CHARTA LEARNING · LESSON NOTES

Alternative investments: types, features, access and partnerships

CFA Level I · Alternative Investments

You will learn: Name the main types of alternative investment, explain what sets them apart from listed stocks and bonds, compare the three ways to reach them, and describe how a limited partnership fund works and pays out.

Running example: Examples follow Oakfield Foundation, a made-up university endowment of $500m held entirely in listed stocks and bonds. All figures are round numbers made up for teaching.

1. The types of alternative investment

- Alternatives sit toward the hard-to-sell end of a line that runs from cash, listed bonds and listed stocks (sold in seconds), through hedge funds, real estate and infrastructure, to private equity (money locked in for about ten years). The line is an illustration, not a measurement.
- Private equity is owning shares in unlisted companies. Private debt is loans made directly to companies, negotiated in private. Together they are called private capital. Hedge funds are pooled funds using flexible strategies such as short selling or borrowed money.
- Real assets have physical form. Real estate is land and buildings, returning rent and changes in value. Infrastructure is toll roads, airports, pipelines and power lines, often with long, steady contracted cash flows. Natural resources are commodities (oil, metals) and land that grows things (timber, farmland).
- Commodities pay no interest or dividend, so their return comes only from price changes. Some investors also treat digital assets as a further alternative category.

OAKFIELD PUTS 20% OF $500M INTO ALTERNATIVES

Alternatives sleeve	20% of 500	**$100m**
Private equity + real estate	40 + 30	**$70m**
Infrastructure + hedge funds	20 + 10	**$30m**
Stocks and bonds left	500 − 100	**$400m**

2. What sets alternatives apart

- Compared with listed stocks and bonds, alternatives are less liquid (lock-ups of years, often no market), valued rarely and by appraisal, use leverage (borrowing) and derivatives more freely, are lightly regulated with less disclosure, and charge higher fees including a share of profit.
- Light disclosure means they are usually offered only to larger, qualified investors, and the investor must do more of their own checking, called due diligence. Investors expect an illiquidity premium, extra return for accepting the difficulty.
- Appraisers lean on the last valuation and on old sales, so reported values are smoothed. Measured volatility and correlation with other assets are understated, and the diversifying benefit looks greater than it is. Nothing about the fund became safer.
- Understated volatility flatters the Sharpe ratio, the reward per unit of risk. A higher number looks better; if volatility is understated, the ratio is overstated.

Sharpe ratio = (Rp − Rf) ÷ σ, where Rp is the fund return, Rf the risk-free rate and σ the standard deviation of returns

SMOOTHING AND THE SHARPE RATIO (PROPERTY FUND)

True quarterly returns	+10, −10, +10, −10	**σ 11.5%**
Reported (50/50 old and new)	+5, −2.5, +3.75, −3.125	**σ 4.2%**
Risk hidden	1 − 4.2 ÷ 11.5	**about 64%**
Sharpe, reported (return 8%, Rf 2%, σ 7%)	6 ÷ 7	**0.86**
Sharpe, unsmoothed (σ 13%)	6 ÷ 13	**0.46**
Fall in Sharpe ratio	1 − 7 ÷ 13	**46%**

Watch out: Taking low reported volatility at face value; thinking the extra return of an alternative is free, when it is payment for illiquidity and only a reward if you can sit through the lock-up.

3. How alternatives charge

- Most charge two pieces. The management fee is a fixed percentage a year (for example 2%), paid whether or not the fund makes money. The performance fee (incentive fee in a hedge fund, carried interest in private equity) is a share of profit, often 20%: "two and twenty".
- A hurdle rate is a minimum return the fund must beat before any bonus is paid. A high-water mark means a bonus is earned only on gains above the previous peak, so losses are recovered first.
- Order of payment: management fee, hurdle, catch-up, then the bonus. The management fee comes off first as a plain cost. If nothing is left above the hurdle, the incentive fee is zero.

Incentive fee = rate × (gross profit − management fee − hurdle amount)

TWO AND TWENTY WITH A HURDLE ($100M GROWS TO $120M BEFORE FEES; 2% FEE, 20% BONUS, 5% HURDLE)

Gross profit	120 − 100	**$20.0m**
Management fee	2% of 100	**$2.0m**
Profit above the hurdle	20 − 2 − 5	**$13.0m**
Incentive fee	20% of 13.0	**$2.6m**
Investor net return	(20 − 2 − 2.6) ÷ 100	**15.4%**
High-water mark, year 2 then 3	115.4 × 0.9 − 2.3 = 101.6; 101.6 × 1.15 − 2.0 = 114.8	**below 115.4, so no fee in year 3**

Watch out: Mixing up the protections (hurdle is a minimum return, high-water mark is recovering past losses), and forgetting the management fee comes first and is paid whatever the result.

4. Three ways to reach alternatives

- A fund: a specialist manager selects and runs the assets. Full fees, little skill needed from you. A fund of funds sits furthest toward delegation and adds a second layer of fees.
- Co-investment: extra money alongside a fund into one particular deal, with reduced or zero fees. You must judge the deal in a few weeks, so you need staff who can evaluate it fast. It is not free money.
- Direct investment: you buy the asset yourself. No fund fees, you hold the asset outright, and you need the most capability (staff, systems, deal access).
- Moving from fund to co-investment to direct, cost falls and the expertise required rises. Direct investing pays only for large investors, because the team has a fixed cost.

