



Adding return and lowering risk with private assets

October 2018

Private assets bring a number of potential advantages to portfolios, from return enhancement to reduced risk. However, increased demand means that the low hanging fruit have now largely gone. Highly attractive opportunities remain, but buyers need to be more discriminating in their sector and manager selection. Access to deals has grown in importance as a source of alpha.

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A burgeoning market

Private assets have been popular with endowments and official institutions (such as sovereign wealth funds and government pension plans) for some time. However, more recently, they have also been attracting increasing interest from other institutional investors. For example, 60% of European insurers increased their allocations to private assets between 2011 and 2016. Both equity and fixed income attracted inflows and private equity now makes up around a third of their equity portfolios¹. Defined benefit pension funds have also been moving deeper into illiquid asset classes. Private debt in particular has come of age in the years after the financial crisis. Only 2% of European pension funds had any money whatsoever invested in this area in 2013, but that figure has now grown to 11%². Our 2018 Institutional Investor Survey confirmed that this trend is set to continue. Average private asset allocations are expected to increase above 13% in 2018, with growth across all major investor types and regions³.

¹ *Investment behaviour report*, European Insurance and Occupational Pensions Authority, November 2017.

² *Mercer European Asset Allocation Survey 2018*

³ Schroders Institutional Investor Survey, 2018

This shift into private assets poses questions and challenges for uninitiated and experienced investors alike. In this paper we address two of the most common reservations we hear about private assets:

- 1 Why lock your money up for years (and sometimes decades) when there are plenty of other assets which don't constrain you in this way?
- 2 Am I too late to invest in private assets? Earlier investors may have done very well but are valuations now too high?

We cover the main categories of private assets, as set out in Figure 1, below. This is not an exhaustive list and a discussion of the full spectrum is outside the scope of this paper. However, many of the principles and arguments introduced can be applied more broadly.

A diverse universe

Firstly, it is important to understand that private assets cover a myriad of investment opportunities. This makes it difficult to generalise, but also provides investors with a diverse range of options. Risk, return and liquidity profiles vary significantly. Some assets offer the prospect of higher returns, others greater certainty of returns.

Figure 1: Private assets – the main categories



Source: Schroders

As well as the traditional equity-debt demarcation, private assets are commonly split into their main sectors – for example, real estate, infrastructure, and corporate equity (normally called private equity), with a similar breakdown for debt.

Even then, each of these can be broken down into subsectors with differing characteristics. Private equity alone can be broken down into venture capital, small/mid/large buyout, growth, turnaround, secondaries and more. Commercial real estate and infrastructure are traditionally split into core, core plus, value-add and opportunistic, but also includes others, such as long lease real estate. Residential real estate is also common in some markets and has its own sub-categorisation.

On the debt side, the position in the capital structure is highly relevant. Common distinctions are made between senior, junior, mezzanine or whole loan, investment grade or high yield, secured or unsecured, long-dated or short-dated, fixed rate or floating rate.

Some of these distinctions are intuitive and relate to risk profile. For example, lending money to, or investing in the equity of, earlier stage companies is generally riskier than backing more mature businesses. Financing the construction of a new airport is riskier than the purchase of an existing one. Purchasing a shop to let to a struggling retailer on a short lease is riskier than buying an office to let to a government department on a long lease.

A key feature of private assets is their illiquidity, but even here there is great variety. Money can be locked away for as little as a few years to as long as several decades on some infrastructure projects. Furthermore, while an investment vehicle could have a long life, this can be broken down into a number of different phases. It will include a period during which capital is committed to it but not yet drawn down (when it can be invested elsewhere but may be called on at short notice), a period when capital is drawn down and invested, and then a divestment period, when assets are sold or debt matures and the proceeds are distributed to investors. The result is that capital is not tied up for the entire life of the vehicle. For example, while private equity buyout funds typically have a life of 10 to 12 years, individual tranches of capital will generally only be drawn down for an average of four to seven years at a time. It is this second period when the investment is truly illiquid.

“Liquid” investment vehicles which invest in illiquid assets also exist, but great care is needed to ensure any liquidity mismatches and potential implications are understood. For example, many open-ended (liquid) UK real estate funds were forced to temporarily stop redemptions following the UK’s Brexit referendum when large numbers of retail investors tried to sell at the same time. The funds’ liquidity evaporated just at the moment when some investors desired it most (even if it was restored soon after).

Given the diversity of investments on offer, it is rare to find an investor whose portfolio would not benefit from exposure to at least one part of the private universe, other than where liquidity is paramount.

A simplified summary of some of the main categories is shown in Figure 2 on the next page, with publicly-traded equities, corporate bonds and high-yield debt included for comparison purposes. The rest of the paper is devoted to providing further details and explanation of the private assets and characteristics summarised in the table.

Figure 2: A bird's eye view of the private asset landscape

	Holding period of underlying investments (years)	GBP yield (%)*	Credit spread (%)	Extent of investor control	Alpha potential	High potential returns	Stable income generating	Security	Low risk of capital loss (single investment)	Low risk of capital loss (portfolio)	Equity diversifie	Government bond diversifie	
Equity	Global equities	Daily liquidity	2-3	n/a	✓	✓	✓✓	X	XX	XX	XX	XX	✓✓
	PE: large buyout	4-7	n/a	n/a	✓✓	✓✓	✓✓	XX	XX	XX	XX	XX	✓
	PE: small/mid buyout	4-7	n/a	n/a	✓✓	✓✓	✓✓	XX	XX	X	X	✓	✓✓
	PE: venture capital	5-8	n/a	n/a	✓✓	✓✓	✓✓	XX	XX	XX	X	✓✓	✓✓
	Infra equity	10+	5	n/a	✓✓	✓✓	✓	✓	X	X	X	✓	✓
	Real estate	4-6	4-5	n/a	✓✓	✓✓	✓	✓✓	X	X	X	✓	✓
Debt	IG corporate bonds	Daily liquidity	2-3	1.0-1.5	XX	X	XX	✓✓	X	✓✓	✓✓	✓✓	XX
	Senior infra debt	10+	3.5-4.5	1.75-2.25	✓	X	XX	✓✓	✓✓	✓✓	✓✓	✓✓	XX
	Senior real estate debt***	5-7	2.5-3.5	1.0**-2.5	✓	X	XX	✓✓	✓✓	✓✓	✓✓	✓✓	✓✓
	High yield debt	Daily liquidity	4-5	3-4	XX	✓	✓	✓	XX	X	X	✓	✓
	Junior infra debt***	5	5-6	4-5	X	X	✓	✓	✓	✓	✓	✓✓	✓✓
	Mid-market direct lending***	3	5-7	4-6	✓	✓	✓	✓	X	X	X	✓✓	✓✓
	SME lending***	5	8-11	7-10	✓	✓	✓✓	✓	X	X	X	✓	✓✓

Reporting dates vary. Analysis based on the most up to date data obtainable as at June 2018.

