

## 2024 年 CFA 一级

### ——Alternative Investments 学习笔记

本科目学习建议：

- 学完衍生品、固定收益、权益投资、组合管理这四个科目，再来学习本科目。

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Module 1:Alternative Investment Features, Methods, and Structures(☆☆)

Module 2:Alternative Investment Performance and Returns(☆☆☆)

Module 3:Investments in Private Capital: Equity and Debt(☆☆☆)

Module 4:Real Estate and Infrastructure(☆☆)

Module 5:Natural resources(☆)

Module 6:Hedge Funds(☆☆☆)

Module 7:Introduction to Digital Assets(☆)

## Module 1: Alternative Investment Features, Methods, and Structures

### 1) Traditional investments vs. Alternative investments

- traditional investments 传统投资
  - ✓ investments in long-only, publicly traded investments in stocks, bonds, and cash.
- alternative investments 另类投资
  - ✓ 广义上的另类投资指的是除传统投资意外的投资
  - ✓ 这个科目中, 另类投资主要研究:
    - ✧ 1. Private Capital 私募资本:
      - Private Equity (PE) 私募股权
      - Private Debt 私募债券
    - ✧ 2. Real Assets 实物资产:
      - Real Estate 房地产
      - Infrastructure 基础设施
      - Natural Resources 自然资源
      - Commodities 商品
      - Agricultural land and Timberland 农业用地和林地
    - ✧ 3. Hedge Funds 对冲基金

### 2) 另类投资特征

- The need for **specialized knowledge** to value cash flows and risks 【需要专业技能。】
- Typically low correlation of returns with more traditional asset classes. 【和传统投资之间的相关性低, 分散化效果好。】
- Illiquidity, long investment time horizons, and large capital outlays 【流动性差、投资时间跨度长、资本投入大】

As a result of these characteristics, alternative investments often exhibit the following:

- ✓ Different investment structures due to the challenges of direct investment; 【不同的投资结构: 直接投资存在一定的挑战, 因此另类投资通常采用不同的投资结构。比如基金、合伙企业或其他形式】
- ✓ Incentive-based fees to address/minimize information asymmetry between managers and investors 【激励费用: 为了解决或最小化管理者和投资者之间的信息不对称, 一些另类投资采用基于绩效的费用结构】
- ✓ Performance appraisal challenges 【绩效评估挑战, 因为另类投资的复杂性和独特性】

### 3) Investment Methods

● 3 种投资方式, 投资者角度

✓ Fund investment 基金投资 (例如 a in a PE fund, 也叫间接投资 Indirect investment)

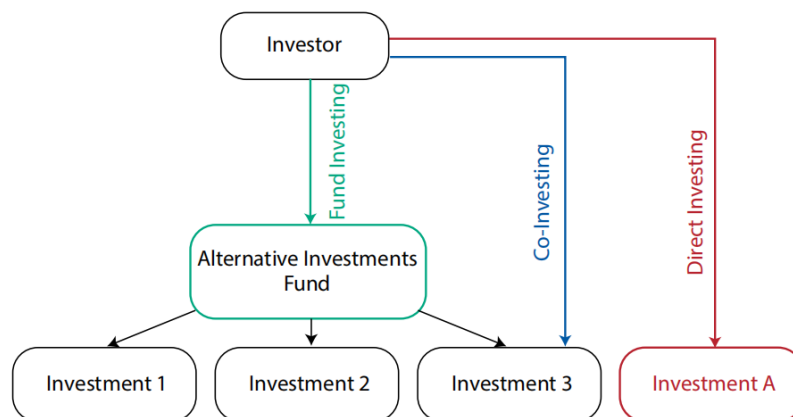
- 投资者向一个基金提供资金, 基金代表投资者识别、选择并进行投资。以**间接方式投资于另类资产**。
- 作为回报, 投资者需支付管理费用, 以及一定绩效费用。
- 基金**投资者在投资决策上几乎没有或没有任何自主权**, 因为他们的选择仅限于投资或不投资于该基金。
- 基金投资适用于所有主要的另类投资类型, 包括对冲基金、私募股权、房地产、基础设施和自然资源等。

✓ Direct investment 直接投资 (例如 infrastructure or real estate)

- 投资者通常通过**直接投资**进行个别的另类投资, 而**无需中介**。
- 直接投资者在投资选择、融资方法 and 时间方面拥有最大的灵活性和控制权。
- 直接投资需要投资者具备提供专业知识、技能和监督能力所需的资源。

✓ Co-investment 共同投资

- 共同投资指投资者通过基金间接投资于资产, 但同时拥有权利 (称为共同投资权利 co-investment rights) 直接投资于同一资产。
- 通过共同投资, **投资者能够扩展投资知识、技能和经验, 以较低费用获得投资机会**。
- 基金经理通过选择共同投资者可以加速投资时间、扩大新投资范围和增加投资组合的多样性。

