

An introduction to private markets

Private markets education

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- Private markets offer a combination of high potential returns, a long-term focus, and access to innovative and fast-growing businesses. They can provide differentiated investment opportunities when combined with a traditional public markets portfolio.
- Private markets are traditionally less impacted by perceived volatility, news flows and inefficiencies, enabling companies to focus on long-term value creation. This sets them apart from public market companies.
- Private markets require long-term commitments. Investors should be able to tolerate illiquidity for multiple years.



Source: UBS

This report is part of a series of short educational primers introducing private markets concepts. You can find more information on the client portal or contact your advisor for assistance.

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Summary

- Private markets are a broad term for assets not traded on public exchanges. Private market investments can include equity ownership in privately owned firms across all stages of development, private lending, real estate, infrastructure and other real assets.
- Investing in private markets can help diversify portfolios as they offer an alternative source of return not available on public markets.
- There are various private market strategies investors can choose from, ranging from private equity, private debt, to private real estate and infrastructure.
- Investors need to be able to lock away cash for longer to access private markets and accept illiquidity. Depending on the type of private investments, Private investments are typically committed for 7-10 years or longer. Some strategies may require shorter investment periods.
- However, historically investors have been rewarded for their patience with higher returns compared to investments on public exchanges, as global private equity has provided annual returns of 13.8% between 2001-2021 compared to 7.1% returns in publicly traded global equities for the same period.
- Besides differentiated strategies, investors can also choose from various approaches to include private markets in their portfolios, depending on their desired level of involvement and responsibility.
- Investors can make direct investments in companies if they have the capacity to do so, co-invest alongside a fund manager, or choose from different fund management styles and strategies to meet their needs.
- To maximize chances of success, investors should invest across geographies, managers, strategies and vintage years. This reduces dependence on any single factor or strategy exposure and improves the potential for higher and stable returns.
- Manager selection is crucial, as there is high dispersion of returns between private market funds and management styles.

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What are private markets?

Private markets are a broad term for assets not traded on public exchanges. Private market investments can include equity ownership in privately owned firms across all stages of development, private lending, real estate, infrastructure and other real assets.

Private markets can employ different strategies to add value. Private equity managers can focus on buying stakes in companies ranging from early stage, expansion or the turn around of mature businesses. Private debt managers, on the other hand, specialize in everything from underwriting loans to small, mid or large cap companies to restructuring default debt. Meanwhile, private real estate fund managers can focus on the acquisition of high-quality assets, property refurbishment or repositioning, as well as new development projects, to generate returns.

The individual manager(s) of a fund is referred to as the General Partner (GP) and Limited Partners (LP) are the investors in the fund. When Limited Partners commit to a fund, they are not immediately invested. The General Partner will call capital as it invests out the fund over time. Investment periods typically range from 3 – 6 years. When the portfolio companies are sold, the General Partner will distribute capital back to the Limited Partners.

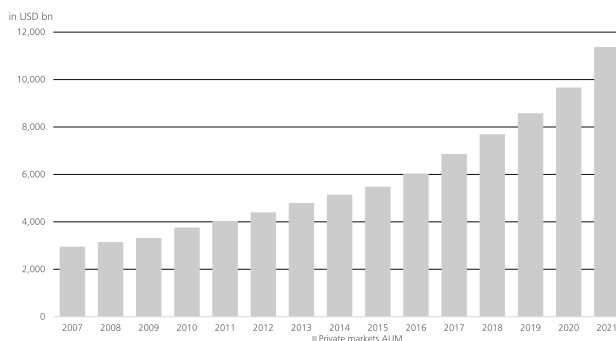
The GP then creates a portfolio and works directly with the companies and projects to increase their chance of success with a particular strategic focus or asset class. GPs require a management fee to cover for operating costs and an incentive fee that is paid to the manager in case the fund performs above a specific hurdle rate of return. This fee is known as carried interest.

Other investors may prefer a direct approach, buying stakes in a range of private companies without the help of a fund manager. This however requires a higher level of expertise and a larger minimum investment.

Access to information in private markets is more challenging than in public markets. GPs often rely on their own resources and network to find attractive investment opportunities. The better the ability a manager has to gather information and formulate an investment thesis, the better chance they have to spot rewarding investment opportunities. There is also no continuous market or valuation for these assets and the transactions require time to negotiate and execute. Yet these challenges and inefficiencies are precisely what make the opportunity set compelling. The potential for mispricing exists because many investors do not have the necessary knowledge, patience or information to evaluate, invest, and help realize the intrinsic value of these assets.