Infra = infrastructure, IG = investment grade, SME = small and medium-sized enterprise

Although they do not normally have a formal credit rating, senior infrastructure debt and senior real estate debt share characteristics with investment grade corporate bonds, in terms of credit quality. Similarly, junior infrastructure debt, mid-market lending and SME lending share characteristics with high yield (sub-investment grade) debt.

* Currency exposure assumed to be unhedged for equity investments and hedged for debt investments. GBP shown for illustrative purposes only to permit comparison across assets. Equity yields unchanged in other currencies. Hedged debt yields vary according to interest rate differentials. For example, as at 31 July 2018, USD-hedged yields would be approximately 1.6% higher than those shown, EUR-hedged yields 1.2% lower and JPY-hedged yields 0.9% lower.

** Lower end of range is for Germany.

*** Typically floating rate debt, paying a coupon which increases with interest rates

Categories above are not exhaustive and are shown for illustrative purposes only.

Sources: Bank of America Merrill Lynch, Callan Associates, CBRE, De Montfort University, Ernst & Young, International Property Forum, NEOS, Preqin, Schroders and Thomson Reuters Datastream,

1. Why private assets?

There are four ways in which private assets can potentially add value:

- 1.1 Provide higher returns
- 1.2 Give access to a broader range of exposures, industries or outcomes
- 1.3 Reduce risk (volatility and/or risk of loss)
- 1.4 Add diversification benefits

1.1 Higher returns

An attraction of private assets is their ability to earn a higher return than public equivalents. As shown in the first two charts in Figure 3, private equity has handsomely outperformed public equity over time and private infrastructure equity has outperformed public infrastructure equity. Attention often focuses on the higher fees charged by private asset investment managers, but these results are net of all fees. In the fixed income world, private debt commands a credit spread premium over public markets without the need to take on additional credit risk, as highlighted in Figure 2. In today's world of low return expectations, this return premium has taken on added importance.

Real estate's experience is more mixed as listed real estate investment trusts (REITs) have actually outperformed private funds over the long run (Figure 3, bottom), although this can be explained by the higher leverage in REITs (which also makes them more volatile).

A large part of the return pick-up in private assets arises because they are cheaper to buy than public ones. Figures 4 and 5 show this over time for private equity⁴ and infrastructure debt. The reason is clear. Let us say an investor is offered two potential investments, both identical other than the fact that one can be sold easily and the other ties up money for five years. They would obviously want to pay less for the one with poorer liquidity – a term for how easy it is to buy and sell an asset. That cheapness can result in an illiquidity premium, a reduction in the price or additional yield to compensate for having money tied up.

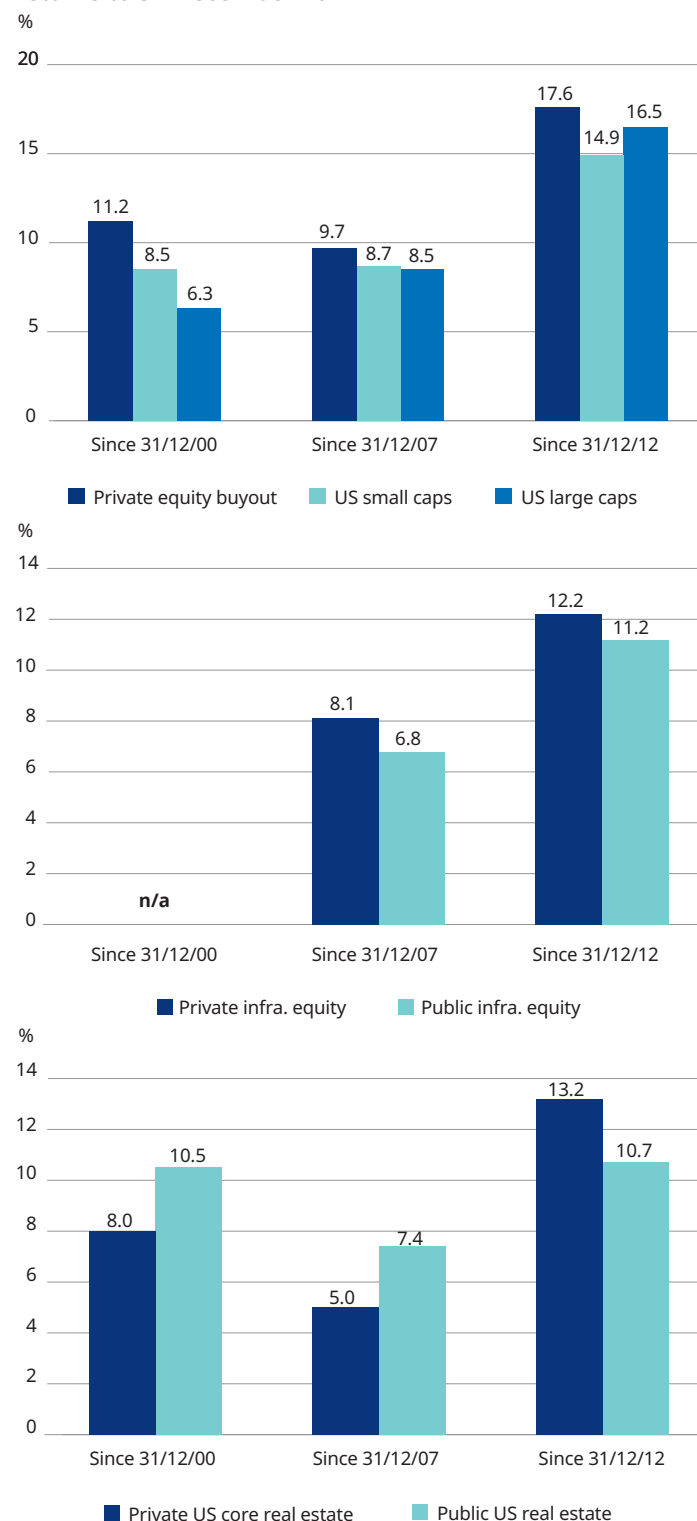
In reality, the magnitude of the additional return offered by private assets is not due solely to illiquidity but also to other factors like transaction size, complexity and the deal sourcing ability of an investment manager. In most cases, it is impossible to disentangle these different drivers, but it is important to be aware of their existence.

Deal sourcing is an often under-appreciated factor which can make a big difference to an investor's experience in private assets. In general terms, the more competitive the bidding process, the higher the price paid and the lower the expected return. Deals sourced through private networks of contacts can be completed with far less, or even no, competition.

