

An introduction to private markets

Private markets education

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This primer serves as an introduction to private markets, including a review of the key strategies, opportunities, and risks that potential investors should consider.



Private markets offer a combination of high potential returns and a long-term focus while expanding the universe of exposures beyond publicly traded securities. They can add diversification benefits when combined with a traditional public market portfolio.



Private markets are traditionally less affected by perceived volatility, news flows, and inefficiencies, enabling companies to focus on long-term value creation. This sets them apart from public market companies.



Investing in private markets requires long-term commitments. Investors should be able to tolerate illiquidity for multiple years.

Summary

- Private markets are a broad term for assets not traded on public exchanges. There are various private market strategies investors can choose from, ranging from private equity, private debt, private real estate, and infrastructure.
- Investing in private markets can help diversify portfolios, as they offer an alternative source of return not available on public markets.
- 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 require commitments of seven to 10 years or even longer. Some strategies may have shorter investment periods.
- However, historically investors have been rewarded for their patience with higher returns compared to investments on public exchanges. For instance, global private equity has provided annual returns of 14.7% between 2004 and 2023 compared to 8.1% returns in publicly traded global equities over 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 structures to meet their needs, ranging from traditional drawdown primary funds, secondary funds, fund-of-funds, or open-ended funds.
- To maximize chances of success, investors should invest across geographies, managers, strategies, sectors and vintage years, as this reduces dependence on any single factor or strategy exposure and improves the potential for higher and stable returns over the long run.
- Manager selection is crucial, however. There is high dispersion of returns between private market funds and management styles.



16.4trn
Private markets assets under management (AUM) in 2023



3.6x
AUM growth 2013 – 2023



15.5%
Median Cambridge Associates private equity pooled IRR 1999 – 2019



9.5%
Cliffwater Direct Lending Index Annualized Return 2005 – 2023



9.9%
Median Cambridge Associates real estate pooled IRR 2008 – 2019



9.3%
Median Pitchbook infrastructure net IRR 2006 – 2019

Source: Cambridge Associates, Cliffwater Direct Lending Index, Pitchbook, Preqin as of October 2024, UBS.

This report has been prepared by UBS Switzerland AG and UBS Financial Services Inc. (UBS FS).

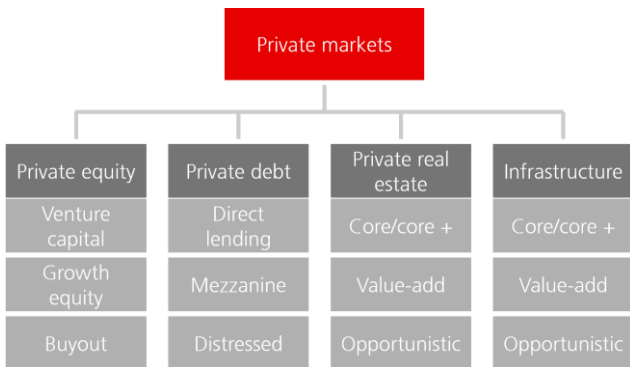
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What are private markets?

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 are a broad term for assets not traded on public exchanges. Private equity managers focus on buying stakes in companies ranging from early stage, expansion, or the turnaround of mature businesses. Private debt managers specialize in everything from underwriting loans to small-, mid-, or large-cap companies to restructuring default debt. Private real estate fund managers focus on the acquisition of high-quality assets, property refurbishment, or repositioning, as well as new development projects, to generate returns. Infrastructure fund managers acquire, develop, and/or operate assets that are critical to a well-functioning economy.
- 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 LPs commit to a fund, they are not immediately invested. The GP will call capital as it invests out the fund over time. Investment periods typically range from three to six years. When the portfolio companies are sold, the GP will distribute capital back to the LP.
- 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, a greater appetite for risk, 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 many 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.

