2025 CFA®
Exam Prep

SchweserNotes™
Private Markets

Level III

KAPLAN SCHWESER

Private Markets

SchweserNotes™ 2025

Level III CFA®

SCHWESERNOTES™ 2025 LEVEL III CFA® PRIVATE MARKETS

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b. discuss private investment methods and structures and their uses.
c. discuss the difference between public and private market performance, and calculate, interpret, and discuss the use of performance metrics including distributed to paid-in, residual value to paid-in, and total value to paid-in.
d. compare the risk and return of investing in private markets and public markets as part of a strategic asset allocation.

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e. discuss the risk and return among infrastructure investments and as compared to other investments as part of a strategic asset allocation.

READING M1

PRIVATE INVESTMENTS AND STRUCTURES

EXAM FOCUS

This reading focuses primarily on private investments, while also differentiating them from public investments. Candidates should understand the differences between private and public investments in terms of key characteristics such as liquidity, performance, and asset prices. Also important is understanding the different forms of investment structures available to private investors. Know the calculations and interpretations of performance measures such as the internal rate of return, return on investment, the different market fund multiples, and how to use a public market equivalent methodology. Finally, candidates should be familiar with the risks and associated return expectations for asset class investments in both the public and private spaces.

MODULE M1.1: COMPARING PRIVATE VS. PUBLIC INVESTMENTS AND MARKETS

Video covering this content is available online.

LOS M1.a: Contrast the features of private and public investments, and discuss characteristics of private and public markets

Although both are often found in investor portfolios, public and private investments differ dramatically in terms of their characteristics. Public investments are typically listed equity or debt securities that trade on exchanges and through over-the-counter dealers. They tend to be issued by more mature entities with more stable cash flows, and they usually do not provide control positions. Traders can quickly buy and sell their investments, and valuation is easier due to greater information on current/historical prices as well as comparison benchmarks.

Private investments are, in many ways, opposite to their public counterparts. The assets are usually unlisted, there is no over-the-counter or exchange market, and the underlying company is often unwilling or unable to access public markets. Ownership stakes tend to be significant (if not, controlling), and investments are usually held for longer than they are for public companies. Contracts are negotiated and nonstandard, which differs considerably from public investments. Note that alternative investments (those that do not involve traditional cash instruments or public equity/fixed-income investments) are not synonymous with private investments, as alternative investments

may have public and/or private elements. Figure M1.1 provides a characteristic comparison of private versus public investments.

Figure M1.1: Private vs. Public Investments

Characteristic	Private	Public
Liquidity	Illiquid (sales restricted or even prohibited)	Mostly liquid (limited restrictions, if any)
Investment process	Closed-end	Open-end
Performance measurement	Compounded over a longer holding period	Periodic
Asset prices	Negotiated (based on estimates)	Observable and traded regularly
Management skills	Expertise needed in legal and financial analysis; experience in industry, management, and technical areas	Experience and expertise needed in company, industry, and financial analysis
Diversification within a portfolio	Dependent on uniqueness of asset type, as well as company and investment life cycle phases	Dependent on correlations of periodic returns

Liquidity and the Investment Process

Because public investments tend to be listed on exchanges (or traded over the counter) and are actively traded, they will have low transaction costs and high liquidity. In contrast, private investments will have far less liquidity. To invest privately, fund managers expect a longer time horizon and larger capital commitments from their investors. To avoid the negative impact of early liquidations, investors are often heavily restricted (or even prohibited) from selling their fund positions.

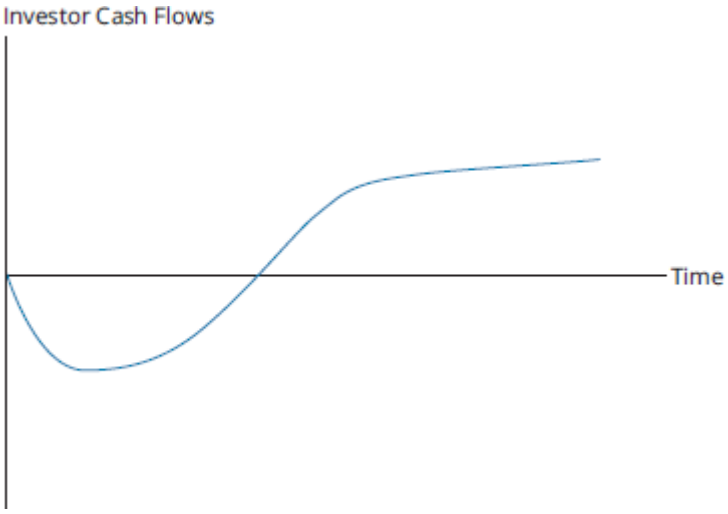
The investment structure and approach is more open ended for public investments because of their greater price transparency and liquidity. For private investments, the approach is more closed end with investments held for longer periods and expectations that managers will be compensated based on how well the investment performs.

The **private asset investment life cycle** involves four phases:

1. *Precommitment*. This is where investment strategy is developed, due diligence is performed, and limited partners are solicited, leading to a commitment of capital.
2. *Capital deployment*. This is where investments are selected, capital calls are made by the managers, and value is (hopefully) created.
3. *Capital distribution*. This is where debt is paid off, and the project or restructuring is completed.
4. *Exit*. This is where there is a public or private sale or transfer.

Returns are expected to be negative in the early phases (precommitment/commitment of capital and capital deployment) and positive in later phases (capital distribution and exit). The returns reflect a **J-curve effect**, shown in Figure M1.2.

Figure M1.2: J-Curve Effect



Management influence differs considerably between public and private investments. Investors in public markets have influence only to the extent of their voting rights, whereas private investment managers have active roles in management and asset control. A private investment manager may be involved in performing due diligence on potential targets, developing financing and business plans, making decisions on capital deployment and the eventual sale/exit of the investment, and return of capital to investors.