⁴ The average private company is smaller than public so a comparison has been made with the Russell 2000 index of small cap public companies

Figure 3: Private assets have typically outperformed, net of fees

Returns to 31 December 2017*

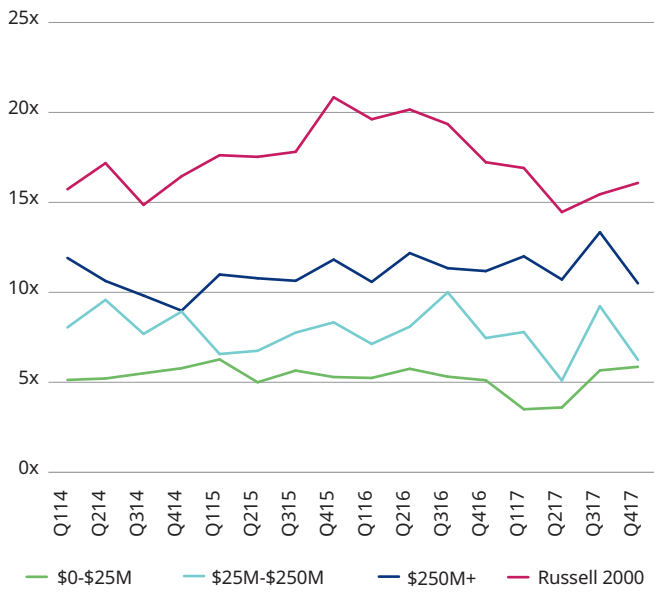


Past performance is not a guide to future performance and may not be repeated

*Other than infrastructure which is to 30 September 2017.

For illustrative purposes only. US large cap is S&P 500 index; US small cap is Russell 2000 index; public infrastructure equity is Dow Jones Brookfield Global Infrastructure index; public real estate is MSCI USA REIT index; private equity and private infrastructure are PreQIn indices; private real estate is NCREIF Fund Index - Open End Diversified Core Equity Fund Index. All figures are total returns and private asset returns are net of fees. Sources: FTSE Russell, MSCI, NCREIF, Preqin, and Thomson Reuters Datastream.

Figure 4: Private companies are cheaper than public
EV/EBITDA* buyout multiples vs Russell 2000



* EV = enterprise value = the total value of a company, taking account of equity and net debt. EBITDA = earnings before interest, tax, depreciation and amortisation.
Source: Pitchbook Global PE Deal Multiples Report: V and Thomson Reuters Datastream

This “deal-sourcing alpha” is a feature across much of the private asset universe. It is especially important for “secondary” private equity funds, which buy stakes in private equity funds from existing investors (known as limited partners). The manager of the private equity fund (the “general partner”) can block such a sale unless they deem the acquirer acceptable. A manager with an existing relationship is at an advantage. This presents a barrier to entry for newer participants in the market as it takes time to establish credibility. One complaint sometimes levied against private assets is the time it takes to deploy capital but here too, the better access to deals of more experienced practitioners gives them a clear edge.

As well as being cheaper, private assets offer a number of other return advantages over public markets. One is the greater potential for active managers to add value.

Figure 6: Sources of added value

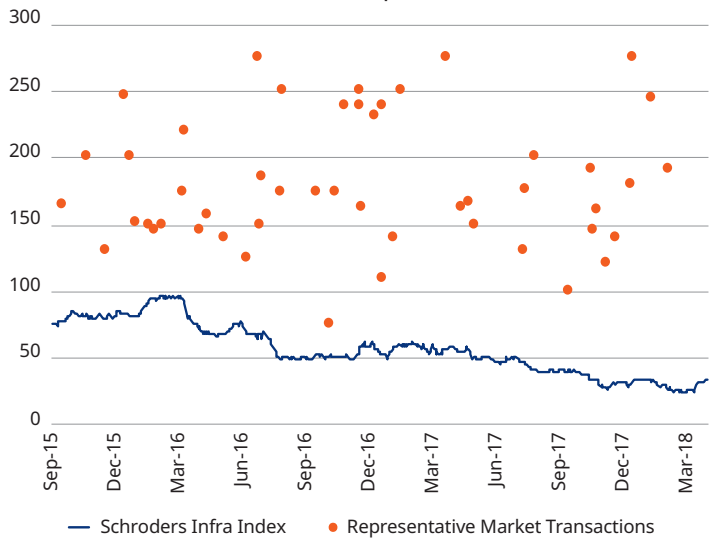
Factor	Source of add value	Public market	Private market
Market timing	Deciding appropriate entry/exit point	✓	✓
Stock selection	Identifying most attractive opportunities	✓	✓
Negotiations	Ability to negotiate attractive entry price/conditions	X	✓
Operational improvement	“Hands-on” approach with ability to effect change	~	✓
Leverage	Ability to boost equity returns and instil financial discipline at portfolio companies	~*	✓

* The ability of public market investors to influence a company's capital structure is more limited than in private equity. The efforts of activist investor are the main exception. Individual investors can borrow to invest in the stock market, but the additional risks associated with this strategy, including the need to make margin payments, mean that this is relatively uncommon.

Source: Schroders

Figure 5: Private infrastructure debt offers a credit spread pick-up

Spread of Representative Market Transactions vs. Schroders BoAML Infra Index (bps)



Infra Index developed by Bank of America Merrill Lynch and Schroders (Bloomberg Q896) representative of a diversified portfolio of investments in the European infrastructure bond market. Credit spread shown is over mid-swap rates.
Source: Bloomberg, Infranews, Schroders

The lack of transparency in private markets and inefficiencies this brings forth are a part of the story.

However, another is that investment managers in private markets have more levers at their disposal to improve returns (Figure 6). They are much more hands-on than their public equivalents and have access to a wider range of information in a timelier manner than is possible in public markets. Private equity general partners routinely influence corporate strategy and appoint directors and management. Real estate managers actively manage lease extensions and building refurbishments. Private debt managers negotiate covenants which give them greater protection than would be standard in corporate bonds. In some cases, these give them the right to step in and direct strategy if a borrower is struggling.

The private debt return advantage over public markets

As well as a higher credit spread or yield, private debt comes with the added attraction that it is normally exposed to a lower risk of loss than equivalent-rated corporate bonds. This has one of two drivers (or both in some cases):

- 1 Lower average default rates
- 2 Higher average recovery rates

Default rates are linked to the credit risk of the underlying asset or project being lent against. Infrastructure exhibits the greatest cash flow stability and a notably lower risk profile than corporate bonds. Real estate can also be lower risk than corporate bonds, especially now that financing structures are more conservative than before the financial crisis. For example, average loan-to-value ratios on European commercial real estate have fallen from around 70% to 50%, meaning a 50% decline in value would now be required before debt holders would be exposed to the risk of loss. Previously only a 30% decline would have been required. Lending to small and mid-market companies is generally “sub-investment grade” (sometimes referred to as high yield) risk but the universe is highly diverse.

Real estate and infrastructure debt also come with the advantage that they are normally secured on physical assets such as airports, toll roads or buildings. Security is less common and can be more varied when it comes to private loans to small and medium-sized enterprises (SMEs). It could be as simple as personal guarantees from the directors.

