金程教育 GOLDEN FUTURE

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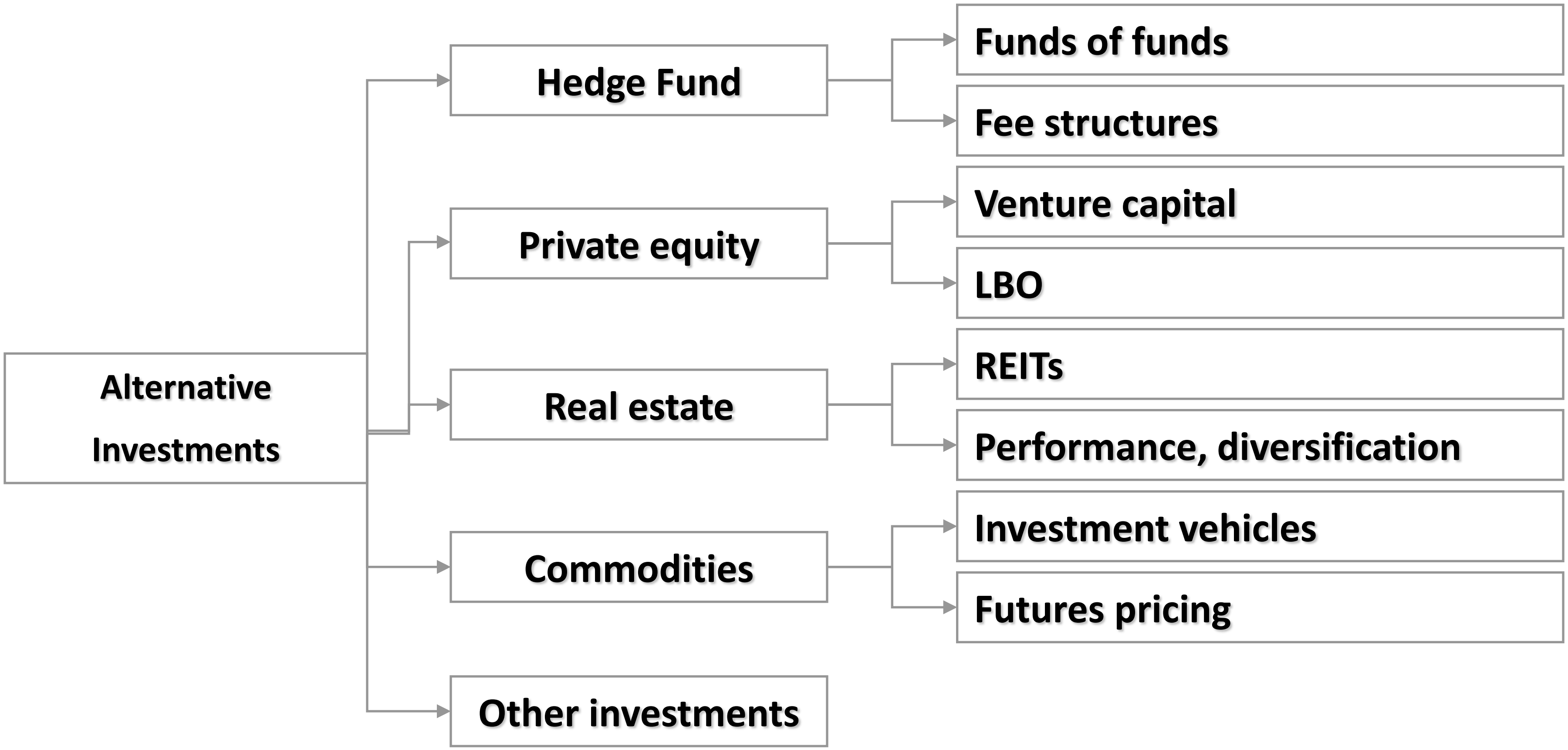
CFA一级培训项目

Alternative Investments

CFA一级课程框架

Study Session 1	Ethics & Professional Standards	15
Study Session 2-3	Quantitative Methods	12
Study Session 4-6	Economic Analysis	10
Study Session 7-10	Financial Statement Analysis	20
Study Session 11	Corporate Finance	8
Study Session 12	Portfolio Management	5
Study Session 13-14	Equity Investments	10
Study Session 15-16	Fixed Income Analysis	12
Study Session 17	Derivative Investments	5
Study Session 18	Alternative Investments	3
	Total:	100

Framework of alternative investments



R63. Alternative Investments

Traditional vs. alternative investments

- Traditional: long-only investments in stocks, bonds, and cash, etc.
- Alternative: other investment vehicles which fall outside the scope of traditional investments, extensive use of leverage.