FUND FEES AND WHEN DIRECT PAYS ($50M FOR 10 YEARS; 2% FEE ON COMMITMENT, 20% CARRY, NO HURDLE)

Management fee	2% × 50 × 10 years	**$10.0m**
Money actually invested	50 − 10	**$40.0m**
Carry if it doubles to 80	20% × (80 − 40)	**$8.0m**
Total fund fees	10.0 + 8.0	**$18.0m (co-invest: $0)**
Small investor, direct team $2.5m a year	1.8 − 2.5	**−$0.7m a year**
Investor ten times the size	18.0 − 2.5	**+$15.5m a year**

5. The limited partnership

- Most private equity, real estate and infrastructure funds, and many hedge funds, are limited partnerships. The general partner (GP) is the manager: it finds, runs and exits deals, calls capital, and has unlimited liability, so it is usually a company set up for the purpose.
- Limited partners (LPs) supply most of the money and take no part in management. Their loss is capped at their commitment. An investor who interferes in management may lose that protection.
- Money in: LPs commit capital (a promise); the GP calls it (a drawdown) as deals appear; the fund buys assets. Money back: assets are sold or pay income, the distribution waterfall sets who is paid first, then cash reaches the LPs and, once they are satisfied, the GP.
- The limited partnership agreement sets the investment period and term, the fees (management fee, carry, hurdle, catch-up), the waterfall, key-person provisions (if named leaders leave, new investing may stop) and a clawback (overpaid carry must be returned).
- Commitment is not invested capital. The uncalled money must be kept liquid for calls at short notice, while the management fee is charged on the whole commitment.

LIMITED VERSUS UNLIMITED, AND COMMITTED VERSUS INVESTED

LP commits $20m, $12m paid in; fund owes $50m beyond its assets	paid in 12; still callable 20 − 12 = 8	**LP maximum loss $20m**
Left owing after the LP	50 − 8	**$42m, borne by the GP**
Commitment $20m: called 3 + 7	20 − 10 uncalled	**$10m called, $10m uncalled**
Fee 2% on the commitment	2% × 20; 0.4 ÷ 10	**$0.4m a year = 4.0% of money drawn**

6. Measuring return: J-curve, IRR and the waterfall

- The J-curve is the investor's cumulative net cash: it falls early as capital is called and fees are charged, bottoms out when the whole commitment is paid in, then climbs through break-even as investments are sold. Poor early results are normal.
- The internal rate of return (IRR) is the single yearly rate that makes the present value of all cash flows equal zero. Private funds use it because the GP decides when money moves. A multiple (received ÷ paid in) ignores timing.
- Waterfall in order: return of capital to the LPs; the hurdle (preferred return) compounded; the catch-up, where the GP takes all the next dollars until it holds 20% of profit so far; then the rest is split 80/20. A full catch-up leaves the GP with 20% of all profit.

$$0 = CF_0 + CF_1 \div (1 + IRR) + CF_2 \div (1 + IRR)^2 + \ldots + CF_n \div (1 + IRR)^n$$

WATERFALL ($100M IN, $170M OUT AFTER 4 YEARS; 8% HURDLE, FULL CATCH-UP, 20% CARRY)

1. Return of capital to LPs		**$100.00m**
2. Hurdle: 8% for 4 years	$100 \times 1.08^4 - 100$	**$36.05m**
3. Catch-up to the GP	until 20% of profit	**$9.01m**
Left to split 80/20	170 − 100 − 36.05 − 9.01	**$24.94m**
GP total carry	9.01 + 0.2 × 24.94 (4.99)	**$14.0m = 20% of 70**
LPs' total and IRR	170 − 14 = 156; 1.56^¼ − 1	**$156.0m, 11.8%**

Key takeaways

- Alternatives are private capital (private equity, private debt), hedge funds and real assets (real estate, infrastructure, natural resources).
- They are harder to sell, appraised, lightly regulated, more leveraged and more expensive than listed assets.
- Appraisal smoothing understates volatility and correlation, which flatters the Sharpe ratio.
- Fee order: management fee, hurdle, catch-up, then carried interest; the high-water mark stops paying twice for the same gains.
- Fund, co-investment, direct: as fees fall, the skill needed rises.
- In a limited partnership the GP has unlimited liability; LPs lose at most their commitment, and use IRR because the GP controls timing.

Quick check

1. Return 8%, Rf 2%, reported σ 6%, unsmoothed σ 12%. Both Sharpe ratios?
   Answer: Reported 6 ÷ 6 = 1.0. Unsmoothed 6 ÷ 12 = 0.5.
2. Which route has no fund fees but needs the most capability?
   Answer: Direct investment.
3. LP commits $30m, has paid in $18m. Maximum loss if the fund fails?
   Answer: $30m: the commitment (18 paid + 12 callable).