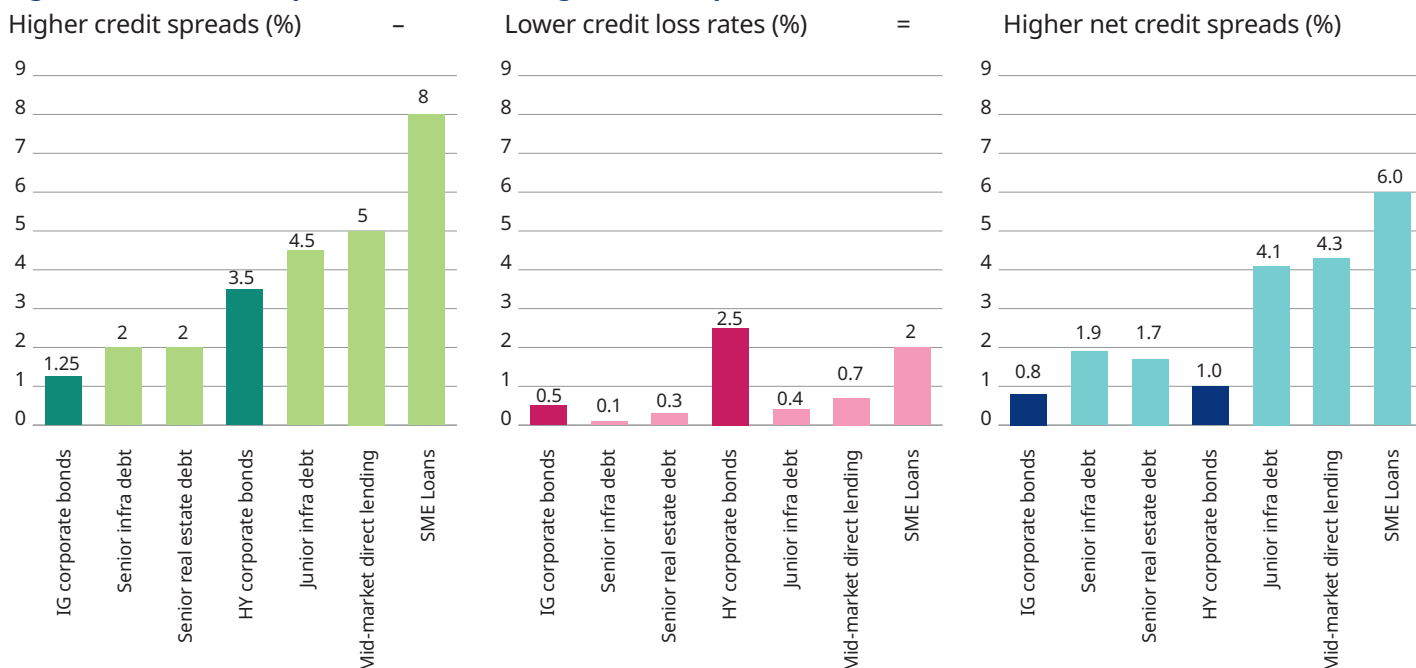
Importantly, the secured nature of infrastructure and real estate debt means that, in the event of a default, an asset

or assets can be sold and the proceeds used to repay the lender. This boosts recovery rates and limits losses. For example, recovery rates for infrastructure and real estate debt average around 75%, substantially more than the 40% level typical on corporate bonds. Furthermore, the most common recovery rate on infrastructure defaults has actually been 100%. This means most investors have incurred no losses at all, even when there has been a default. Recovery rates on SME loans come in much lower at 40-50% as a result of weaker security, but they are still higher than on normal corporate bonds.

When taken together, lower default rates and higher recovery rates contribute to lower overall expected losses for private credit compared with corporate bonds (Figure 7, middle chart). Infrastructure debt is the least risky from this perspective, followed by real estate debt and, finally, SME loans. In combination with the higher credit spread, this results in a much larger net credit spread after taking account of losses than in public markets (Figure 7, right hand chart). Higher, more certain returns make private assets an excellent fit for pension funds or insurance companies when used as part of a liability- or cashflow-driven investment strategy.

Another feature which boosts private debt returns over and above headline yield levels is the ability to earn arrangement fees and early repayment penalties from borrowers. These can be material. For example, arrangement fees of around 1-2% can be earned on junior infrastructure debt transactions and 1% on real estate debt transactions, while early repayment penalties for SME loans can be as high as 25-50% of the amount borrowed. Other private debt investments can benefit from similar return kickers.

Figure 7: A win-win for private credit from higher credit spreads and lower loss rates

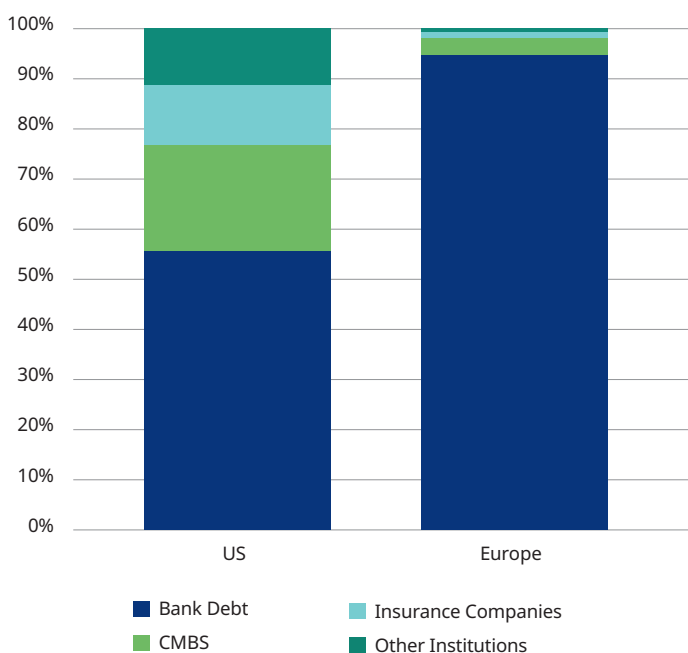


Note: IG and HY corporate bond credit loss rates incorporate default losses (default rates adjusted for recovery rates) and price changes arising from changes in credit quality (net downgrade losses). Investors in private debt will not generally experience downgrade losses (or upgrade gains) as the credit spread component typically remains unchanged unless there is an impairment (high risk of default). Consequently, private debt loss rates above only reflect default losses. Figures are shown for illustrative purposes only and may not be reflective of credit spreads or default experience on any individual investment or portfolio. Source: Bank of America Merrill Lynch, Callan Associates, CBRE, De Montfort University, NEOS, Preqin and Schroders

1.2 Access to a broader range of exposures, industries or outcomes

For certain assets, the public market captures only a small subset of the overall market. This is a particular issue in European debt markets, where only around 20% of corporate financing has historically been provided by capital markets, with the vast majority of the rest being provided by the banks. Even more extreme situations exist. Public markets have barely featured in a European commercial real estate debt market dominated by the banks (Figure 8).

