The core role of private markets in modern portfolios

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We explain why the premium commonly tied to illiquidity may be due to other factors, show how many investors have room for relatively large allocations to private markets depending on risk tolerance and their specific objectives, and outline our new method of estimating private equity returns.

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Summary

- Private markets occupy a significant share of institutional portfolios. They have evolved considerably and now offer exposure to a broader array of industries, geographies and capital claims. Asset owners, from sovereign wealth funds to endowments, have steadily upped allocations to private markets in the hunt for higher returns and to diversify away from public markets. We believe private markets will keep playing a growing role in portfolios as more investors find that the diverse array of private assets – from infrastructure debt and real assets to private equity – can help better achieve certain objectives.
- Liquidity is a fundamental difference between investing in private and public markets. That has led to assumptions that the higher returns of private markets are partly driven by an "illiquidity premium". Yet our work leads us to rethink whether the potential premium earned in private markets is due to illiquidity and may in fact be tied to their complexity or higher governance costs. We study private equity allocations and simulate cash flows around the 2007-2009 global financial crisis and find that only investors with high spending needs would have run into liquidity troubles. Investor cash flows don't appear to be a binding issue for most decisions to allocate to private markets.
- Expected returns are a key input in any allocation sizing decision. The typical industry practice for private markets is to add a premium to a comparable public market expected return, often mechanically leading to a higher allocation that may prove inappropriate for some investors. We believe our new approach to expected returns for private markets is a step forward. For private equity, we use the returns embedded in current valuations given the level and cost of debt, as well as fees. We also model for uncertainty within these expected returns, resulting in more realistic allocations, in our view. We do not discuss implementation or the process of defining the exact asset allocation to the diverse array of private market assets – that will be unique to each investor.
- Some private market assets are as vulnerable to late-cycle excesses as public markets, in our view. Concerns have mounted about such valuation excesses building because private markets are less visible and may receive less scrutiny. We address ways of dealing with downside risks through the use of uncertainty – an explicit acknowledgment that any point return assumption can be spuriously accurate. We believe it makes more sense to build portfolios using a range of potential outcomes through robust optimisation techniques – especially in an uncertain, late-cycle environment. Our return ranges – reflecting uncertainty – are broader for private markets than public given the relative lack of data.
- We find the appropriate private markets allocation can range from 10% to 40% of the portfolio depending on individual investor objectives, conviction in the ability to pick top-performing alpha-seeking managers, risk tolerance and annual cash flow needs. Allocations could be higher for investors with fewer constraints.
- The decision to allocate to private markets goes beyond expected returns, in our view. This can include sustainable investing goals and accessing emerging markets where public markets are thin. Other investor objectives or constraints, such as the regulatory considerations of insurers, can matter more than the potential return premium over public markets.

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Setting the scene

Private markets, from real estate and leveraged buyouts (LBOs) to private credit, have grown rapidly as they have become a core part of institutional portfolios. Large US endowments have led the way with sizeable allocations: those with over $1 billion in assets under management have allocations as high as 58% to "alternative strategies" – most of which represent private market funds, according to the NACUBO-TIAA 2018 study of endowment sponsors. Yet the trend towards private markets is not limited by geography and client type. BlackRock's December 2018 survey of global institutional clients representing $7 trillion in assets showed a desire to further increase allocations to private markets by reducing their allocation to public equities. See the *Survey says* chart.

As such, private market investments have long stopped being niche, and the breadth of private market debt and equity across industries and geographies rivals or even surpasses public markets (Doskeland and Stromberg 2018). The nature of investing in these assets is evolving, however. Private market access - be it real estate, credit or private equity - is increasingly being gained via direct investments or co-investments, not just blind pools or traditional funds. Further, the development of new investment vehicles, such as long-horizon private capital funds, aim to own companies for a much longer period than traditional LBO funds in private equity. These funds ultimately offer a new "tranche" of private equity investment, sitting between publicly traded equities and LBO funds in the risk/reward spectrum.

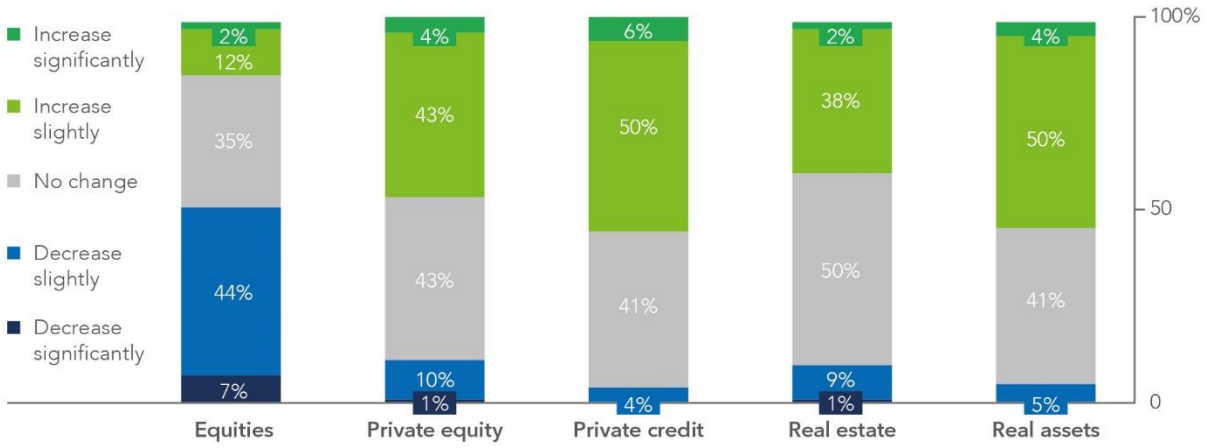
Though the mega-trend of increasing allocations to private markets might be due to anticipated higher returns, in our view little work has been done to form robust return expectations for private markets. Our recently revamped capital market assumptions (CMAs) propose an innovative method to form such expectations. In addition, to better understand how investors should appropriately size a target private market allocation, we incorporate the uncertainty in these expected returns, the potential reward for private market fund selection abilities (alpha potential) and the impact of considering alternate pathways for asset prices when building resilient portfolios.

