Module 18: Asset Allocation to Alt. Investments.

18.1. Roles of alt. investment

overall goal of alt investment: improve the portfolio's risk & return profile.

Hedge fund: Some are mainly expected to increase returns via manager selection skill, others may be less correlated w/ traditional asset classes.

Private Equity (Return-enhancing & risk-increasing): has limited diversification benefits

Private Credit (Return-enhancing & risk-increasing): direct lending has similar risk-return profile except higher iliquidity

Commercial Real Estate: hedge inflation risk.

Real Assets (Risk-reducing): also protects against inflation risk.

18.b. Alternative investments vs. bond as risk mitigators in relation to a long equity position

Short investment horizon (i.e. primary risk = returns volatility)
⇒ Alternative investment statistically has lower correlation & volatility w/ equity but it's biased downwards:
- Appraisal-based valuations of privately held companies may result in smoothing of reported returns.

- Sampling bias. (e.g. surivorship bias, backfill bias) may result in downside risk being understated
- Index of alt. inv. returns reflect some deg. of diversification.

By comparison, bonds have lower correlation with equity returns than alt. investments.

Long investment horizon (primary risk = failing to achieve a min. required return) ⇒ Alt. invt is better b/c bonds have lower rate of return.

18.c. Investment Opportunity Set approaches.

Liquidity Approach (more traditional):

Figure 18.1: Liquidity-Based Investment Opportunity Set

	Fixed Income	Equity	Other Assets
More Liquid	Cash Bonds	Public Equity	Commodity Futures REITs
		Equity Hedge Funds	Private Real Estate
Less Liquid	Private Credit	Private Equity	Private Real Assets

or classify by how they are expected to perform under diff. scenarios for economic growth & inflation:

Figure 18.2: Economic Environment-Based Investment Opportunity Set

	Negative/Low Growth	High Growth
Deflation	Non-Indexed Bonds	
		Public Equity Private Equity Private Credit
High Inflation	Indexed Bonds	Commodities Real Assets

Risk-based approach: statistically estimate the sensitivities to risk factors identified by the manager.

MODULE QUIZ 18.1

1. Which of the following categories of alternative investments would be *most appropriate* for diversifying a portfolio of public equity?
   A. Private equity and short-bias hedge funds.
   B. Long-short hedge funds and distressed debt.
   C. Commercial real estate and global macro hedge funds.
2. For alternative investments as an asset class, appraisal-based valuations and sampling biases are believed to overstate:
   A. returns.
   B. risk measures.
   C. diversification benefits.

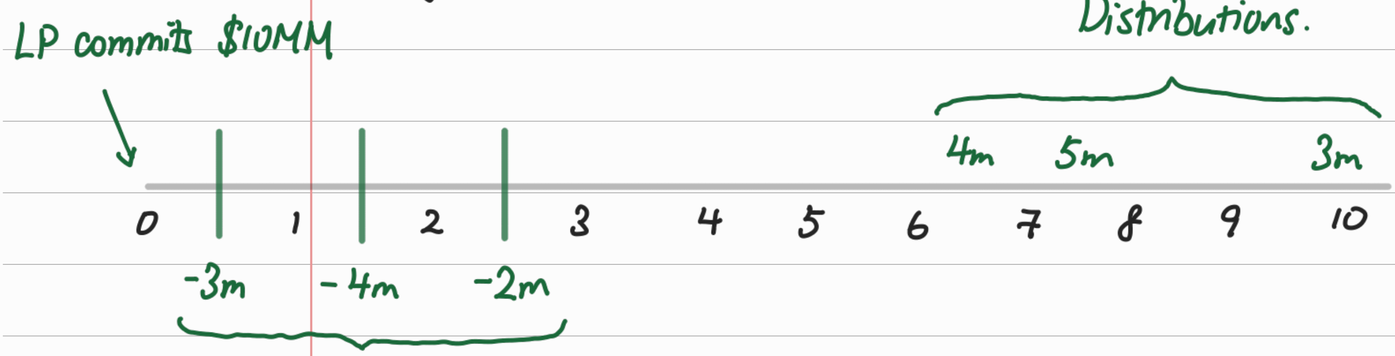
1. C ✓ (has to be non-equity-relating hedge fund)
2. A × C understate the correlation (i.e. overstate diversification)
understate risk too but not exactly overstating returns

18.d. Considerations in allocating to alt. investment.
Investment Vehicles
- typical structure: limited partnership (manager will be a general partner while investors will be a limited partner)
- fund-of-fund allows investors that lacked the needed expertise to invest in a limited partnership via a manager but they charge an additional layer of fees.
- SMAs:
- establish a limited partnership with a single client (i.e. fund of one)
- Some open-ended mutual funds & "undertakings for collective investment in transferable securities" (UCITS) aims to give smaller investors access to alt. investments. it may be more regulated & constrain managers' choices. → might not achieve the same result.