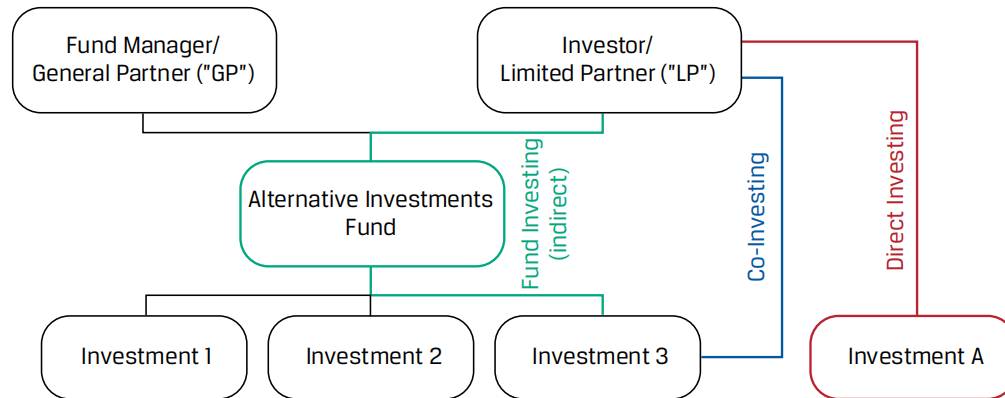


	Advantages	Disadvantages
<b>Fund investing</b> 间接投资	<ul style="list-style-type: none"> <li>■ <b>Lower level of investor involvement</b> as the fund managers provide investment services and expertise</li> <li>■ Access to alternative investments without possessing a high degree of investment expertise 【省心】</li> <li>■ <b>Lower minimum capital requirements</b></li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Costly management and performance fees</b></li> <li>■ Investor must conduct thorough <b>due diligence</b> when selecting the right fund because of the wide dispersion of fund manager returns</li> <li>■ Investors <b>less able to exit</b> the investment as funds typically have lock-ups and other restrictions</li> </ul>
<b>Co-investing</b>	<ul style="list-style-type: none"> <li>■ Investors can learn from the fund's process to become better at direct investing</li> <li>■ Reduced management fees</li> <li>■ Allows more active management of the portfolio compared with fund investing and allows for a deeper relationship with the manager</li> </ul>	<ul style="list-style-type: none"> <li>■ Reduced control over the investment selection process compared with direct investing</li> <li>■ May be subject to <b>adverse selection bias</b> 逆向选择偏差</li> <li>■ Requires more active involvement compared with fund investing, which can be challenging</li> </ul>
<b>Direct investing</b>	<ul style="list-style-type: none"> <li>■ Avoids paying ongoing management fees to an external manager</li> <li>■ <b>Greatest amount of flexibility</b> for the investor</li> <li>■ <b>Highest level of control</b> over how the asset is managed</li> </ul>	<ul style="list-style-type: none"> <li>■ <b>Requires higher internal investment costs</b></li> <li>■ Less access to a fund's ready diversification benefits or the fund manager's sourcing network</li> <li>■ Requires more complex due diligence because of the absence of a fund manager</li> <li>■ <b>Higher minimum capital requirements</b></li> </ul>

- 根据投资方法（直接投资、共同投资或基金投资）的不同，另类投资需要采用不同的尽职调查方法。
  - ✓ Direct investing: 重点关注 company itself, at a very detailed level.
  - ✓ Fund investing: 重点关注 fund manager
  - ✓ Co-investing: 重点关注 company&fund manager
- 运营、财务、交易对手和流动性风险可能是投资另类投资的关键考虑因素。这些风险可以在尽职调查过程中进行分析。

#### 4) Partnership Structures 合伙模式

- 另类投资工具常采用有限合伙企业(Limited partnerships)形式



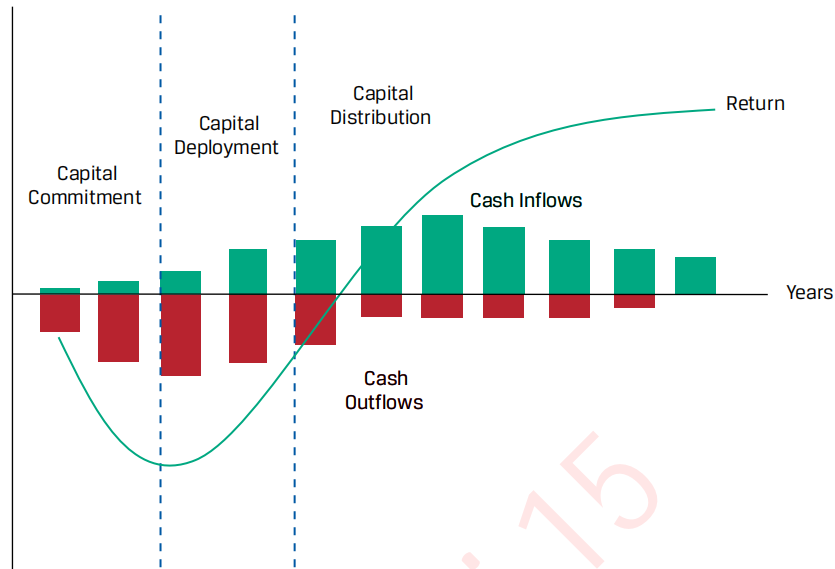
- Fund manager is the **general partner (GP)**
- Investors are the **limited partners (LP)**
  - ✓ LP 通常是合格的投资者（由于基金的法律限制），他们应该理解并能够承担与投资相关的风险，而这些投资受到的**监管更少**。承担**有限责任**。
  - ✓ GP 经营着这家公司，理论上对任何出现的问题都要**承担无限责任**。GP 还可以同时管理多个基金。
  - ✓ Between the GP and the LPs there exists a principal/agent problem.
    - This principal/agent problem is managed through **compensation structures and limited partnership agreements (LPAs)**.
      - ◆ LPA 有限合伙协议，类似公司章程，列明各方的权利义务
    - **side letters** 补充协议 may also be negotiated. Side letters are agreements created between the GP and a certain number of LPs that exist outside the LPA.
- 其他特殊合伙模式
  - ✓ Infrastructure investors frequently enter into public-private partnerships (PPP) 公私合作伙伴关系。PPP 是公共部门和私营部门之间的协议，用于资助、建设和运营公共基础设施，如医院和收费公路
  - ✓ In real estate fund investing 房地产基金投资, investors may be classified as unitholders
  - ✓ In real estate direct investing 房地产直接, joint ventures 合资企业 are a partnership structure common

## Module 2: Alternative Investment Performance and Returns

### ● Performance Appraisal and Alternative Investment Features

#### 1) the life cycle phase of the investment 投资的生命周期阶段

- ✓ 另类投资通常涉及更长的投资生命周期，其具有明确的阶段
- ✓ 其回报呈现 J-curve effect 形曲线效应（因其类似字母 J 而得名）



- 资本投入阶段 capital commitment: 收益可能为负
- 资本部署阶段 capital deployment: 现金流出通常超过流入，管理费用进一步降低了回报
- 资本分配阶段 capital distribution
- ✓ 投资收益倍数 multiple of invested capital, MOIC
  - $MOIC = ( \text{Realized value of investment} + \text{Unrealized value of investment} ) / \text{Total amount of invested capital}$

#### 2) the amount of borrowed funds 借款金额

- ✓ 基金可以借入资金增加投资收益，但也会放大投资损失
- ✓ 杠杆收益率 leveraged rate of return
  - Leveraged return is the return on the investor's own money. Leveraging a portfolio, via borrowing or futures, can amplify the portfolio's gains or losses.