Incorporating uncertainty is important for private market returns as the global expansion approaches a late-cycle phase: we wouldn't want to treat two return figures the same way when we have much less confidence in one compared with the other. That is especially true for some private market assets where we have limited or no data on how they fared in a previous downturn. For example, we see a wider range of potential return outcomes for global direct lending than US credit. See our CMA website for more comparisons.

Importantly, we quantify the liquidity risk in private markets – how investors assess the risks of any allocation being locked up and limiting their ability to distribute funds in a downturn. We outline a framework that uses the observed cash flows of private market funds to assess how investors would have fared during a historically extreme liquidity event and market drawdown – the 2007-2009 global financial crisis (GFC). We find that only investors with large annual spending requirements would need to cap their private market allocations.

Survey says

Asset allocation intentions for 2019 by BlackRock's global institutional clients



This information is not intended as a recommendation to invest in any particular asset class or strategy or as a promise – or even an estimate – of future performance. For illustrative purposes only. Source: BlackRock Investment Institute and BlackRock's 2019 Global Institutional Rebalancing survey, March 2019. Notes: The bars show the proportion of investors surveyed that indicated a preference to increase, decrease or make no change to allocations to respective asset classes in 2019. The sample size by asset are as follows: equities (225); private equity (188); private credit (160); real estate (203); real assets (173).The private credit allocation intentions refer to responses among global fixed income clients.

Rethinking illiquidity risks

Private market assets are less tradeable than their public counterparts, leading to assumptions there's an additional return earned for committing capital to illiquid assets. But is illiquidity the source of this premium? We challenge this notion.

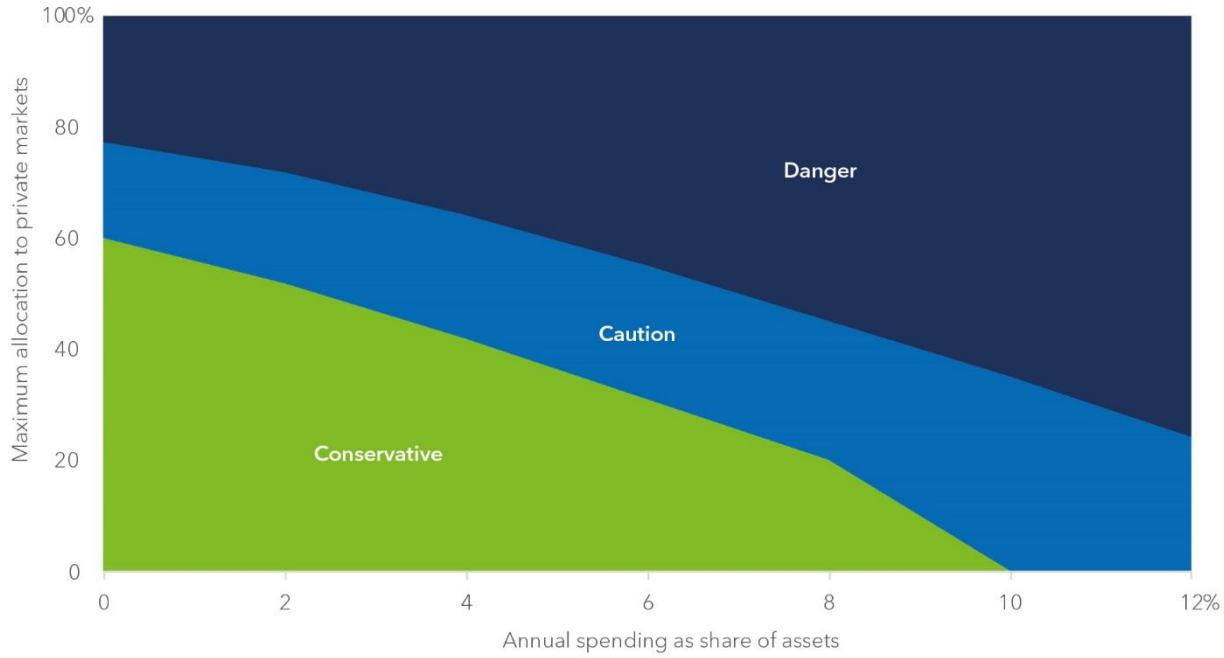
Here we define liquidity risk as the likelihood of failing to meet a fund capital call or on other obligations because one runs out of cash. To quantify this risk, we performed a simulation based on a historical period of market stress – the GFC. The simulation assesses how much an investor can allocate to private markets before running into problems meeting total portfolio spending requirements and capital calls from funds. Details are on page 11 in the appendix.

We assess an investor's liquidity needs across a range of key variables that impact their outcomes: the allocation to private markets, the annual spending requirements of the overall portfolio, the bond-equity mix among public market investments (assuming they are easy to sell), the diversification within their private markets portfolio and the age of the programme. The programme's age is relevant because cash flow streams vary depending on the age of the private markets portfolio: immature programmes have a high ratio of committed – but not yet called – capital relative to capital already deployed. We find that most parameters do not change the results much: it mainly depends on spending needs. The results in the chart below are striking. The area in green shows that many investors could make relatively large allocations to private markets before liquidity constraints start to bite.