Characteristics of alternative investments

- Illiquidity of underlying investments
- Narrow manage specialization
- Low correlation with traditional investments
- Low level of regulation and less transparency
- Limited and potentially problematic historical risk and return data
- Unique legal and tax considerations

Not always true!

e.g. high correlation in financial crisis

R63. Alternative Investments

- **Returns for alternative investments**
  - Empirically, the mean returns to hedge funds, real estate, private equity, and venture capital exceeded the mean returns to global stocks and bonds.
  - May be due to active exploitation of less efficiently priced assets, illiquidity premiums, and/or account leverage. May also be the result of tax advantage.
- **Risks for alternative investments**
  - The average standard deviation is higher than traditional investments
    - ✓ But hedge funds have lower average standard deviation and higher mean return, this may be due to hedge fund indices' reporting biases.
- **Historically, the correlation between alternative and traditional investments is low. It seems that adding alternative investments to a portfolio will improve both portfolio risk and expected return(risk/return profile)**

Example

- Adding alternative investments to a portfolio of traditional investments will *most likely* result in a new combined portfolio with returns and standard deviation that are, respectively:

Returns	Standard Deviation
A. lower	lower
B. higher	lower
C. higher	higher

- Solution: B
  - Because the risk/return profile of the overall portfolio will potentially improve. The overall risk will most likely drop, and the overall return will most likely rise.

R63. Risk – Return measures

- **Is Sharpe ratio appropriate for alternative investments?**
  - ***Illiquid nature of the assets***
    - ✓ Return may not be reliable overstated
    - ✓ Standard deviation may not be reliable understated
- **Normal distribution?**
  - ***Alternative investment return: leptokurtic, negatively skewed***
    - ✓ Non-normal distribution cannot use standard deviation for risk measure
    - ✓ VaR, Sortino ratio would be appropriate
    - ✓ Assuming normal distribution underestimate downside risk
- **Tail events**
  - ***Stress testing/scenario analysis***

R63. Alternative Investments

- **Example:**
- Compared with traditional investments, alternative investments are most likely to be characterized by high:

  A. leverage

  B. liquidity

  C. Regulation

- Compared to managers of traditional investments, managers of alternative investments are likely to have fewer restrictions on:

  A. holding cash.

  B. buying stocks.

  C. using derivatives.

R63. Alternative Investments- Categories

- **Hedge funds**
  - Manage portfolios of securities and derivative positions using a variety of strategies. Long and short positions, highly leveraged, absolute return.
- **Private equity funds**
  - Invest in start-up companies that are not publicly traded, or in public companies with the intent to take them private.
- **Real estate**
  - Outright ownership or through real estate equity/debt investments. E.g. MBS, REITs, etc.
- **Commodities**
  - In physical commodity products, either through owning cash instruments, utilizing derivatives, or investing in businesses engaged in the production of commodities.
- **Other**
  - Tangible (Fine wine, art, stamp, coin, etc.) and intangible (patents)

R63. Hedge funds

Characteristics of hedge funds

- Aggressively managed investment portfolios across asset classes. Use of leverages, take long and short positions, and/or uses derivatives.
- Aimed at higher returns, either in absolute or relative sense.
- Private investment partnership open to a limited number of investors willing and able to make a large initial investment.
- Hedge fund indices may not reflect actual performance
  - ✓ Survivorship bias
  - ✓ Backfill bias
- Less restricted than traditional investments
- Often impose restrictions on redemptions.
  - ✓ Lockup period
  - ✓ Notice period

R63. Alternative Investments- Investment structures

➢ Most common structure: Partnership

- **Limited partner (LP): LP is the investors who understand and able to assume the risks in the investment.**
  - ✓ LP owns a fractional interest based on their investment and as agreed to by the partners.
  - ✓ LP's fractional interest is called his/her share of the partnership.
  - ✓ The partnerships are located in tax-efficient locations.
- **General partner (GP): GP runs the fund**