【计算方式和 HPR 相似,注意分母不是总金额而是自己的资金】

$$R_L = \frac{\text{Portfolio return}}{\text{Portfolio equity}} = \frac{R_P * (V_E + V_B) - (V_B * r_D)}{V_E} = R_P + \frac{V_B}{V_E} (R_P - r_D)$$

$V_E$  is the equity of the portfolio

$V_B$  is the debt or borrowed funds

If  $R_P < r_D$  then leverage decreases  $R_L$

#### 3) the valuation of the assets 资产的估价

#### 4) the fee structure of the fund 基金的收费结构

- **management fee 管理费**

- ✓ typically ranging from 1% to 2%
- ✓ 对冲基金基于资产管理规模 (AUM) 收取, 可以基于期初或期末规模, 如果题目中没有强调, 默认期末。
- ✓ private equity funds 基于 committed capital 承诺资本收取
- ✓ 管理费与业绩无关, 一定要交。

- **Performance fee 激励费**

- ✓ 也叫 incentive fee 或 carried interest
- ✓ is applied based on excess returns. 和业绩表现有关

- **Hurdle rate 门槛收益率**

- ✓ 有些基金, 针对激励费用会设定门槛值
- ✓ a minimum rate of return, that the GP must exceed in order to earn the performance fee.

- **hard hurdle rate:** the GP earns fees on annual returns in **excess of the hurdle rate**

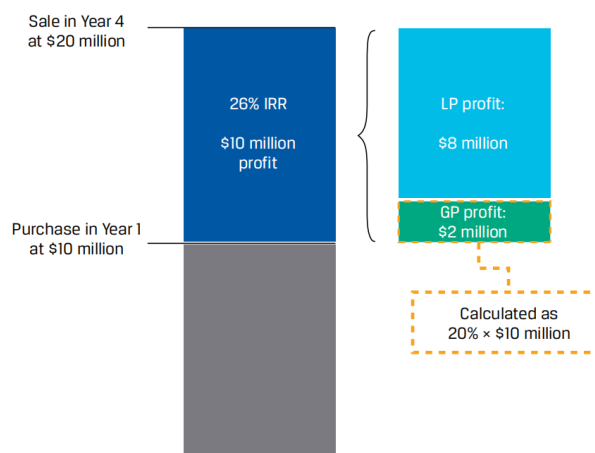
- ◆ 只对超出门槛回报的利润支付激励费, 题目中没有说明, 默认硬门槛

- **soft hurdle rate:** the fee is calculated on the **entire annual gross return** as long as the set hurdle is exceeded.

- ◆ 两步走, 第一步判断是否超出门槛回报, 没有超过, 没有激励费;
    - 超过的话, 对全部的利润支付激励费。

- 举例:

- ✓ **"2 and 20" compensation structure, where management fees are calculated on 2% of AUM or committed capital and performance fees are calculated on 20% of profits.**



● 激励费用的其他规定:

1) **catch-up clause** 追补条款

- ✓ catch-up clause allows a general partner to accelerate performance fees once a fund exceeds a specified soft hurdle rate.

- ✓ GP 的收益:  $r_{GP} = \max[0, r_{cu} + p * (r - r_h - r_{cu})]$

$r_{cu}$ , 一旦达到 hurdle rate, GP 就可以获得的收益;  $p$ , 激励费用的百分比;  $r$ , 基金总收益;  $r_h$ , hurdle rate。

- ✓ 例如: if a fund earns  $r$  of 18% over a period and receives a performance fee of 20% ( $p$ ) of returns in excess of the hurdle rate,  $r_h$ , of 8%, then  $r_{GP}$  is equal to 2%:

$$r_{GP} = \max[0, 2.0\% + 20\%(18\% - 8\% - 2\%)] = 3.6\%$$

2) **High-water mark** 高水位

- ✓ 基金扣除过费用之后的历史最高净值, 当出现时代替初始值进行激励费用的计算。
- ✓ 高水位线条款规定, 对冲基金经理必须恢复高水位线带来的价值下跌, 然后才能对新产生的利润收取绩效费。
- ✓ The use of high-water marks protects clients from paying twice for the same performance. 作用是为了防止投资者为相同的收益重复支付两次激励费。

3) **waterfall** 瀑布式结构

- ✓ A waterfall represents the distribution method that defines the order in which allocations are made to LPs and GPs. Two types of waterfalls:

■ deal-by-deal (or American) waterfalls

- ◆ performance fees are collected on a per-deal basis
- ◆ more advantageous to the GP

■ whole-of-fund (or European) waterfalls

- ◆ all distributions go to the LPs as deals are exited
- ◆ more advantageous to the LPs

● **clawback** provision 收回条款

- ✓ A **clawback** provision reflects the right of LPs to reclaim part of the GP's performance fee.
- ✓ Clawback provisions are usually activated when a GP exits successful deals early on but incurs losses on deals later in the fund's life. 【防止早些年赚钱, 而后些年亏。如果亏, LP 是权利追回一部分费用的】