We define the danger zone in dark blue as a probability above 5% that the overall portfolio would have less than two years of spending needs in public market assets – regardless of the asset mix in public markets or the breadth of the private asset portfolio. The caution zone shows where some, but not all, combinations of the liquid asset mix and private market breadth are above the 5% threshold. Only investors with high spending needs – 8% of the portfolio or higher per year – would have ended up with potential allocations below 20%. This suggests that the ceiling for private market allocations may be higher than is often assumed – and may be even higher if the private markets allocation tilts towards income-earning assets. Investors with high liquidity needs, such as mature defined benefit pensions, should be aware of the risks when allocating to private markets. Their need for regular cash flows could lead to liquidity problems during a drawdown. Pension funds holding bulk annuity contracts ("buy-in" assets) may think these assets reduce liquidity risk because their cash flows can better match liability-determined spending. Yet they are still hard-to-sell assets – and we believe they should be grouped with private market assets when making allocation decisions.

Assessing liquidity risks

Hypothetical maximum allocations to private markets depending on annual spending needs, March 2019



This information is not intended as a recommendation to invest in any particular asset class or strategy or as a promise – or even an estimate - of future performance. Source: BlackRock Investment Institute, March 2019. Notes: The chart shows different ranges for maximum allocations to private market assets depending on a hypothetical portfolio's annual spending needs, expressed as a share of the overall portfolio. The "conservative" zone shows the range of maximum allocations can start at 60% with no spending needs and falls to zero when spending needs reach 10% per year. The "caution" zone shows where maximum allocations would start hitting a 5% risk threshold described above. "Danger" is the zone where the maximum allocations result in a greater than 5% probability. We assume quarterly liquidity needs on the public assets. Annual liquidity needs would reduce the allocation to private markets. See the appendix for full methodology.

Debunking myths

We find certain assumptions linger when it comes to understanding the unique features of private markets – with important implications for thinking through allocations. We showed on the previous page that a variety of investors are unlikely to run into liquidity issues with private market allocations. This suggests a rethink of the illiquidity premium: any such premium in private markets is more likely to be driven by the complexity or the higher governance costs of investing, such as due diligence and assembling a large team of specialists, in our view. We challenge some other assumptions.

Downturns: It is commonly assumed that private market assets perform badly in a downturn. We think this is not true for two reasons, both related to our observation that illiquidity is a misdiagnosed problem.

First, the structure of private market funds can provide a buffer against the liquidity issues caused by investors fleeing for the exits (Ladapo 2010). During the GFC, some investors had more trouble with investments assumed to be liquid than those known to be illiquid. Vehicles such as hedge funds or certain mutual funds were subject to investors looking to redeem capital at the same time – creating a self-reinforcing bout of selling and falling net asset values (NAVs). Because the illiquidity of private market assets was already understood, this behaviour didn't materialise in the same way.

Second, the dry powder available to private equity (PE) funds – at a record $1.2 trillion as of the end of 2018 according to Preqin – can act as a buffer during downturns. This liquidity allows PE funds to inject equity into struggling companies, helping them grow or steady themselves at a time when competitors are struggling. A July 2018 (Bernstein et al) study found that PE-backed companies cut investments less than their peers during the crisis. During downturns, PE funds have historically softened demands for additional capital from investors. This is partly because it takes longer for bid-ask spreads – the pricing expectations between buyers and sellers – to converge in a private equity transaction than on an exchange-traded security. During the GFC, some PE funds slowed their capital calls at the request of investors suffering a liquidity squeeze in other parts of their portfolio (Ladapo 2010).

Risks vary across private market assets. There are structural benefits to LBOs. For example, a PE fund does not face margin calls the way a hedge fund might – and the value of its investments are not marked-to-market in real time. Even though equity is typically riskier than debt because it sits lower in the capital structure, an (equity) investor in PE LBO fund may be somewhat cushioned relative to the equivalent (debt) investor in a private credit fund. A January 2019 study (Ellias and Stark) found anecdotal evidence that banks were able to amend or extend the terms of debt written to prevent losses at operating companies owned by large PE funds. Weak debt covenants can put the equity holder in a position of strength relative to those holding junior debt in private credit. The surge in leveraged loans with weak covenants – known as "cov lite" and now making up 60% of the mid-sized company market and 80% of the large company market, according to February 2019 S&P LCD data – has stoked concerns about such loans being a source of trouble in any downturn. At the same time, some private credit assets have not existed as institutional assets through a full economic cycle, resulting in a data gap that makes it difficult to assess how performance could fare in a drawdown – another reason for incorporating uncertainty.

Investor behaviour is also crucial when attempting to successfully navigate downturns. PE buyout funds mark down the value of their investments with a lag to the real-time valuations of public markets. That means the overall value of PE holdings stays constant or falls at a slower rate than public equities. As a result, the percentage of PE allocations rises because of the so-called denominator effect: the overall portfolio shrinks due to the drop in value of publicly traded investments. This can tempt investors to mechanically sell PE stakes to maintain portfolio allocation shares. Selling stakes at a time when liquidity is pricey can cost investors – as seen during the GFC.

Investor-specific value: A typical approach to judge the attractiveness of private market returns is to assess the current premium over its closest public counterpart and compare this with history. We believe such a method of assessing "value" is misleading and can lead to sub-optimal outcomes. For example, shrinking spreads on infrastructure debt have not stopped insurers from adding to allocations, as indicated by our institutional investor surveys of the past few years. One reason is the more favourable capital treatment for certain tranches of infrastructure debt. This treatment helps insurers manage their Solvency II regulatory risk even at a relatively low absolute return premium. Yet other investors with few constraints or regulatory hurdles may prefer other private market assets when seeking higher returns. The attractiveness is determined by objectives and constraints – not just the current spread.