R63. Funds of funds

- **Funds of funds:**
  - ***Funds of funds are funds that hold a portfolio of hedge funds.***
    - ✓ FOFs enable small investors to have returns in hedge funds.
    - ✓ FOFs have some expertise in conducting due diligence on hedge funds
    - ✓ Negotiate better redemption terms for investors.
    - ✓ FOFs invest in numerous hedge funds, diversifying across fund strategies, investment regions, and management styles.
    - ✓ *FOFs managers charge an additional layer of fees beyond the fees charged by the individual hedge funds in the portfolio*

Example

- For a hedge fund investor, a benefit of investing in a fund of funds is *least likely* the:

  A. multilayered fee structure.

  B. higher level of due diligence expertise.

  C. ability to negotiate better redemption terms.

- Solution: A
  - Because funds of funds typically have a multilayered fee structure that may dilute the returns to the investor.

R63. Hedge Fund Strategies

Hedge Fund Strategies

- Event-driven strategies
- Relative value strategies
- Macro strategies
- Equity hedge strategies

R63. Hedge fund strategies - Event-driven strategies

- **Event-driven strategies**
  - Seek to profit from short-term events that will affect individual companies.
  - Considered “bottom up” strategy.
  - Include long/short positions in common and preferred stocks, as well as debt securities and options.
- **Subdivisions**
  - **Merger arbitrage:** long the stock of the company being acquired, and short the stock of the acquiring company.
  - **Distressed/restructuring:** focus on the securities of companies either in bankruptcy or perceived to be near to bankruptcy.
  - **Activist shareholder:** purchase sufficient equity to influence a company's policies or direction.
  - **Special situations**: focus on companies that are currently engaged in restructuring activities other than merger/acquisitions and bankruptcy.

R63. Hedge fund strategies - Relative value strategies

- **Relative value strategies**
  - Seek to profit from a pricing discrepancy between related securities.
- **Examples of relative value strategies**
  - **Fixed income convertible arbitrage:** Exploit pricing discrepancies between convertible bond and the common stock of the issuing companies.
  - **Fixed Income Asset Backed:** Exploit pricing discrepancies among various MBS and ABS.
  - **General Fixed Income :** focus on the relative value within the fixed income markets.
  - **Volatility:** Exploit pricing discrepancies arising from differences between returns volatility implied by options prices and manager expectations of future volatility.
  - **Multi-Strategy:** looks for investment opportunities wherever they might exist.

R63. Hedge fund strategies – Macro strategies

Macro strategies

- “top down” approach to identify economic trends
- Use long/short positions to potentially profit from a view on overall market direction as influenced by major economic trends or events.
- Trade opportunistically in the fixed income, equity, currency, and commodity markets.

R63. Hedge fund strategies – Equity hedge strategies

- **Equity hedge strategies**
  - Seek to profit from long or short positions in publicly traded equities and derivatives with equities as their underlying assets
- **Examples of equity hedge strategies**
  - **Market Neutral:** Maintain a net position that is neutral with respect to market risk. The intent is to profit from individual securities movements while hedging against market risk.
  - **Fundamental Growth:** fundamental analysis to identify companies expected to exhibit high growth and capital appreciation.
  - **Quantitative Directional:** technical analysis to identify companies that are under- and overvalued.
  - **Short Bias:** varies its net short exposure based upon market expectations, going fully short in declining markets.
  - **Sector Specific:** exploit expertise in a particular sector.

R63. Hedge Fund Fees

- **Management fee**
  - Based on capital under management.
    - ✓ Attractive to portfolio managers because the management fee alone will generate significant revenue if assets under management are large.
  - Earned irrespective of returns.
- **Incentive fee**
  - Based on profits net of (or before) management fee
  - Only earned if the return exceeds a hurdle rate
  - High water mark highest value reported
    - ✓ The hedge fund must recover past losses and return to previous high water mark before any additional incentive fee is earned.
    - ✓ Protect clients from paying twice for the same performance.
  - "2 and 20" means 2% management fee and 20% incentive fee for hedge funds.
    - ✓ FOFs may charge extra 1% management fee and 10% incentive fee.
- **Negotiable terms**
  - Fees, notice and lockup periods are negotiable with potential investors.
    - ✓ longer investment periods, lower fees.

