\frac{S}{S_0}\right)^m e^{(1-m)(r+0.5m\sigma^2)t}$$

$$= 3.45m + (\$4m - \$3.4m)\left(\frac{2.55m}{\$3m}\right)^5 e^{(1-5)(0.03+0.5\times 5\times 0.2^2)0.5}$$

$$= 3.45m + (\$4m - \$3.4m)(0.85)^5 e^{-0.26} = \$3.66m$$

QUESTION G • Learning Objective Learning Objective L2

Briefly describe the payoff and exposure diagrams of the CPPI strategy.

GUIDELINE RESPONSE

The exposure diagram plots desired stock position (in dollars) against dollar value of the assets. The CPPI's exposure diagram is a straight line with a slope of 5 (which represents the multiplier) and a horizontal intercept of $3.4m (which represents the floor).

The payoff diagram plots value of assets against value of stock market. The CPPI has a convex payoff diagram that has a vertical intercept of $3.4m (which represents the floor).

ESSAY 4 of 7 • Reading 1.8

ID: 1059

Distributed ledger technology is currently a popular topic. In the financial services industry, distributed ledgers have the potential to create efficiencies for operations and transactions, accelerating banking processes such as clearing and settlement, and to improve data security and reduce counterparty risk.
In February 2019, JP Morgan announced its own digital coin, called "JPM Coin," which will be issued on the bank's own private blockchain, called Quorum, and will be redeemable 1:1 for U.S. dollars. JP Morgan plans to use JPM Coin to settle

payments between large institutions.

QUESTION A • Learning Objective 1.8.1

Briefly describe what happens when a new transaction is added to a distributed ledger network. Include in your response the implication of the immutability of the ledger.

GUIDELINE RESPONSE

When a DL network operator submits a new transaction to the network, consensus breaks **(0.5pts)** and the other operators either validate the new transaction **(0.5pts)** via an agreed-upon consensus mechanism **(0.5pts)** or they reject the new transaction **(0.5pts)**.
When a DL network operator submits a new transaction to the network, consensus breaks **(0.5pts)** and the other operators either validate the new transaction **(0.5pts)** via an agreed-upon consensus mechanism **(0.5pts)** or they reject the new transaction **(0.5pts)**.
1pt: If the transaction is confirmed as valid, it is added to the ledger and each operator's copy of the ledger is updated.
1pt: If the transaction is confirmed as valid, it is added to the ledger and each operator's copy of the ledger is updated.
1pt: Since the ledge is immutable, once a transaction is added to the ledger, it cannot be changed or deleted.

QUESTION B • Learning Objective 1.8.1

Is the blockchain technology that underlies the digital currency Bitcoin based on a private, public, permissionless, and/or permissioned network?

GUIDELINE RESPONSE

Bitcoin is powered by a public, permissionless network.

Not needed for response: Bitcoin's network differs from that of JP Morgan's JPM Coin, which is a private, permissioned network.

QUESTION C • Learning Objective 1.8.1

State the name of the consensus mechanism used by the bitcoin blockchain and briefly describe it.

GUIDELINE RESPONSE

1pt: The bitcoin blockchain uses a Proof of Work consensus mechanism.
This mechanism involves users/miners validating a new transaction **(0.5pts)** by solving a difficult computer problem **(0.5pts)** and then adding a block of transactions to the blockchain.
This mechanism involves users/miners validating a new transaction **(0.5pts)** by solving a difficult computer problem **(0.5pts)** and then adding a block of transactions to the blockchain.
1pt: The first miner to solve the problem confirms the block of transactions and adds the block of transactions to the blockchain.
0.5pts: As a reward, this miner receives bitcoins.

Not needed for response: When a miner solves the computer problem, he/she presents his/her block to the network for verification. Users can then confirm for themselves that the latest block of transactions added to the blockchain records valid transactions (i.e., that the user(s) spending bitcoins received them in an earlier transaction and have not yet spent them).

QUESTION D • Learning Objective 1.8.1

i. What key benefit of blockchain systems do permissioned blockchains lack?
ii. State one key benefit of permissionless blockchains that permissioned blockchains share.
iii. State a problem associated with permissionless blockchains that permissioned blockchains alleviate.