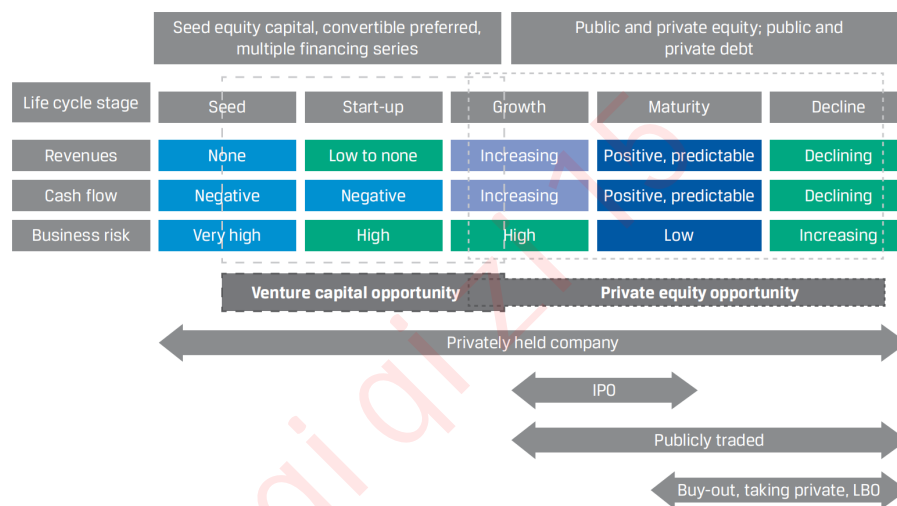
## Module 3: Investments in Private Capital: Equity and Debt

### 1. Private Capital 私募资本

- Private Capital is a broad term for funding provided to companies sourced from neither the public equity nor debt markets. 【私募资本是指不是通过公开市场（如股票、债券等）或传统机构（政府、银行等）获得的资金。】
- 分为 Private equity 和 Private debt

#### 1) Private equity

- primary private equity 策略:
  - ✓ Venture capital (VC)
  - ✓ Growth capital
  - ✓ Leveraged buyouts



- **Venture capital (VC) 风险投资**
  - ✓ entails investing in or providing financing to private companies with high growth potential.【对具有高成长潜力的私人公司进行投资或提供融资。通常，这些公司是初创公司或年轻的企业】
  - ✓ 风险投资可以在不同的发展阶段注入资金，从概念创建到公司 IPO 或收购。

Stage	Pre-seed	Seed	Early stage   Later stage
Investors	<ul style="list-style-type: none"> <li>• Founders</li> <li>• Friends and family</li> <li>• Angel investors</li> </ul>	<ul style="list-style-type: none"> <li>• Seed funds</li> <li>• Angel investors</li> </ul>	<ul style="list-style-type: none"> <li>• Venture capital funds</li> <li>• Corporate venture funds</li> <li>• Private equity investors</li> <li>• Strategic investors</li> </ul>
Typical investment amount	USD5k–USD500k	USD25k–USD5mil	USD5mil+
Source of capital	Mainly individuals	Funds	<ul style="list-style-type: none"> <li>• Institutional investors</li> <li>• Family offices</li> <li>• Strategic investors</li> </ul>

- ✓ 中间阶段融资（mezzanine venture capital）

- 为私人公司提供桥梁融资, 直到其能够进行 IPO 或被出售。
- 处于私人公司和上市公司之间, 主要区别在于融资的时间而不是方法。
- Growth capital 成长资本
  - ✓ also known as growth equity or minority equity investing.
- Leveraged buyouts (LBOs) 杠杆收购
  - ✓ 借钱去收购一个公司, 即举杠杆。例如: 贷款或发行高收益债券
  - ✓ 分为:
    - Management buyouts (管理层收购): a company's management team acquires the business they manage 【管理层联合外人, 收购自己管理的公司】
    - Management buy-ins (管理层换购): an external management team acquires a company and replace the existing management team. 【把收购过来的公司原管理层换掉】
- 退出策略

Exit Strategies	Tips
IPO (Initial public offerings)	potential for the highest price 【最理想的资金退出方式】
直接上市 <b>direct listing</b>	不需要承销商, 直接上市。 DL 不同于 IPO <ul style="list-style-type: none"> <li>• No investment bank involved</li> <li>• No new capital is raised</li> </ul> 好处: more quickly and at a lower cost
殊目的收购公司 <b>special purpose acquisition company, SPAC</b>	成立壳公司(shell company), 申请 IPO 募集资金, 用募集到的“盲池资金”(blind pool)收购非上市公司 <ul style="list-style-type: none"> <li>• 非上市通过被壳公司并购实现上市</li> </ul>
<b>Trade sale</b> (同行出售)	Sale of a company to a strategic buyer such as a competitor of the company 【出售给战略投资者 (strategic buyer)】
<b>Secondary sales</b> (二次出售)	Sale to another PE/other investors.
<b>Recapitalization</b> (资本结构调整)	Company issues debt to fund a dividend distribution to equity holders.
	Popular strategy when interest rates are low.
<b>Write-off/Liquidation</b> (清算)	The investment is failed

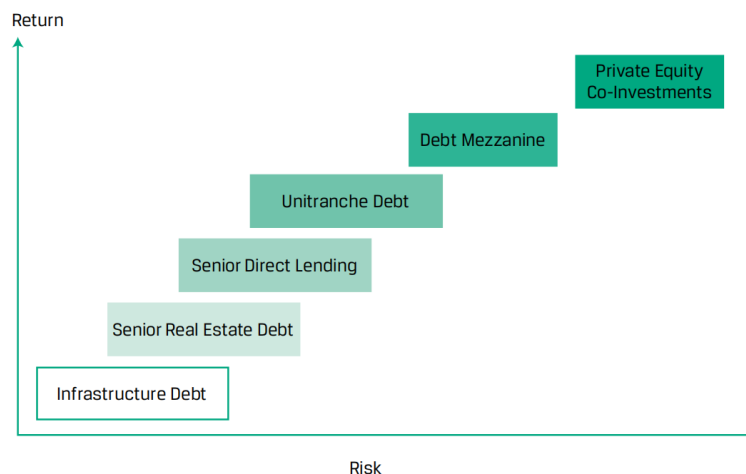
- 私募股权的风险和收益：
- ✓ 高回报机会：因为能够投资于私有公司，影响投资公司的管理和运营，并使用杠杆。
- ✓ 风险高：包括流动性和杠杆风险