R63. Hedge Fund Fees

Example 1

UC is a hedge fund with $250 million of initial capital. It charges a 2% management fee based on assets under management at year end, and a 20% incentive fee based on returns in excess of an 8% hurdle rate. In its first year, UC appreciates 16%. Assume management fees are calculated using end-of-period valuation. The investor's net return assuming the performance fee is calculated net of the management fee is closest to:

A. 11.58%

B. 12.54%

C. 12.80%

R63. Hedge Fund Fees

Solution to 1

B is correct. The net investor return is 12.54%, calculated as:

- End of year capital = $250 million * 1.16 = $290 million
- Management fee = $290 million * 2% = $5.8 million
- Hurdle amount = 8% of $250 million = $20 million;
- Incentive fee = ($290 - $250 - $20 - $5.8) million * 20% = $2.84 million
- Total fees to UC = ($5.8 + $2.84) million = $8.64 million
- Investor net return: ($290 - $250 - $8.64) / $250 = 12.54%

R63. Hedge Fund Fees

Example 2

Capricorn Fund of Funds invests GBP 100 million in each of Alpha Hedge Fund and ABC Hedge Fund. Capricorn FOF has a "1 and 10" fee structure. Management fees and incentive fees are calculated independently at the end of each year. After one year, net of their respective management and incentive fees, the investment in Alpha is valued at GBP80 million and the investment in ABC is valued at GBP140 million. The annual return to an investor in Capricorn, net of fees assessed at the fund of funds level, is closest to:

A. 7.9%.

B. 8.0%.

C. 8.1%.

R63. Hedge Fund Fees

Solution to 2

A is correct because the net investor return is 7.9%, calculated as:

First, note that "1 and 10" refers to a 1% management fee, and a 10% incentive fee

- End of year capital = GBP140 million + GBP80 million = GBP220 million
- Management fee = GBP220 million * 1% = GBP2.2 million
- Incentive fee = (GBP220 - GBP200) million * 10% = GBP2 million
- Total fees to Capricorn = (GBP2.2 + GBP2) million = GBP4.2 million
- Investor net return: (GBP220 - GBP200 - GBP4.2) / GBP200 = 7.9%

R63. Hedge funds – other considerations

- **Using leverage to seek higher returns but may magnify losses**
  - Investors are required to put up some collateral
    - ✓ Helps to protect against default.
    - ✓ Buying on margin
      - The margin requirement depends on the riskiness of the investment and the creditworthiness of the hedge fund.
- **Redemptions also magnify losses for hedge funds**
    - ✓ Redemption occurs when a hedge fund is performing poorly.
      - When drawdown (reduction in NAV) occurs, investors may require liquidation of their positions and incur transaction costs. Thus further magnify the losses.
    - ✓ Ways to prevent redemptions
      - Redemption fees
      - Notice periods
      - Lockup periods
      - Investing in FOFs

R63. Hedge fund valuation issues

- **When using market prices for valuation**
  - ***Common practice***: use average quote, (bid + ask)/2
  - ***Conservative approach*** : use bid prices for longs and ask prices for shorts.
- **Illiquid underlying positions**
  - ***No reliable market values***: use statistical models to compute estimated values.
    - ✓ Models should be independently tested, benchmarked, and calibrated to industry accepted standards to ensure consistency.
    - ✓ In-house valuations to prevent conflicts of interests affecting estimates.
  - ***Liquidity discounts***: reflect fair value.
    - ✓ Two NAVs
      - Trading NAV: incorporates liquidity accounts, based on the size of the position held relative to the total amount outstanding in the issue and its trading volume
      - Reporting NAV: based on quoted market prices.

R63. Due diligence

- **Funds of funds have the expertise, but that comes at a cost.**
  - Investors should still conduct due diligence when choosing an FOFs.
  - Key factors to consider
    - ✓investment strategy
    - ✓investment process
    - ✓competitive advantage,
    - ✓track record,
    - ✓size and longevity,
    - ✓management style,
    - ✓key-person risk,
    - ✓reputation,
    - ✓investor relations,
    - ✓plans for growth,
    - ✓systems risk management.

R63. Private Equity

- **Private equity (PE):** investing in privately owned companies or in public companies with the intent to take them private.
  - **Leveraged buyouts (LBOs):** acquire companies with a significant percentage of the purchase price financed through debt.
    - ✓ Assets of the target company as the collateral for the debt
    - ✓ The debt becomes part of the capital structure of the target company
  - **Venture capital:** invest in private companies with high growth potential.
  - **Development capital:** minority equity investment in mature firms that are looking for expanding or restructuring opportunities.
  - **Distressed investing:** buying the debt of mature companies in financial difficulties.

