Alternative Investments for Portfolio Management

CFA三级原版书课后题

讲师：

Reading 27

Asset Allocation to Alternative Investments

Case: Kevin Kroll

- Kevin Kroll is the chair of the investment committee responsible for the governance of the Shire Manufacturing Corporation (SMC) defined benefit pension plan. The pension fund is currently fully funded and has followed an asset mix of 60% public equities and 40% bonds since Kroll has been chair. Kroll meets with Mary Park, an actuarial and pension consultant, to discuss issues raised at the last committee meeting.
- Kroll notes that the investment committee would like to explore the benefits of adding alternative investments to the pension plan's strategic asset allocation. Kroll states:
- **Statement 1** The committee would like to know which alternative asset would best mitigate the risks to the portfolio due to unexpected inflation and also have a relatively low correlation with public equities to provide diversification benefits.

Case: Kevin Kroll

- The SMC pension plan has been able to fund the annual pension payments without any corporate contributions for a number of years. The committee is interested in potential changes to the asset mix that could increase the probability of achieving the long-term investment target return of 5.5% while maintaining the funded status of the plan. Park notes that fixed-income yields are expected to remain low for the foreseeable future. Kroll asks:
- **Statement 2** If the public equity allocation remains at 60%, is there a single asset class that could be used for the balance of the portfolio to achieve the greatest probability of maintaining the pension funding status over a long time horizon? Under this hypothetical scenario, the balance of the portfolio can be allocated to either bonds, hedge funds, or private equities.

Case: Kevin Kroll

- Park confirms with Kroll that the committee has historically used a traditional approach to define the opportunity set based on distinct macroeconomic regimes, and she proposes that a risk-based approach might be a better method. Although the traditional approach is relatively powerful for its ability to handle liquidity and manager selection issues compared to a risk-based approach, they both acknowledge that a number of limitations are associated with the existing approach.

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- Park presents a report (Exhibit 1) that proposes a new strategic asset allocation for the pension plan. Kroll states that one of the concerns that the investment committee will have regarding the new allocation is that the pension fund needs to be able to fund an upcoming early retirement incentive program (ERIP) that SMC will be offering to its employees within the next two years. Employees who have reached the age of 55 and whose age added to the number of years of company service sum to 75 or more can retire 10 years early and receive the defined benefit pension normally payable at age 65.

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Exhibit 1 Proposed Asset Allocation of SMC Defined Benefit Pension Plan						
Asset Class	**Public Equities**	**Broad Fixed Income**	**Private Equities**	**Hedge Funds**	**Public Real Estate**	**Total**
Target	45%	25%	10%	10%	10%	100%
Range	35%–55%	15%–35%	0%–12%	0%–12%	0%–12%	–

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- Kroll and Park then discuss suitability considerations related to the allocation in Exhibit 1. Kroll understands that one of the drawbacks of including the proposed alternative asset classes is that daily reporting will no longer be available. Investment reports for alternatives will likely be received after monthly or quarter-end deadlines used for the plan's traditional investments. Park emphasizes that in a typical private equity structure, the pension fund makes a commitment of capital to a blind pool as part of the private investment partnership.
- In order to explain the new strategic asset allocation to the investment committee, Kroll asks Park why a risk factor-based approach should be used rather than a mean–variance-optimization technique. Park makes the following statements:

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- **Statement 3** Risk factor-based approaches to asset allocation produce more robust asset allocation proposals.
- **Statement 4** A mean–variance optimization typically overallocates to the private alternative asset classes due to stale pricing.
- Park notes that the current macroeconomic environment could lead to a bear market within a few years. Kroll asks Park to discuss the potential impact on liquidity planning associated with the actions of the fund's general partners in the forecasted environment.

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- Kroll concludes the meeting by reviewing the information in Exhibit 2 pertaining to three potential private equity funds analyzed by Park. Park discloses the following due diligence findings from a recent manager search: Fund A retains administrators, custodians, and auditors with impeccable reputations; Fund B has achieved its performance in a manner that appears to conflict with its reported investment philosophy; and Fund C has recently experienced the loss of three key persons.

Exhibit 2 Potential Private Equity Funds, Internal Rate of Return (IRR)			
Private Equity Fund	**Fund A**	**Fund B**	**Fund C**
5-year IRR	12.9%	13.2%	13.1%

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- Based on Statement 1, Park should recommend:
  A. hedge funds.
  B. private equities.
  C. commodity futures.