## 2) Private Debt

- 风险债务(venture debt)
  - 创业贷款为初创或早期阶段公司提供私人债务融资，尤其是对于可能现金流较少或负面的公司。
- 直接借贷(direct lending)
  - 直接提供资金
  - 直接贷款通常是优先和有担保的
- 夹层债务(mezzanine debt)
  - 次级债务是在借款人资本结构中介于优先有担保债务和股权之间的私人信贷。
- 危机债务(distressed debt)
  - 购买处于财务困境中的成熟公司的债务

## 2. 私募资金的 diversification benefits

- 私人债务和私募股权的绩效与风险高度依赖于公司生命周期的特定阶段。
  - ✓ 私人资本投资的风险和回报随着企业资本结构的不同层次而异。
  - ✓ 私募股权通常提供最高的回报，但风险也最高，而私人债务的回报逐渐下降。
  - ✓ 最安全、最有保障的形式是基础设施债务。
  - ✓ 私募股权和私人债务类别展现了风险和回报水平，投资者需要在次级和优先债务以及股权和债务之间做出选择。



## Module 4: Real Estate and Infrastructure

### 1. Real Estate 房地产

- 房地产包括两大板块：住宅和商业。
  - ✓ Residential real estate 住宅房地产 is the largest sector
  - ✓ Commercial real estate 商业房地产 primarily includes office buildings, shopping centers, and warehouses.
- 特征
  - ✓ Competitive long-term total returns driven by both income generation and capital appreciation. 【长期总回报：分为房子本身的价值升值和房屋租赁的租金】
  - ✓ Prospect that multiple-year leases with fixed rents may lessen cash flow impact from economic shocks.
  - ✓ Diversification benefits may be provided by less than perfect correlation with other asset classes.
  - ✓ Providing inflation hedge if rents can be **adjusted quickly for inflation**. 【房地产可以抗通胀 inflation hedge】
- Basic Forms of Real Estate Investments

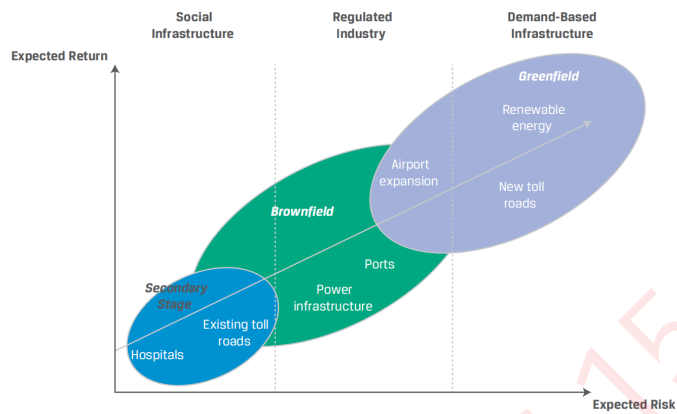
	Debt	Equity
Private	<ul style="list-style-type: none"> <li>■ Mortgages</li> <li>■ Construction lending</li> <li>■ Mezzanine debt</li> </ul>	<ul style="list-style-type: none"> <li>■ Direct ownership of real estate: sole ownership, joint ventures, separate accounts, or real estate LPs</li> <li>■ Indirect ownership via real estate funds</li> <li>■ Private REITs</li> </ul>
Public	<ul style="list-style-type: none"> <li>■ MBS (residential and commercial)</li> <li>■ Collateralized mortgage obligations</li> <li>■ Mortgage REITs</li> <li>■ ETFs that own securitized mortgage debt</li> </ul>	<ul style="list-style-type: none"> <li>■ Shares in real estate operating and development corporations</li> <li>■ Listed REIT shares</li> <li>■ Mutual funds</li> <li>■ Index funds</li> <li>■ ETFs</li> </ul>

- 房地产投资分为直接投资和间接投资
- ✓ **Direct Real Estate Investing** 直接房地产投资：直接买房
  - 直接投资房地产优点
    - 控制权 Control。只有所有者可以决定何时买卖
    - 税收优惠 Tax benefits。所有者可以通过非现金的房产折旧费用和可抵扣的利息支出来减少应纳税收入。

- 多样化 Diversification。房地产与其他资产类别的相关性较低
  - 直接投资房地产不利因素:
    - 复杂性 Complexity。所有者需要花费时间来管理物业。
    - 需要专业知识 Need for specialized knowledge。
    - 资金需求巨大 Significant capital needs。由于房地产投资需要大量的初始资本支出
    - 集中风险 Concentration risk。所有者,特别是较小的投资者,无法通过直接投资来创建一个多样化的房地产投资组合。
    - 缺乏流动性 Lack of liquidity。
  - ✓ **Indirect Real Estate Investing 间接房地产投资**
    - 间接投资通过各种集合投资工具提供对基础房地产资产的投资。
    - 例如 limited partnerships, mutual funds, corporate shares, REITs 和 exchange-traded funds (ETFs)。
    - REITs
      - ✧ Real estate investment trusts(**REITs**) are the preferred investment vehicles for owning income-producing real estate of both private and public investors.
      - ✧ REIT 的好处: **the elimination of double corporate taxation**
      - ✧ Equity REITs own real estate equity
      - ✧ Mortgage REITs own real estate mortgages and MBS
      - ✧ Hybrid REITs own both.
2. Infrastructure 基础设施
- The assets underlying infrastructure investments are real, capital intensive 本密集型, and long lived 较长期的。
    - ✓ 例如机场、医疗保健设施和发电厂。
  - Funding is often done on a public-private partnership(公私合作) basis.
  - 基础设施投资类别
    - ✓ Transportation assets.包括道路、桥梁、隧道等
    - ✓ ICT assets。包括存储、广播和传输信息或数据的基础设施,如电信塔和数据中心
    - ✓ Utility and energy assets。
  - 基础设施投资也可以根据基础资产的发展进行分类。
    - ✓ 投资于将要建设的基础设施资产,被称为绿地投资 greenfield investment。
    - ✓ 对现有基础设施资产的投资,称为棕地投资 brownfield investment。
  - 基础设施投资具有以下特点:
    - ✓ Strategically important 不一定是以营利为目的

