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London Borough of Hammersmith & Fulham Pension Fund
Overview of alternative asset classes

Introduction
This note has been prepared for the London Borough of Hammersmith & Fulham Pension Fund Committee ("the Committee") and includes an overview of 5 alternative asset classes selected by the Committee.

i. Direct lending
ii. Renewable infrastructure
iii. Social housing
iv. Emerging Market Debt
v. Green bonds

For each of these asset classes we will describe their main characteristics and various key considerations from the perspective of a pension scheme investor. As a general point, it is worth noting that the majority of these asset classes are illiquid in nature and hence the Committee should consider its immediate and future cashflow requirements and longer term goals before making a commitment.

Direct lending

What is it?
Direct lending funds, as the name suggests, provide loans directly to businesses requiring capital. Following the financial crisis in 2008, bank finance became increasingly difficult to obtain for small to medium sized enterprises. As lending capacity became constrained and regulation increased, these businesses saw higher rejection rates, were asked to pay increased interest rates and were more likely to be required to provide collateral. With the size of these organisations precluding them from raising finance in public debt markets, an opportunity arose for pension funds and other institutional investors to 'fill the gap' and lend directly to such businesses.

Direct lending as an asset class, also referred to as private debt, has provided investors with attractive returns in recent years. The aforementioned demand for finance, flexibility with respect of the terms governing the loan and speed of implementation have enabled direct lending funds to demand attractive rates of interest on loans and strong covenants on loans.

Other key features include:

- Underlying returns consist of an upfront fee plus ongoing interest payments, which are usually priced at Libor plus a margin (called a spread). Floating rate nature of interest payments means that unlike liquid corporate bonds, the asset offers pension scheme investors with minimal interest rate hedging;
- Loans are relatively short term in nature and early repayment is common;
- Deal origination is key with a large number of loans emanating from wider private equity transactions;
- Credit risk remains a key consideration and will vary dependent on position within the capital structure;
- An illiquid asset class where funds are structured as closed-ended vehicles.

Key considerations
Direct lending has seen a lot of interest in recent years. New players have entered the market and some existing managers have raised more capital and larger funds. While capital deployment in terms of number of deals has slowed in 2019, fund raising continues apace with $16.9bn raised across global direct lending funds in Q1 versus the $7.9bn raised in Q1 last year.

Credit risk is dependent on the position in the capital structure. We have a strong preference for Senior secured debt to provide investors with greater protection in a default event. However, we are increasingly seeing instances where asset quality is being weakened to preserve return levels. Reduced covenants on loans, higher leverage levels and a willingness to move down the credit spectrum are all tools being used by managers. Investor demand for this asset class has also resulted in 'mega-funds' being raised, which can have an impact on how strategies are managed and the sub-market from which deals are sourced.

Given the significant slowdown in deployment and the compromises being made in terms of asset quality, we would not recommend making new commitments to the asset class at this time.

Renewable infrastructure

What is it?

Infrastructure funds have of course been around for some time. As well as targeting traditional areas such as bridges, airports etc, these funds have increasingly been targeting clean-energy assets across wind, solar, hydroelectric and tidal. There has also been an increase in the number of specialist renewable energy funds.

Governments around the world have pledged to tackle climate change in an attempt to limit rises in global temperatures. 180 countries signed the Paris Agreement in 2018 which pledged to limit temperature rises to "well below" 2^{o}C above pre-industrial levels. To do this, greenhouse gas emissions must be cut significantly by 45% by 2030 and to net zero by 2050. Renewable sources will therefore be required to "fill the gap".

In the UK alone, BloombergNEF estimates that £188bn of investment is required in renewable infrastructure. With the UK now targeting net zero greenhouse emissions by 2050 (the first G7 nation to legislate for this objective), the Committee on Climate Change targets indicate that the investment required may be as high as £660bn. Regardless of the number, there is obvious demand for renewable infrastructure and private investors will play a key role in funding projects. At the same time, the cost of leading renewable technologies has decreased significantly since 2010 (for example, the cost of solar technology has fallen 85%).

Other key features:

- Predominantly illiquid, closed-ended funds;
- Reasonably long date with maturities likely to be in excess of 10 years;
- Offers contractual income at attractive yields;
- Renewable infrastructure funds will invest in a combination of development opportunities and operational assets.