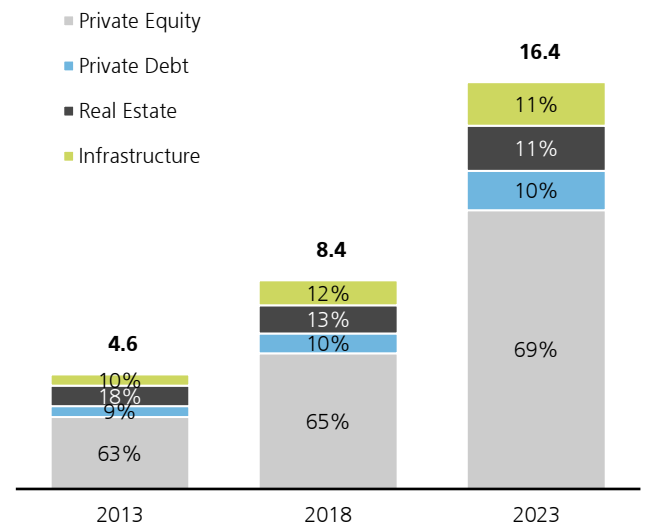
Fig. 1: Private markets encompass a variety of strategies with different risk-return profiles



Source: UBS November 2024.

Fig. 2: Private markets have grown more than threefold in the last decade

Assets under management, in USD trillion



Source: Preqin, UBS October 2024.

Key private markets strategies

Private markets can be broken down into four different strategies: private equity, private debt, private real estate, and infrastructure. These strategies pursue different risk-adjusted returns, and display different investment approaches, time horizons, and cash flow profiles.

Private equity represents the lion's share of private markets, with USD 11.3 trillion in assets under management (Fig. 3). 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. Private equity can be further divided into sub-strategies, in line with the stage in the life cycle of the target company:

1. Venture capital seeks 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. Leverage buyout funds target control positions in mature, cash-generating companies with the aim of growing earnings through value-add initiatives.

Private debt strategies focus on non-traded debt instruments issued to public or private companies. Private debt managers typically source, negotiate, and originate debt instruments with borrowers, providing investors with a credit-type risk. The main private debt sub-strategies are:

1. Direct lending, which originates senior secured debt financing for below-investment-grade companies;
2. Mezzanine financing, which focuses on subordinated debt with equity like participation;
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 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. Private equity real estate offers potential for inflation protection, income and somewhat lower correlations to traditional assets. Sub-strategies include:

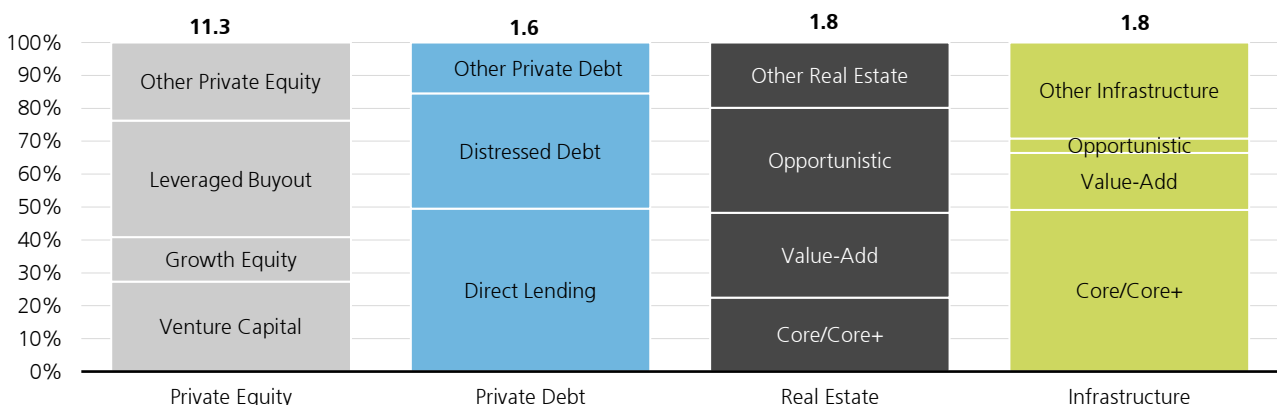
1. Core RE targeting established, quality, and fully leased assets;
2. Value-add RE strategies targeting assets with some lease-up or refurbishment risk; and
3. Opportunistic RE targeting development projects and assets that require significant repositioning.

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, some private infrastructure strategies, 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. 3: Private equity represents the lion's share of private markets

2023 assets under management by private market strategy, in USD trillion



Note : Infrastructure includes Natural Resources. Source: Preqin as of October 2024, UBS.