Figure 8: In 2012, Europe was a bank-dominated real estate debt market



Source: Commercial Real Estate Debt in the European Economy 2016, CREFC Europe. Originally sourced from INREV (2012) and US Federal Reserve (2012)

However, with the post-crisis retrenchment of the banking sector in Europe, there is now an attractive opportunity for institutional investors to step in and fill the void left behind by the banks. This supply shortfall is one reason why private credit spreads have remained elevated relative to corporate bonds. In the UK, non-bank lenders have taken a 25% market share of new commercial real estate lending⁵. This opportunity is only accessible in private markets.

The narrower focus of the public market can also result in sector or regional allocations that misrepresent the broader asset class. The public infrastructure debt market, for example, is 90% utilities and 60% US dollar debt. However, the broader infrastructure industry, accessible privately, is much more diverse by sector and region. In addition to utilities, it covers transportation, communication, and social infrastructure such as schools and hospitals. The largest region for brownfield infrastructure debt (typically safer, operational assets

⁵ UK Commercial Real Estate Lending Report, Cass Business School and De Montfort University, 2017.

which appeal to a wide range of investors⁶) is also Europe, not the US. The public market is a poor reflection of the opportunity set.

Public equity and bond markets also tend to be open only to larger issuers, given the costs of acquiring and maintaining public status. Private markets provide broader exposure, capturing much smaller companies and transactions. At one extreme, young technology companies are nearly all privately held and SME lending is only possible in the private market.

Another issue is that, according to our research, companies are increasingly turning their back on public equity markets and preferring to stay private for longer, if not indefinitely⁷. The number of publicly-listed companies in the US, UK and parts of western Europe has collapsed by around 50% since the early 1990s. The increased scale and accessibility of private equity as a source of capital has been a contributing factor to this trend. Companies such as Uber and WeWork can now raise sums of money privately that would have been impossible outside the public markets in the past. One consequence is that public markets are providing exposure to an increasingly narrow subset of older, more mature companies. Investors focused solely on public markets risk missing out. Furthermore, if high quality companies are turning their backs on the public market, the risk is that the quality of the market deteriorates over time. This may have negative implications for public market returns. A more holistic approach to equity investment, where public and private market exposures sit alongside each other, is likely to be more appropriate.

1.3 Lower risk

Measuring and understanding risk in private assets is challenging:

- Valuation methodologies smooth reported price variability
- Investors are unable to sell their investments quickly, so it is questionable whether standard analyses of month-to-month price movements even have any relevance.

When the volatility of private assets is calculated in the traditional way, as standard deviation of historic monthly or quarterly returns, private assets appear relatively low risk. This feature can be appealing to investors who are concerned about the reported volatility of their portfolio. For example, it can limit the impact of changing asset valuations on a company's pension expense in its profit and loss account. In such an instance, the stability of private assets is highly prized.

However, while there can be fundamental reasons why certain private assets could be considered lower risk than their public peers (see later), this is also partly a consequence of their valuation methodology. Private asset valuations are only updated infrequently, if at all, and are not always tested against public market prices ("marked to market"). Both features dampen volatility.

⁶ Greenfield projects are those which are still at the construction stage. These typically have a much higher risk profile.

⁷ What is the point of the equity market?, Schroders, April 2018

Approaches taken to remedy this include extending the time period used for returns when calculating volatility (e.g. using annual returns rather than quarterly) or employing statistical de-smoothing techniques.

The former can make a difference as it is more common for some assets to be revalued fully on an annual basis, rather than every quarter. This removes some distorting effects.

The latter is a statistical technique which attempts to add back the volatility that is dampened by stale valuations. It can make a useful contribution to any analysis of private asset risk but, while commonly used, should not be relied upon in isolation. Some of the underlying assumptions can be challenged as unrealistic⁸ and it is very sensitive to both the data period and model used. For example, when we de-smooth US core real estate returns, the model suggests that US core real estate fell in value by 80% in the final quarter of 2008 and a further 32% in the next quarter, before rallying by 22% in the following one. While the US real estate market clearly suffered a sharp decline over this period, it did not lose approaching 90% of its value in six months. In our analysis we remove these three quarters when calculating volatility. The fact we have been forced to do so demonstrates the vulnerability of this approach.

Figure 9 sets out the volatility of real estate, buyouts and venture capital on a quarterly, annual and de-smoothed basis. It shows the divergent results under these different approaches. Both annual and de-smoothed volatilities are higher than the traditional analysis of quarterly returns would suggest, in some cases much higher. This highlights the limitation of relying on short-term return analysis as a measure of underlying risk.

For private equity, we have shown venture capital over the whole period and also excluding 1998-2002, as the extreme nature of the Dotcom bubble has a big impact on calculations of volatility but is perhaps less meaningful on an ongoing basis (venture returned almost 300% in 1999 alone, for example). 2008 was less anomalous for public markets as its exclusion would have had minimal impact on estimates of their long-term volatility. It is interesting to note that, even on the basis of annual returns, buyouts appear less risky than public equities, despite their higher leverage.

It may surprise some readers to learn that venture capital volatility is only on a par with buyouts, and is below public market levels if the Dotcom bubble is excluded. Individual venture capital investments are very high risk but this risk is mitigated when several investments are put together in a portfolio. Each can perform very differently, driving significant diversification benefits at the overall portfolio level. Quantitative analysis of thousands of simulated portfolios drawn from thousands of realised investments made by Schroder Adveq confirm this feature. Portfolio risk declines rapidly, even at relatively modest portfolio sizes, indicating a very low correlation between investments⁹.

Any attempt to analyse the volatility of private debt comes up against an even bigger problem. This is a developing market, a fraction of the size of the private equity and real

⁸ Such as the assumption that the quarterly net asset values are actual market values which an investor could buy and sell, which is not the case for private equity. The results could give an investor a misleading view of their investment. See *Risk in Private Equity*, British Private Equity & Venture Capital Association, October 2015.

⁹ For a more in-depth analysis of this subject, see the upcoming Schroder Adveq paper on venture capital investing, expected September 2018

Figure 9: Standard approaches can understate volatility

	Volatility of quarterly returns	Volatility of annual returns	Volatility of de-smoothed quarterly returns
US core real estate	6	10	14*
US buyouts	10	13	15
US venture	23	58	46
US venture ex-1999-2002	9	14	21
US large caps	16	18	n/a
US small caps	19	19	n/a

All volatilities have been annualised

*De-smoothed volatility for core real estate excluding the period from fourth quarter 2008 to second quarter 2009.

No de-smoothed volatilities have been shown for large or small cap public equities as statistical tests do not indicate the presence of any smoothing in these return series. Given the liquidity of public markets, this is to be expected.

Core real estate is NCREIF Open-Ended Diversified Core Real Estate Fund index; buyout and venture data are one-year horizon-pooled-IRRs; real estate and public equity data Q1 1991-Q4 2017; buyout and venture data Q1 1991-Q4 2016. Source: Cambridge Associates, MSCI, NCREIF and Thomson Reuters Datastream.

estate markets, and there is no reliable source of benchmark data. Most transactions take place privately on undisclosed terms, making it impossible to get an overall picture of how the market is performing. Volatility can be inferred by comparison with corporate bonds of equivalent credit rating, but this will overstate risk given that private debt can benefit from covenants and security not typical in corporate bond markets. Most private debt also does not have a formal credit rating so any such analysis relies on estimates. Such an approach would also fail to capture any difference in risk profile within private debt. For example, both junior infrastructure debt and SME loans are categorised as sub-investment grade (high yield). However, junior infrastructure assets have more stable cash flows than SME loans, while the debt is backed by hard assets with long economic lives. This should result in it being given a more favourable risk assessment.