Performance Measurement and Asset Prices

As noted earlier, having access to price data (both current and historical) and identifying relevant benchmarks are advantages of holding public investments. Price transparency for private market investors is much harder to find, as price estimates have to be derived using discounted cash flow (DCF) methodologies, relative valuation techniques, and recent transactions where applicable. Timing is also a challenge, as fund managers often provide valuation estimates far less frequently, and with more delays than they would for public investments.

Cash flows are substantially different between private and public, as private investments involve multiple inflows and outflows that are not very predictable. Public investments are valued using an initial outflow and relatively predictable future inflows such as dividends on equities, interest income on bonds, and net operating income (NOI) for real estate.

Management Skills

Managers of public funds rely on the managers of their investee companies to create value, while they (the fund managers) perform the research across industries, companies, and individual securities. For managers of private investments, the skills they need to be successful are more nuanced as they have to take investments from the initial selection stage to the exit stage. Industry and operational expertise are needed, as well as established relationships with industry and experience in building and restructuring businesses. Expertise in tax, accounting, and law are critical as well.

Venture capital is a form of private equity investing where funds are given to early-stage companies with minimal (or no) revenue. The rate of failure is high, which means the risk level is high as well. The funds are provided by investors with the partnerships, contacts, and experience to help early companies be successful.

Diversification

Private investments can provide portfolio diversification due to their low (or negative) correlations with public investments. Private markets offer the following sources of diversification:

- Return dynamics of private company equity and debt over their investment life cycles, which will differ from the return dynamics of more mature public companies
- The exposures of private company equity and debt to growth or restructuring opportunities during their life cycles, which are typically not available to public company investors
- Private investment return exposures (other than equity or debt) that show different return dynamics than public investments

Private investments typically span the entirety of a company's life cycle. The stages of a company life cycle range from start-up, to growth, to maturity, and finally to decline. Cash flows tend to be primarily outflows until the growth stage, after which they hopefully become positive for the duration of the company. Revenues also tend to begin during the growth stage, while some companies may generate revenues late in the start-up phase.

Another avenue for diversification is through private **buyout equity**, where public companies are taken private in an attempt to reorganize the company and sell it later at a higher price. Reduced correlations with public investments may arise from the private manager's ability to select, finance, restructure, or acquire other companies.

Real estate and/or infrastructure represent alternative asset classes that could provide additional diversification benefits. Public **real estate investment trusts (REITs)** tend to provide more stable income, while private real estate will involve new construction or significant renovations.

Illiquidity, large minimum investment size, minimal price transparency, and specialized knowledge have historically made it challenging for all but the wealthiest investors and entities to participate in private investments. However, recent evolutions have increased the accessibility of these investments to a wider range of high-net-worth and institutional investors.

MODULE QUIZ M1.1

1. Relative to an investment in a mature company's common stock, a private investment will *most likely* result in the investor having:

   A. less liquidity.
   B. standardized terms.
   C. established benchmarks.

2. The J-curve effect identified with successful private investments reflects:

A. more committed capital later in the investment life cycle.
B. more distributed capital earlier in the investment life cycle.
C. greater cash outflows early and greater cash inflows later in the life cycle.

MODULE M1.2: PRIVATE INVESTMENTS: METHODS, STRUCTURES, AND USES

Video covering this content is available online.

LOS M1.b: Discuss private investment methods and structures and their uses.

The **limited partnership** structure is a popular one for private investments. The partnership is run by a **general partner (GP)** who serves as the fund manager and controls investment operations and processes but has unlimited liability. The investors are **limited partners (LPs)** who have no investment control, have limited liability, and share in both the returns and the risks with the GP.

Direct Investments

Investment methods can be both direct or indirect, depending on the investor's ability to actively manage and commit resources over the life cycle of the investment. A **direct investment** is a purchase of a private debt investment or equity ownership stake without involving an investment intermediary or a partner. The direct investor who purchases a majority ownership position in equity will be responsible for developing a business plan for creating value. This approach is more common with larger asset owners who can afford the investment and the associated risk.

Co-investment can take the form of either a direct co-investment or a limited partner co-investment. The **direct co-investment** will be a direct purchase (with partners) of a private debt or equity investment, with the investor benefiting from partner expertise, size reductions of private portfolio positions, and lower fees relative to indirect investments. A **limited partner co-investment** is a purchase of private debt or equity in a single investment run by a private fund manager. These co-investment opportunities are made available to a smaller group before wider distributions to the investment community.

Experience and expertise is absolutely critical with private investments, as these ventures tend to have high failure rates. **Angel investors** are high-net-worth investors who often have entrepreneurial expertise and industry experience and can provide early-stage financing for start-up ventures.

Indirect Investments

Fund-based alternatives and co-investments are examples of indirect private market investments. The limited partner co-investment option affords LPs the opportunity to own larger stakes of assets while the management is left to the private fund manager (GP). The GP will share due diligence materials and investment information with LPs, giving them greater access than that afforded to other investors. LPs have a more active role in the investment process, while GPs get expanded access to investor capital,

shared investment risk, and access to investors outside of established partnerships. For LPs, they are exposed to long holding periods and illiquidity. In addition, capital commitments are required before investments, and the timing of capital calls and distributions can be highly uncertain.

Private Investment Structures

Corporate governance differs considerably between private and public investments, as the former may allow investors (even with minority positions) the ability to negotiate for seats on the board or influence critical business decisions. While public investments tend to be standardized, private structures may result in new legal organizations created for specific purposes.

One such example is a **take-private transaction**, where private investors purchase a public company. This may also be referred to as a **leveraged buyout (LBO)** when a significant amount of debt financing is used to execute the acquisition. The target company's debt is usually refinanced due to **change of control clauses** in place to protect existing bondholders and lenders. Long-term financing is negotiated in the second buyout stage, where the acquirer and the target become a new merged company and the financing used in the acquisition is replaced with medium- and longer-term debt issued by the new entity. The debt structures used in private market transactions tend to be less standardized than those found in public markets.