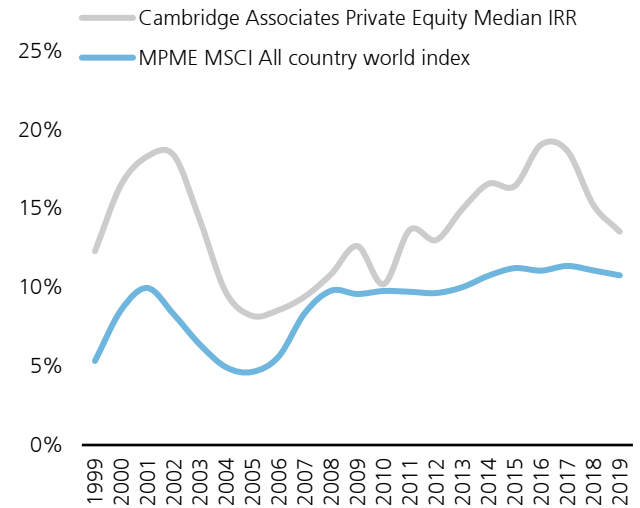
Why include private markets in a portfolio?

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 (Fig. 6).

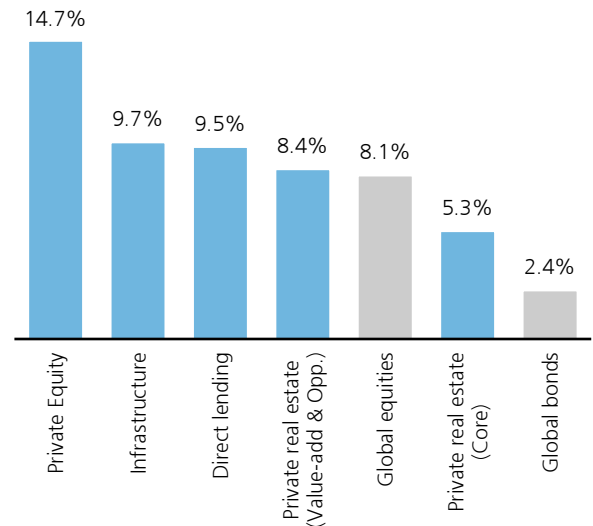
Fig. 4: Private equity has outperformed public markets across vintages

Private equity IRR versus public market equivalent returns



Source: Cambridge Associates, UBS November 2024.