- ✓ Monopolistic and regulated 垄断和监管
- ✓ Stable long-term cash flows 长期的稳定现金流
- ✓ Significant capital investment 投入资金高
- ✓ Long operational lives
- ✓ Defined risks
- ✓ Highly leveraged financial structure

## ● Infrastructure Investment Characteristics



## Module 5: Natural resources 自然资源

【自然资源包括: commodities 大宗商品, agricultural land (farmland) 农地, and timberland 林地.】

### ● Commodities 大宗商品

✓ 分为:

- 软性商品(soft): 需要被开采或是被提炼的物品, 如原油或铜
- 硬性商品(hard): 需要时间生长的物品, 如牲畜、玉米。

✓ 特征:

- 收益来源于大宗商品价格的变化, 而非期间收益
- 持有大宗商品现货会产生运输费和储藏费
- 大宗商品投资的相关性与传统投资的相关性较低, 能够实现分散化
- 抗通胀
- Commodity investments may involve investing in actual physical commodities or in producers of commodities. More typically, they are made using commodity derivatives (futures or swaps)【更多的使用衍生品投资】

✓ 商品期货定价

【这里可以重点关注《衍生品》科目中的期货定价相关内容。这里是简化公式】

- $Futures\ price \approx Spot\ price(1+r) + Storage\ costs - Convenience\ yield$ 
  - ✧ Storage costs 储存成本
  - ✧ Convenience yield 便利性收益, 指的是持有现货带来的好处
- 1) 期货价格高于现货价格, contango 市场, 便利收益率较低。
- 2) 现货价格高于期货价格, backwardation 市场, 便利收益率较高。

### ● Digital Commodities 数字货币

✓ 将加密货币定义为“数字商品”, Commodity Futures Trading Commission (CFTC) 将“数字资产”和“数字资产衍生品”视为商品, 并对其进行相应监管。

### ● 林地和农地

✓ 收益来源

- 土地上的产物的增长(biological growth);
- 土地上的产物的期货价格与现货价格的改变;
- 土地本身的价格改变(underlying land)。

✓ 林地和农地的风险

- 恶劣的天气
- 国际竞争格局(international competitive landscape):

- 负的现金流(negative cash flow)
- 土地实物资产的流动性极差。

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## Module 6:Hedge Funds 对冲基金

### 1. 对冲基金简介

- 对冲基金通常为私有投资合伙制，仅向有限的投资者开放，且期初要求的投资金额较大
- **Aimed at higher returns, with few investment restrictions.**
- **Aggressively managed portfolio** across asset classes, use leverage and/or derivatives, take long and short positions.
- 对冲基金特征（区别于传统投资）：
  - ✓ 1. Less legal and regulatory constraints 较少的法律和监管限制
  - ✓ 2. Flexible mandates permitting the use of shorting and derivatives 灵活的范围，允许使用卖空和衍生品
  - ✓ 3. A larger investment universe on which to focus 更广泛的投资范围
  - ✓ 4. Aggressive investment 激进的投资风格 styles that allow concentrated positions in securities offering exposure to credit, volatility, and liquidity risk premiums
  - ✓ 5. Relatively liberal use of leverage 相对自由的杠杆使用
  - ✓ 6. Liquidity constraints that include lockups 锁定期 and liquidity gates
    - ✧ Lockup period 锁定期
      - 初始投资在一定时期内不得被赎回
    - ✧ Notice period 通知期
      - LP 赎回份额需要提前通知 GP
  - ✓ 7. Relatively high fee structures involving management and incentive fees 相对较高的费用结构，包括管理费和激励费

### 2. 对冲基金策略

- ✓ 主要有下面几种策略
  - equity hedge (e.g., market neutral),
  - event driven (e.g., merger arbitrage),
  - relative value (e.g., convertible bond arbitrage),
  - Opportunistic Strategies

#### 权益对冲策略（Equity Hedge Strategies）

关键词：bottom-up analysis（关注个股）

Market neutral  
市场中性 ★★

maintains a net position that is **neutral** with respect to **market risk**. **Long positions in undervalued securities and short positions in overvalued securities.** 【使用基础分析和基本面分析，**long undervalued**，同时 **short overvalued**；对冲掉 **market risk**，投资组合的  $\beta$  近似为 0】