Liquidity Concerns.

- limited partnership is usually structured w/ subscription provisions, lock-up period, restriction on redemptions

line of CF might occur:



Note:

- Neither capital calls nor distributions occur on a predetermined schedule.
- general partner is NOT REQUIRED TO call the full amount of committed capital.
- Limited partner must also consider the opportunity cost of their committed capital during the calldown period.

Long-only equity hedge funds tend to hold relatively liquid investments that are consistent w/ offering redemptions monthly/quarterly. General partner might designate some of the fund's less liquid holdings as not subject to ordinary redemptions (i.e. "side pocket")

Expenses, Fees & Taxes

- usually involves significant fees & expenses
- must also consider tax situations.

Intermediaries or In-House Programs

- may be appropriate for an investor that needs highly customized solutions, desires close control over its investment program.

MODULE QUIZ 18.2

1. A limited partnership structure with a single client is known as:
   A. UCITS.
   B. a fund of one.
   C. a separately managed account.
2. Cash flows from investors into a private equity limited partnership:
   A. are at the discretion of the general partner.
   B. will be 100% invested after three to five years.
   C. are made only on the establishment date of the partnership.
3. Which of the following terms describes the practice of a hedge fund designating certain of its investment holdings as exempt from the fund's ordinary redemption terms?
   A. Gate.
   B. Lock-up.
   C. Side pocket.

1. B
2. A
3. C

18.3: Suitability, Approaches, Liquidity & Monitoring

18.e: Suitability consideration

in general only suitable for large investor w/ long time horizon & specialized knowledge, strong gov. framework & comfort w/ lack of transparency.

18.f: approaches to asset allocation

return distribution is known to be non-normal, exhibiting skew & excess kurtosis

/ /

One method for modeling distribution w/ fat tails (positive excess kurtosis) : define risk & return properties for ≥ 2 distinct market environments (e.g. normal period & high-volatility period)

Monte Carlo Simulation

Mean Variance optimization

Risk factor based optimization

18.g : Importance of Liquidity planning

Simple model might assign a % of remaining cap to each year of the calldown period:

$$\boxed{\text{\% to be called in period } t \times (\text{committed cap} - \text{cap previously called}).}$$

Distribution in Period t would be

% to be distributed in period t × [NAV in period t-1 × (1+ growth rate]

NAV in period t :

= NAV in period t-1 × (1 + growth rate
+ contributions in period t
− distributions in period t

18.h: monitoring alt investments.

especially crucial for private & iliquid investments b/c these require considerable amt of time to correct if out of line with program objective

Can be challenging b/c performance reporting can be infrequent, come with significant time lags & often report IRR rather than time-weighted rate of return.

Investors may prefer to monitor private fund's multiple on invested funds (MOIC) :

$$\boxed{\text{MOIC} = \frac{\text{fund underlying investment + distribution}}{\text{total invested capital}}}$$

MODULE QUIZ 18.3

1. Which class of publicly traded securities is *most likely* to be affected by similar risk factors to those that affect private credit?
   A. REITs.
   B. Equity securities.
   C. High yield bonds.
2. Alternative investments are *most likely* to be suitable for a portfolio investor that:
   A. has a strong governance program and insists on transparency.
   B. has a long time horizon and believes financial markets are efficient.
   C. believes active management can generate excess risk-adjusted returns over time.
3. When using optimization approaches to determine an allocation to alternative investments, recommended practices *least likely* include:
   A. using smoothed historical data as inputs.
   B. modeling normal and high-volatility periods separately.
   C. placing constraints on the allocations to various asset classes.
4. A $20 billion endowment has decided to increase its allocations to private equity and private credit from 5% each to 10% each. The endowment will *most likely* need to:
   A. forecast the timing of capital calls and hold enough capital in cash equivalents to meet them.
   B. account for the expected growth rate of the portfolio when planning the capital commitment.
   C. identify suitable investment vehicles for $100 million each of private equity and private credit.
5. Compared to an alternative investment partnership's reported internal rate of return, its multiple on invested capital is less affected by:
   A. stale pricing.
   B. timing of capital calls.
   C. appraisal-based valuations.

1. C. ✓ HY debt = proxy for private debt.
2. B C believes that active management can add value.
3. B A unsmoothing is recommended b/c. data often reflect appraisal-based valuations.
4. C. B need to account for expected rate of return
5. B ✓