Two types of loans often found in private market transactions include leveraged loans and mezzanine loans. A **leveraged loan** is a senior secured, prepayable loan with a floating-rate coupon and restrictive debt covenants. A **mezzanine loan** is a subordinated debt claim that lands between senior debt and common equity. The coupon rate tends to be fixed and higher than the leveraged loan floating rate, and the maturity tends to be longer. However, the debt is not prepayable, and there are fewer restrictive covenants. To gain exposure to these types of loans, private debt investors may invest indirectly as a limited partner or contract directly with a borrower.

A **special purpose entity (SPE)** may be established for investments in real estate or infrastructure. The entity will exist to facilitate the building, operations, and financing of the underlying real estate or infrastructure asset. The benefit of the SPE is that as its own legal entity, the revenues, expenses, cash flows, assets, liabilities, and contractual obligations are independent of the financial statements of the investment stakeholders.

A **concession agreement** is one where an operator (or developer) is tasked with building, operating, maintaining, and financing an infrastructure asset over a period according to the terms and conditions of the entity. An SPE is often used within these arrangements.

MODULE QUIZ M1.2

1. A private investor who participates in a mezzanine loan will find their claim position to be:

   A. below common shareholders.

   B. above leveraged loan investors.

C. between senior debt and equity.

2. Which of the following statements regarding the limited partner co-investment option is *most accurate*?

A. The holder periods for limited partners tend to be short.
B. General partners share investment risk with limited partners.
C. Limited partners have a passive role in the investment process.

MODULE M1.3: INVESTMENT PERFORMANCE AND RETURN METRICS

Video covering this content is available online.

LOS M1.c: Discuss the difference between public and private market performance, and calculate, interpret, and discuss the use of performance metrics including distributed to paid-in, residual value to paid-in, and total value to paid-in.

Income (from dividends on equity securities and interest on debt securities) and asset appreciation serve as the most appropriate performance metrics for public investments. Because of the inherent liquidity and price transparency of public investments, it is far easier to calculate and act on these performance measures than it is for private investments.

For private investments, one valuable measure of return over a multiyear holding period is the **internal rate of return (IRR)**. This represents the singular discount rate that produces a **net present value (NPV)** of zero for a series of cash flows over *n* periods. An inherent (and potentially problematic) assumption is that interim cash flows can be reinvested at the IRR rate, which may be less realistic with private markets. The formula is shown here:

$$\text{NPV} = 0 = \frac{\text{CF}_1}{(1+\text{IRR})^1} + \frac{\text{CF}_2}{(1+\text{IRR})^2} + \cdots \frac{\text{CF}_n}{(1+\text{IRR})^n}$$

Another valuable measure is **return on investment (ROI)**, which compares cash flows received to those invested. The investment holding period and time value of money are not factored into this calculation, shown here:

$$\text{ROI} = \frac{\sum(\text{cash flows received})}{\sum(\text{cash flows invested})}$$

The following equation relates IRR to ROI and works well when there is a single outflow at the start of the holding period and a single inflow at the end:

$$\text{ROI} = (1+\text{IRR})^n$$

EXAMPLE: IRR and ROI

An investor is given an opportunity to invest $5.2 million in a project that is expected to return $8.3 million at the end of four years. The investor will only accept projects that exceed a target return of 10%. **Calculate** the ROI and the IRR and assess whether this investment will meet the investor's required return.

Answer:

$$\text{ROI} = \frac{\$8.3 \text{ million}}{\$5.2 \text{ million}} = 1.596\text{x}$$

$$1.596\text{x} = (1 + \text{IRR})^4 = 12.40\%$$

Because the IRR of 12.40% exceeds the investor's target return of 10%, the project will be accepted.

One of the unique elements of private market investments is the need for lengthy, up-front capital requirements. Funds are often committed well in advance (potentially years) of capital deployment, which means the magnitude and timing of capital calls can be highly variable. As a result, the funds used to meet these commitments must be held in highly liquid, public investments that will likely generate relatively low returns. For limited partnerships, the challenges include comparing return horizons relative to public markets and the impact of public market conditions on the timing of capital calls.

The longer that committed capital must be invested in liquid, public investments, the greater the negative impact to IRR. Public market conditions and the overall outlook of the economy will impact the timing of capital calls. When economic growth is strong and borrowing costs are low, GPs are likely to deploy capital quickly. But when interest rates are rising and economic trends lend to greater aversion to taking risk, capital deployments are less frequent.

The **vintage year** is the year where capital is first deployed to a project or investment and serves as a valuable comparison point for performance relative to other investments with the same vintage year. Private market fund performance is also heavily impacted by return and timing dynamics. After identifying target investments, a GP will deploy capital for lengthy periods with no cash flows to investors. The inflows coming in from early investments will eventually (and hopefully) offset outflows. Once all commitments are fully deployed, the inflows will also factor in exit values from individual investments.

EXAMPLE: IRR across a portfolio of investments

Baker Brothers PE Firm has capital commitments of $80 million in place for its new investment fund. Kyle Baker, the general partner, is looking at five assets over a four-year time frame for investment. The first investment (in Asset 1, or A1) will occur immediately, with the next investment in A2 happening in one year, the next investment in A3 happening one year after that, and so on. The investments required and the cash inflows forecasted over each investment's four-year time horizon are shown next, with amounts stated in millions:

Asset	Initial Investment	Cash Inflow #1	Cash Inflow #2	Cash Inflow #3	Final Cash Inflow	IRR
A1	−15	3	3	3	18	20.0%
A2	−12	2	2	2	14	16.7%
A3	−17	4	4	4	21	23.5%
A4	−20	5	5	5	25	25.0%
A5	−16	3	3	3	20	19.9%

Given this information and the timing of the cash flows, **determine** the IRR of the overall fund.