In all cases, investing in private markets requires time. In public markets, investors often can easily access their investments and realize returns by month, quarter or year. Because private market funds aim to transform companies or projects over the course of years, investors need to be willing to lock up their capital for longer. For private equity funds, for instance, this could be for 10-years or more.

Fig. 1: Private market assets under management (AUM) have grown rapidly



Source: Pitchbook, UBS, August 2022. Includes private equity, private debt, real estate, infrastructure/natural resources.

Key private markets strategies

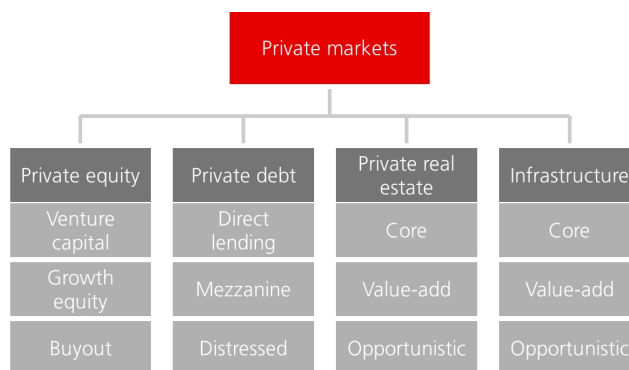
Private markets can be broken down into four different strategies: private equity, private debt, private real estate and infrastructure. These styles pursue different investment approaches, asset classes, exposure levels, time horizons and risk-adjusted returns.

- **Private equity (PE)** represents the lion's share of private markets, with well over 60% of total private assets under management. Private equity strategies refer to equity investments made into companies that are not publicly traded, thus providing investors with equity-like ownership interest and returns. PE can be further divided into sub strategies, depending on the stage in the life cycle of the target company:
 1. Venture capital seek to acquire minority stakes in startups and early-stage companies.
 2. Growth equity makes minority investments into fast growing companies that need additional funding to expand.
 3. Buyout funds target control positions in mature, cash-generating companies with the aim of growing earnings through value-add initiatives.
- **Private debt (PD)** strategies focus on non-traded debt instruments issued to private companies. PD managers typically source, negotiate and originate debt instruments with borrowers, providing investors with a

credit-type risk. The main PD sub-strategies can be split into:

1. Direct lending, which originates senior secured debt financing for middle-market, below-investment-grade companies,
 2. Mezzanine financing, which focuses on subordinated debt with equity like participation; and
 3. Distressed debt, which seeks to monetize debt investments (with potentially equity like participation) through normalizing firm profitability, restructuring, or asset liquidation.
- **Private real estate (PRE)** strategies focus on acquiring real estate and related assets, particularly in the value-add and opportunistic segments, where active management can drive substantial value creation. PRE offers potential for inflation protection, income and potentially lower correlations to traditional assets. Sub-strategies include:
 1. Core real estate targeting established, quality and fully leased assets;
 2. Value-add RE strategies targeting assets with some lease-up or refurbishment risk; and
 3. Opportunistic RE targeting development projects and assets that require significant repositioning.
 - **Private infrastructure** strategies focus on acquiring infrastructure assets which often exhibit the following common characteristics- high barriers to entry, low price elasticity of demand, stable and inflation linked cash flows. Similar to real estate, private infrastructure strategies, dependent on type, offer potential for inflation protection and lower correlations to traditional assets.
 1. The core strategy targets investment in existing assets (brownfield) with minimal capex requirements, low operational complexity, and predictable contracted revenues.
 2. Value-add managers target more complex assets with some development risk; and
 3. Opportunistic funds target greenfield project or assets that require substantial capital expenditure. Dependent on the strategy, infrastructure investors can generate a mix of both income and capital gains.

Fig. 2: Key private markets strategies



Source: UBS, August 2022.

Why include private markets in a portfolio?

Private markets can significantly expand the universe of instruments and exposures beyond liquid, publicly traded securities. In particular, private markets enable investors to capture additional potential sources of return including an illiquidity premium and manager skill or alpha. Listed below are key reasons for incorporating private markets into portfolios.