R63. Private Equity Strategies – LBOs

LBO with debt financing

- If debt financing is unavailable or costly, less likely to occur.

Typical LBO capital structure

- Equity, leveraged loans, high yield bonds
  - ✓ Mezzanine financing is an alternative to bonds.
  - ✓ Mezzanine financing refers to debt or preferred shares with warrants or conversion options. It pays a higher coupon rate than bank loans and bonds.
- Leveraged loans carry covenants to protect the investors
  - ✓ Require the company to maintain specified financial ratios within limits, submit information, or operate within certain parameters.
  - ✓ Restrict the company from further borrowing, or impose limits on paying dividends or making operating decisions.
- Financed through high yield bonds
  - ✓ Key difference: leveraged loans are senior secured debt, while bonds are unsecured in bankruptcy.

R63. Private Equity Strategies – LBOs

Characteristics of Attractive Target Companies for LBOs

- ***Undervalued/depressed stock price***
  - ✓ The intrinsic value of the company is perceived higher than market price. Private equity firms are willing to pay a premium to the market price to secure shareholder approval
- ***Willing management***
  - ✓ Existing management is looking for a deal.
- ***Inefficient companies***
- ***Strong and sustainable cash flow***
  - ✓ Cash flow is necessary to make interest payments on the increased debt load.
- ***Low leverage***
  - ✓ Easier for PE firms to utilize debt
- ***Assets***
  - ✓ Physical assets can be used as security

Example

- Which attributes would a private equity firm most likely consider when deciding if a company is particularly attractive as a leveraged buyout target?

  A. Sustainable cash flow

  B. Efficiently managed companies

  C. Market value exceeds intrinsic value

- Solution: A
  - Because private equity firms look for companies with strong cash flow and that have a significant amount of physical assets. These physical assets can be used as security and borrowed against.

R63. Private Equity Strategies – Venture capital

- **The stage of venture capital investing**
  - ***Formative stage***:
    - ✓ ***Angel investing***: At the idea stage, funds are used to transform the idea into a business plan and to assess market potential. Often provided by individuals.
    - ✓ ***Seed stage***: support product development and/or marketing efforts. The first stage at which VC funds invest.
    - ✓ ***Early stage***: help companies move toward operation but before commercial production and sales have occurred.
  - ***Later stage***: after commercial production and sales have begun but before any IPO. Funds may be used for expansion.
  - ***Mezzanine stage***: prepare to go public. Represent the bridge between the expanding company and the IPO.

R63. Private Equity Strategies – Venture capital

Balanced-Stage Financing

- **Formative-Stage**
  - **Angel investing**
  - **Seed-Stage**
  - **Early-Stage**
- **Later-Stage** ⇐ **Expansion-Stage Financing**
- **Mezzanine Stage** ⇐ **Bridge to IPO**

R63. Private Equity Structure and Fees

- **PE firms are structured like hedge funds**
  - PE funds are structured as partnerships where the PE firm is the GP, and investors are LPs.
- **Fee structures are also like hedge funds**
  - **Management fees:** 1~3% of committed capital.
    - ✓**Distinction from hedge funds**: Management fee is based on committed capital, **not** invested capital.
  - **Incentive fees:** GP does not earn an incentive fee until the LPs have received initial investment back.
  - **Policies that protect LPs**
    - ✓Clawback provision: return any incentive fees until LPs received initial investment back and their profits.

R63. Private Equity – Exit strategies

- **Common exit strategies:**
  - ***Trade Sale***: sale of a company to a strategic buyer
    - ✓ **Advantages**: (a) immediate cash exit; (b) potential for high valuation; (c) fast and simple execution; (d) lower transaction costs than an IPO; (e) lower levels of disclosure and higher confidentiality
    - ✓ **Disadvantages**: (a) possible opposition by management; (b) lower attractiveness.to employees of the portfolio company; (c) limited number of potential buyers; (d) a possible lower price than in an IPO
  - ***IPO***
    - ✓ **Advantages**: (a) potential for the highest price; (b) management approval; (c) publicity for the private equity firm; (d) ability to retain future upside potential
    - ✓ **Disadvantages**: (a) high transaction costs; (b) long lead times; (c) risk of stock market volatility; (d) high disclosure requirements; (e) potential lock-up period; (f) IPO is usually only appropriate for larger companies with attractive growth profiles.