Fundamental long/short 基本多空策略	<p><b>long position</b> in those securities (buys stocks or call options) whose valuations are <b>underestimated/undervalued by the market</b> or have a <b>potential for growth</b>.</p> <p>The strategy also concurrently <b>shorts stocks or an index</b> to reduce the risk. 【做多 <b>underestimated/undervalued/potential for growth</b>; 同时做空 <b>stocks or an index</b>; 】</p> <p>maintains a <b>net long exposure</b></p> <p>不过更偏向 <b>long 高成长性(long biased)</b></p> <p>differentiates this strategy from the short bias strategy.The hedge fund takes long positions in these companies while shorting companies with business models being disintermediated or under downward pressure.</p> <p>【使用基本面分析 fundamental analysis, 找出股票的成长性。<b>long 高成长性股票</b>, <b>short 低成长性股票</b>。】</p>
Fundamental growth 基本面增长	<p>基于 fundamental analysis</p> <p>做多 <b>high growth and capital appreciation</b>.</p> <p>做空 <b>business models that are under downward pressure</b></p> <p><b>long biased</b>; they may <b>not be market neutral</b> and their returns may exhibit a non-zero beta. 【倾向于多头，因此可能不是市场中性的，其回报可能显示出非零的贝塔值】</p>
Fundamental value 基本面价值	<p>The hedge fund takes long positions in undervalued and sometimes hedges the portfolio by shorting index ETFs or more growth-oriented companies deemed overvalued. Portfolios also tend to be long biased.</p> <p>【<b>long undervalued, short overvalued</b>.不过更偏向 <b>long 低估的, long biased</b>】</p>
Short biased 空头策略	<p>These strategies use quantitative (technical) and fundamental analysis to focus the bulk of their portfolio on <b>shorting overvalued equity</b> securities (against limited or no long-side exposures). 【只 short 高估的，例如关于瑞幸的做空报告】</p>
<p>事件驱动策略（Event-Driven Strategies）</p> <p>关键词：bottom-up analysis, short-term、merge、acquisition、restructuring</p>	
Merger arbitrage 并购套利★★	<p>long the stock of the company being acquired, and short the stock of the acquiring company 【对冲基金买入被收购公司股票，同时做空收购公司的股票。最大的风险在于并购事件发生的不确定性。】</p>
Distressed securities 危机证券★★	<p>focus on securities of companies either in bankruptcy or perceived to be near to bankruptcy. 【买入处在危急中公司的证券；赌能度过危机】</p>

Activist shareholder 积极股东	<b>purchase sufficient equity to influence</b> a company's policies or direction. 【买你足够多的股票, 以影响你公司的经营】
Special situations 特殊事件	focus on companies that are currently engaged in restructuring activities other than merger /acquisitions and bankruptcy 【专注经历特殊事件的公司】
相对价值策略 (Relative Value Strategies) 关键词: pricing discrepancy, long undervalued and simultaneously short overvalued	
Convertible bond arbitrage 可转债套利	Exploit pricing discrepancies between convertible bond and the common stock of the issuing companies. 【买入可转债的同时卖掉该公司的普通股】
Fixed income (general)综合类固定收益策略	focus on the relative value within the fixed income markets.【关注固定收益证券的相对价值。买入被市场低估的证券, 同时卖出被高估的证券】
Fixed Income Asset Backed	seek to take advantage of mispricing across different asset backed securities(ABS).
Multi-strategy 多重策略	look for opportunities within and across asset classes.不局限于某一种策略或资产
机会导向策略 Opportunistic Strategies 关键词: top-down analysis, macroeconomic trend	
Macro Strategies 宏观策略	Macro strategies emphasize a top-down approach to identify economic trends. Macro hedge funds use long and short positions to profit from a view on overall market direction. 【利用宏观经济制定投资策略, 比如量子基金】
Managed futures 管理期货	Managed futures funds are actively managed funds making diversified directional investments primarily in the futures markets on the basis of technical and fundamental strategies. 【专注期货投资】 Managed futures funds 也叫 commodity trading advisers (CTAs)

### 3. 对冲基金费用

【结合 Module2 费用知识模块一起学习】

- ✓ management fee 管理费
- ✓ Performance fee 激励费
- ✓ 对冲基金关于费用的其他设定:
  - “2 and 20” and “1 and 10” are common, but variations exist
  - Fees based on liquidity terms and asset size

- 封锁时间越长, 费用越低
- Discount fees for larger investors or for placement agents
- Founders' shares 创始人会有比较低费用
- Either / or fees : managers agree either to charge a 1% management fee or to receive a 30% incentive fee above the hurdle , whichever is greater。【要么收取 1%的管理费, 要么收取 30%的激励费用】

#### 4. 对冲基金的投资形式

- Direct Hedge Fund Investment Forms 直接投资形式
  - ✓ 以投资者名义注册和持有标的资产, 对冲基金经理进行日常管理
- Indirect Hedge Fund Investment Forms 间接投资形式
  - 基金中的基金(Fund of Hedge Funds, FOF)
    - ✓ 投资一个基金, 这个基金再去投资其它的对冲基金【以对冲基金为投资标的的基金】
    - ✓ Funds of hedge funds are funds that create a diversified portfolio of hedge funds. These vehicles are attractive to small investors
    - ✓ 优点:
      - 使得中小散户可以通过投资 FOF, 从而间接投资对冲基金
      - FOF 相当于让我们获得了更专业的投资能力
      - 更好的赎回条款
      - FOF 会投资众多的对冲基金, 即分散化投资的风险
    - ✓ 缺点: 存在双重收费

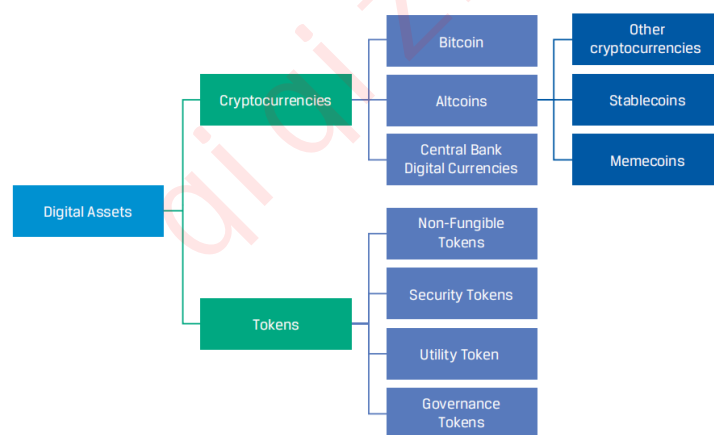
#### 对冲基金和私募股权对比

	Hedge Fund	Private Equity
	The same fees structure: LP&GP	
Management fees	Asset Under Management (AUM)	committed capital
Incentive fees	Only earned if the return exceeds a hurdle rate	GP does not earn an incentive fee until the LPs have received initial investment back
Claw back provision	×	✓