- **Expanded universe.** Many attractive companies and assets are not necessarily publicly listed. Private markets offer exposure to these investments. Investors willing to trade off liquidity can access otherwise unavailable assets and themes, and thus diversify portfolio sources of return.
- **Inefficiencies create opportunity.** Asymmetry of information and the complexity of transacting in private companies and assets offer attractive opportunities for long-term investors who can find, evaluate and purchase opportunities at a significant discount to their assessment of intrinsic value.
- **Diversify with liquidity and other premia.** Private markets offer investors the potential to capture an illiquidity and complexity premium stemming from managers' active ownership and management approach focused on long term value creation. Some strategies exhibit low to no correlation to traditional markets.
- **Attractive risk-adjusted returns.** Historical private markets returns show a significant premium to traditional asset returns over the long term. (see Fig. 3).

- **Behavioral advantage.** The illiquidity of private markets helps prevent investors from making emotional decisions to redeem during market dislocations. In fact, private markets vehicles raised and/or investing during such periods can often capitalize on a more attractive valuation environment on behalf of their investors.

Returns and performance

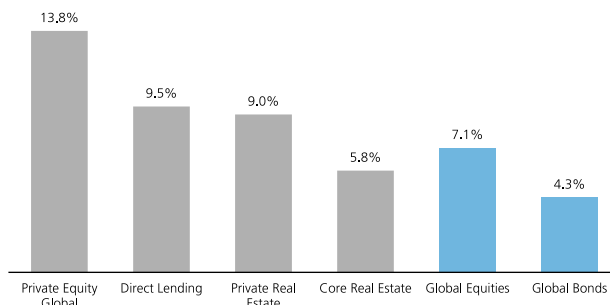
Investors must take a long-term view on private markets returns, as investment vehicles are typically locked up for years and performance can only really be assessed once the majority of investments have been exited and returns realized, which can take some time. But in exchange, investors have the potential to generate attractive risk adjusted returns. Over the most recent decades, investments in private market strategies have outperformed listed bond and equity investments by a significant margin (see Fig. 3 and 4). On a time-weighted return basis, global private equity provided annual average returns of 13.8% between 2001 and 2021, significantly above the 7.1% returns achieved by publicly traded global stocks. Direct lending returned 9.5% against 4.3% for global bonds, while private real estate delivered average returns of 9%.

To measure performance in private markets, however, investors typically look at different metrics including internal rate of return (IRR) and return multiples. IRR assesses timing and size of cash flows to factor in the time value of money. Looking from a different angle, multiples can provide an absolute measure of how much return is created over a time period. Two key multiples include the distributed to paid-in ratio (DPI), which measures distributions against invested capital, and the total value paid-in ratio (TVPI), which measures the value of all realized and unrealized investments against invested capital.

To compare IRRs to public index returns, one needs to account for timing of cash flows. This requires a return calculation referred to as public market equivalent (PME) measuring the value-add of the manager and allowing for performance to be evaluated against liquid asset classes. This is accomplished by comparing the difference between the cashflows of the private market funds and those of a series of cash flows that buy and sell a relevant public equity index, thereby measuring relative performance.

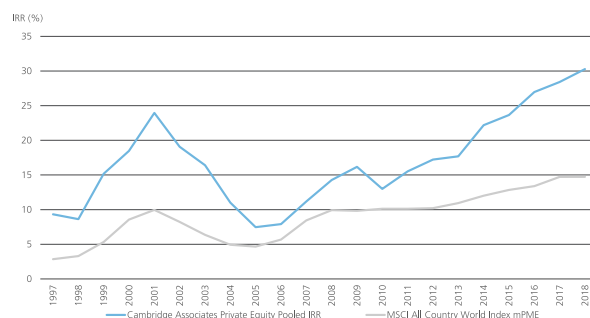
Fig. 3: Private versus public market returns

Average annual time weighted returns between January 2001 and December 2021 (for real estate from 2004 to 2021)



Source: CAPE Global Private Equity Index, Cliffwater Direct Lending Index, Cambridge Real Estate Index, MSCI All Country World Index, Barclays Global Aggregate, UBS. Data as of August 2022.

Fig. 4: Private equity pooled IRR vs. MSCI ACWI mPME



Source: Cambridge Associates, UBS. Data as of August 2022.

Dynamics of investing in a private markets fund

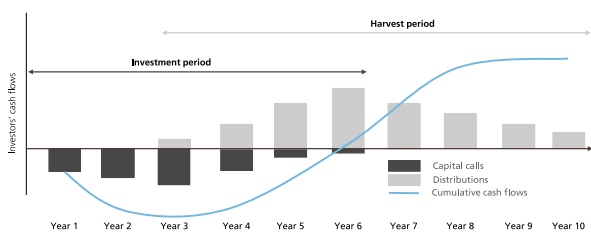
Private markets funds have distinctive characteristics that investors must consider carefully.