R63. Private Equity – Exit strategies

Common exit strategies (con't):

- ***Recapitalization***
  - ✓ Not a true exit strategy, but allows investors to extract money from the company.
  - ✓ Very popular when interest rates are low
  - ✓ Often a prelude to a later exit
- ***Secondary Sale:*** sale to another private equity firm or other group of investors
- ***Write-off/Liquidation:*** When a transaction has not gone well, liquidate the investment to move on to other projects.

R63. Private Equity – Portfolio Company Valuation

Three approaches to value a company

- ***Market or comparable***: value a company or its equity using multiples
  - ✓ EBITDA multiple
- ***DCF approach***
  - ✓ FCFF and WACC company value
  - ✓ FCFE and K_e company's equity value
  - ✓ Simple approach: income or cash flow divided by a capitalization rate
- ***Asset-based***
  - ✓ arrives at the value of the company to the equity holders
  - ✓ assumes that the company value = Asset – liabilities
  - ✓ Can be valued by using fair values or liquidation values
    - Fair values assume an orderly transaction
    - Liquidation values assume a distressed transaction

R63. Private Equity – Investment considerations

- **Current and anticipated economic conditions**
  - Interest rate and capital availability expectations
  - Refinancing risk
- **Long term investments**
  - Requires a long-term commitment on the part of an LP
    - ✓ Illiquidity aversion: liquidity risk premium
- **Due diligence**
  - GP's experience and knowledge – financial and operating
  - valuation methodology
  - alignment of the GP's incentives with the interests of the LPs
  - the plan to draw on committed capital
  - planned exit strategies

R63. Real Estate

➢ Key reasons for investing in real estate

- Competitive **long-term total returns** driven by income generation and capital appreciation.
- Fixed rents may lessen cash flow impact from economic shocks.
- Diversification benefits may be provided by less than perfect correlation with other asset classes
- Potential to provide an inflation hedge if rents can be adjusted quickly for inflation.

R63. Real Estate

Investment categories

- ***Residential property***
- ***Commercial real estate***
  - ✓ Appropriate direct investment (equity and debt) for institutional funds or high-net-worth individuals with long time horizons and limited liquidity needs.
- ***REIT Investing***
  - ✓ Risk and return characteristics depend on the type of investment
    - Mortgage REITs
    - Equity REITs
- ***MBS***
  - ✓ MBS structure is based on the securitization model of buying a pool of assets and assigning the income and principal returns into individual security tranches.
  - ✓ MBS may be issued privately or publicly.
- ***Timberland and Farmland***

R63. Real Estate – Performance and diversification benefits

Performance measurements

- Appraisal index
  - ✓ use estimates of value (appraisals) as inputs to the indices
  - ✓ rely on comparable sales and cash flow analysis techniques
  - ✓ understate volatility
- Repeat sales (transaction-based) index
  - ✓ use changes in prices of properties to construct the indices
  - ✓ sample selection bias
- REIT index
  - ✓ use the prices of publicly traded shares of REITs to construct the indices
  - ✓ More frequently traded, more reliable is the index

Diversification benefits

- REIT index and equity returns: high correlation
- REIT index and bond returns: low correlation

R63. Real Estate Valuation

Common techniques for appraising real estate property

- ***Comparable sales approach***
  - ✓ determine an approximate value based on recent sales of similar properties.
  - ✓ condition, age, location, and size
- ***Income approach***
  - ✓ **Direct capitalization**
    - NOI property level CFO; cap rate
    - strength of tenants, the level of landlord involvement, the extent of repairs and improvements, the vacancy rate, management and operating costs, expected inflation of costs and rent.
  - ✓ **DCF approach**
- ***Cost approach***
  - ✓ evaluate the replacement cost of the property

R63. Real Estate Valuation

REIT valuation

- ***Income based approach***
  - ✓ Similar to the direct capitalization approach
  - ✓ Funds from operation (FFO) and adjusted funds from operation (AFFO)
  - ✓ Cap rate
- ***Asset based approach***
  - ✓ REIT’s NAV = MKT value of assets – MKT value of liabilities
  - ✓ REIT shares trade at prices that differ from its NAV per share. (premiums or discounts)

Example

- A real estate property valuation would least likely use a(n):

  A. income approach.

  B. asset-based approach.

  C. comparable sales approach.

- Solution: B
  - The three approaches to valuing a property are income, comparable sales, and cost. An asset-based approach can be used for real estate investment trusts, but not for valuing individual real estate properties.

