Alternative Investments

Study Session 18

Weight on Exam	4%
SchweserNotes™ Reference	Book 5, Pages 201–227

Introduction to Alternative Investments

Cross-reference to CFA Institute Assigned Reading #60

Alternative investments differ from traditional investments in the types of assets and securities included in this asset class and in the structure of the investment vehicles in which these assets are held. Managers of alternative investment portfolios may use derivatives and leverage, invest in illiquid assets, and short securities. Many types of real estate investment are considered alternative investments as well. (For the exam, alternative investments are what the CFA Curriculum says they are.)

Compared to traditional investments, alternative investments generally can be characterized as having **less liquidity** of assets held, **more specialization by investment managers**, **less regulation and transparency**, more problematic and **less available historical return and volatility data**, and **different legal issues and tax treatments**. Types of alternative investment structures include hedge funds, private equity funds, real estate, and commodities.

- **Hedge funds** may use leverage, hold long and short positions, use derivatives, and invest in illiquid assets. Managers of hedge funds use many different strategies in attempting to generate investment gains. They do not necessarily hedge risk.
- **Private equity funds** invest in the equity of companies that are not publicly traded or in the equity of publicly traded firms that the fund intends to take private. **Leveraged buyout** (LBO) **funds** use borrowed money to purchase equity in established companies and comprise the majority of private equity investment funds. **Venture capital funds** invest in companies early in their existence.
- **Real estate** investments include residential or commercial properties as well as real estate backed debt. These investments are held in a variety of structures including full or leveraged ownership of individual properties, individual real estate backed loans, private and publicly traded securities backed by pools of properties or mortgages, and limited partnerships.

- **Commodities** investors can own physical commodities, commodities derivatives, or the equity of commodity producing firms. Some funds seek exposure to the returns on various commodity indices, often by holding derivatives contracts that are expected to track a specific commodity index.
- **Infrastructure** refers to long-lived assets that provide public services. These include economic infrastructure assets such as roads, airports, and utility grids, and social infrastructure assets such as schools and hospitals.
- Other alternative investments include patents and collectible assets such as fine wines, stamps, automobiles, antique furniture, and art.

The primary motivation for holding alternative investments is their historically low correlation of returns with those of traditional investments, which can reduce an investor's overall portfolio risk. However, the risk measures we use for traditional assets may not be adequate to capture the risk characteristics of alternative investments.

Historical returns for alternative investments have been higher on average than for traditional investments, so adding alternative investments to a traditional portfolio may increase expected returns. The reasons for these higher returns are thought to be that some alternative investments are less efficiently priced than traditional assets; that alternative investments may offer extra returns for being illiquid; and that alternative investments often use leverage.

There are potential problems with historical returns data and traditional risk measures. **Survivorship bias** refers to the upward bias of returns if data only for currently existing firms is included. Since surviving firms tend to be those that had better-than-average returns, excluding the returns data for failed firms results in average returns that are biased upward. **Backfill bias** is introduced by including the previous performance data for firms recently added to a benchmark index. Since firms that are newly added to an index must be those that have survived and done better than average, including their returns for prior years tends to bias average returns upward.

Hedge Funds

Hedge funds are typically set up as limited partnerships, with the investors as the limited partners. Investors must have sufficient wealth, liquidity, and investment sophistication. The management firm is the general partner and typically receives both a management fee based on the value of assets managed and an incentive fee based on fund returns. The most common fee structure for a hedge fund is "2 and 20," or 2% of the value of the assets under management plus an incentive fee of 20% of profits.

Hedge fund investments are less liquid than traditional, publicly traded investments. Restrictions on redemptions may include a lockup period and/or a notice period. A **lockup period** is a time after initial investment during which withdrawals are not allowed. A **notice period** is the amount of time a fund has after receiving a redemption request to fulfill the request. Additional fees may be charged at redemption.

A **fund of funds** is an investment company that invests in hedge funds, giving investors diversification among hedge fund strategies and allowing smaller investors to access hedge funds in which they may not be able to invest directly. Investors in funds of funds incur additional fees from the managers of the funds of funds. A common fee structure from funds of funds is "1 and 10" in addition to any fees charged by the individual hedge funds within the fund-of-funds structure.

According to Hedge Fund Research, Inc., there are four main classifications of hedge fund strategies: event-driven, relative value, macro, and equity hedge fund.