- Private market funds traditionally have a **closed-ended** structure, meaning that funds are offered to investors only during a specified fundraising period. Once fundraising is completed, funds are closed and illiquid for a specified term, typically ranging from 7 to 12 or more years depending on strategy. The term may be extended by the GP, sometimes with LP approval.
- Private market funds typically have a **commitment/drawdown** structure. During the fundraising period, each LP makes an irrevocable upfront capital commitment of a specific amount to the fund. None of this capital is immediately invested; instead, LPs will fund

future investment acquisition upon request by the GP, referred to as a "capital call."

- Funds can only make investments during a specified **investment period**. This is usually during the first three to six years of a fund.
- Limited partners cannot influence the **timing and magnitude of cash flows** in and out of a fund, as these are determined by the fund manager and the pace they invest. Cash distributions tend to come in the middle to later years of a fund. By then the general partner has had time to work with the investments and add value.
- The features above describe the **J-curve effect**, illustrating how in early years limited partners experience net cash outflows during capital calls. Inflows are limited or not yet available until the middle years of the fund when distributions start outweighing capital calls. Net cash outflows start to decrease and then turn positive (see fig. 5).
- LPs typically **will not achieve a 100% investment exposure** of their commitment to a private market fund. The net invested capital level can fall below target, because distributions may begin while committed capital is still being invested. Historically net effective investment levels vary from 60-80%. To achieve fully invested effective exposure levels, limited partners can either overcommit to a single fund, or pursue ongoing commitments to multiple funds.

Fig. 5: Illustrative lifecycle of a private equity fund



Source: UBS, August 2022.

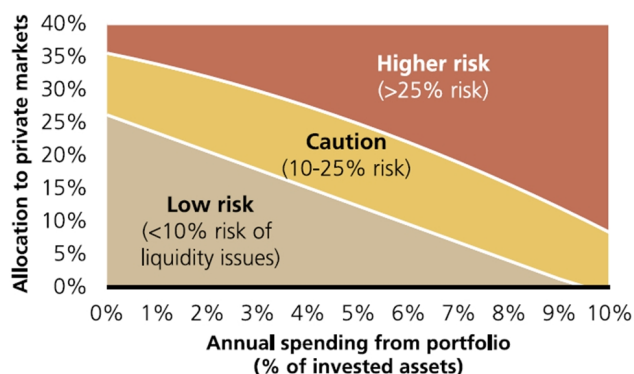
Key principles to include private markets in a portfolio

Before considering an allocation to private markets, investors need to take into account:

- **Tolerance for illiquidity** over long time horizon. With fund terms lasting 10 years or more, investors should be comfortable having a portion of their portfolio inaccessible during this period.

- **Personal goals, objectives, and risk tolerance.** Investors should ensure personal goals and objectives are in line with the duration of private investments, even considering a potential change in personal circumstances. Additionally, an allocation to alternatives shouldn't meaningfully alter the risk profile of an investor's overall portfolio.
- **Spending requirements.** Investors with higher spending requirements to meet expenses or higher allocations to private investments to meet capital calls should ensure sufficient liquidity is available, particularly when planning for potential market drawdown periods.
- **Sizing an allocation.** The above considerations should help size an allocation to private assets tailored to an investor's needs. As a general rule, an allocation of up to 20% to such less liquid assets should enable most investors to avoid liquidity issues even during market downturns (see Fig. 6). An allocation of up to 40% would be acceptable from a liquidity perspective if cash flows needs are moderate and/or mitigated if external liquidity is available.

Fig. 6: Probability of running into liquidity issues in severe market stress



Note: Color coding represents the probability that an investor's liquid equity bond portfolio falling below three years' worth of spending requirements. Broad range of weights between global equity (MSCI ACWI) and global fixed income (Bloomberg Barclays Global Aggregate) in USD are assumed. Mature PE portfolio is considered. Monte Carlo simulations of the liquid portfolio values reflect severe bear market performance lasting three years. All liquidity and spending needs are taken on an annual basis. We assume no slowdown in capital calls and assume no distributions. For more information, refer to "Investing in private markets with UBS Wealth Way" published on 5 May 2021. Source: Bloomberg, UBS.