Key considerations

Renewable infrastructure is obviously an ESG compliant asset. However, whilst core infrastructure funds have been investing in renewable assets over many years, and are doing so increasingly, there aren't a large number of specialist renewable funds at this stage with most strategies being relatively small in size. We expect this to change given the global community's ambitious plans to increase the proportion of power generated from renewable technologies.

Historically the bulk of returns in this sector have been driven by feed-in-tariffs, where contractual cashflows are secured by the government. However, such arrangements are almost non-existent in the current market. While it would be unlikely for any government (certainly in the UK) to remove any current standing tariff arrangements, this still creates a degree of risk. This places greater emphasis on the fundamental assessment and asset management of renewable assets.

Key to return profile will be the willingness to accept development risk. Those funds willing to invest a greater proportion of commitments in development opportunities will ultimately offer higher returns but greater default risk as well.

Large volumes of commitments are flowing into core infrastructure assets, particularly the larger funds. As a result, we prefer strategies at the small and mid-market end of the market, or where managers' specialties can gain a competitive advantage. In this regard, targeting specialist renewables funds with more understanding of the sector and greater expertise in asset origination may be preferable.

Social Housing

What is it?
It is well known that the UK housing market has become significantly less affordable in recent years. Since the turn of the century, median house prices across England have moved from c. 4x earnings to double that. While the total housing stock in England has increased by 15% in this period, the amount rented from housing associations has remained stable.

There are regulations to encourage affordable homes, especially Section 106 of the Town and Country Planning Act 1990 ("S106"). Here, larger private developments have needed to include a proportion of their properties as affordable homes. While councils may want c. 30% of homes built under this arrangement, the actual number may vary substantially from that.

This creates a large requirement for affordable housing not just for the lowest paid, but those earning median incomes or even more. Councils and Housing Associations also have difficulty in raising funds internally to pay for new housing due to their current leverage levels, so look to external sources for funding.

Investment managers are now offering investment funds which buy or build new houses, designed to be rented to those on lower incomes. Discounts to market rents vary with the universe of affordable housing segmented into the following groups:

- "Social Rent" offers tenants terms which are less than 60% of market rent;
- "Affordable Rent" charges tenants 70-80% of market rates;
- A small amount of homes are available at Key Worker Rent, designed for key public sector employees.

Across the asset class, regardless of segment, rents are typically linked to CPI.

It is important to point out that the managers typically contract with the local councils and housing associations, rather than directly with tenants.

There are several types of housing that are financed through affordable housing funds:

- New housing developments. The land is typically bought with planning permission already agreed, to remove planning risk;
- Bulk purchase of new properties. Homes are purchased directly from developers when completed. This helps developers through providing cashflow, and can be purchased at a discount to normal market rates;
- New S106 properties: homes are purchased from developers who are fulfilling their S106 requirements, again at a discount from market value;
- Sale and leaseback arrangements with existing providers. Homes may need upfront capital to upgrade them before leasing back.

Key considerations
Funds are typically closed-ended, at least initially, with terms in the region of 7 to 10 years.

Affordable housing offers contractual income, at yields in the region of 4-5% p,a. Target returns could vary between 5 and 10% net of fees, depending on the underlying strategy, the extent of inflationary increases and the potential levels of capital appreciation. Leverage may be used to enhance returns.

Fees appear higher than typical property fund investments. An example fund charges 0.75% p.a. with additional acquisition fees equal to 5% of each property's purchase price. This would be on top of investment costs which are typically quite high.

Emerging Market Debt

What is it?
Emerging market debt is a diverse and sizeable market containing a mixture of sovereign and corporate debt of differing credit quality, some of which may be $-denominated whilst other bonds will be issued in the relevant local currency. The bulk of the market can be split into 4 main segments:

i. US $ denominated EM sovereign debt

Has been in decline in recent years and is now the smallest segment. Diverse set of issuers (JP Morgan benchmark consists of 73 countries).

ii. Local currency EM sovereign debt

The largest segment. Low default risk (representative benchmark index saw no defaults between 2000 and July 2019) but exchange rate risk that can't be hedged directly.

iii. EM corporate bonds

Fast growing segment with around $2tn of debt in issuance currently. Despite its size, receives less research coverage compared to developed market investment grade and high yield debt.

iv. Frontier market sovereign bonds

US $ denominated debt by less developed nations like the Ivory Coast or Vietnam. Often fast growing economies who might be issuing first bonds having previously relied on assistance from IMF or World Bank.