Answer:

The timing of the cash flows is critical in determining the IRR. Because each investment starts one year apart, the cash flows can be organized as follows:

Asset	CF0	CF1	CF2	CF3	CF4	CF5	CF6	CF7	CF8	Asset IRR
A1	−15	3	3	3	18					20.0%
A2		−12	2	2	2	14				16.7%
A3			−17	4	4	4	21			23.5%
A4				−20	5	5	5	25		25.0%
A5					−16	3	3	3	20	19.9%
Net cash flow	**−15**	**−9**	**−12**	**−11**	**13**	**26**	**29**	**28**	**20**	**21.1%**

The IRR of the overall fund is 21.1% (CF0 = −15, C01 = −9, C02 = −12, C03 = −11, C04 = 13, C05 = 26, C06 = 29, C07 = 28, C08 = 20, CPT IRR = 21.1). As shown in the previous example, the IRRs of private market fund investments reflect uneven cash flow timing. This makes it difficult to compare private market IRRs to public market returns. For comparison purposes, **public market equivalent (PME)** methods can be used to compare public and private market returns. The underlying logic behind the PME method is that private fund cash outflows are invested into a public market index, while private fund cash inflows are sold from the same index.

EXAMPLE: Public market equivalents

A €50 million private equity fund with a five-year life was recently closed. The following table reflects the cash flows of the fund (in millions), as well as a public market index and public market returns:

Year	Fund Cash Flows	Public Market Index	Public Market Return
0	−28	100	NA
1	−22	115	15.00%
2	5	109	−5.22%
3	10	122	11.93%
4	15	145	18.85%
5	46	158	8.96%

Discuss how to interpret these results and show the year-end asset values for a PME associated with this fund.

Answer:

The fund's IRR is 11.44% (CF0 = −28, C01 = −22, C02 = 5, C03 = 10, C04 = 15, C05 = 46, CPT IRR = 11.44), and the public market index compound return (annual) is 9.58% (PV = −100, FV = 158, N = 5, CPT I/Y = 9.58). Though the IRR of the fund is higher than the PME return, the latter is an annual return that does not reflect the uneven nature of cash flow timing for the private equity fund. So, this is not an appropriate comparison.

The following table shows asset values at year-end for a PME based on the cash flows (in millions) of the fund:

Year	Fund PME Asset Values
0	28
1	54.2
2	46.37
3	41.90
4	34.80
5	37.92

Calculations for asset values are as follows:

- Year 0: initial investment = 28
- Year 1: 28 × 1.15 (public market return of 15.00%) + 22 additional investment = 54.2
- Year 2: 54.2 × 0.9478 (public market return of −5.22%) − 5 outflow to investors = 46.37
- Year 3: 46.37 × 1.1193 (public market return of 11.93%) − 10 outflow to investors = 41.90
- Year 4: 41.90 × 1.1885 (public market return of 18.85%) − 15 outflow to investors = 34.80
- Year 5: 34.80 × 1.0896 (public market return of 8.96%) = PME terminal value of 37.92

The PME IRR based on cash flows for Years 0–4 and the PME Year 5 asset value is equal to 8.41% (CF0 = −28, C01 = −22, C02 = 5, C03 = 10, C04 = 15, C05 = 37.92, CPT IRR =

8.41). The fund's IRR of 11.44% exceeds the PME IRR of 8.41%. Note that this reflects a greater outperformance than the originally calculated difference of 11.44% versus 9.58% (the public market index compounded annual return). One of the challenges of the PME methodology is choosing the appropriate public market index. The composition of the investments in the private market fund should align with the constitution of the public market index, including in areas such as growth versus value, leverage factors, and capitalization. As evidenced by the previous examples, overall fund returns should be based on the net values of cash inflows and outflows over the life of a fund.

Private Market Fund Multiples

While IRR is a valuable and relatively easy measure to calculate, there are various other fund return multiples that are useful for evaluating fund performance.

The first of these measures is **paid-in capital (PIC)**, which is calculated using this formula:

$$\text{PIC} = \frac{\text{capital invested}}{\text{total capital committed}}$$

This formula is a measure of the extent to which the capital drawdown phase of the life cycle is complete. Another use of this measure is to gauge when a GP may need (or want) to return to the market to raise new funds (the higher the PIC, the more likely this will be).

The next measure is **distributed to paid-in (DPI)**, which is a ratio comparing cumulative distributions (to LPs) relative to capital invested. This "cash-on-cash" return is considered the investor's realized return, as shown here:

$$\text{DPI} = \frac{\text{cumulative distributions}}{\text{total capital invested}}$$

Another return measure is **residual value to paid-in (RVPI)**, which is the fund's net asset value (NAV) relative to total invested capital. This is considered the investor's unrealized return, as shown here:

$$\text{RVPI} = \frac{\text{net asset value}}{\text{total capital invested}}$$

The **total value to paid-in (TVPI)** serves as the overall investment value to the limited partner and is the summation of DPI and RVPI, as shown here:

$$\text{TVPI} = \frac{\text{cumulative distributions} + \text{net asset value}}{\text{total capital invested}}$$

$$\text{TVPI} = \text{DPI} + \text{RVPI}$$

A TVPI calculation that is gross of fees may also be referred to as the **multiple of money (MOM)** or the **multiple of invested capital (MOIC)**. While more mature industries tend to have TVPIs near 2x, emerging high-growth industries can have TVPIs near 3x.

EXAMPLE: Private market fund multiples

The following table reflects the net asset values (NAVs), capital calls, and distributed capital of the PE4 investment fund. All data are in millions:

Years	0	1	2	3	4	5	6
Net asset value (NAV)		45	75	95	120	90	40
Capital called	−15	−25	−20	−15			
Distributed capital		0	0	0	20	25	45

Based on this data, **calculate** the following multiples:

1. PIC at the end of Year 2
2. DPI at the end of Year 6
3. TVPI at the end of Year 5

Answer:

1. PIC Year 2 = (15 million + 25 million + 20 million) / 75 million = 0.80, or 80%. Note that 75 million is the combination of all capital calls.
2. DPI Year 6 = (20 million + 25 million + 45 million) / 75 million = 1.20, or 120%. The results show that the LPs have been paid cash distributions 20% higher than the cash invested.
3. TVPI Year 5 = (20 million + 25 million + 90 million) / 75 million = 1.80, or 180%. The DPI component is 45 million / 75 million, or 60%. The RVPI component is 90 million / 75 million, or 120%.