- **Funding an allocation.** When allocating to private assets in a multi-asset class portfolio, investors should seek to preserve the overall risk characteristics of a portfolio. As such, investors should:
 1. Fund higher-risk private markets such as private equity, opportunistic real estate/ infrastructure equity out of higher-risk liquid assets such as public equity.

2. Fund income-focused private markets such as core real estate/infrastructure or high-quality private debt out of fixed income and credit assets.

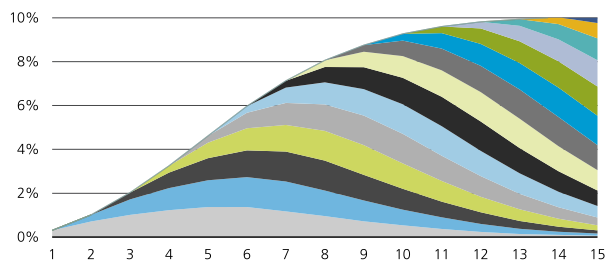
To avoid a cash drag on returns, investors may want to maintain capital earmarked for private market capital calls invested until needed.

- **Diversification is critical.** Diversification of private markets exposure is important from a portfolio perspective, and should be achieved by allocating to a number of private markets funds across geographies, managers, strategies and vintage years (starting year of the fund). Achieving diversification is not easy as it depends on timing of when funds of various types are raising capital, as well as the quality of the investor's relationships with managers. Institutional private market portfolios typically contain 15-25 funds, which allows for strong diversification along the dimensions below without diluting returns and creating portfolio monitoring challenges:

1. Strategy diversification reduces dependence on any single factor or strategy exposure.
2. Geographic diversification limits dependence on a single economy or region.
3. Manager diversification reduces risk of over-exposure to the biases of any single fund manager.
4. Vintage year diversification ensures investors are exposed to the opportunity set and market conditions across time, to mitigate performance variance between funds launched in different years (Fig. 7).

Fig. 7: Importance of a diversified and consistent capital deployment plan

Illustrative example of building a private equity exposure, in % of overall portfolio



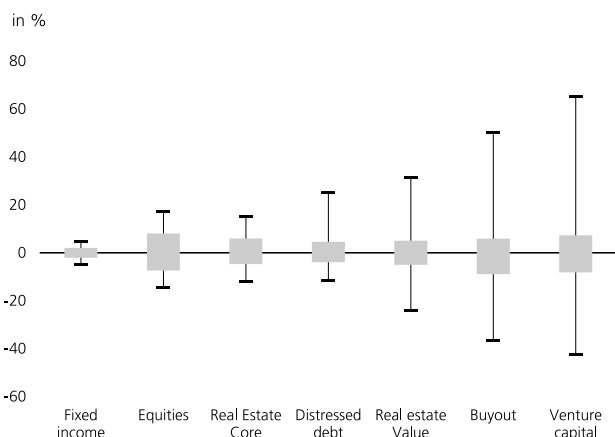
Source: UBS, Pitchbook. Colored areas represent NAV development of individual PE fund for different vintages. Commitment assumption of one fund per year. For more details, refer to "Investment Strategy Insights - Investing in private equity" published on 17 April 2017.

- **Building private markets exposure is a long process.** Most funds focused on public markets are open-ended, meaning anyone has the ability to invest at any time, making it easier to achieve fully invested portfolios almost immediately. However, it typically

takes years to build up well-diversified private markets exposure. After setting a target allocation, an investor must then source funds for investment, however managers for their preferred strategies and geographies may not be raising capital on the same schedule. Diversifying across vintage years further extends this process. Even after investors select and commit capital to funds, managers will only gradually deploy that capital over multi-year investment periods. The time and effort required to build these allocations properly means that investors must be committed to private market allocations over the long-term. We note that investors have ways to speed up this process through secondaries and/or semi-liquid structures.