Case: Kevin Kroll

- **Solution: C.**

  Real assets (which include energy, infrastructure, timber, commodities, and farmland) are generally believed to mitigate the risks to the portfolio arising from unexpected inflation. Commodities act as a hedge against a core constituent of inflation measures. Rather than investing directly in the actual commodities, commodity futures may be incorporated using a managed futures strategy. In addition, the committee is looking for an asset class that has a low correlation with public equities, which will provide diversification benefits. Commodities are regarded as having much lower correlation coefficients with public equities than with private equities and hedge funds. Therefore, commodities will provide the greatest potential to fulfill the indicated role and to diversify public equities.

Case: Kevin Kroll

- In answering the question raised in Statement 2, Park would most likely recommend:
  - A. bonds.
  - B. hedge funds.
  - C. private equities.

Case: Kevin Kroll

- **Solution: C.**

  When projecting expected returns, the order of returns from highest to lowest is typically regarded as private equities, hedge funds, bonds. Therefore, the probability of achieving the highest portfolio return while maintaining the funded status of the plan would require the use of private equities in conjunction with public equities. In addition, private equities have a high/strong potential to fulfill the role of capital growth. Fixed-income investments are expected to have a high/strong potential to fulfill the role of safety.

Case: Kevin Kroll

- A limitation of the existing approach used by the committee to define the opportunity set is that it:
  - A. is difficult to communicate.
  - B. overestimates the portfolio diversification.
  - C. is sensitive to the historical look-back period.

Case: Kevin Kroll

- **Solution: B.**

  A traditional approach has been used to define the opportunity set based on different macroeconomic conditions. The primary limitations of traditional approaches are that they overestimate the portfolio diversification and obscure the primary drivers of risk.

Case: Kevin Kroll

- Based on Exhibit 1 and the proposed asset allocation, the greatest risk associated with the ERIP is:

  A. liability.

  B. leverage.

  C. liquidity.

Case: Kevin Kroll

- **Solution: C.**

  With the introduction of the early retirement incentive plan (ERIP), the defined benefit pension plan will likely be called upon to make pension payments earlier than originally scheduled. As a result, the near term liquidity of the plan is the greatest risk arising from the addition of the alternative asset classes (e.g., private equities, hedge funds, and real estate). Investments in alternatives, such as private equities, can take upwards of five years to reach a full commitment and potentially another decade to unwind.

Case: Kevin Kroll

- The suitability concern discussed by Kroll and Park most likely deals with:
  - A. governance.
  - B. transparency.
  - C. investment horizon.

Case: Kevin Kroll

- **Solution: B.**

  The pension plan's investment in private equities via a blind pool presents the prospect that less than perfect transparency will be associated with the underlying holdings of the alternative asset manager. Capital is committed for an investment in a portfolio of assets that are not specified in advance. In addition, reporting for alternative funds is often less transparent than investors are accustomed to seeing on their stock and bond portfolios.

Case: Kevin Kroll

- Which of Park's statements regarding the asset allocation approaches is correct?
  - A. Only Statement 3
  - B. Only Statement 4
  - C. Both Statement 3 and Statement 4

Case: Kevin Kroll

- **Solution: C.**

  Statement 3 is correct because risk factor-based approaches to asset allocation can be applied to develop more robust asset allocations. Statement 4 is correct because a mean–variance optimization typically overallocates to the private alternative asset classes, partly because of underestimated risk due to stale pricing and the assumption that returns are normally distributed.

Case: Kevin Kroll

- Based on the forecasted environment, liquidity planning should take into account that general partners may:

  A. call capital at a slower pace.

  B. make distributions at a faster pace.

  C. exercise an option to extend the life of the fund.

Case: Kevin Kroll

- **Solution: C.**

  Park notes that the current macroeconomic environment could lead to a bear market within a few years. Liquidity planning should take into account that under a scenario in which public equities and fixed-income investments are expected to perform poorly, general partners may exercise an option to extend the life of the fund.

Case: Kevin Kroll

- Based on Exhibit 2 and Park's due diligence, the pension committee should consider investing in:
  - A. Fund A.
  - B. Fund B.
  - C. Fund C.

Case: Kevin Kroll

- **Solution: A.**

  Fund A should be selected based on both quantitative and qualitative factors. Fund A has a five-year IRR (12.9%) that is slightly lower than, but comparable to, both Fund B (13.2%) and Fund C (13.1%). Given the sensitivity to the timing of cash flows into and out of a fund associated with the IRR calculation, however, the final decision should not be based merely on quantitative returns. It is also important to monitor the investment process and the investment management firm itself, particularly in alternative investment structures. Considering the qualitative factors identified by Park, Fund A is the only fund with a strong, positive factor: It benefits from service providers (administrators, custodians, and auditors) with impeccable reputations. Fund B seems to be experiencing style drift, which suggests that the returns are not consistent with the manager's advertised investment edge (hence, a negative factor). Fund C has experienced the departure of key persons, which puts future fund returns in jeopardy (hence, a negative factor).

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