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Sizing allocations and blurring lines

Since the 1960s, modern portfolio theory holds that investors can achieve an optimal risk/return trade-off by investing in the so-called total market portfolio – a theoretical portfolio consisting of every asset, including public and private assets. A few decades ago, most of the market portfolio was made of listed assets – public equity and debt and it was relatively easy to measure the size of listed assets and the investible universe. Because private market assets are not listed, they cannot easily be sized and are often kept outside this total market portfolio. Therefore they are not part of any "neutral" allocation. Here we compare global private market assets to their public market counterparts to understand what their role might look like in the total market portfolio.

We find private markets make up about 9% of the market portfolio of global investible assets. See *The world in assets* table below. This table, based on original research and studies compiled by Doskeland and Stromberg (2018), is one of the most comprehensive attempts to compare the global investible universe of private market assets with public markets. The authors estimate the size of the PE market to be roughly $2.5 trillion. Lerner et al (2018) estimate alternative investment vehicles offered by certain private capital groups to select investors could account for another $600 billion.

Yet the lines dividing public and private assets are blurring. Consider the rising popularity of private investments in public equity (PIPE). PIPE investments seek to fill a funding gap for publicly listed companies that suffer from low exchange-traded volumes. Conversely, public infrastructure funds are stepping up investments in privately held companies, notably in digital infrastructure such as fixed and wireless networks, data centres and fibre optics in developed market economies. REITs are another example of such blurred lines.

As private market investing becomes increasingly mainstream, some of the challenges in identifying the size of the asset base could abate. Developments in technology are making it easier and more efficient to invest in private markets and are helping to create reference "lists" for buying and selling assets. Secondary markets, historically a feature only of public markets, now provide liquidity to PE funds: it is the only way for limited partnerships (LPs) to sell their investments early or opportunistically in what is typically a 10-year vehicle structure. The secondary market has tracked the expansion of the primary private equity market. It allows investors to manage their portfolios more proactively, or modify their business models in response to regulatory or strategic change. The secondary market has grown rapidly in the past two decades as the global private equity asset class has matured. We estimate that global PE transaction volumes in the secondary markets reached a record high of about $80 billion in 2018, almost quadrupling in a decade[1].

To sum up, identifying a neutral sizing to private markets is difficult. While it is an important starting point, we will explain that the appropriate sizing of private markets in a portfolio requires investor-specific views on potential returns, liquidity needs, objective maximising and risk aversion.

The world in assets

Estimated market capitalisation of global public and private markets, 2016

	Asset	Estimated AUM, USD trillion	% of total
Public	Public debt	70.0	55.7
Public	Public equity	44.6	35.5
Public	Real estate	7.0	5.5
Private	Private equity	3.1	2.5
Private	Infrastructure and natural resources	0.6	0.5
Private	Private debt	0.4	0.3

Sources: BlackRock Investment Institute, with data from Doskeland and Stromberg (2018), March 2019. Notes: The table shows the estimated size of investible assets in the world across broad public and private asset groupings. We rely on Doskeland and Stromberg but also borrow from Lerner et al (2018) and Gupta et al (2016) who have tried to aggregate the size of the total assets managed under private equity and debt funds. Public equity includes listed infrastructure and real estate. Estimates of the size of professionally managed real estate funds come from MSCI. These estimates could have changed materially since they were compiled.

1 Our estimate is based on deal data from Evercore and our own compilations of deal activity.

Our private market return assumptions

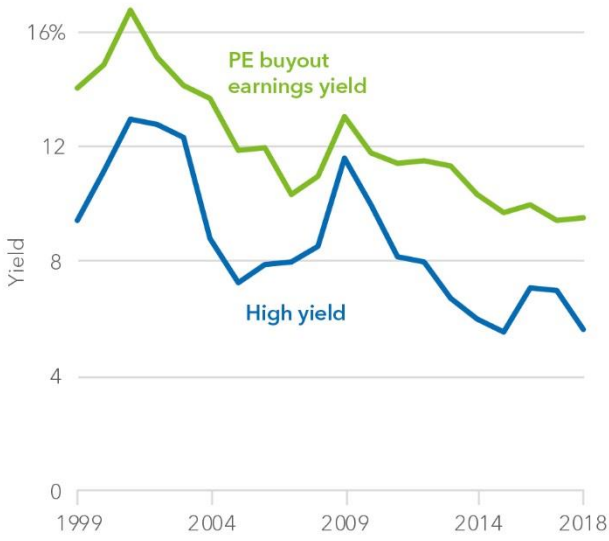
Determining an appropriate portfolio allocation should be informed by a few considerations: having a view on expected returns, taking uncertainty into account, assessing liquidity risks and understanding an investor's individual constraints and objectives. Data availability leads to different methods for making return assumptions for private markets. Here we lay out our approach for estimating PE buyout returns and the historical factors that drive them. For public equity returns, earnings growth, dividend income and changes in forward earnings multiples drive total returns - with the advantage that sizable data sets help shape expected returns. PE returns should be driven by similar factors, yet more limited data makes it more difficult to understand the impact of leverage or the evolution of a company's capital structure over time. Our approach? We use aggregate buyout transaction data and portfolio company growth rates in the US and Europe from S&P Capital IQ. With this, we model a hypothetical balance sheet and income statement for the overall buyout universe, similar to our framework for estimating real estate equity returns. We then take this hypothetical historical equity return and compare it with historical PE buyout returns calculated from aggregated fund cash flows and NAVs. This approach is similar to how managers might model individual deals and is based on PE company fundamentals. Most of the variables needed to derive these expected returns are observable: leverage, the interest coverage ratio and the entry multiple. Yet there are three variables that need to be estimated to derive our PE buyout return assumption, as we explain below and in the appendix on page 12.