GUIDELINE RESPONSE

0.5pts each -

i. A key benefit of blockchain systems is that parties do not need to trust each other. Permissioned blockchains lack this benefit; parties need to trust each other in permissioned blockchains.
ii. All blockchains have (*state one*): decentralized storage of the database and near real-time reconciliation of all copies of the database.
iii. Permissionless blockchains need substantial computing resources to confirm transactions. This is not required by permissioned blockchains.

ESSAY 5 of 7 • Reading 1.3

ID: 1153

As discussed in Monk and Clark's paper: "Asset Owners, Investment Management, and Commitment: An Organizational Framework," recent developments in the industry have witnessed asset owners claiming control over the investment process by insourcing the production of returns and/or selective intermediation. The control of the production process and oversight over the commitment of those employed to realize the institutions' objectives are problematic due to three asymmetries in the investment services market.

QUESTION A • Learning Objective 1.3.1

i. Other than asymmetry of information, what are the asymmetries in the investment management process that favor the sell side of the financial market? Briefly describe one of the asymmetries you state.
ii. Which of the asymmetries is the most important for asset owners?

GUIDELINE RESPONSE

i. **1pt:** Asymmetries of expertise and asymmetries of market power.

1pt *for description of one* –

- Asymmetry of expertise – Asset owners typically lack the skills, expertise, and experience of asset managers needed to assess issues related to generating superior risk-adjusted returns and implement successfully. This is due to the highly specialized nature of each part in the intermediation chain.
- Asymmetry of market power – This refers to the fact that the global investment management industry is concentrated in terms of the largest asset managers' share of AUM and the significance of global financial centers (e.g., New York vs. Frankfurt).

ii. **0.5pts:** Asymmetries of expertise is the most important for asset owners.

QUESTION B • Learning Objective 1.3.3

Describe how a large finanical organization with internal capabilities and management resources consistent with a wide scope of activities likely decides to insource and/or pursue selective re-intermediation.

GUIDELINE RESPONSE

This organization can internalize the entire production process by creating investment teams across all asset classes and investment strategies.

QUESTION C • Learning Objective 1.3.3

Briefly describe the mismatch that often exists between the interests of asset owners and external asset managers in terms of their temporal reach and geographical dimension.

GUIDELINE RESPONSE

Regarding temporal reach, many asset owners have long time horizons (e.g., 80 years), whereas external asset managers have relatively short time horizons.
Regarding geographical dimension, many asset owners have one "home," whereas large investment managers collect and distribute assets on a global basis.

QUESTION D • Learning Objective 1.3.5

State two of the performance and commitment metrics that can be used to manage relationships between institutions' senior managers and investment staff.

GUIDELINE RESPONSE

Metrics of performance and commitment – *state two.*

1. Organization's risk-adjusted return over short-, medium-, and long-term (where long-term is in terms of beneficiaries' welfare).
2. Measure of the staff's commitment to the organization's long-term mission by accounting for recruitment & retention of staff, effectiveness of the organization's investment decision-making process, and quality of information systems underling the investment function.
3. Risk-adjusted return of the unit or asset-class-specific investment team assessed in terms of its industry peers (medium-term) and its contribution to the organization's long-term performance.
4. Skills & expertise of investment staff (considering the organization's requirements) and the investment staff's long-term quality in relation to its expected size, scope, and reach.
5. Investment department's long-term costs (staff, infrastructure, space & running, and shared services) relative to performance & commitment and the observed or imputed costs of outsourcing these services.
6. Access to deals, quality of investment partners, and continuity of investment relationships by asset class, across the organization, and among peers.

QUESTION E • Learning Objective 1.3.1

State and briefly describe the first tier in Clark and Monk's three-tiered functional model of investment management that reflects recent initiatives by asset owners to better realize their goals and objectives.

GUIDELINE RESPONSE

0.5pts: Tier 1 is the organizational framework.
1pt: It defines how organizations manage themselves in relation to their objectives and in relation to similar organizations and the market for investment management services.

QUESTION F • Learning Objective 1.3.1

State the second tier in Clark and Monk's three-tiered investment management model, and state a factor that is considered a key ingredient in the process of generating risk-adjusted rates of return.