- **Event-driven strategies** are typically based on a corporate restructuring or acquisition that creates profit opportunities for long or short positions in common equity, preferred equity, or debt of a specific corporation. Subcategories are merger arbitrage, distressed/restructuring, activist shareholder, and special situations.
- **Relative value strategies** involve buying a security and selling short a related security with the goal of profiting when a perceived pricing discrepancy between the two is resolved. Subcategories include convertible arbitrage fixed income, asset-backed fixed income, general fixed income, volatility, and multi-strategy.
- **Macro strategies** are based on global economic trends and events and may involve long or short positions in equities, fixed income, currencies, or commodities.
- **Equity hedge fund strategies** seek to profit from long or short positions in publicly traded equities and derivatives with equities as their underlying assets. Subcategories include market neutral, fundamental growth, fundamental value, quantitative directional, and short bias.

Hedge fund values are based on market values for traded securities in their portfolios, but must use estimated values for non-traded securities. For traded securities it is most conservative to use the prices at which a position could be closed: bid prices for long positions and ask prices for short positions. Some funds use the average of the bid and ask prices instead. For illiquid securities, market prices may be reduced for the degree of illiquidity. Some funds calculate a **trading NAV** in addition to the accounting NAV, by reducing asset values for their lack of liquidity.

Due diligence of available hedge funds may be somewhat hampered by a lack of transparency by funds that consider their strategies and systems to be proprietary information. Regulatory requirements for hedge fund disclosures are minimal.

The total fee paid by investors in a hedge fund consists of a management fee and an incentive fee. The **management fee** is earned regardless of investment performance and **incentive fees** are a portion of profits. Profits can be (1) any gains in value, (2) any gains in value in excess of the management fee, or (3) gains in excess of a **hurdle rate**. A hurdle rate can be a **hard hurdle rate** with incentive fees earned only on returns in excess of the benchmark, or a **soft hurdle rate** with incentive fees paid on all profits, but only if the hurdle rate is met.

A **high water mark** means incentive fees are only paid to the extent that the current value of an investor's account is above the highest value previously recorded. This feature ensures that investors will not be charged incentive fees twice on the same gains.

Management fees may be calculated on either the beginning-of-period or end-of-period values of assets under management. Incentive fees may be calculated net of management fees or independent of management fees.

Private Equity

Most private equity funds are **leveraged buyout funds** that invest either in private companies or in public companies they intend to take private, or **venture capital funds** that invest in early stage companies. Two smaller categories of private equity funds are *distressed investment funds and developmental capital funds*.

There is evidence that returns on private equity funds have been higher on average than those of traditional equity investments. There may also be portfolio diversification benefits from including private equity in portfolios. The standard deviation of private equity returns has been higher than the standard deviation of equity index returns, suggesting greater risk. As with hedge fund returns data, private equity returns data may suffer from survivorship bias and backfill bias.

Similar to hedge funds, private equity funds are typically structured as limited partnerships. **Committed capital** is the amount of capital provided to the fund by investors. The committed capital amount is typically not all invested immediately but is "**drawn down**" (invested), usually over three to five years, as securities are identified and added to the portfolio. Management fees are typically 1% to 3% of committed, rather than invested, capital.

Incentive fees for private equity funds are typically 20% of profits, but these fees are not earned until after the fund has returned investors' initial capital. A **clawback provision** requires the manager to return any incentive fees that would result in investors receiving less than 80% of the profits generated by portfolio investments as a whole. This situation can arise when returns on portfolio companies are high early and decline later.

Leveraged buyouts (LBOs) are the most common type of private equity fund investment. "Leveraged" refers to the fact that the fund's purchase of the portfolio company is funded primarily by debt. This may be bank debt, high-yield bonds, or **mezzanine financing**, which refers to debt or preferred shares that are subordinate to the high-yield bonds issued and carry warrants or conversion features.

Two types of LBOs are **management buyouts** (MBOs), in which the existing management team is involved in the purchase, and **management buy-ins** (MBIs), in which an external management team will replace the existing management team.

In an LBO, the private equity firm seeks to increase the value of the firm through management incentives, restructuring, cost reduction, revenue enhancement, or new management. Firms with high cash flow are attractive LBO candidates because their cash flow can be used to service the debt taken on for acquisition.

Venture capital funds invest in companies in the early stages of their development. Venture capital fund managers are closely involved in the development of portfolio companies, often sitting on their boards or filling key management roles.

Venture capital investment at different stages of the company's life includes the following:

- **Formative stage** investment refers to investments made during a firm's earliest period, including:
    - **angel investing stage** (individuals; idea stage and business plan)
    - **seed stage** (VC investors; product development and marketing)
    - **early stage** (VC investors; initial commercial production and sales)
- **Later stage investment** (company is operating; expansion of production, and marketing)
- **Mezzanine-stage financing** (capital provided to prepare the firm for an IPO, refers to the timing of the financing rather than the type of financing)

Other private equity strategies include **developmental capital** or **minority equity investing**, which refer to providing capital for business growth or restructuring. If the firms financed are public, such financing is referred to as **private investment in public equities** (PIPEs).