Fig. 5: Private versus public market returns between 2004 and 2023

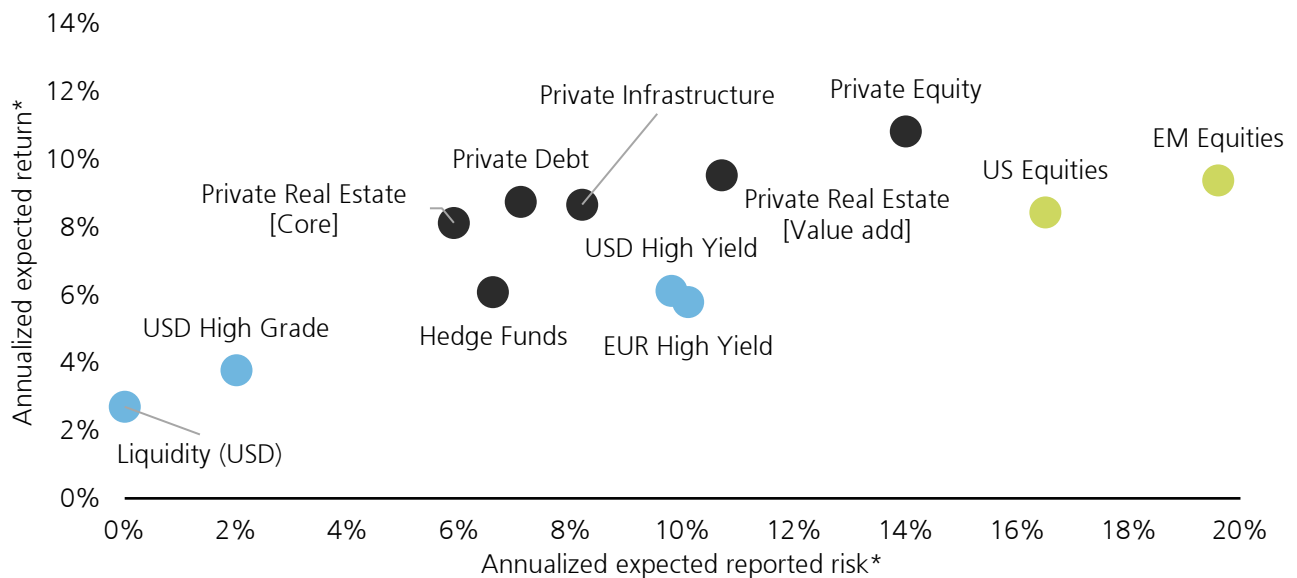


Source: CAPE Global Private Equity Index, Cliffwater Direct Lending Index, Cambridge Real Estate Index, MSCI All Country World Index, Barclays Global Aggregate, UBS. Data covers period Jan 01 2004 – December 31 2023. For CDLI and GREFI Jan 2005 – Dec 2023. UBS November 2024.

Performance analysis

- Investors must take a long-term view on private market 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.
- In recent decades, investments in private market strategies have outperformed listed bond and equity investments by a significant margin (see Fig. 4 and 5).
- On a time-weighted return basis, global private equity provided annual average returns of 14.7% between 2004 and 2023, significantly above the 8.1% returns achieved by publicly traded global stocks.
- Direct lending returned 9.5% against 2.4% for global bonds, while infrastructure and private real estate (value-add and opportunistic) delivered average returns of 9.7% and 8.4%, respectively.
- 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. 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 cash flows 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. 6: Expected annualized risk/return for public and private market investments



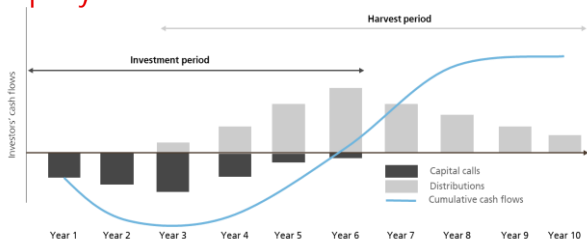
Note: Annualized expected risks / return figures are based on the CIO Capital Market Assumptions (CMA) 2024. Forward-looking expected returns such as CMAs are forecasts and are not a reliable indicator of future performance. The CMA assume a full investment exposure to each asset class during the investment period. Expected returns are equilibrium returns p.a. (geometric returns), risk is measured as volatility of annual log-returns. Volatility measures reflect reported volatility which for private market asset classes are typically subject to a smoothing effects. Illiquidity, related risks and foregone flexibility - an additional dimension of portfolio construction - are not reflected in this two-dimensional graph. Source: UBS 2024.

Fund investment dynamics

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 between seven and 12 or more years depending on the strategy, subject to extensions.
- 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.
- LPs 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 at which they invest. Cash distributions tend to come in the middle to later years of a fund. By then the GP has had time to work with the investments and add value.
- The features above describe the **J-curve effect**, illustrating how in early years LPs 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 (Fig. 7).
- 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 between 60-80%. To achieve fully invested effective exposure levels, LPs can either overcommit to a single fund, or pursue ongoing commitments to multiple funds.

Fig. 7: Illustrative lifecycle of a private equity fund



Source: UBS.

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.

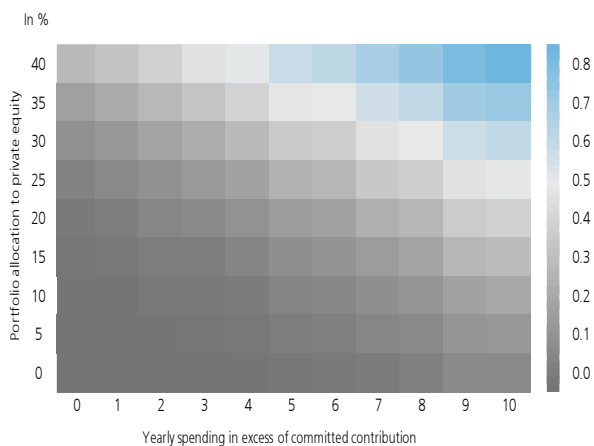
- Investors can make **direct investments** in companies and assets. However, this requires a high level of expertise to evaluate merits and risks of companies across various sectors. This also requires greater scale and can be onerous when seeking to achieve diversification.
- Investors can **co-invest** 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.
- **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.
- 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.
- **Open-ended funds** are 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 queues and investor or fund level gate restrictions may still apply.

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 less liquid assets should enable most investors to avoid liquidity issues even during market downturns (see Fig. 8). 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. 8: 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 17 February 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.