GUIDELINE RESPONSE

0.5pts: Tier 2 is the asset owners' capabilities and resources.
0.5pts: Human capital (quality of staff) is a key ingredient, as well as the investment decision-making process and the information infrastructure (that enables asset owners to implement timely and effective investment strategy).

ESSAY 6 of 7 • Reading 1.1

ID: 1164

You are the chief investment officer of The Fincal Fund and regularly review your portfolio to determine if a change in strategy is warranted or a change in position is necessary based on fluctuations in the equity market. Your decisions are based in part on market forecasts made by your research team. You currently have a buy-and-hold strategy implemented, where the mix of your portfolio is $1 million in stocks and $240,000 in risk-free assets.

QUESTION A • Learning Objective Learning Objective L2

Under this strategy, what should the value of your portfolio assets be if the stock market increases by 7%?

GUIDELINE RESPONSE

Buy and hold is a "do nothing" strategy. After the initial mix of the portfolio is selected, no matter what happens to the stock market, the portfolio is not rebalanced. So, if the stock market goes up by 7%, the value of the risky portion of the portfolio becomes:
$1,000,000 x 1.07 = $1,070,000,
and the risk-free assets remain at $240,000, giving a total portfolio value of:
$1,070,000 + $240,000 = $1,310,000.

QUESTION B • Learning Objective Learning Objective L2

In what type of market would it be most beneficial for you to continue implementing this strategy, given that your risk tolerance level remains the same?

GUIDELINE RESPONSE

Under buy-and-hold strategies, the value of the portfolio increases as the value of the stock market increases. So, as long as the market is trending upwards, this is a good strategy to maintain, especially since my risk tolerance has not changed. If I became more risk tolerant, I could consider the CPPI strategy.

QUESTION C • Learning Objective Learning Objective L2

Your research team informs you that projections indicate that equity prices are expected to oscillate fairly significantly, but end fairly close to their beginning levels. Based on this information, you switch to a different trading strategy that performs better in this type of environment. At the time you switch, the value of your portfolio is $1.4 million. After a short time, the market drops by 4.3%.
i) State which strategy you switched to.
ii) Calculate the value of your portfolio assets after the drop in the market.
iii) Describe how you rebalance after the market drop.

GUIDELINE RESPONSE

1 pt:
i) Given that the market is flat, but oscillating, the strategy that performs the best is the constant mix strategy because it capitalizes on market reversals. It maintains an exposure to stocks that is a constant proportion of wealth. The general rule of this strategy is to rebalance by buying stocks when the market drops in value, and vice versa, to maintain the desired mix.

2 pts:
ii) Out of the $1.4m in the portfolio, $240,000 is in risk-free assets, leaving the remaining $1.16m in stocks. So, stocks make up $1.16m/$1.4m = 82.86% of the portfolio. I select to implement the constant mix strategy by maintaining this 82.86%/17.14% mix.

When the market drops by 4.3%, the value of my stocks drop to $1,110,120, leaving a total portfolio value of $1,110,120 + $240,000 = $1,350,120. So, stocks now make up $1,110,120/$1,350,120 = 82.22% of my portfolio.

1 pt:
iii) To maintain the mix of 82.86%/17.14%, my portfolio of $1,350,120 should have $1,350,120 x 0.8286 = $1,118,709.43 in stocks. After the market drop, I would rebalance my portfolio by buying stocks worth $1,118,709.43 – $1,110,120 = $8,589.43, using proceeds from the sale of my risk-free assets.

QUESTION D • Learning Objective Learning Objective L2

You ask your research team to provide you with a report comparing and contrasting the payoff curves of the buy-and-hold strategy and the one you selected for the flat market. Describe components of the report that you would expect to receive from them.

GUIDELINE RESPONSE

Buy-and-hold strategy
- Payoff diagram has linear (convex) curves.
- The slope of payoff diagram is the percentage invested in stocks initially.
- The vertical intercept of payoff diagram is the amount invested in T-bills.
- There is no rebalancing.

Constant mix (CM) strategy
- Payoff diagram has concave curves.
- The rebalancing rule is to buy stocks as they fall and sell stocks as they rise.
- There is little downside protection.