Distressed investing involves buying debt of a firm that is potentially or currently in default, or in bankruptcy proceedings. Investors in distressed debt often take an active role in the turnaround by working with management on reorganization or to determine the direction the company should take. Distressed debt investors are sometimes referred to as **vulture investors**.

Real Estate

Real estate as an asset class can provide diversification benefits to an investor's portfolio and a potential inflation hedge because rents and real estate values tend to increase with inflation. Assets included under the heading of real estate investments include residential property, commercial property, and loans with residential or commercial property as collateral.

Residential property is considered a direct investment in real estate. Most buyers take on a mortgage to purchase. The mortgage lender has a direct investment in a whole loan and is said to hold the mortgage. Mortgages are often pooled into mortgage-backed securities (MBS), which represent an indirect investment in the mortgage loan pool.

Commercial real estate properties generate income from rents. Homes purchased for rental income are considered investment in commercial property. Long time horizons, illiquidity, the large size of investment needed, and the complexity of the investments make commercial real estate inappropriate for many investors. As with residential mortgages, commercial property mortgages can be pooled into commercial mortgage-backed securities.

Real estate investment trusts (REITs) issue shares that trade publicly like shares of stock. REITs are often identified by the type of real estate assets they hold: mortgages, hotel properties, malls, office buildings, or other commercial property. Typically, 90% of income must be distributed to shareholders to avoid taxes on this income that would have to be paid by the REIT.

Two additional assets considered as real estate investments are **timberland** and **farmland**, for which one component of returns is the proceeds of timber or agricultural product sales. Timberland returns also include price changes on timberland, which depend on expectations of lumber prices. Farmland returns include land price changes and are affected by price changes in agricultural commodities, as well as the quality and quantity of the crops produced.

Three methods are commonly used to value real estate:

1. The **comparable sales approach** bases valuation on recent sales of similar properties. Values for individual properties include adjustments for differences between the characteristics of the specific property and those of the comparable properties, such as age, location, condition, and size.

2. The **income approach** estimates property values by calculating the present value of expected future cash flows from property ownership or by dividing the net operating income (NOI) for a property by a capitalization rate.

3. The **cost approach** estimates the replacement cost of a property. The value of the land included and the cost of rebuilding at current construction costs are summed to estimate replacement cost.

Commodities

The most commonly used instruments to gain exposure to commodity prices are derivatives. Futures, forwards, options, and swaps are all available forms of commodity derivatives. Other methods of gaining exposure to commodities returns include exchange-traded funds, equities that are linked to a commodity, managed futures funds, individual managed accounts, and commodity funds in specific sectors.

Returns on commodities over time have been less than returns on global stocks or bonds. Correlations of commodity returns with those of global equities and global bonds have been low, so that adding commodities to a traditional portfolio has provided diversification benefits. Because commodity prices tend to move with inflation rates, holding commodities can hedge inflation risk.

A commodity today and a commodity in the future are different products. Purchasing a commodity today gives the buyer use of it if needed, while contracting for it to be delivered six months from today avoids storage costs and interest costs on invested cash. An equation that considers these aspects is:

$$\text{futures price} \approx \text{spot price } (1 + \text{risk-free rate}) + \text{storage costs} - \text{convenience yield}$$

Convenience yield is the value of having the physical commodity for use over the period of the futures contract. If there is little or no convenience yield, futures prices will be higher than spot prices, a situation termed **contango**. When the convenience yield is high, futures prices will be less than spot prices, a situation referred to as **backwardation**.

The return on a commodity investment includes:

- *Collateral yield:* the return on the collateral posted to satisfy margin requirements.
- *Price return:* the gain or loss due to changes in the spot price.
- *Roll yield:* the gain or loss resulting from re-establishing positions as contracts expire.

Note that *roll yield* is positive if the futures market is in backwardation and negative if the market is in contango.

Infrastructure

Infrastructure investments include transportation assets such as roads, airports, ports, and railways, as well as utility assets, such as gas distribution facilities, electric generation and distribution facilities, and waste disposal and treatment facilities. Other categories of infrastructure investments are communications (e.g., broadcast assets and cable systems) and social (e.g., prisons, schools, and health care facilities).

Investments in infrastructure assets that are already constructed are referred to as **brownfield investments**. In general, investing in brownfield investments provides stable cash flows and relatively high yields but offers little potential for growth.

Investments in infrastructure assets that are to be constructed are referred to as **greenfield investments**. Investing in greenfield investments is subject to more uncertainty and may provide relatively lower yields but offers greater growth potential.

Infrastructure assets typically have long lives and are quite large in cost and scale, so direct investments in them are not liquid. ETFs, mutual funds, private equity funds, or master limited partnerships that invest in infrastructure assets can provide greater liquidity.