Putting aside measurement issues, there are a number of fundamental drivers of volatility that can be qualitatively appreciated:

- Real estate leases normally run for several years and often have some form of indexation or upward-only rent clause which prevents downward adjustments during the term of the lease. This provides a more stable underpinning to returns than in public equities.
- The cashflows from infrastructure projects are less sensitive to the economic cycle than the broader equity market.
- For a given asset, a more leveraged investment is riskier than a less leveraged one. The average private equity large buyout is around 55% debt financed whereas for the average S&P 500 company the equivalent figure is less than 50%. This would suggest that large buyouts are riskier than public equities.

Figure 10: Private assets have different underlying risks to public markets

Cashflow stability	Asset-backing/security	Investor protections / covenants	Superior access to information for active manager	Long term nature shields from short term noise
Illiquidity	Leverage	More limited valuation transparency for end investor	Concentrated individual funds	Elevated performance dispersion between funds

Source: Schroders

- By the same argument, it is wrong to automatically jump to the conclusion that all private equity buyouts are riskier than public markets. Small and mid cap buyouts are less highly leveraged and some other strategies employ little or no leverage at all.
- Individual funds of private assets are less diversified than public market funds and so are riskier from this perspective. However, this risk can be mitigated at the portfolio level by spreading investments across a number of funds over time and/or by investing in funds of funds. The controlling stakes that private equity investors typically take in their portfolio companies afford them more access to information in a more timely manner than would be possible in public markets. This ability to do much deeper due diligence helps to mitigate the risk of any individual investment and thereby avoid unwelcome surprises.
- Some of the price movements in public markets, and by consequence volatility, are driven by investor fear and greed rather than underlying fundamentals. In addition, the behavioural temptation to sell when markets are falling is in itself a contributor to volatility. The fact that investors in private assets are typically unable to sell their stakes in such an environment prevents them from making the same behavioural mistakes and insulates private assets from these sentiment shocks. Instead, it plays to their advantage as it allows private asset investment managers to act in a counter-cyclical way. Arguably these short-term shifts in sentiment are irrelevant to the long term investor. The fact that they are glossed over in private asset volatility should not necessarily be misinterpreted as an oversight or “wrong”.

Notwithstanding the desire to fit private assets into a traditional risk/return framework which allows easy comparison with other asset classes, a bigger question is whether volatility is really the right measure for investors in private assets to be looking at? It measures how bumpy the ride is, but that is somewhat meaningless for a private asset investor who has committed themselves to locking their money up for a period of several years. Risk of capital loss is a more worthy focus.

For private debt investors, this comes down to whether they are repaid what they are owed. This can be shown to be more likely than with corporate bonds, as demonstrated by the lower loss rates in Figure 7. The European Solvency II insurance regulations specifically recognise the particularly low loss rates of infrastructure debt. They provide 30% relief on the amount of capital that insurers have to set aside when they invest in infrastructure debt compared with corporate bonds. Losses from SME loans are markedly higher than infrastructure debt due to their more cyclical nature and weaker security, but even these remain below losses on high yield debt.

Real estate has the advantage that, even if a tenant goes bust, the property itself continues to exist and can be re-let, albeit normally after an interruption. A classic example of this is 25 Bank Street in London. It was originally intended for Enron, the failed US energy group, and subsequently let to Lehman Brothers, the US bank which itself failed soon after Enron. Equity investors in both of those companies lost everything, but the property was re-let and now houses JP Morgan’s European headquarters. In extremis, therefore, the physical nature of real estate is a store of a value which contributes to its having a lower risk profile than equities.

Despite its reputation as being higher risk, private equity has shown greater resilience in protecting investors from losses than might have been expected. The largest peak-to-trough loss suffered by the Cambridge Associates US Buyout Index in the ten years to 2016 was around 30%. This compares with a figure of around 50% for public markets. Confounding the widely held view that venture capital is riskier than public markets, it fared even better, with a maximum drawdown of only around 20%.

Given that the financial crisis had its roots in the real estate market, it should not be surprising that real estate losses were higher, reaching close to 40% at that time. However, in all cases, losses were less than public equity markets. This resilience is an often underappreciated quality of many private assets.

As can be seen, risk and volatility are challenging topics for private assets. Reported volatility will indeed be lower than public markets and this is an attraction for some investors. However, this has an illusionary aspect and is likely to understate true risk. It is also an irrelevant concept when investors have committed themselves to locking up their capital for years on end.

A more holistic approach to understanding risk is required. Real estate risk is nearer to equities than bonds, despite what standard volatility analysis might suggest. Private equity is highly diverse. The leverage in large cap buyouts means that it would be reasonable to treat the sector as riskier than public equities, but a qualitative case can be made for small and mid cap buyouts to be given more favourable treatment. Individual venture capital investments may be risky but portfolios have been remarkably resilient and can also gain in value even when markets are crashing.

Private debt markets are clearly less risky than equivalent-rated corporate bonds thanks to their secured nature and more stable underlying cashflows.

This is a subject we intend to return to in more detail in subsequent research.

1.4 Diversification benefits

Given their differing underlying exposures and return drivers, private assets offer diversification benefits compared to public markets. These vary by asset class and market.

However, valuations can be slow to update and/or unreliable, so standard correlation analysis can overstate these benefits. For example, credit spreads on private debt tend to ignore broader market movements and are only revalued when there is a material deterioration in credit quality which requires a write down. In contrast, the underlying government yield or swap rate, which is the other driver of private debt yields and valuations, does adjust in response to market moves. As a result, the correlation with interest rates is high (which can make private debt a good fit for liability matching portfolios), but the correlation with corporate bonds is likely to be understated. Similarly, for the reasons given in the section on risk, estimates of correlations between private equity, real estate equity and infrastructure equity, on the one hand, and public markets, on the other, are partly a function of valuation methodology. These estimates understate the underlying economic linkages.

A better way to consider the relationship between public and private returns is to look through to the underlying exposures. Figure 11 provides indicative guidance about the relative strength of relationship that various private assets have with returns from public equity and government bond markets.

As already argued, private assets can provide exposure to different asset classes and return drivers to public markets. Diversification potential is a natural consequence.