- **Maintaining sufficient exposure is challenging.** Given the unpredictability of private markets fund cash flows, managing a pro forma private markets portfolio to ensure consistent and sufficiently invested exposure can be challenging. In order to maintain private market allocation levels near target, investors need to continually redeploy distributions into existing or new private markets funds, which requires strong manager relationships and ongoing monitoring of the fundraising schedules of top tier managers.
- **Manager selection matters.** Manager selection has a significant impact on performance in private markets evidenced by the large gap between the top and bottom quartile private markets funds. Each fund has a distinct portfolio and holdings are rarely shared with other managers. This reinforces the importance of manager selection. Figure 8 shows that the spread between top and bottom quartile private markets funds is generally higher than for public equity and fixed income funds. Returns also diverge significantly between funds from different vintage years.
- **Access to top managers is limited.** Private markets funds run by top performing managers tend to limit capacity (fund size), have high minimum investment levels and net worth requirements and are often oversubscribed, meaning fund managers can be highly selective about who can invest. Capacity in these funds is often limited or even unavailable for anyone except long-term recurring limited partners. Therefore, strong relationships with this tier of managers, or similar access via an intermediary, is important for investors to position for the historically attractive returns from a private markets allocation.

Fig. 8: Public vs. private manager fund returns dispersion



Source: Pitchbook, Bloomberg, UBS. Dispersion of fund returns relative to median performance. Data references 1995-2018 for private market funds, 1995-2021 for traditional equity and fixed income funds. Data as of August 2022.

Ways to invest in private markets

Investors have a range of different options for incorporating private markets into their portfolios. Each investor needs to decide individually what approach is right based on size, level of expertise, preference for control, and desired degree of time and involvement.

- Investors can make **direct investments** in companies and assets. However, this requires a high level of expertise to evaluate merits and risks of companies across various sectors. This also requires greater scale and can be onerous when seeking to achieve diversification.
- Investors can **co-invest** with the general partner who has management responsibility. This means that investors get the chance to invest into companies alongside specific private fund managers.
- Investors can become limited partners in **primary private markets funds**. The fund manager will take care of sourcing and executing investments, portfolio diversification and active risk and portfolio management. Private market funds usually require a high minimum investment, meaning investors need to secure access to a strong network of fund managers.
- Smaller investors could invest in **feeder funds**, open to a much larger investment base. Investors benefit from an institutional approach, as the funds are often used by private banks to aggregate investor interests into a single larger investment in a private market fund. This requires additional fees from investors.
- **Fund-of-funds** pool investor capital to create a diversified portfolio of private market funds and can be

attractive to first-time investors. Investors give up control to professionals with institutional expertise who can provide exposure to hard-to-access top-tier managers.

- **Secondary investments** take place when a buyer purchases existing private assets. The secondary market allows limited partners to make an early exit and incoming investors to buy private assets often at a discount and further ahead in their performance cycle, mitigating the J-curve effect.
- **Semi-liquid funds** are open-ended structures that offer investors the option to subscribe and redeem private equity shares on a regular basis. Buyers would invest in an existing portfolio of assets immediately generating revenues. Unlike closed-end funds, there is no J-curve effect. Initial lock up periods, commitment amounts and investor or fund level gate restrictions may still apply.

Risks of investing in private markets funds

Investors in private market funds must consider the following risks. Many of these factors can actually work in investors' favor as long as expectations of investors and managers are set properly in advance.

- **Illiquidity.** When investing in a private markets fund, investors must be prepared to accept significant illiquidity. This illiquidity is what allows access to more inefficient markets. On the other hand, investors cannot expect to access their capital or receive distributions with any regularity. Their only potential option for liquidity is to try to sell their stakes in the secondary market, where there may be no bid at all, or they may have to sell at a significant discount to fair value, if the fund manager even permits.
- **Uncertain cash flows.** Amount and timing of the cash flow is at the manager's discretion. LPs need to fund a "capital call" within a certain time frame. Unpredictable cash flows apply to early stage capital calls as well as to distributions to investors at later stages
- **Fees.** Private markets fund managers charge both management fees (typically in the 1.5-2.0% range) and incentive fees (typically in the 15-20% range). These levels are high compared to traditional asset funds, but the incentive fee helps to align objectives as the manager only gets paid if the investor achieves attractive returns. Most funds specify a hurdle or preferred return below which the manager does not receive incentive pay.
- **Lack of control:** Investors in private market funds cede control over investment decisions, pace of investments and exits, strategic and operational matters, and other significant decisions to the third party fund manager.

While this eliminates investors' ability to "vote with their feet" to express displeasure with the manager, ceding control gives the manager the necessary tools to seek outperformance for investors.