- **Exit multiple**, or measure of PE valuations defined as enterprise value over EBITDA (earnings before interest tax depreciation and amortisation): We find that the inverse of this multiple, the buyout earnings yield, historically tracks the yield of corporate high yield debt. In the chart on the left we shift forward the high yield line to show how it leads the buyout yield by about a year. We already estimate credit spreads and interest rates in our CMAs, so we then only need the buyout/high yield spread. We find this spread mean-reverts over time.
- **EBITDA growth**: We find buyout EBITDA growth closely tracks our public equity earnings growth assumptions.
- **Plowback ratio**: The plowback ratio – or the share of company profits reinvested to drive future growth – cannot be easily observed over time. We calibrate the model by determining the long-term plowback ratio that most closely matches the modelled PE buyout return (the green line) and the historic PE buyout return (blue line). Increasing or decreasing the plowback ratio shifts the green line up or down with no impact on its shape.

Buyout yields have sunk to historically low levels and reflect elevated valuations – perhaps a sign of being near a late-cycle phase. A downturn that results in higher financing costs is likely to lead to lower valuations and impaired returns. We account for this downside risk in our optimisation process on page 9.

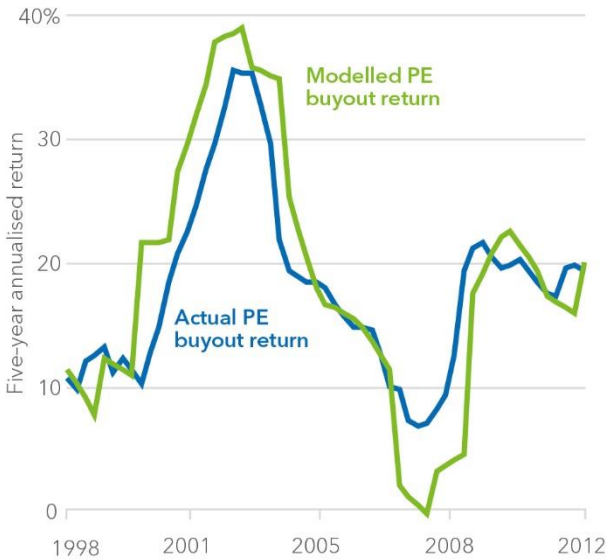
Modelling the exit multiple…

US PE buyout valuations vs. high yield, 1999-2018



…to estimate PE buyout returns

Actual and modelled US PE buyout returns, 1998-2012



This information is not intended as a recommendation to invest in any particular asset class or strategy or as a promise – or even an estimate - of future performance.
Sources: BlackRock Investment Institute, Preqin and S&P Capital IQ, March 2019. Notes: The chart on the left shows the four-quarter average of the PE buyout earnings yield and the yield on corporate high yield bonds, shifted forward one year. The chart on the right shows the annualised five-year return of US buyout funds in the Preqin database relative to our modelled returns gross of fees (in US dollars). The 1998 starting point represents the annualised forward five-year return between 1998-2012. The actual performance of a strategy may vary significantly from our modelled CMAs due to transaction costs, liquidity or other market factors. This model was created with the benefit of hindsight, has inherent limitations and should not be relied upon for investment advice.

Finding private market alpha

Return assumptions are essential for determining an appropriate allocation. Yet using the approach described on the previous page would mean basing allocation decisions on an "average" fund manager. Such an average manager does not really exist: an investor cannot buy a "share" of the private markets universe in the same way as in public markets. There is no private markets index to own.

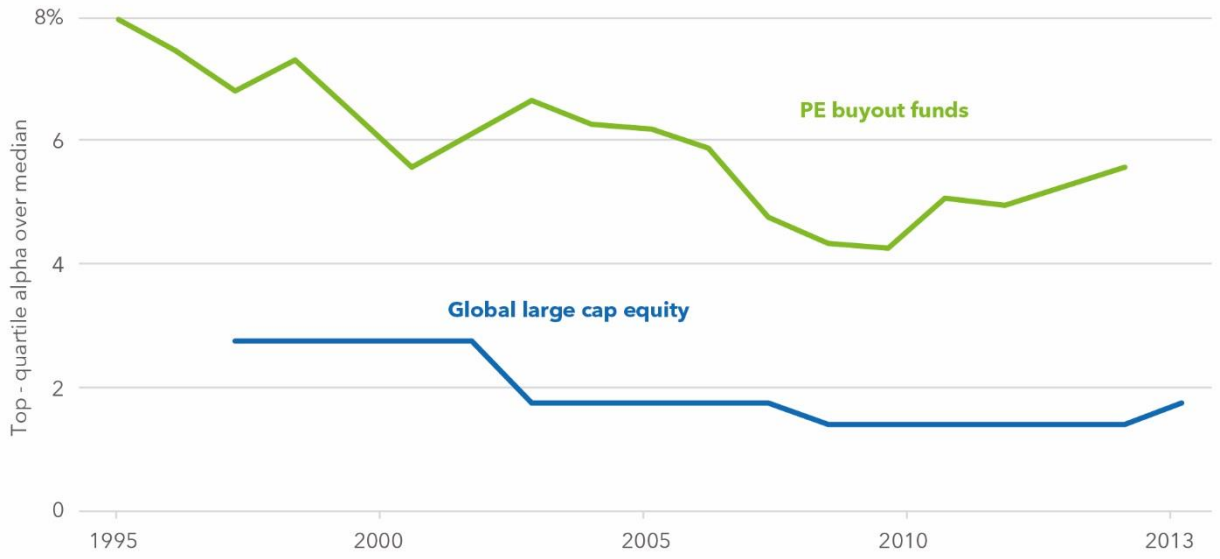
An investment in a private fund manager raises the question of the dispersion of returns across different managers, not just that of the average manager. What return above the average manager can a skilful manager deliver? Understanding the alpha potential in private markets – the ability of some fund managers to outperform relative to the average manager – is crucial. Private equity is an example where richer data sets allow us to understand how this has evolved over time.