In trending markets, the buy-and-hold strategy dominates the CM; and when markets are flat, CM dominates buy and hold.

ESSAY 7 of 7 • Reading 1.4 ID: 1156

JPP, a large sovereign wealth fund, is planning to make a fairly large allocation to illiquid private assets. While JPP does not have any scheduled payment obligations, it may face significant cash demands from its sovereign sponsor or unexpected GP capital calls.
Despite the enhanced returns and improved diversification of illiquid private assets, JPP is aware that its protfolio liquidity will decline and thus affect its ability to meet unexpected liquidity demands. Therefore, JPP's management team considers implementing the cash flow-driven asset allocation framework proposed by Shen et al in the paper "Building a Better Portfolio: Balancing Performance and Liquidity."

QUESTION A • Learning Objective 1.4.1

JPP's management team recognizes its challenge is to structure its portfolio so that it maximizes expected performance, at the same time as keeping the frequency and severity of liquidity events under control. Therefore, it must determine how to formulate a private asset commitment strategy to manage private asset exposure and its uncertain cash flows.
What two other issues/questions must JPP address?

GUIDELINE RESPONSE

Key questions faced – **1pts each**

1. What should be its desired allocations given its liquidity risk tolerance?
2. How will various market scenarios affect its portfolio's liquidity and performance?

QUESTION B • Learning Objective 1.4.2

i. If JPP is focused on vintage diversification and implements the target NAV commitment strategy, what portion of uncommitted capital should be selected to use for the commitment amount in the next period: 0.85, 1, or 1.25?
ii. If JPP implements a cash flow matching (CFM) commitment strategy, how does it determine the amount commited at the start of each quarter?

GUIDELINE RESPONSE

i. **0.5pts:** 0.85

Not needed for response: The value should be anything less than one.
Commitment amount = fixed portion (f) x total uncommitted capital at end of previous period. To pace out commitments for vintage year diversification, f should be < 1.

ii. **1pt:** The commitment amount is determined to ensure that the projected net cash flow (i.e., distributions minus capital calls) is zero two quarters ahead.

QUESTION C • Learning Objective 1.4.2

Which commitment strategy would JPP adopt if:

i. Liquidity is a major concern?
ii. It wants a smooth commitment pattern?

GUIDELINE RESPONSE

i. CFM
ii. Target NAV

Reminder for ii.: the CFM strategy has a more volatile commitment pattern.

QUESTION D • Learning Objective 1.4.2

Should JPP use the cash flow matching commitment strategy if it were starting a private capital investment program with no prior commitments?

GUIDELINE RESPONSE

No; it would not be possible.

Not needed for response: the CFM strategy aims to constructs a private asset portfolio in which distributions received in the previous quarter fund capital calls in the next quarter. Therefore, distributions are needed to implement cash flow matching. This is one of the limitations of the CFM strategy.

QUESTION E • Learning Objective 1.4.3

What types of assets are used to meet GP capital calls? Give an example of each asset type that you state.

GUIDELINE RESPONSE

1pt: GP capital calls are met by liquid passive assets and liquid active assets.
1pt each:

- Liquid passive assets – stock or bond ETF.
- Liquid active assets – an actively managed fund or a liquid hedge fund strategy.

Note needed for response –

- Liquid passive are investments in equity & debt assets not expected to earn alpha.
- Liquid active are actively managed investments that aim to earn alpha over passive indices.

QUESTION F • Learning Objective 1.4.1

To which of these liquidity events would JPP give the highest severity score: rebalancing liquidity shortage or capital call liquidity shortage?

GUIDELINE RESPONSE

Capital call liquidity shortage

Not needed for response: More severe events have higher scores; and LPs must meet capital calls from GPs, whereas they can select when to rebalance.

QUESTION G • Learning Objective 1.4.1

JPP's management team is concerned about keeping a large amount of its committed, uncalled capital in low-risk public investments due to the likely drag on its portfolio returns. If JPP uses the Takahashi-Alexander cash flow to predict capital calls, what will the capital call amount be in the next period?

GUIDELINE RESPONSE

Capital call in next period = Uncalled capital in previous period x Rate of contribution