MODULE QUIZ M1.3

1. At the end of the year, the residual value to paid-in (RVPI) is equal to 40%, and the total value to paid-in (TVPI) is equal to 110%. The distributed to paid-in (DPI) measure must equal:
   A. 70%.
   B. 75%.
   C. 150%.
2. An investment requires a single outflow in Year 0 and will produce a single inflow in Year 3. If the ROI is 1.25x, the IRR will be *closest* to:
   A. 3.75%.
   B. 7.72%.
   C. 8.33%.

MODULE M1.4: RISK AND RETURN FOR PRIVATE AND PUBLIC MARKETS

Video covering this content is available online.

LOS M1.d: Compare the risk and return of investing in private

markets and public markets as part of a strategic asset allocation.

After the Global Financial Crisis (GFC) in 2008 and 2009, rising valuations, increases in risk appetite, and relatively low interest rates led private markets to outperform public markets—both in terms of attracting new capital and in generating returns. Participation in private markets has not just been limited to institutional investors, as smaller investors have been able to gain access to these markets as well in both North America and Europe.

While private market returns have overall outperformed those in public markets, there is considerable variability in the former due to a broader range of life cycle phases and investments, as well as specialized manager skills. In looking at the median IRR from inception to late 2022 for private equity funds with vintage years from 2009 to 2019, the median net IRR was 20.1% compared to the average return of the S&P 500 Index of 11.8%. However, the performance for private equity fund managers spanned a range between the top quartile (29.8%) and bottom quartile (11.4%) of 18.4%. Those in the bottom quartile actually slightly underperformed the S&P. The range from the top to bottom quartile for other private asset classes was not as wide.

The three key drivers of periodic return over an investment period for private market investments are as follows:

1. *Committed capital*. Capital that has not been called (but committed) is typically held in liquid public investments with relatively low expected returns.
2. *Deployed capital*. Negative returns often occur in early drawdown periods, as no returns are realized, and investors are contributing committed funds that are also being assessed fees.
3. *Returns distributed*. An IRR of zero occurs when returns equal contributed capital. After time has passed, the IRR of the investment will align with its true compounded return at the end of its life cycle.

While public investments often generate stable cash flows (and hopefully, appreciation) over the life of the investment, private market investments are more reliant on price appreciation due to their long time horizons and J-curve effects. The illiquidity and greater uncertainty associated with private investments present more risk, which equates to higher expected returns for investors.

Asset Class Comparisons

Figure M1.3 highlights the different types of investments available in both public and private markets, broken out by asset classes.

Figure M1.3: Asset Classes Across Markets

Characteristic	Public	Private
Equity	Mature, listed companies	Growth equity, buyout equity, venture capital
Debt	Corporate and sovereign bonds	Direct lending, venture debt, mezzanine debt
Real estate	Real estate investment trusts (REITs)—income-producing properties	Opportunistic real estate, value-added real estate
Infrastructure	Public infrastructure companies	Opportunistic infrastructure, value-added infrastructure

The following are characteristics of the asset classes listed in Figure M1.3:

- *Equity*. As noted earlier, public equities are typically larger companies in the mature stage of the life cycle with relatively stable cash flows. Private equity funds are often investing in **growth equity** or early-stage venture capital opportunities, along with more mature buyout opportunities where controlling stakes can be obtained. Growth equity is defined as noncontrolling investments in newer companies with rising revenues and a goal of scaling their operations. The goal with private equity is to provide diversification relative to public equity investments, as well as higher risk-adjusted returns. Emerging industries and companies with business models built on innovation are the targets for private equity.
- *Debt*. Much like with public equities, public debt is often issued by governments or mature companies with relatively low default risk and offering stable cash flows. Private debt may involve **direct lending** (sourced from nonbank lenders), **venture debt** (early-stage borrowing with high default risk), or mezzanine debt (subordinated). Differences in default risk, liquidity, life cycle stages, and unique features differentiate risk and returns for public and private debt investments.
- *Real estate*. For public securities, REITs will house income-producing properties, which should provide relatively stable cash flows. For private investments, the underlying real estate investments may include new development or major renovation projects with negative cash flows early on and income with less stability. Once again, as compensation for greater market risk, illiquidity, and a longer holding period, investors will expect higher returns.
- *Infrastructure.* As with the other asset classes, public investments in the **infrastructure** space involve mature companies with many projects that generate stable cash flows. Private infrastructure investments may involve **greenfield investments**, which are projects that may be built in the future but carry long periods and may or may not occur. Higher expected returns and potential diversification benefits can be attractive for investors. **Special situations** are investments that invest in event-driven, stressed, or distressed opportunities that can involve private assets or public securities.

There are unique challenges associated with private investments that general partners, LPs, and all investors need to take into account. Liquidity planning is critical, as there are commitments of capital for lengthy periods where timing and distribution are

uncertain. Performance reporting is often delayed. Diversification benefits can be found by incorporating private investments into a portfolio with public investments, but there may be higher costs and accessibility challenges associated with investing in different vintage years. Relationships are also critical between the GP and LPs.

MODULE QUIZ M1.4

1. An investor looking for stable income will *most likely* enter into which of the following investments?
   A. Venture debt.
   B. Direct lending.
   C. Real estate investment trusts (REITs).

2. From the end of the Global Financial Crisis (GFC) until 2022, the performance of private equity fund managers is *best* described as:
   A. underperforming the S&P 500 Index.
   B. outperforming the S&P 500 Index overall.
   C. outperforming the S&P 500 Index across all performance quartiles.