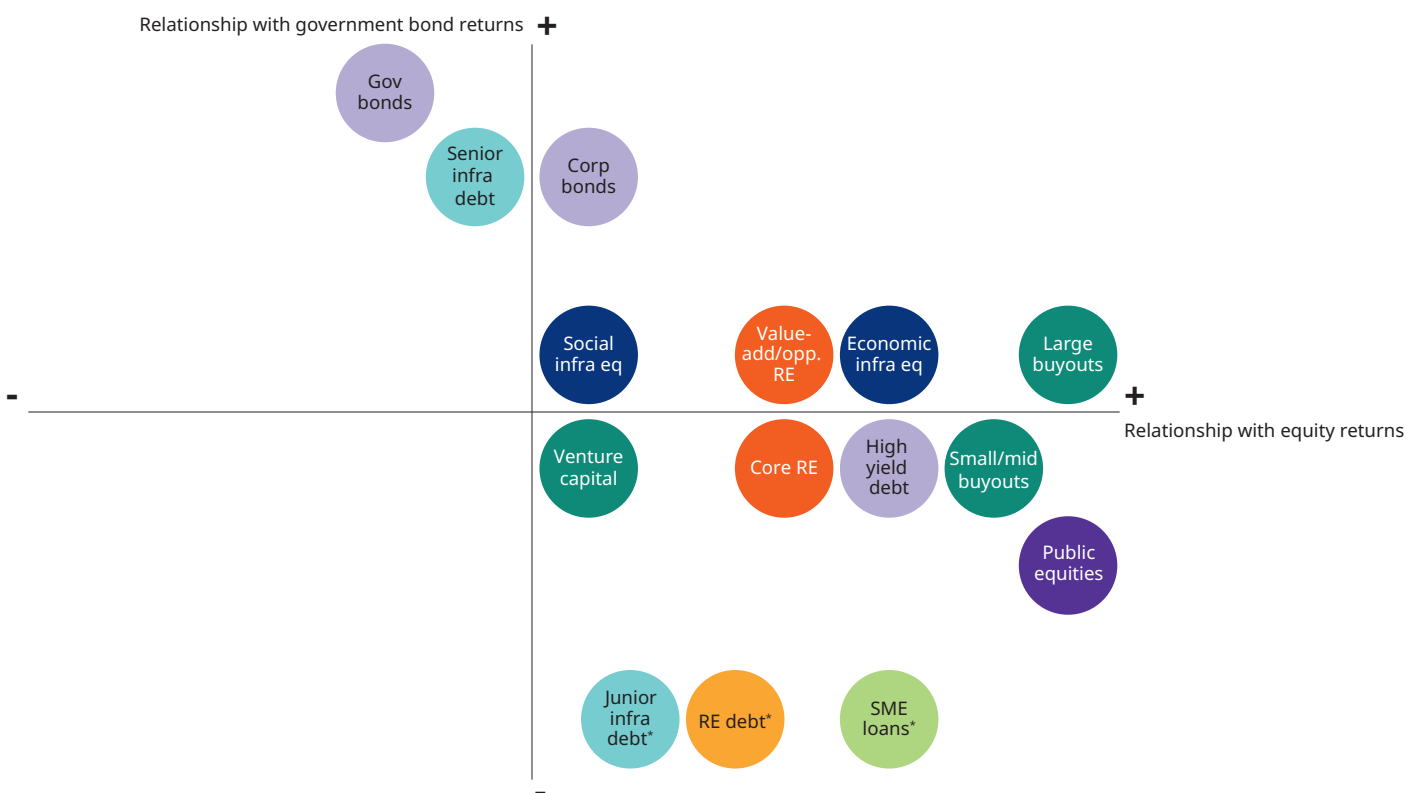
For private equity, this varies significantly by sector. Large buyouts returns are strongly influenced by public markets. However, the relationship is much weaker elsewhere. Early-stage venture capital depends less on stock markets and the economy (as companies typically have no or low revenues and no earnings), but on progress in product development and initial customer wins. This can also be true of more mature venture capital. Some companies in the private equity “growth” sector grow strongly not because of strength in their underlying markets, but because of disruption and taking business trade away from incumbent industries – something which could even accelerate in a down market.

Similar variation exists in real estate and infrastructure. For example, the greater stability of infrastructure cashflows and the lack of sensitivity that certain sectors have to the economic cycle (especially government-backed social infrastructure projects) can drive diversification benefits for investors in those sectors. In contrast, other sectors, such as (sea) ports, are heavily influenced by global trade and are consequently less effective diversifiers.

Turning to the relationship with government bonds, an environment of rising bond yields and falling (possibly negative) government bond returns would also hit fixed-rate, senior infrastructure debt, at least on a mark-to-market or mark-to-model basis. Although higher interest rates would normally be associated with an improving economic climate, which is supportive for equity investments, higher borrowing costs would be a drag on returns for more leveraged equity investments. These might include infrastructure, large buyouts and value-add/opportunistic real estate.

Figure 11: Sensitivity to public equity and bond markets varies by sector

Illustrative relationships



* typically floating rate debt, paying a coupon which adjusts to moves in interest rates

Note: gov = government, corp = corporate, infra = infrastructure, opp. = opportunistic, RE = real estate, SME = small and medium-sized enterprises

Source: Schroders

In contrast, equity investments with little or no leverage would be less directly affected. The typically floating rate nature of SME loans, real estate debt and junior infrastructure debt would also see returns pick up as interest rates rise, in contrast to more traditional debt investments.

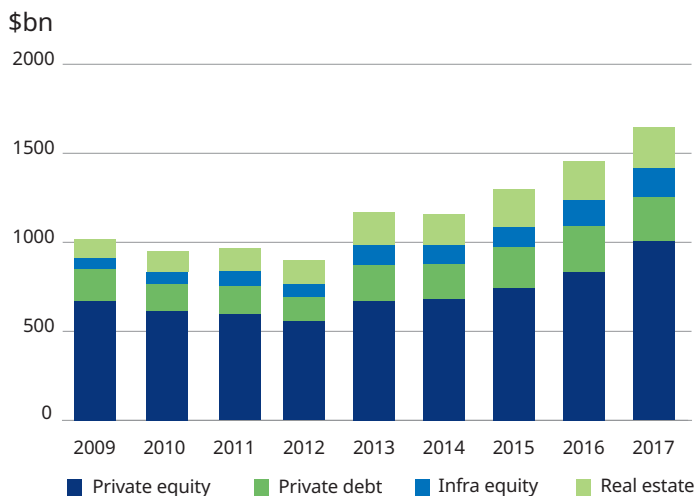
Another source of significant returns is through the direct action of private asset managers in sectors where they adopt a hands-on approach. This too can lead to returns that diverge from the broader market.

In summary, the ability of private assets to diversify existing public investments can be a major attraction, but attention must be paid to the underlying exposures as correlation estimates are unreliable. As with risk, this is a subject we intend to return to in more detail in subsequent research.

2. Am I too late?

Demand for private assets has accelerated in recent years as the low yield environment has forced investors to expand their horizons in search of return. One unfortunate consequence is that there has been too much money looking for a home. "Dry powder", money that has been raised but not yet drawn down, is at record levels. Figure 12 illustrates this with a chart of recent annual capital raising by the main categories of private assets (although sub-strategy data for private debt is unavailable on a consistent basis).