Conventional market practice focuses on comparing managers via the internal rate of return, or the discount rate that equates the present value of future cash flows to invested capital. Instead, we use the present value of cash flows based on an equity discount rate – the S&P 500's total return – to compare funds. We calculate the alpha of each fund as the ratio of the present value of cash distributions to capital calls. This number is annualised based on the typical cash flow pattern for funds in that vintage year: we need to do this because cash flow patterns can differ materially depending on a fund's age. Using these figures allows us to compare performance across funds and determine the extra return potential to be gained from a top-quartile manager relative to the average manager. We find that the extra returns delivered by top-quartile PE buyout managers relative to median managers has decreased over time to 4%-6% in the current market environment from near 8% in the mid-1990s. See the *Comparing alphas* chart below. Yet net of fees, this PE alpha is notably larger than our estimates of the *gross* alpha delivered by top-quartile managers in global large cap as the chart shows.

Our results now allow us to go a step further in asset allocation by directly comparing the alpha in both public and private markets based on our framework in the July 2018 paper *Blending alpha-seeking, factor and indexing strategies: a new framework*. This would reflect investors' confidence in their ability to select and maintain top-performing managers in both public and private markets. We find that the alpha potential in private markets has historically been greater than that in public markets when making a like-for-like comparison. This may bias an investor's allocation to private markets relative to any optimisation based on the assumed returns from average fund managers. Of course, costs are part of the equation – not just fees but the overall governance costs of picking and overseeing alpha-seeking managers.

Comparing alphas

Extra returns of top-quartile PE buyout and global large cap managers over median managers, 1995-2013



This information is not intended as a recommendation to invest in any particular asset class or strategy or as a promise – or even an estimate - of future performance.
Sources: BlackRock Investment Institute, Morningstar, Preqin and S&P Capital IQ, March 2019. Notes: The chart shows the annualised five-year extra return over the median generated by top-quartile managers. For top-quartile performance in global large cap equity, we looked at returns gross of fees from sample of about 4,500 managers in the Morningstar database between 1997 and 2013. Representative fees are incorporated into our portfolio optimisation process. For top-quartile performance in PE buyout, we use Preqin data of returns net of fees from about 800 managers over a 25-year period to 2012. We use forward five-year performance for each PE buyout fund launched in each calendar year: we find that at least five years' worth of data is needed to draw meaningful conclusions on performance. The PE buyout alpha already reflects fees from the overall Preqin buyout universe. Returns are in US dollars.

What it means for portfolios

We've pushed back against a few assumptions about private market investing and showed how the illiquidity of private assets may be less of an issue than many investors assume. Our private market return expectations show both higher returns compared with public markets – and higher potential alpha. What does that mean for allocations? It boils down to investor objectives and constraints.

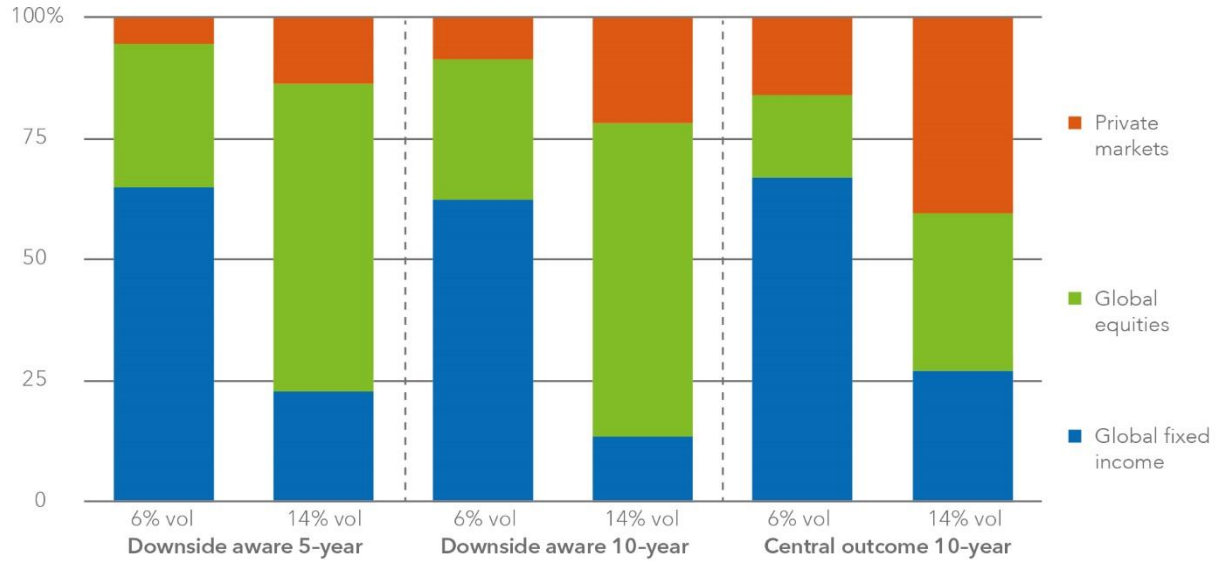
We used our private market returns to optimise portfolios robustly – maximising return relative to risk – under different investor time horizons and levels of risk tolerance. To make this as general as possible, we start by assuming that an investor has no particular constraints, no liabilities and no conviction in the ability to pick top-performing managers. See the *Differing allocations* chart below. The bars depict the allocations to private and public markets of six hypothetical portfolios. The four portfolios on the left are what we call "downside-aware": they are more risk-averse and optimised based on potential return pathways below our central (median) return projections. These portfolios give up some expected return relative to a median outcome to help minimise downside risks in a late-cycle environment. The two portfolios on the right are based on our central return projection, taking no steps to mitigate for the uncertainty in our return expectations.