KEY CONCEPTS

LOS M1.a

Private vs. Public Investments

Characteristic	Private	Public
Liquidity	Illiquid (sales restricted or even prohibited)	Mostly liquid (limited restrictions, if any)
Investment process	Closed-end	Open-end
Performance measurement	Compounded over a longer holding period	Periodic
Asset prices	Negotiated (based on estimates)	Observable and traded regularly
Management skills	Expertise needed in legal and financial analysis; experience in industry, management, and technical areas	Experience and expertise needed in company, industry, and financial analysis
Diversification within a portfolio	Dependent on uniqueness of asset type, as well as company and investment life cycle phases	Dependent on correlations of periodic returns

The private asset investment life cycle involves four phases: (1) precommitment, (2) capital deployment, (3) capital distribution, and (4) exit. Returns are expected to be negative in the early phases (precommitment/commitment of capital and capital deployment) and positive in the later phases (capital distribution and exit). The returns reflect a J-curve effect.

LOS M1.b

In the limited partnership structure, the partnership is run by a general partner (GP) who serves as the fund manager and controls investment operations and processes but has unlimited liability. The investors are limited partners (LPs), who have no

investment control, limited liability, and share in both the returns and the risk with the general partner.

A direct investment is a purchase of a private debt investment or equity ownership stake without involving an investment intermediary or a partner.

Co-investment can take the form of either a direct co-investment or a limited partner co-investment. The direct co-investment will be a direct purchase (with partners) of a private debt or equity investment. A limited partner co-investment is a purchase of private debt or equity in a single investment run by a private fund manager.

Angel investors are high-net-worth investors who often have entrepreneurial expertise and industry experience and can provide early-stage financing for start-up ventures. A take-private transaction is one where private investors purchase a public company. This may also be referred to as a leveraged buyout (LBO) when a significant amount of debt financing is used to execute the acquisition.

Two types of loans often found in private market transactions include leveraged loans and mezzanine loans. A leveraged loan is a senior secured, prepayable loan with a floating-rate coupon and restrictive debt covenants. A mezzanine loan is a subordinated debt claim that lands between senior debt and common equity.

A special purpose entity (SPE) may be established for investments in real estate or infrastructure. The entity will exist to facilitate the building, operations, and financing of the underlying real estate or infrastructure asset.

A concession agreement is one where an operator (or developer) is tasked with building, operating, maintaining, and financing an infrastructure asset over a period according to the terms and conditions of the entity.

LOS M1.c

Income (from dividends on equity securities and interest on debt securities) and asset appreciation serve as the most appropriate performance metrics for public investments. For private investments, the internal rate of return (IRR) is often used. Another valuable measure is return on investment (ROI), which compares cash flows received to those invested.

The vintage year is the year where capital is first deployed to a project or investment and serves as a valuable comparison point for performance relative to other investments with the same vintage year.

Public market equivalent (PME) methods can be used to compare public and private market returns. The logic behind the PME method is that private fund cash outflows are invested into a public market index, while private fund cash inflows are sold from the same index.

Paid-in capital (PIC) is a measure of the extent to which the capital drawdown phase of the life cycle is complete:

$$\text{PIC} = \frac{\text{capital invested}}{\text{total capital committed}}$$

Distributed to paid-in (DPI) is a ratio comparing cumulative distributions (to limited partners) relative to capital invested:

$$\text{DPI} = \frac{\text{cumulative distributions}}{\text{total capital invested}}$$

Residual value to paid-in (RVPI) is the fund's net asset value (NAV) relative to total invested capital:

$$\text{RVPI} = \frac{\text{net asset value}}{\text{total capital invested}}$$

Total value to paid-in (TVPI) serves as the overall investment value to the limited partner and is the sum of DPI and RVPI:

$$\text{TVPI} = \frac{\text{cumulative distributions} + \text{net asset value}}{\text{total capital invested}}$$

$$\text{TVPI} = \text{DPI} + \text{RVPI}$$

LOS M1.d

The three key drivers of periodic return over an investment period for private market investments include committed capital, deployed capital, and distributed returns. While public investments often generate stable cash flows and appreciation over the life of the investment, private market investments are more reliant on price appreciation due to their long time horizons and J-curve effects. The illiquidity and greater uncertainty associated with private investments present more risk, which equates to higher expected returns for investors.

Asset class comparisons across public and private markets can be made for equities, debt, real estate, and infrastructure. Public equities are typically larger companies in the mature stage of the life cycle with relatively stable cash flows. Private equity funds are often investing in growth equity or early-stage venture capital opportunities, along with more mature buyout opportunities where controlling stakes can be obtained.

Public debt is often issued by governments or mature companies with relatively low default risk and offering stable cash flows, while private debt may involve direct lending, venture debt, or mezzanine debt (subordinated).

With real estate, public securities REITs will house income-producing properties, which should provide relatively stable cash flows. For private investments, the underlying real estate investments may include new development or major renovation projects with negative cash flows early on and income with less stability.

Public infrastructure investments involve mature companies with myriad projects that generate stable cash flows. Private infrastructure investments may involve greenfield investments, which are projects that may be built in the future but carry long periods and may or may not occur. Special situations are investments that invest in event-driven, stressed, or distressed opportunities that can involve private assets or public securities.