## Module 7: Introduction to Digital Assets

- Digital assets 数字资产
  - 是指可以电子化创建、存储和传输, 并具有相关所有权或使用权的资产类别。它包括各种各样的数字资产, 如加密货币 **cryptocurrencies**, , and .、代币 **tokens** 和数字收藏品 **digital collectables**。
  - 数字资产利用分布式账本技术 (DLT) 或区块链技术, 使用先进的加密技术确保数字资产的真实性和完整性。
- 1. Distributed ledger technology (DLT) 分布式账本技术
  - Distributed ledger technology (DLT) based on a distributed ledger (defined later) 分布式账本
  - DLT 网络被视为一种创建、交换和跟踪金融资产所有权的方式, 采用点对点 (P2P) 基础。
  - 潜在优势
    - ✓ 记录保存的准确性、透明性和安全性提升 **greater accuracy, transparency, and security in record keeping**;
    - ✓ 所有权的更快转移 **faster transfer of ownership**;
    - ✓ 点对点的交互 **P2P interactions**
  - 缺点: 可能会泄露隐私
    - ✓ 需要大量能源来验证交易活动
  - DLT 的基本要素
    - ✓ 数字账本 **digital ledger**
    - ✓ 共识机制 **consensus mechanism**
      - 共识机制是网络中计算实体 (或节点) 就账本的共同状态达成一致的过程。
    - ✓ 参与者网络 **a participant network**
  - DLT 的特征
    - ✓ 密码学 **cryptography**
      - 一种算法过程, 对数据进行加密。
    - ✓ 智能合约 **smart contracts**
      - 根据合同各方事先约定的特定条款自主执行的计算机程序。
- 区块链 **Blockchain**
  - ✓ 区块链是一种数字账本, 其中包含诸如所有权变更等信息, 这些信息按顺序记录在区块中, 然后通过链接或“链式”方式相连, 并使用密码学方法进行安全保护。

- ✓ “工作量证明” 共识协议 the proof of work protocol, PoW
  - 矿工(miners)使用强大的计算机和大量的能量来解决复杂的算法难题，以验证并将交易块锁定到区块链中，在此过程中为自己赚取加密货币
- ✓ “权益证明” 共识协议 the proof of stake protocol, PoS
  - 网络上选定的参与者，即验证者(validators),以质押资本的方式为区块的有效性提供担保(pledge capital to vouch for the block's validity)
- 账本技术（DLT）中的两种形式：Permissioned and Permissionless Networks 许可和无许可网络。
  - ✓ 无需许可网络 permissionless networks
    - 任何用户都可以进行交易，所有用户都可以看到区块链上的所有交易记录
    - 不依赖集中的权威来验证交易有效性，而是通过共识机制完成
  - ✓ 许可网络 permissioned networks:
    - 允许对不同级别的信息进行权限控制
- Digital Assets 类型



- ✓ Cryptocurrencies 加密货币
  - 没有实物形式，是由个人、公司和其他组织私下发行的。
  - 不受中央银行或货币当局的支持，没有政府支持或监管。
  - 大多数发行的加密货币使用开放式的分布式账本技术
  - 有多种不同类型的加密货币，例如替代币 altcoins 和稳定币 stablecoins。
  - 波动性比较大
- ✓ 代币 Tokens
  - 代币化 tokenization:在区块链或分布式账本上代表实物资产所有权的过程

## 2. Digital Asset Investment Features 数字资产投资的特征

- 数字资产和传统金融资产之间存在显著的区别。主要区别如下：
  - ✓ 价值内涵的不同 Differences in inherent value:
    - ◆ 大多数数字资产并没有基于基础资产或其所能或预期产生的潜在现金流（利息和股利）的内在价值。
    - ◆ 它们的价格完全来自于对资产升值的预期（因货币总供应量的限制而产生的稀缺价值），以及未来转移价值的潜力。
  - ✓ 交易验证的不同 Differences in validating transactions:
    - ◆ 使用加密技术和增强算法，记录在去中心化的数字分类账上
    - ◆ (decentralized digital ledger)
  - ✓ 作为交易媒介的用途的不同 Differences in the uses as a medium of exchange.:
    - ◆ 一些数字资产被用作法定货币的直接替代品
  - ✓ 法律和监管保护的差异 Differences in legal and regulatory protection:
    - ◆ 传统金融工具和资产以及这些交易的法律和监管标准都很完善，并且在国际间通常是可比较的；但是对于数字资产来说并非如此。

## 3. Digital Asset Investment Forms 数字资产投资的形式

- 直接投资
  - ✓ 使用加密货币钱包 (cryptocurrency wallet)
  - ✓ 在数字交易所 (digital exchange) 进行
  - ✓ 中心化交易所 centralized exchanges
  - ✓ 去中心化交易所 decentralized exchanges
- 间接投资
  - ✓ 加密货币信托基金 cryptocurrency coin trusts
  - ✓ 加密货币期货合约 cryptocurrency futures
  - ✓ 加密货币交易所交易基金 cryptocurrency exchange-traded funds
  - ✓ 加密货币股票 cryptocurrency stocks
  - ✓ 投资加密货币的对冲基金 hedge funds investing in cryptocurrencies

## 4. 数字资产投资的风险、收益与分散化

- 收益和风险
  - ✓ 高回报、高波动性
- 分散效益
  - ✓ 与传统资产类别的相关性低