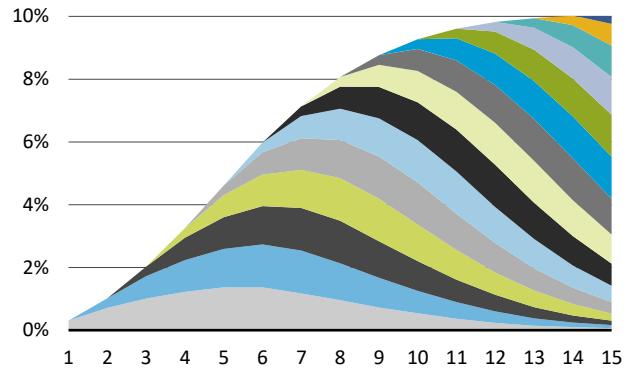
- **Diversification is critical.** Diversification of private markets exposure is important from a portfolio perspective, and should be achieved by allocating to a number of private markets funds across geographies, managers, strategies, sectors, and vintage years. Achieving diversification is not easy, 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 actively investing funds, which allows for strong diversification along the dimensions below without diluting returns and creating portfolio monitoring challenges:
 1. Geographic diversification limits dependence on a single economy or region.
 2. Manager diversification reduces risk of over-exposure to the biases of any single fund manager.
 3. Strategy diversification reduces dependence on any single factor or strategy exposure.
 4. Sector diversification ensures a portfolio is balanced between sectors that benefit from an expansionary business cycle and those which are more resilient.
 5. 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. 9).

- **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.

- **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 properly build these allocations 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.
- **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 10 shows that the spread between top- and bottom-quartile private market 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.

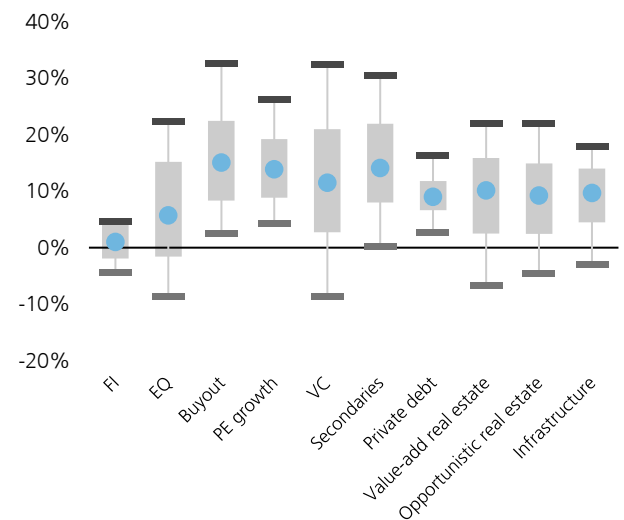
Fig. 9: Importance of a diversified and consistent capital deployment plan

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 "allocating to private equity in a multi-asset portfolio" published on 20 July 2020.

Fig. 10: Public fund total returns vs. private manager fund IRR returns



Source: Pitchbook, Bloomberg, UBS. Dispersion of fund returns relative to median performance. Data references 2002-2018 for private market funds, 1990-2023 for traditional equity and fixed income funds. November 2024.

Risks of investing in private markets

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

- **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 with proper due diligence.
- **Fees.** Private markets fund managers charge both management fees (typically 1.5-2.0%) and incentive fees (typically 15-20%). 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.
- **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. 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.
- **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, ceding control gives the manager the necessary tools to seek outperformance for investors.
- **Limited disclosure.** Disclosure on performance of underlying investments is periodic and can be limited, as managers need time and flexibility to work with underlying companies and are focused on long-term value creation. Valuations of private assets involves subjectivity and assumptions, and as such may not necessarily be indicative of long-term performance or potential.
- **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.
- **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: Select definitions