The shorter time horizon portfolios will limit the allocation to private markets to a midpoint of 10% when averaging the allocation in the first two portfolios below. Yet this figure climbs materially as an investor takes a longer time horizon and more risk. Even in the downside-aware portfolios, an increase in risk leads to a substantially higher allocation to equities and private markets, as seen in the green and orange bars. An investor with long horizons, few constraints and more risk appetite can end up with an optimised private markets allocation of 40% or higher. This fits with the experience of some large pension and endowment funds that allocate 40%-50% to private markets. As the bars also show, higher allocations to private markets will come primarily out of fixed income allocations.

Such broad ranges can be narrowed when we look at specific examples. Consider an unconstrained, US-based investor with a 10-year horizon and concerned about the rising risk of a downturn over the next three to five years. This investor has a strong conviction in the ability to pick top-performing private market managers. From the starting broad range of 10-40%, their aversion to uncertainty – fuelled by the drawdown worries – might immediately push the investor towards the lower end of the range, broadly 10% to 20% and similar to the middle bars in the chart below. Yet the investor's conviction in finding a top-performing manager pushes this range higher: that's because potential alpha is greater in private market assets than public. The range rises to 20%-25%. These are the constraints that govern our strategic asset preferences on the CMA website.

Differing allocations

Hypothetical private market allocations in unconstrained US dollar portfolios based on risk tolerance, March 2019



This information is not intended as a recommendation to invest in any particular asset class or strategy or as a promise – or even an estimate - of future performance. Source: BlackRock Investment Institute, March 2019. Notes: The charts show optimised allocations to hypothetical portfolios. The public and private market breakdown is based on different assumed portfolio return volatility tolerances and time horizons. The various allocations are based on annualised total return volatility of 6% and 14%. We assume most multi-asset fund managers target a total return volatility of 8%-10%. The "downside-aware" portfolios are optimised based on potential return pathways below the median expected return, reducing risk from a potential drawdown. The "central outcome" portfolios are based on the median expected return. The indices making up each category are listed in the appendix. It is not possible to invest directly in an index.

Investor-specific objectives

What about investors with different objectives? Some investors will be more constrained, such as those biased towards fixed income-like assets to directly target liabilities or specific cash flow goals. These investors may end up seeking not just a different overall allocation to private markets, but a different mix of private market assets. Such problems can be explicitly addressed through optimisation techniques, such as setting the benchmark as a liability set or constraining the overall universe of investible assets.

For others, the private markets allocation is a broader decision. Direct ownership of companies can make it easier for investors to shape corporate policy and achieve ESG goals rather than trying to influence corporate behaviour via smaller public stakes. More broadly, some investors embrace private markets because they can help achieve certain objectives that public markets cannot satisfy.

For example, we expect private markets to increasingly help investors access a range of emerging markets (EM) where public market assets are thin. Investors may be suffering reduced diversification in EM where limited public market assets are not representative of their growing share of global GDP. In some large EM economies, liquid public equity assets can be dominated by DM-based multinationals. The local subsidiaries of two large food and beverage multinationals are among the biggest companies by market capitalisation listed on the main stock exchange of Nigeria – Africa's largest economy. Private market investing in EM is more about infrastructure and real asset investment than private equity for the time being. The idea of private equity being the channel for accessing EM is not a new idea – and it has proved problematic. Private equity in EM can be challenging due to weaker environments for making such investments, including intellectual property protection, legal systems and debt capital markets.

We believe private markets can help investors balance exposures and hedge risks tied to specific liabilities. A few hypothetical examples tell this story. The sovereign wealth fund (SWF) of a large oil importer may want exposure to oil, but rather than buying oil-related equities and bonds it decides to own oil fields directly to assure long-term supply for the country. On the flipside, the SWF of a Middle Eastern oil producer imports large amounts of food and might want to hold farmland in countries from which it imports. University endowments may also want to reduce risks if their revenue is dependent on foreign students: a university with a large share of US students may want to hedge its exposure by holding property uncorrelated to the US economy. This centres the private markets allocation on individual objectives that no risk/reward optimisation process can capture.

Our bottom line: there is no neutral starting point for sizing private markets in a portfolio, and late-cycle considerations need to be taken into account. A default "neutral" allocation does not exist. Private markets are no less prone to the excesses that can build up in public markets, especially at this stage of the economic cycle. Indeed, their private nature make valuations harder to assess. This is why uncertainty needs to be incorporated into any optimisation process. At the same time, we believe that some of the usual concerns cited about private markets – illiquidity in particular – need a rethink. Liquidity concerns should be less of a constraining factor for determining a private markets allocation than is commonly assumed. The ultimate sizing of the private markets allocation is highly dependent on investor-specific objectives – even with more sophisticated techniques for estimating the returns of top and average managers and a well-defined framework for managing liquidity risk.