- **Blind pool risk.** Investors must make long-term commitments to private markets funds in advance, without knowing what the underlying investments will be. This is known as blind pool risk. This dynamic can be mitigated through familiarity with the general partner and its track record as well as proper due diligence.
- **Limited disclosure.** Disclosure on performance of underlying investments is periodic and can be more limited given that managers need time and flexibility to work with underlying companies and are focused on long-term value creation. Also, valuation of private assets involves subjectivity and assumptions, and as such may not necessarily be indicative of long-term performance or potential.
- **Use of leverage.** This is not a blanket risk. Certain private markets strategies such as buyout use significant leverage which poses potential default risk if the company encounters stress, but many PM strategies do not involve any leverage. Prudent leverage in the right situation has historically shown to help enhance returns without significant incremental risk.

Appendix

Selected definitions

- **Correlation:** the degree to which the fluctuations of one variable are similar to those of another.
- **Leverage:** the use of borrowed capital or instruments to increase the potential return (but also potential losses) of an investment, a simple example is a mortgage used in real estate transactions.
- **Leveraged buyout funds:** a private equity strategy using borrowed capital to gain control of a company.
- **Illiquidity premia:** the premium that an investor can demand depending on how difficult it is to convert the underlying security can be converted to cash.
- **Multiples:** a term that measures some aspect of a company's financial well-being, determined by dividing one metric by another metric. The metric in the numerator is typically larger than the one in the denominator, because the top metric is usually supposed to be many times larger than the bottom metric.
- **Multiple expansion:** describes the way a particular valuation metric increases to reflect a higher value assigned to an underlying investment.
- **Value add:** describes the operational, business, or structural improvements private market managers seek through underlying portfolio investments.
- **Cash flows:** cash flow is the net amount of cash and cash-equivalents being transferred into and out of a fund.
- **Public Market Equivalent (PME):** a method that converts public market returns to a benchmark that can be compared to private market returns.
- **IRR:** a return method used to evaluate private market investments and reflects the discount rate at which the present value of an investment's future cash flow equals the cost of the investment.
- **Pooled returns:** a return method that represents the net return calculated on the aggregate of all cash flows and market values as reported by individual fund managers in their quarterly and annual reports, net of management fees, expenses and performance fees.
- **TVPI (Total Value to Paid In):** a return metric that describes the total capital distributed back to the investor + residual value left in the fund divided by invested capital.
- **Exit:** the time period in which an investor can convert holdings into cash to be liquidated over a designated period of time.
- **IPO:** the first sale of stock by a private company to the public. Also referred to as an "initial public offering."
- **Standard deviation:** a measure of the degree to which individual values vary from the distribution mean. The higher the number, the greater the risk.
- **Dry powder:** refers to cash reserves kept on hand by a private markets firm to cover future obligations, purchase assets or make acquisitions.
- **J-curve:** illustrates a period of initial negative cash flows (contributions) towards positive cash flows (distributions back to the investor) over a period of time.
- **Sponsor:** the general partner in a limited partnership who organizes and signs up investors.
- **Secondary buyout:** describes a sale between private market firms
- **Trade sale/strategic sale:** describes a sale of a business to another business operating in a similar industry.

- **Senior debt:** loans or debt securities that have claim prior to junior obligations and equity on a corporation's assets in the event of liquidation.
- **Junior debt:** loan or security that ranks below other loans or securities with regard to claims on assets or earnings. In the case of borrower default, creditors who own subordinated debt won't be paid out until after senior debt holders are paid in full.
- **Vintage year:** is the year in which the first influx of investment capital is delivered to a project or company. This marks when capital is contributed by venture capital, a private equity fund or a partnership drawing down from its investors.
- **M&A:** mergers and acquisitions is a general term that refers to the consolidation of companies or assets through various types of financial transactions. M&A can include a number of different transactions, such as mergers, acquisitions, consolidations, tender offers, purchase of assets and management acquisitions.
- **Blind pool:** money collected from several people which is put into a fund and invested for their profit. It is left unspecified which properties are to be acquired.
- **Unit economics:** a measure of direct revenues and costs on a unit basis for a particular business model.
- **Minority stake:** reflects a non-controlling interest that is less than 50% of a particular entity.
- **Spin off:** describes the separation of an independent company from a larger parent.
- **Control provisions:** designed to provide a level of influence over significant operational and business matters.
- **Redemption rights:** gives investors the right to force a company to repurchase their shares after a period of time.
- **Idiosyncratic risk:** risk associated with a narrow set of factors pertaining to a particular company. Risk that has little association with overall market risk.
- **Tag-along provisions:** provides a minority shareholder the right to join in on a sale of a company that is initiated by a majority shareholder.

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