- **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.
- **Cash flows:** cash flow is the net amount of cash and cash-equivalents being transferred into and out of a fund.
- **Control provisions:** designed to provide a level of influence over significant operational and business matters.
- **Correlation:** the degree to which the fluctuations of one variable are similar to those of another.
- **Dry powder:** refers to cash reserves kept on hand by a private markets firm to cover future obligations, purchase assets or make acquisitions.
- **Exit:** the time period in which an investor can convert holdings into cash to be liquidated over a designated period of time.
- **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.
- **Idiosyncratic risk:** risk associated with a narrow set of factors pertaining to a particular company. Risk that has little association with overall market risk.
- **IPO:** the first sale of stock by a private company to the public. Also referred to as an "initial public offering."
- **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.
- **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.
- **Junior debt:** loan that ranks below other loans 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.
- **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.
- **Minority stake:** reflects a non-controlling interest that is less than 50% of a particular entity.
- **Multiple expansion:** describes the way a particular valuation metric increases to reflect a higher value assigned to an underlying investment.
- **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.
- **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.
- **Public Market Equivalent (PME):** a method that converts public market returns to a benchmark that can be compared to private market returns.
- **Redemption rights:** gives investors the right to force a company to repurchase their shares after a period of time.
- **Secondary buyout:** describes a sale between private market firms
- **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.
- **Spin off:** describes the separation of an independent company from a larger parent.
- **Sponsor:** the general partner in a limited partnership who organizes and signs up investors.
- **Standard deviation:** a measure of the degree to which individual values vary from the distribution mean. The higher the number, the greater the 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.
- **Trade sale/strategic sale:** describes a sale of a business to another business operating in a similar industry.
- **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.
- **Unit economics:** a measure of direct revenues and costs on a unit basis for a particular business model.
- **Value add:** describes the operational, business, or structural improvements private market managers seek through underlying portfolio investments.
- **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.

Non-Traditional Assets

Non-traditional asset classes are alternative investments that include hedge funds, private equity, real estate, and managed futures (collectively, alternative investments). Interests of alternative investment funds are sold only to qualified investors, and only by means of offering documents that include information about the risks, performance and expenses of alternative investment funds, and which clients are urged to read carefully before subscribing and retain. An investment in an alternative investment fund is speculative and involves significant risks. Specifically, these investments (1) are not mutual funds and are not subject to the same regulatory requirements as mutual funds; (2) may have performance that is volatile, and investors may lose all or a substantial amount of their investment; (3) may engage in leverage and other speculative investment practices that may increase the risk of investment loss; (4) are long-term, illiquid investments, there is generally no secondary market for the interests of a fund, and none is expected to develop; (5) interests of alternative investment funds typically will be illiquid and subject to restrictions on transfer; (6) may not be required to provide periodic pricing or valuation information to investors; (7) generally involve complex tax strategies and there may be delays in distributing tax information to investors; (8) are subject to high fees, including management fees and other fees and expenses, all of which will reduce profits.

Interests in alternative investment funds are not deposits or obligations of, or guaranteed or endorsed by, any bank or other insured depository institution, and are not federally insured by the Federal Deposit Insurance Corporation, the Federal Reserve Board, or any other governmental agency. Prospective investors should understand these risks and have the financial ability and willingness to accept them for an extended period of time before making an investment in an alternative investment fund and should consider an alternative investment fund as a supplement to an overall investment program.

In addition to the risks that apply to alternative investments generally, the following are additional risks related to an investment in these strategies:

- **Hedge Fund Risk:** There are risks specifically associated with investing in hedge funds, which may include risks associated with investing in short sales, options, small-cap stocks, "junk bonds," derivatives, distressed securities, non-U.S. securities and illiquid investments.
- **Managed Futures:** There are risks specifically associated with investing in managed futures programs. For example, not all managers focus on all strategies at all times, and managed futures strategies may have material directional elements.
- **Real Estate:** There are risks specifically associated with investing in real estate products and real estate investment trusts. They involve risks associated with debt, adverse changes in general economic or local market conditions, changes in governmental, tax, real estate and zoning laws or regulations, risks associated with capital calls and, for some real estate products, the risks associated with the ability to qualify for favorable treatment under the federal tax laws.
- **Private Equity:** There are risks specifically associated with investing in private equity. Capital calls can be made on short notice, and the failure to meet capital calls can result in significant adverse consequences including, but not limited to, a total loss of investment.
- **Foreign Exchange/Currency Risk:** Investors in securities of issuers located outside of the United States should be aware that even for securities denominated in U.S. dollars, changes in the exchange rate between the U.S. dollar and the issuer's "home" currency can have unexpected effects on the market value and liquidity of those securities. Those securities may also be affected by other risks (such as political, economic or regulatory changes) that may not be readily known to a U.S. investor.

Appendix

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