Figure 12: A soaring dry powder mountain



Cumulative dry powder growth rates 2009-2017:

Private equity	Real estate	Infra equity	Private debt
50%	42%	148%	126%

Source: Preqin Q2 2018 Private Capital Fundraising Update

Increased competition for assets has pushed prices up. However, this pressure has not been universal. For example, while large buyout dry powder is at record levels and there are justified concerns that the market is overheating, the same is not true of other sectors. Our proprietary Schroder Adveq Fund Raising Indicator (Schroder Adveq FRI), developed to assist investors in assessing the private equity landscape, highlights a divided market¹⁰. It suggests

that investors would be wise to prioritise exits in the large buyout, late-stage venture/growth and Chinese renminbi markets. For new investments, more favourable conditions exist in small/ mid buyouts, early stage venture capital and in certain emerging markets.

Figure 13: European small buyout purchase multiples are structurally and cyclically cheaper than large ones

Pro forma trailing EV/EBITDA* multiples



* EV = enterprise value = the total value of a company, taking account of equity and net debt. EBITDA = earnings before interest, tax, depreciation and amortisation. Source: Baird, LCD S&P and Schroder Adveq, 2017.

Similar differentiation can be seen across other private assets. Within real estate, prime prices are high by historical standards, but prices for assets which require active management are less extended. For example, office refurbishment projects in cities with strong economies and low vacancy rates continue to offer value as do assets in less popular locations which are due to be opened up by new transport infrastructure. Certain parts of the market also benefit from structural change which should make them relatively resilient through the economic cycle. Examples include logistic warehouses for on-line retail, tech and life-science clusters, care homes for the elderly, self-storage and data. Conversely, the value of many shops and shopping centres is likely to have peaked already.

On the debt side, the market for long-dated senior infrastructure debt is highly competitive, while the junior market is far less so. Pension schemes and insurance companies are drawn to the long-dated market by its long duration, steady cashflow profile and favourable regulatory treatment. Credit spreads have shrunk as prices have risen. This sector retains appeal from a liability management perspective and continues to offer a better risk-adjusted return than corporate bonds, but that advantage has narrowed. In contrast, the somewhat newer junior infrastructure debt market is far less competitive and offers a significant additional premium versus the additional risk being taken on.

The larger end of the private debt market has also become very crowded, with record volumes of capital raised. However, the smaller end of the market remains less well served.

¹⁰ For more information, see *Where should you invest in private equity today?*, Schroder Adveq, September 2018.

In general terms, the low hanging fruit have now largely gone. High valuations increase the risk of overpaying. The illiquidity of private assets makes this a bigger problem by fuelling regret risk. However, as illustrated in the examples above and in Figures 2 and 7, many parts of the private universe continue to offer good value.

Furthermore, access to deals has become one of the most important edges that a successful investor can lay claim to. There are two main ways to achieve this:

- Use the credibility and reputation of an investment manager to gain access to deals that others would not see.
- Invest in parts of the market that are less crowded.

In regard to the latter, bigger transactions tend to be highly competitive, whereas smaller or more complex deals tend to be less so. An obvious example is a comparison between a private equity fund taking a public company private (by paying a premium to its public value) and a buyout of a family-run business with no other suitors. Another example is a small wind farm requiring £50 million of financing versus a large utility requiring £1 billion of financing. A £1 billion financing can support the expense associated with a credit rating, prospectus and exchange listing, whereas the small £50 million wind farm financing cannot. Therefore there is a significant premium offered for undertaking the complicated technical analysis on wind farm technology and drafting complex legal agreements. Equivalent comparisons can be made for other private assets.

At this stage of the cycle, investors need to be more discerning about where and with whom they invest their money. Valuations are more expensive than a few years ago but attractive investment opportunities can still be found, providing they are approached in the right way.

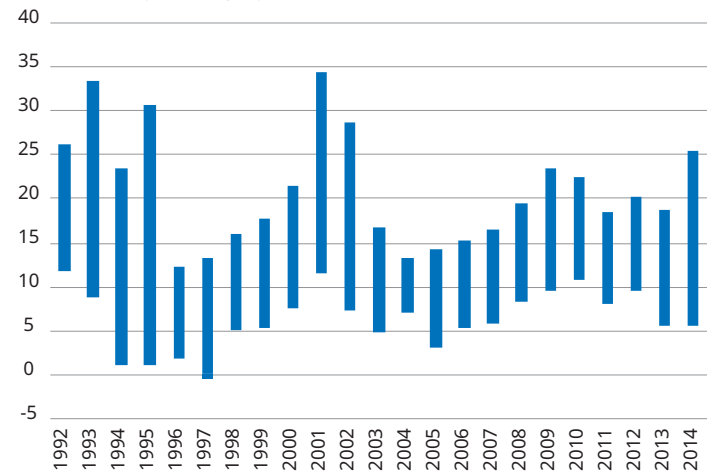
3. Practical considerations

One consequence of the greater scope for private asset managers to steer their investments is a wider dispersion of returns than is typical in public markets. The difference in return between top and bottom quartile US private equity managers has been around 15%, on average. Manager selection is therefore more important than ever.

Investing in private assets also introduces some fresh challenges. The cashflow profile of an investor's liabilities – such as the need to make payments to members of a pension scheme for instance – has implications for the amount they can afford to invest in illiquid assets. However, this is mainly an issue for investors with very large allocations. Even a 30% allocation to private assets,

Figure 14: The importance of fund selection in private assets

Interquartile range for US private equity net internal rates of return, by vintage year, %



Source: Cambridge Associates

which would be considered very large by most standards, would mean that 70% of a portfolio is still invested in liquid assets which could be sold to meet any cashflow needs. In our experience, most investors have greater capacity to invest in illiquid assets than they realise. In addition, private debt, infrastructure and real estate equity are all highly cash generative and can be used to help meet cashflow liabilities.

The main exception would be investors who require daily pricing, such as is common in defined contribution pension plans. The inability to value private assets on a daily basis can make them less compatible with such structures, to the disadvantage of the end investor/beneficiary.

A second element of liquidity management is the practical issues of managing withdrawals of capital and further investments to ensure exposure to the asset class is maintained, if desired. It can take several years for money to be drawn down for investment, depending on how quickly an investment manager can identify opportunities. Decisions must be made about how committed capital is invested in the interim to ensure it is available when called upon, without detracting from an investor's overall objectives. Assuming an investor wants to maintain exposure over time, they will also need to manage an ongoing investment programme across vintages of private assets. If not, their allocation will decline as they receive the proceeds from equity sales or maturing debt. A detailed discussion of these topics is outside the scope of this paper but they should be carefully considered before an investment in private assets is undertaken.

Conclusion

Private markets offer a rich variety of investment options. They provide a return uplift over public markets and, in some cases, a reduction in risk. Prices have risen but attractive opportunities remain. In the more competitive markets, access to deals has grown in importance as a source of alpha. At this stage in the cycle investors need to be more discriminating in where they invest and who they appoint to manage their money.

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