R63. Other Commodity Investment Vehicles

Alternative means of achieving commodity exposure:

- ***ETF***
  - ✓ suitable for those who can only buy equity or seek the simplicity of trading.
  - ✓ may use leverage
- ***Common stock of companies exposed to a particular commodity***
  - ✓ E.g. Sinopec
- ***Managed futures funds***
  - ✓ Similar to hedge funds in structure
- ***Individual managed accounts***
  - ✓ managed by professional managers on behalf of high net worth individuals or institutional investors
- ***Funds in specific commodity sectors***

R63. Commodities

- **The role of commodities for investing in production and consumption**
  - Investing in commodities gives an investor exposure to an economy's production and consumption growth.
    - ✓ E.g. when the economy experiences growth, the demand for commodities increases, and price increases are likely.
    - ✓ During recessions, commodity prices are likely to fall with decreased demand.
- **Overall, swings in commodity prices are likely to be larger than changes in finished goods prices.**

R63. Introduction to Commodities

- **Most investors invest in commodities using commodity derivatives:**
  - ***Futures and forward contracts***
    - ✓ Futures contracts are exchange-traded products (ETPs)
      - No physical delivery
    - ✓ Forward contracts trade OTC
      - Physical delivery can be expected
  - ***Options contracts***
    - ✓ Options can be ETPs or OTC traded
  - ***Swaps contracts***
- **Commodity indices**
  - use the price of futures contracts on the commodities, rather than the prices of the commodities themselves.
  - performance of an index can be quite different from the performance of the underlying commodities.
  - vary in the constituents and the weighting methods used

R63. Commodities

- **Relationship between spot prices and expected future prices**
  - ***Contango***
    - ✓ **Futures price > Spot price**
  - ***Backwardation***
    - ✓ **Futures price < Spot price**
- **Futures markets that are dominated by long hedgers (users of the commodity who buy futures to protect against price increases) tend to be in contango.**
- **Futures markets that are dominated by short hedgers (producers of the commodity who short futures to protect against price decreases) tend to be in backwardation.**

R63. Commodities

Sources of return and risk

- **Price return** on a long-only investment in commodities derivatives can be positive or negative, depending on the direction of change in the spot price.
- **Collateral yield**: an additional return that the investor deposits cash as collateral for the futures contract purchased with the exchange.
- **Roll yield**: since commodity derivative contract expire, a speculator or hedger who wants to maintain a position must close out the expiring derivative position and re-establish a new position.
    - ✓ **"Rolling over" the position leads to gains (backwardation) or losses (contango) are termed the roll yield.**

R63. Pricing of Commodity Futures Contracts

The price of a futures contract

$$\boxed{\text{futures price} \approx \text{spot price}(1+r) + \text{storage costs} - \text{convenience yield}}$$

✓ r is the period's short term risk free interest rate.

- The storage and interest costs: "the cost of carry" or "the carry"
- The buyer of a futures contract does not have immediate access to the commodity but will receive it in the future loss of convenience yield

R63. Commodities

- **Example:**
- A commodities market tends to be in backwardation if:
  - A. it is dominated by end users of the commodity.
  - B. the spot prices is greater than futures prices.
  - C. futures prices are greater than the spot price.

- The source of return on a long-only commodity investment that represents the change in the spot price over the life of the forward or futures contract used is the:
  - A. Roll yield
  - B. Price return
  - C. Collateral yield

R63. Other Alternative Investments

- **Collectibles:**
  - Definition: Tangible assets such as antiques and fine art, fine wine, rare stamps and coins, jewelry and watches, and sports memorabilia.
  - do not provide current income, but can potentially provide long-term capital appreciation, diversify a portfolio, and be a source of enjoyment
  - can fluctuate dramatically in value, highly illiquid

It's not the end but just the beginning.

A true friend is the one who holds your hand and touches your heart.

一个真正的朋友会握着你的手，触动你的心。