Appendix and references

Deriving hypothetical upper bounds for private market allocations

Input	Range Tested
Target allocation to private markets	0% to 100% of the total portfolio in June 2007
Annual liquidity/spending requirement from total portfolio	0% to 12% of June 2007 total portfolio value
Mix of liquid assets	100% global equity (MSCI ACWI) to 100% US investment grade fixed income (BB US Aggregate)
Number of private market fund commitments per year	4 to 20 funds per year
Age of private markets portfolio	1 to 20 years, although the output is conservatively based on the age with the greatest liquidity requirements during the global financial crisis
Quarterly NAVs and cash flows for private market funds	All fund types and geographies from Preqin

For each combination of the input parameters in the table above, we run 200 Monte Carlo simulations of portfolio performance from June 2007 to December 2012, each time selecting a random combination of private market funds to allocate to. The probability that the liquid assets fall below two years of spending requirements is recorded and used to produce the chart on page 4.

The conservative zone on the chart represents the range of allocations to private markets that don't result in greater than a 5% chance of a liquidity event for any combination of the other input parameters. The danger zone is the opposite extreme, where all combinations of input parameters lead to at least a 5% chance of a liquidity event. The caution zone is the middle ground, where an investors ability to tolerate liquidity risk depends on how conservatively or aggressively they allocate their portfolio.

We ran the analysis on the entire Preqin private market fund universe of about 3,500 funds.

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Private equity returns model

For our private equity returns model on page 7, we use an accounting statement framework as the basis for our model. External data sources include S&P Leveraged Credit Data, S&P Capital IQ, Preqin and Thomson Reuters. The return on a buyout transaction ($r_{Buyouts}$) is the growth of the equity tranche of the company's capital structure, which can be calculated from current and future enterprise value and debt.

$$r_{Buyouts} = \frac{EV_t - D_t}{EV_0 - D_0} = \frac{\frac{EV_t}{EV_0} - \frac{D_t}{EV_0}}{1 - \frac{D_0}{EV_0}}$$

$$D_t = D_{t-1} - \left((1+g) \cdot EBIT_{t-1} - \frac{D_{t-1}}{Interest\ coverage \cdot \frac{EV_0}{EBITDA_0} \cdot \frac{D_0}{EV_0}} \right) (1 - Tax\ rate) + Plowback \cdot (1+g) \cdot EBITDA_{t-1}$$

Initial debt (D_0), initial enterprise value (EV_0) and EBITDA ($EBITDA_0$) are known. Future enterprise value (EV_t) can be calculated from the earnings growth rate and exit multiple. We find there is a close relationship between five-year S&P 500 revenue growth and EBITDA growth for companies involved in US LBOs. We can then use our US equity revenue forecasts from our CMAs to infer buyout EBITDA estimates. We find the buyout earnings yield (EBITDA/EV), the inverse of the multiple, tracks yields on US high yield debt over time, allowing us to link the exit multiple to our expectations for interest rates and spreads. The plowback ratio is a constant that is determined in-sample to remove forecast bias from the model.

We make the following simplifying assumptions to calculate future debt (D_t): No dividend payouts, negative earnings before tax (EBT) generates a tax credit that is immediately paid to the company, a fixed holding period of five years, cost of debt is fixed at the investment inception date and does not change with additional debt during holding period, the growth rate and EBIT/EBITDA margin are constant over the holding period and the capital expenditure required to sustain the growth of the firm – the plowback ratio – is a fixed fraction of EBITDA.

Accounting for fees in private equity can be challenging, partly due to a wide variety of clauses that allow funds to adjust fees over time and the variety of fees involved (management, carried interest, fund expenses, transaction costs (Phalippou 2018). We use the academic literature and professional surveys that have started to track the LPs of private equity funds. We use Preqin data on deal cash flows to and from funds to simulate the fees charged by typical LPs. We add fee estimates to this cash flow data to calculate our data on gross-of-fees returns. The average fee estimates are in line with the most recent academic research on this topic (Doskeland and Stromberg 2018).

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Indices

Global fixed income

US cash = Citigroup 3-Month Treasury Bill Index
US credit = Bloomberg Barclays U.S. Credit Index
US aggregate bonds = Bloomberg Barclays US Aggregate Total Return Index
US Treasuries = Bloomberg Barclays US Aggregate Government Index
US long Treasuries = Bloomberg Barclays U.S. Long Treasury Index
US long credit = Bloomberg Barclays U.S. Long Credit Index
US high yield = Bloomberg Barclays U.S. High Yield Index
US bank loans = S&P/LSTA Leveraged Loan Index
US agency MBS = Bloomberg Barclays US MBS Index

Global equities

US large cap equities = MSCI USA Index
US small cap equities = MSCI USA Small Cap Index
DM ex US large cap equities = MSCI World ex-US Index
US high yield = Bloomberg Barclays US High Yield Total Return Index
DM government bonds = Bloomberg Barclays Global Aggregate Treasuries
DM ex US government bonds = Bloomberg Barclays Global Aggregate Treasury Index ex US
DM ex US credit = Bloomberg Barclays Global ex-USD Credit Index
Europe large-cap equity = MSCI Europe Index
Japan large-cap equity = MSCI Japan Index
EM equity = MSCI Emerging Markets Index

Private markets

Global infrastructure debt = 50% Bloomberg Barclays European Infrastructure EUR Index/50% Bloomberg Barclays US Corporate 10+ Baa3-A3 Utility
Hedge funds (global) = HFRI Composite Index
US infrastructure debt = BlackRock proxy
US real estate = BlackRock proxy
Global core real estate = BlackRock proxy
Global direct lending= BlackRock proxy
US private equity (buyout) = BlackRock proxy
Global private equity (buyout) = BlackRock proxy
Global diversified private equity = BlackRock proxy
Global infrastructure equity = BlackRock proxy

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