Whilst emerging market debt typically offers higher yields then equivalent bonds found in developed markets, it is also more volatile. However, it is important to recognise that there exists a diverse universe of bonds in issue spread across c. 80 emerging nations and the four main segments described above. That said, good governance, strong political institutions, transparency and central bank independence are all factors which lower the risk of default.

Key considerations

Emerging market debt funds may specialise in a particular segment or provide aggregate exposure across a broad range of segments. Regardless of type, the investment manager must demonstrate sufficient knowledge and expertise of a particularly specialised market. Emerging market debt is sensitive to a vast array of factors, which can be domestic (political, regulation) or global (macroeconomic outlook, risk appetite, capital flows) in nature.

Many pension schemes allocate a significant proportion of their assets in bonds but a relatively small proportion hold emerging market debt securities. This is due, in part, to a pension scheme's need to hedge its £ interest rate exposure. However, the Committee should note that emerging market debt accounts for around 25% of the global bond market.

Emerging market debt's significance as an asset class should at least warrant its consideration as a potential investment for UK pension schemes. Many schemes have been prepared to move down the credit rating spectrum, increasing allocations to high yield. In this regard it is interesting to observe that corporate issuers of emerging market debt have not been subject to the same rise in leverage levels compared to their peers in the UK and US who have increasingly taken advantage of lower borrowing costs. In fact, compared to US high yield, corporate emerging market debt offer lower leverage, higher spreads and lower historic default rates.

When assessing the risks associated with emerging market debt investing, currency exposure is a particularly significant consideration. Sovereign debt in particular, is increasingly being issued in a country's local currency. Whilst default rates have been low, currency risk is high. The value of these bonds will be particularly sensitive to the global macroeconomic outlook, risk appetite and the corresponding trends in capital flows. This currency risk can be reduced to some extent by hedging other currencies like the Australian dollar which are cyclical in nature.

Green Bonds

What is it?

Green bonds are just the same as conventional bonds but fund projects with positive environmental or climate benefits. Bond issuers might focus on a diverse range of "green" issues including energy efficiency, pollution prevention, renewable energy, clean transport, green buildings or sustainable water management.

With increase government focus on financing sustainable growth, the green bond market has been dominated by SSA (sovereigns, supranational and agency) issuers, although the proportion of corporate issuers has been growing. More generally, the green bond market has been growing in recent years with new issuance rising from $6bn in 2013 to $168bn in 2018. Issuance in 2019 is likely to exceed 2018 levels.

A few indices are emerging, including the Bloomberg Barclays MSCI Green Bond Index. The universe of green bonds is dominated by European issuers with €-denominated bond accounting for over 70% of bonds in issue. At present, the green bonds in issuance are mainly traditional investment grade bonds with a relative lack of issuance in high yield, securitised and private debt sectors.

Key considerations

Whilst the asset class has obvious ESG and ethical credentials, the investment case, specifically the available credit spreads, are less compelling. The MSCI Green Bond Index offers 66bps over equivalent government debt, which is unsurprising given the proportion of government related issuers. Whilst spread levels exceed a similarly SSA dominated, broad market aggregate bond index, the yield on offer is lower given that the MSCI Green Bond Index is dominated by European issuers where underlying EU sovereign debt is offering negative nominal yields.

Therefore, we conclude that on spread grounds, the investment case isn't sufficiently compelling to warrant a standalone allocation to green bonds. In our view, the market remains in its infancy and further expansion of the investment universe, especially into higher yielding areas such as private loans and securitized debt markets, is required. We expect that infrastructure debt offered to "green" projects would offer a more compelling investment case at this stage.

Deloitte Total Reward and Benefits Limited

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Risk Warnings

- Past performance is not necessarily a guide to the future.
- The value of investments may fall as well as rise and you may not get back the amount invested.
- Income from investments may fluctuate in value.
- Where charges are deducted from capital, the capital may be eroded or future growth constrained.
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