ANSWER KEY FOR MODULE QUIZZES

Module Quiz M1.1

1. **A** A private investment (relatively to a public investment) will have far less liquidity, as there will not be an active market or exchange available for trading. In addition, these investments tend to have more restrictions on liquidation. The terms are likely to be customized as opposed to standardized (more common with public investments), and benchmarks are harder to identify. (LOS M1.a)

2. **C** The J-curve effect reflects the reality that most successful private investments require significant committed capital (cash outflows) earlier in the life cycle and generate greater distributed capital (cash inflows) later in the life cycle. (LOS M1.a)

Module Quiz M1.2

1. **C** Mezzanine debt is a subordinated debt claim found below senior debt but above common stockholders. A leveraged loan is senior, secured debt with claims higher than those of mezzanine loan investors. (LOS M1.b)

2. **B** With limited partner co-investments, general partners and limited partners share investment risk. Limited partners have a more active role in the investment process, but their holding periods tend to be long, and their positions are generally illiquid. (LOS M1.b)

Module Quiz M1.3

1. **A** TVPI = DPI + RVPI. If TVPI is 110% and RVPI is 40%, DPI must be 70%, and 110% = 70% + 40%. This implies that the investor's realized return (DPI) exceeds their unrealized return (RVPI). (LOS M1.c)

2. **B** $1.25x = (1 + IRR)^3 = 7.72\ \%$. (LOS M1.c)

Module Quiz M1.4

1. **C** While public investments such as equities of mature companies, corporate and sovereign bonds, public infrastructure companies, and REITs tend to provide stable and consistent cash flows for investors, private investments such as venture debt and direct lending provide less stable cash flows and carry higher risk. (LOS M1.d)

2. **B** Over the period between the end of the GFC and late 2022, the median net IRR was 20.1% compared to the average return of the S&P 500 Index of 11.8%. So overall, private equity fund managers outperformed the S&P 500 Index. However, those in the bottom quartile slightly underperformed the S&P. (LOS M1.d)

READING M2

GENERAL PARTNER AND INVESTOR PERSPECTIVES AND THE INVESTMENT PROCESS

EXAM FOCUS

This reading builds on the unique features of private markets and how they shape the role and interaction of both the general partner (GP) and limited partners (LPs). We examine GP compensation and the importance of return measurements in determining performance-related fees. Critical to this is understanding the fee-based methodology designed to align the interests of the GP and LPs. Many of these concepts will be familiar from your Level I and II studies. The first two readings in this pathway provide a generic overview of private market structures before we consider factors that are unique to private equity, private debt, real estate, and unlisted infrastructure funds in subsequent readings.

MODULE M2.1: GENERAL PARTNER ROLES AND RESPONSIBILITIES

Video covering this content is available online.

LOS M2.a: Discuss a general partner's roles and responsibilities in managing private investment funds.

Private investment funds are typically illiquid investments, structured as closed-end limited liability partnerships, with finite lives. LPs provide committed capital, which is then called over time by the GP, during the capital deployment phase, as investments in target companies are identified and established.

The GP defines the fund's strategy and identifies and invests in portfolio companies (investments). The GP then deploys value creation strategies to increase the value of investments before exiting and distributing returns to the LPs toward the end of the fund's life. Value creation requires hands-on active management of the portfolio companies. The GP must have specific knowledge and skills relating to the market in which the portfolio companies operate to facilitate the value creation process.

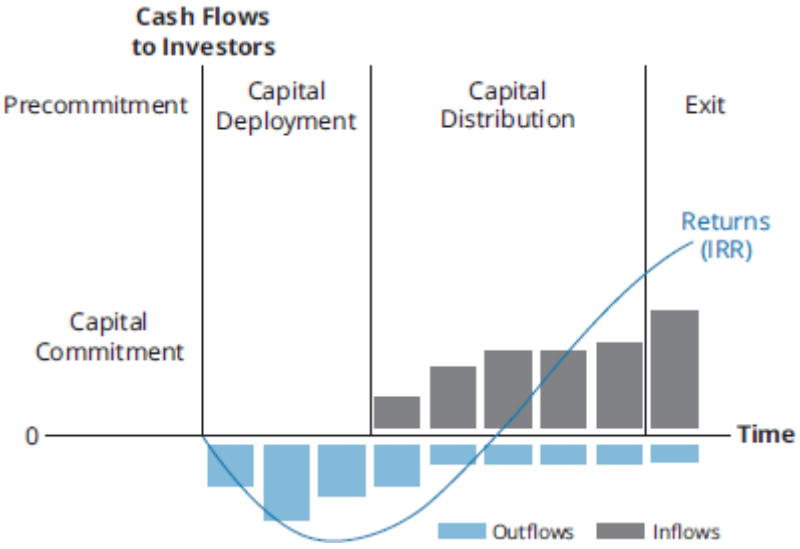
The investments made in target companies (portfolio companies) are controlling interests or holdings that give the GP significant interest; this allows the GP to actively control the strategy of the companies. As a result, these funds hold fewer investments,

are significantly less diversified, and have longer holding periods than funds that invest in public securities.

The portfolio companies held by the fund have low price transparency, resulting in the need to apply valuation methodologies (such as DCF or relative valuation multiples) to estimate the value of investments and the fund's net asset value. Reliable performance benchmarking over the life of an investment is also problematic in private markets. In addition, the value creation process and the ultimate exit timings and routes are uncertain, resulting in unpredictable distributions of capital and returns back from the fund to the LPs.

Funds typically have negative cash flows in their infancy and positive cash flows toward the end of their fixed lives, as shown in Figure M2.1.[1] The fund's performance is often measured by the internal rate of return of these cash flows.

Figure M2.1: Private Asset Investment Life Cycle



Precommitment

The GP outlines the fund's strategy and proposed value creation based on the fund's specialized skill set and experience.

Capital Commitment

Unfunded capital commitments, which may take the form of debt or equity, are secured by attracting investment from LPs. The committed capital is not immediately paid into the fund; rather, these funds will be drawn down as required by the GP to finance due diligence and the acquisition of portfolio companies.

LPs will need to conduct their own due diligence before committing capital, considering the GP's track record and the potential opportunity of the GP's strategy.

A limited partnership agreement is negotiated between the LPs and GP detailing the following:

- Rights of both parties

- Terms and conditions
- Fee structures

The agreement struck may differ for individual LPs depending on bargaining power, determined by the amount and timing of their capital commitment. Special terms that apply to one LP but not to others are stated in "side letters."

Capital Deployment

The GP finalizes due diligence on target investments. A detailed business and financing plan for each portfolio company is created, detailing the sources of value creation and how they will be realized. The GP bids on potential targets and calls down equity and debt finance to fund the purchases.

Capital drawdowns may take place over numerous years to finance not only the initial acquisition but also fund subsequent rounds of financing to cover future capital requirements of existing investments. Some funds (e.g., private real estate and infrastructure) draw down capital as predetermined milestones (detailed in the limited partnership agreement) are met.

The drawdown period typically covers between three and five years. Debt is typically drawn down more frequently and over a longer period than equity, as it is used to cover the target investment's operating costs.

The initial year in which capital is drawn down from the LPs is referred to as the fund's **vintage year**. This enables performance comparisons to be made between different funds. Comparing fund performance with the same vintage year is logical, as they have been exposed to the same macroeconomic conditions since the first drawdown of capital.

The GP may use additional credit facilities, known as **subscription lines**. These are credit lines secured on the LP's committed capital, and they allow the GP to manage the uncertainty in amount and timing of drawdowns by avoiding irregular capital calls to the LPs. These borrowings can be used in the short term before being replaced by drawdowns from LPs. This gives the LPs time to liquidate assets in an orderly fashion to raise the required financing.

The GP is responsible for conducting corporate finance activities and structuring investment deals. The GP will use in-house expertise, but will also use external advisors for corporate finance, taxation, and legal advice.

Capital Distributions and Exit

In comparison to and investment in public funds, LPs have considerable uncertainty regarding the timing and amounts of distributions from their private funds. This unpredictability leads to the use of compound return measures (such as IRRs) rather than periodic return measures for performance measurement. Distributions for private equity funds take the form of dividends and proceeds from investment exits. For private debt funds, the distributions comprise interest and principal payments from fund investments. Unlike plain vanilla bonds (common in public markets), the debt in private

funds may include embedded options, interest accruals, and other features that make the timing of cash flows less certain.

The investment that the LPs make in the private fund are long term and have limited liquidity. GPs, however, may offer the LPs the ability to trade in existing partnership stakes (known as **secondaries**). The secondary market typically has much wider bid-ask spreads than spreads in public markets. The size of the spread depends on the nature of the fund. For example, venture capital funds tend to have larger discounts to net asset value than buyout funds.

Advantages to LPs of an active secondary market include the ability to do the following:

- Purchase seasoned funds
- Diversify their exposure to GPs, fund strategies, and vintage years
- Free up capital for new investments
- Reduce their exposure to a specific fund
- Avoid investment delays by bypassing the capital deployment phase

The GP exits the fund's investments toward the end of the fund's life after the value creation process has been implemented, and the GP returns the proceeds to the LPs. Exit routes can include initial public offerings (IPOs), trade sales, and liquidations (for failed investments). The proceeds generated from exits are uncertain, depending on the success of the GP in implementing the value creation plan (and they have a big impact on LPs' returns).

The GP also provides periodic valuations of the fund to the LPs. The portfolio companies held by the fund lack price transparency, which necessitates the use of valuation techniques to appraise the value of the fund's investments and NAV. By definition, these valuations involve significant subjectivity.

MODULE QUIZ M2.1

1. Which of the following statements regarding LPs is *least accurate*?
   A. The value of the LP's investment in the funds is not transparent and requires the use of valuation techniques.
   B. The LP must transfer the committed capital up front to the GP at the start of the capital deployment period.
   C. The use of subscription lines reduces the uncertainty in timings of capital calls to the LPs.
2. Which of the following statements relating to a fund's vintage year is *least accurate*?
   A. The vintage year is the year in which the fund first makes capital calls to the LPs.
   B. The vintage year allows performance comparison between funds exposed to the same macroeconomic conditions.
   C. A fund can have multiple vintage years if it has a capital drawdown period spanning multiple years.
3. Which of the following is *least likely* a benefit to LPs of an active secondary market?
   A. The opportunity to purchase seasoned investments.
   B. The opportunity to buy and sell at narrow spreads around NAV.

C. The ability to free up capital for investment in new partnerships.

MODULE M2.2: INVESTOR (LP) PERSPECTIVES, FEES, AND PERFORMANCE MEASUREMENT

Video covering this content is available online.

LOS M2.b: Discuss how private investment firms align their interests with those of their investors, and calculate, interpret, and discuss private market fund performance from an investor perspective, including management fees and carried interest.

Private funds are characterized by multiyear holding periods, illiquidity, uncertain timing of cash flow distributions, and a lack of price transparency. To reduce the impact of asymmetrical information between the GP and LPs, funds typically use a combination of management fees and performance-based fees.

Management Fees

Management fees are designed to cover the operating costs of the fund. Public funds typically base these fees on a percentage of assets under management (AUM). Private funds base management fees on a percentage of committed capital. Typical management fees equate to 1% for private debt and 2% for private equity, but in practice, this will vary according to the nature of the fund.

Management fees initially are based on committed capital rather than deployed capital (invested capital). This provides income for the GP to cover up-front costs, such as target investment due diligence, and reduces the incentive for the GP to deploy capital too quickly in suboptimal investments simply to earn fee income. The use of a cost basis also eliminates the motivation for the GP to inflate the NAV of the fund to generate greater management fee income.

Once the fund has fully deployed capital, management fees are based on committed capital less the cumulative cost of investments exited or liquidated (net invested capital).

EXAMPLE: Management fees

Scoggins LLP, a British private equity fund, has £20m of committed capital from its LPs and plans to operate for six years. The committed capital is drawn down equally in Years 1 and 2. In Year 3, an investment with a cost basis of 10% of committed capital is written off. In Years 4–6, Scoggins exits investments with a cost basis of 15%, 25%, and 50% of committed capital, respectively. The fund charges a management fee of 2% of net invested capital.

Calculate the management fees over the fund's six-year life.

Answer: