Review of Alternative Assets

Dorset County Pension Fund

May 2013

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Contents

1 Introduction

This report is provided for the Committee of the Dorset County Pension Fund (the “Fund”). The report aims to provide information on the fundamental case for investing in alternative asset classes. It includes an explanation of alternative asset classes, how they contribute to and mitigate against risks and the shorter, medium and longer term outlooks for alternative assets.

The asset classes are categorised into either “growth” assets or “stabilising” assets. Briefly defined, growth assets are expected to produce a return over the longer term in excess of bonds and generally in excess of inflation. Stabilising assets are expected to exhibit characteristics linked to the way in which the Fund’s liabilities are valued. A third categorisation that will be used is “illiquid” asset classes. These asset classes are generally not readily realisable (i.e. cannot be sold at short notice, or at least not without suffering significant reductions in value). Most asset classes in the illiquid category will fall into the growth category, but some may be considered stabilising or a hybrid of stabilising and growth. Indeed, even liquid asset classes might be considered a mix of growth and stabilising. This is discussed further when considering the individual asset classes.

The different styles of investment for each asset class are also considered.

2 The Fund's current investment strategy and income requirements

The Fund's asset allocation is currently as follows:

Asset Class	Market Value	Weight	Investment Style	Growth / Stabilising / Illiquid
UK Equities	£531,363,515	28.1%	24.5% Listed, 3.5% Unlisted	Growth, liquid strategy
Overseas Equities	£495,207,920	26.2%	22.5% Listed, 3.7% Unlisted	Growth, illiquid strategy
Diversified Growth	£90,669,276	4.8%	Active	Growth, liquid strategy
Property	£162,120,198	8.6%	Active, fund of funds	Growth, illiquid strategy
Hedge Funds	£90,263,142	4.8%	Active, fund of funds	Growth, potentially illiquid strategy
Private Equity	£46,950,894	2.5%	Passive	Stabilising, illiquid strategy
Bonds	£383,236,855	20.3%	Active	Stabilising, liquid strategy
Cash	£91,961,085	4.9%	Passive	Stabilising, liquid strategy

Further information about the asset classes is given in the following sections, including greater detail on the stabilising and liquidity characteristics and why these classifications have been given above. It should be noted that the Bond exposures shown above include the assets managed by Insight Investments. This portfolio is intended to provide protection for the Fund against the impact of inflation on the liabilities. It does this through the use of derivative strategies.

The overall asset allocation contributes to the risk profile of the Fund. Whilst risks could be reduced, it must be remembered that some risks are intentionally taken and the objective is not necessarily to reduce risk. Rather, what will be discussed in the following sections is whether risks being taken are intended, whether the Fund is being compensated for taking those risks and whether these views change over time.

3 Summary historic returns and correlations

The following tables show the returns on the indices of key asset classes over the 10 -year period to 31 December 2012. The volatility (standard deviation) of the monthly returns is also shown over this period, as well as the correlations between asset classes. The returns shown should not be used as a guide to what to expect in the future. However, when discussing the prospects for future returns, reference to the previous 10 years can be informative.

	UK Equities	Overseas Equities	Emerging Market Equities	UK Property	Hedge Funds	Emerging Market Bonds	High Yield Bonds	Global Bonds	UK Gilts	UK Corporate Bonds	UK Index-Linked Gilts	Cash
Return % p.a.	8.8	8.8	17.1	5.8	6.9	11.6	3.5	6.1	6.7	6.5	7.7	3.4
Volatility % p.a.	14.1	14.6	21.1	5.1	5.9	8.9	9.2	9.6	9.2	7.5	8.0	0.6

Source: Thomson Reuters. Volatility calculated as annualised standard deviation of monthly returns.

	UK Equities	Overseas Equities	Emerging Market Equities	UK Property	Hedge Funds	Emerging Market Bonds	High Yield Bonds	Global Bonds	UK Gilts	UK Corporate Bonds	UK Index-Linked Gilts	Cash
UK Equities	1.00											
Overseas Equities	0.90	1.00										
Emerging Market Equities	0.81	0.88	1.00									
UK Property	0.30	0.19	0.18	1.00								
Hedge Funds	0.68	0.56	0.69	0.39	1.00							
Emerging Market Bonds	0.57	0.53	0.60	0.11	0.53	1.00						
High Yield Bonds	0.28	0.47	0.36	-0.27	0.06	0.26	1.00					
Global Bonds	-0.18	0.04	-0.09	-0.38	-0.43	-0.02	0.59	1.00				
UK Gilts	-0.13	-0.05	-0.06	-0.14	-0.20	0.17	0.18	0.54	1.00			
UK Corporate Bonds	0.18	0.16	0.17	0.05	0.19	0.46	0.09	0.28	0.81	1.00		
UK Index-Linked Gilts	0.08	0.13	0.13	0.00	0.14	0.38	0.22	0.34	0.69	0.65	1.00	
Cash	-0.13	-0.07	-0.02	-0.38	-0.15	-0.11	0.24	0.24	0.01	-0.13	-0.04	1.00

Source: Thomson Reuters, based on monthly returns. Correlation of 1.00 means perfect correlation; -1.00 means perfect negative correlation; and 0.00 means no correlation.

4 Growth Illiquid and Alternative asset classes

Equities (liquid)

Description

Public equity is the shares of companies listed on a stock exchange. Public equity has historically been one of the key building blocks of a pension scheme's investment strategy. There are two elements to the total return achieved on an equity investment:

- dividend income; and
- share price growth.

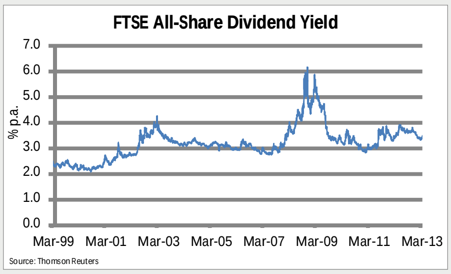
The current share price can be thought of as the "present value" of the future dividends. Dividends are expected to grow as company profits increase in absolute terms; in part due to natural increases caused by inflation and in part due to increases in profitability due to good company management, including investment as not all profits are paid to shareholders, some are reinvested.

The total return on equity can therefore be considered as being driven by the current dividend income and any changes to the expected growth of the dividend.

Typically the equity markets are forward-looking. That is, the current prices reflect the future profitability of companies. As such, the equity markets tend to move ahead of the "real economy" and (assuming the analysts that decide whether to buy, sell or hold the companies are correct in their projections) can be thought of as a predictor of the future economic outlook for the industry and country within which that company operates.

Current conditions

Equity returns have been strong over the period since the financial turmoil of 2008/09. Corporate profitability has been sound as companies have, in general, cut costs and focussed on ensuring they are resilient to any further financial shocks, resulting in a hoarding of cash rather than undertaking investments. However, equities have also been volatile over this period and have fallen sharply during periods of significant uncertainty as has been seen on concerns about a break-up of the Eurozone. Whilst there have been some positive developments in the Eurozone, the outlook for the global economy remains uncertain. Volatility in share prices is therefore also expected to continue. The following chart shows the dividend yield and highlights that yields are currently above their average over the last 10 years. However, this may not mean they are particularly 'cheap' at the moment but could be a reflection of the poor economic outlook.



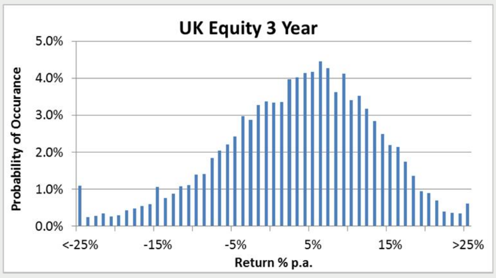
Impact of inflation	Equities are expected to provide a natural hedge to inflation over the longer term, as prices, costs and therefore profits are expected to be linked to inflation over the longer term. However, equities would be expected to perform poorly in “stagflation”, where inflation is high but growth is low.
Implications for ESG policy	ESG risks can be managed through shareholder voting rights and engagement with company management, either via investment managers or collaborative organisations. In addition active managers can take into account a company’s ESG policy in determining opportunities and risks for future share value.

Short term forecasts (3 years) as at: 31 December 2012

Barrie and Hibbert

UK equities: 4.0% p.a.

Overseas equities: 5.2% p.a.



JLT Market Forecast Group

Central range: 4.0% p.a. to 7.0% p.a.

Central forecast: 5.8% p.a.

Premium over cash: 5.0% p.a.

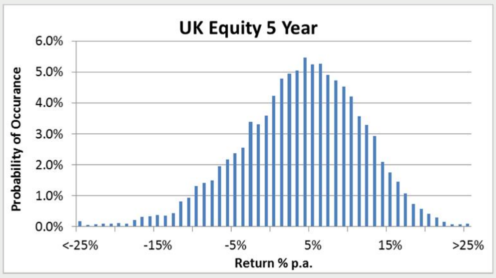
Premium over gilts: 5.5% p.a.

Short/Medium term forecasts (5 years) as at: 31 December 2012

Barrie and Hibbert

UK equities: 4.5% p.a.

Overseas equities: 5.2% p.a.



JLT Market Forecast Group

Central range: 4.0% p.a. to 7.0% p.a.

Central forecast: 6.3% p.a.

Premium over cash: 4.7% p.a.

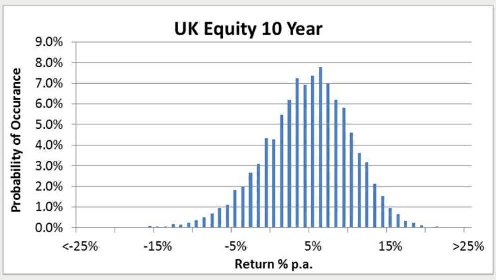
Premium over gilts: 5.6% p.a.

Medium term forecasts (10 years) as at: 31 December 2012

Barrie and Hibbert

UK equities: 5.3% p.a.

Overseas equities: 5.6% p.a.



JLT Market Forecast Group

Central range: 6.0% p.a. to 9.0% p.a.

Central forecast: 7.5% p.a.

Premium over cash: 4.5% p.a.

Premium over gilts: 5.8% p.a.

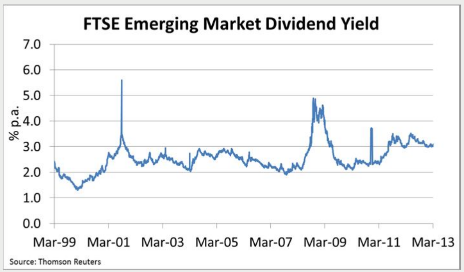
Conclusions for equities

It is expected that equities will provide superior returns to most asset classes over the longer term although it is expected that the returns over the medium term will be volatile. There is an expected low growth environment over this period but, nevertheless, the additional return that equities achieve compared with government bonds and cash is consistent with that required. This implies that equities should continue to comprise a significant proportion of the Fund's portfolio.

The majority of the Fund's equity exposure is through passive management. We believe that this is appropriate as passive management offers a high probability of generating a return close to the market return and for significantly lower fees than for active management.

There is, however an argument to increase the allocation to active management in the current economic environment, where uncertainty is expected to lead to volatility in equities. An active manager with a low volatility approach may be able to take advantage of these gyrations whilst reducing the absolute level of risk.

Emerging Market Equities (liquid)

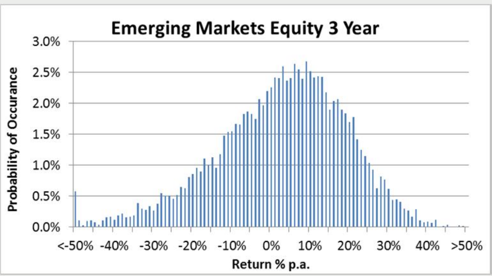
Description	As public equity but specific to those companies listed in emerging markets. It is generally understood what is meant by an emerging market but sometimes difficult to define. The providers of indices that aim to track emerging markets have to decide what constitutes an emerging market (as opposed to a developed / advanced market or frontier market) and therefore what should be included in the index. Definitions range from index provider to index provider and may include a number of criteria, for example GDP per capita. Morgan Stanley Capital Indices, a major provider of global indices, currently includes the following countries: Brazil, Chile, China, Columbia, Czech Republic, Egypt, Hungary, India, Indonesia, Korea, Malaysia, Mexico, Morocco, Peru, Philippines, Poland, Russia, South Africa, Taiwan, Thailand, and Turkey. Exposure to emerging market economies can also be achieved by investing in multinational companies, such as Shell, Unilever and GlaxoSmithKline, that have a significant market presence in these economies.
Current conditions	The share of global market capitalisation (as represented by the MSCI ACW Index) attributable to the emerging markets has grown over the last 6 years from circa 5% in February 2005 to circa 13% in December 2012. However, the emerging markets' share of nominal GDP at the end of December 2012 was around 40%. The IMF forecasts that emerging markets' share of GDP will increase, while that of the US and of Europe will reduce. From analysis of the top 30 economies ranked by size of forecast GDP, HSBC Global Research concludes that by 2050 emerging economies will have increased more than five-fold, whereas developed economies will have increased less than two-and-a-half times; and 19 of the top 30 economies, ranked by GDP, will be countries that we currently describe as "emerging". Superior GDP Growth is however by no means a guarantee of superior equity market performance. Emerging market indices do not always provide access to fast growing economies with growing middle class consumption. Current estimates show that Asia accounts for less than one quarter of the world's middle class, which is set to double by 2020. The following chart shows the dividend yield on emerging market equities over the recent past. 
Impact of inflation	As with developed market equities, emerging market equities are expected to provide a link to inflation over the longer term.

Implications for ESG policy	There are sometimes issues around corruption and human rights at the government level and the regulatory and legal framework will often not be as developed or robust as for developed markets. In addition, in many markets, the limited rights of minority shareholders mean that investors have less ability to influence corporate behaviour. As a consequence, the potential risk of poor ESG practice amongst companies based in the emerging economies is higher than for multinational companies operating in these countries - multinational companies have to adhere to the standards of best practice in their home country.

Short term forecasts (3 years) as at: 31 December 2012

Barrie and Hibbert

Emerging market equities: 6.1% p.a.



JLT Market Forecast Group

Central range: 4.0% p.a. to 8.0% p.a.

Central forecast: 6.5% p.a.

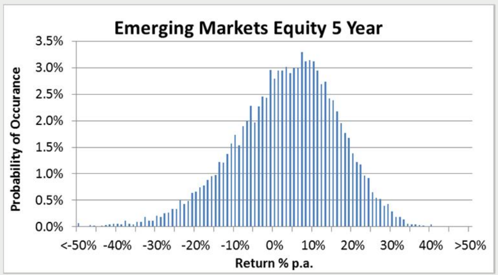
Premium over cash: 5.8% p.a.

Premium over gilts: 6.2% p.a.

Short/Medium term forecasts (5 years) as at: 31 December 2012

Barrie and Hibbert

Emerging market equities: 6.5% p.a.



JLT Market Forecast Group

Central range: 6.0% p.a. to 11.0% p.a.

Central forecast: 8.1% p.a.

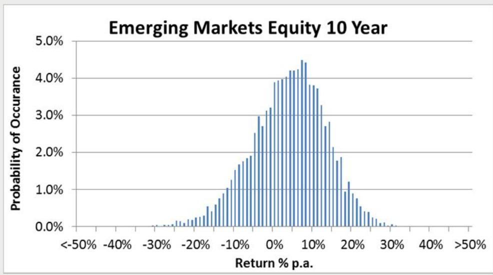
Premium over cash: 6.5% p.a.

Premium over gilts: 7.4% p.a.

Medium term forecasts (10 years) as at: 31 December 2012

Barrie and Hibbert

Emerging market equities: 7.3% p.a.



JLT Market Forecast Group

Central range: 7.5% p.a. to 10.0% p.a.

Central forecast: 8.0% p.a.

Premium over cash: 5.0% p.a.

Premium over gilts: 6.3% p.a.

Conclusions for emerging market equities

There is an expectation that emerging market equities will outperform developed market equities over the longer term. However, the volatility of potential returns is also significantly higher, even over the longest time period.

An increase in the allocation to emerging market equities will increase expected return but will also increase expected volatility. In addition, in times of global uncertainty, emerging market equity prices have often fallen further than those of developed market equities because investors withdraw funds from what they perceive to be a riskier part of their portfolio.

Consideration also needs to made on how to access the growing domestic story and whether this is best effected by holding Emerging Market indices.

Diversified Growth Funds (DGF) (liquid)

Description	Diversified growth funds typically aim to generate equity like returns over the long term but with around two-thirds to three-quarters of the volatility. They aim to do this by: ■ investing in a diversified range of growth asset classes; ■ by active asset allocation; and, ■ by allocating to defensive asset classes from time to time. DGFs have become increasingly popular since the financial crisis as performance has generally been in line with or in excess of equities but without the same level of troughs during distressed times. By not falling as much during down markets (compared to equities), DGFs do not need to generate the same level of positive returns during up markets. DGFs recognise that investors cannot necessarily be as dynamic in their asset allocation to take advantage of opportunities or take advantage of changing market conditions, as a fund manager can. Most will typically not have access to the same level of information either. There are many different styles of DGFs. Some will be much more focussed on capital preservation whilst others will focus more on diversification. They will typically have a long term target related to cash, bank base rates or inflation with an outperformance target that is reflective of a long term expected equity return, although performance over the short term will be very volatile relative to that benchmark. DGFs essentially recognise that the key driver of returns is asset allocation.
Current conditions	One would typically expect DGFs to outperform equities in down markets but underperform during periods of strong equity market returns, expecting a return in line with or above equities over the longer term. Given the current global uncertainty, such an approach may prove attractive.
Impact of inflation	An allocation to DGF would be expected to behave in a similar manner to equities over the longer term in relation to inflation. That is, there is expected to be some link over the longer term.
Implications for ESG policy	There is less scope to reflect the Fund's ESG policy through a DGF investment compared to equities.

It is expected that the returns generated by Diversified Growth Funds will, over time, match those of equity markets. However they will achieve this with lower volatility (around two-thirds) than that of equities. In developing our projections for these funds we expect them to be lower than equity returns when equity returns are strong but do well when equity returns are low or negative. This is highlighted when comparing the returns below in the short term compared to our equity forecasts on earlier pages (which we have repeated below..

Short term forecasts (3 years) as at: 31 December 2012	**JLT Equity Forecast** Central range: 4.0% p.a. to 7.0% p.a. Central forecast: 5.8% p.a. Premium over cash: 5.0% p.a. Premium over gilts: 5.5% p.a.	**Diversified Growth Forecast** Central Range: 4.0%p.a to 6.0% Central forecast: 5.3% p.a. Premium over cash: 4.5% p.a. Premium over gilts: 5.0% p.a.
Short/Medium term forecasts (5 years) as at: 31 December 2012	**JLT Equity Forecast** Central range: 4.0% p.a. to 7.0% p.a. Central forecast: 6.3% p.a. Premium over cash: 4.7% p.a. Premium over gilts: 5.6% p.a.	**Diversified Growth Forecast** Central Range: 4.0% to 6.5% Central forecast: 5.8% p.a. Premium over cash: 4.2% p.a. Premium over gilts: 5.1% p.a.
Medium term forecasts (10 years) as at: 31 December 2012	**JLT Equity Forecast** Central range: 6.0% p.a. to 9.0% p.a. Central forecast: 7.5% p.a. Premium over cash: 4.5% p.a. Premium over gilts: 5.8% p.a.	**Diversified Growth Forecast** Central Range:6.5% to 8.0% p.a Central forecast: 7.0% p.a. Premium over cash: 4.0% p.a. Premium over gilts: 5.3% p.a.

Approaches to DGF investment

Asset allocation	The spectrum of funds ranges from those that take very active asset allocation decisions, making large allocation changes with relatively few constraints on where investments can be made; to those that have core fixed allocations around which positions can be taken.
Internal versus external funds	It is unlikely for one investment house to be the market leader in actively managing all asset classes. Some funds will therefore express their asset allocation by investing in third party funds, having adjusted their expected asset return to account for the additional costs. Equally, other funds will use only in house funds or passive funds. The strong DGF managers recognise that it is the asset allocation that drives the returns and therefore will way up the cost vs. benefits of the method accessing underlying asset exposure.

Conclusions for DGFs

DGFs can help to significantly reduce volatility without reducing expected return, although in some scenarios, particularly, bullish scenarios, they can underperform equities. However, an allocation could reduce risk and therefore free some of the "risk budget" to invest in areas where additional risk is expected to yield superior returns, e.g. emerging markets. DGFs typically need to remain liquid to cater for a wide range of investors and also to be able to make active allocation decisions. As such, illiquid asset classes may be underrepresented compared to, say, a typical pension scheme allocation that has a long term outlook.

Another major advantage of investing in this asset class is that the manager is responsible for the asset allocation decisions within the portfolio and, can rapidly rebalance the portfolio to reflect their tactical or strategic view.

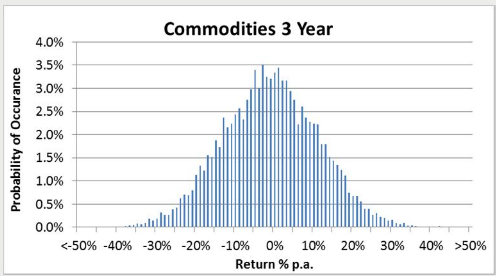
Commodities (liquid)

<table>
<tr><td>Description</td><td colspan="2">Commodities generally reflect investing in the raw materials of production such as oil, coal, industrial metals. It can also involve investing in precious metals such as gold. These commodities are known as hard commodities. Soft commodities include investments in grain, pork wheat and other perishable goods. Investment returns are generated through the price appreciation of such goods.</td></tr>
<tr><td>Current conditions</td><td colspan="2">Commodities are generally volatile in nature as they reflect changes in global demand expectations. A number of markets may expect to benefit over the longer term from the rapid development of emerging market economies, whose rates of increase for energy consumptions as well as growing populations puts pressure on resources. However, as these factors should be reflected in prices, concerns over current economic concerns and global demand weigh heavy on the price of commodities.

Following strong returns for gold, the price has fallen more recently as investors are more prepared to us the US dollar as a store of value.

Recent falls in the prices of some commodities reflects an expectation of low global growth and slowing of growth in major emerging economies such as China. However, lower prices could feed through to improved sentiment amongst consumers (through lower prices) which would have a positive impact on growth prospects.</td></tr>
<tr><td>Impact of inflation</td><td colspan="2">Commodities are expected to provide a fairly close link to inflation, albeit not direct, due to the fact prices of finished goods are heavily influenced by the price of commodities.</td></tr>
<tr><td>Implications for ESG policy</td><td colspan="2">There is little scope to reflect the Fund’s ESG policy for a commodities allocation.</td></tr>
<tr><td>Short term forecasts (3 years) as at:
31 December 2012</td><td>Barrie and Hibbert

Commodities: 0.6% p.a.


</td><td>JLT Market Forecast Group

Central range: 0.0% p.a. to 5.5% p.a.

Central forecast: 2.0% p.a.

Premium over cash: 1.2% p.a.

Premium over gilts: 1.7% p.a.</td></tr>
</table>

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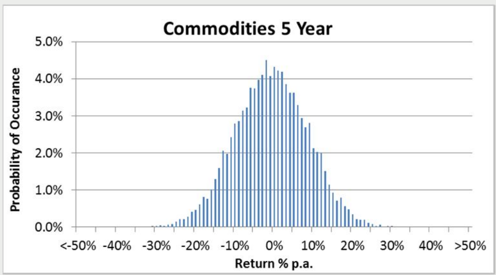
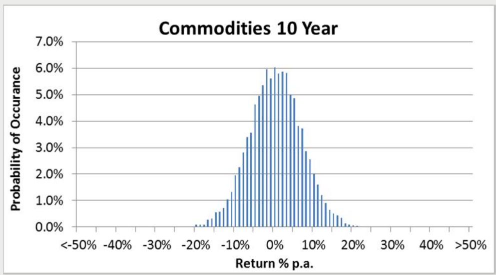
<tr>
<td>Short/Medium term forecasts (5 years) as at:
31 December 2012</td>
<td>Barrie and Hibbert
Commodities: 0.9% p.a.

</td>
<td>JLT Market Forecast Group
Central range: 1.0% p.a. to 5.0% p.a.
Central forecast: 3.0% p.a.
Premium over cash: 1.4% p.a.
Premium over gilts: 2.3% p.a.</td>
</tr>
<tr>
<td>Medium term forecasts (10 years) as at:
31 December 2012</td>
<td>Barrie and Hibbert
Commodities: 1.9% p.a.

</td>
<td>JLT Market Forecast Group
Central range: 3.0% p.a. to 6.0% p.a.
Central forecast: 4.0% p.a.
Premium over cash: 1.0% p.a.
Premium over gilts: 2.3% p.a.</td>
</tr>
</table>

Approaches to commodity investment

Futures contracts	Futures markets exist for commodities to help sellers of commodities and purchasers of commodities have some certainty over the price at which they can either sell or purchase commodities. It is also used by investors in commodities to gain exposure to changing commodity prices. [A futures contract is simply an agreement to sell / buy a certain amount of a good, at a certain date and some pre-agreed price.] An investor would "roll" such contracts as they approach maturity rather than actually take delivery of the contract. However, the futures price does not necessarily behave in the same way as the "spot" price. The spot price is the current price of the commodity. This means that the returns from this investment strategy will not necessarily be the same as if following the prices of commodities (a strategy that is unlikely to be feasible to many investors unless they have the means to store and deliver physical commodities!).
Commodity companies	Investors could attempt to gain an exposure to commodities by investing in companies whose main activity is producing / mining commodities and selling them. However, such a strategy may deviate from commodity returns over the short to medium term due to the idiosyncrasies of companies or general equity market volatility.

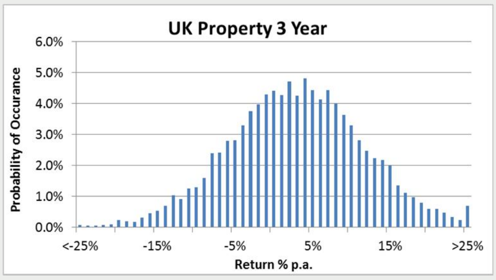
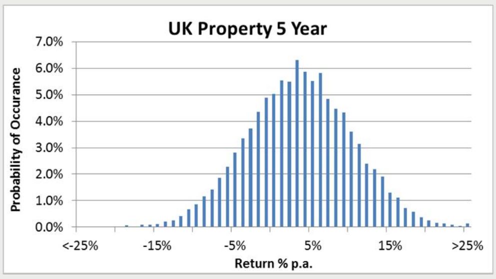
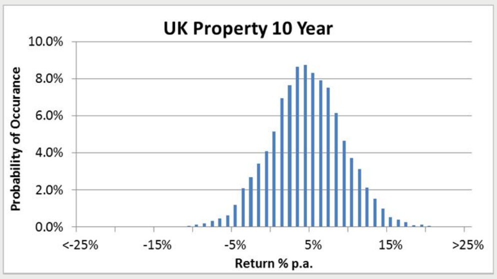
Conclusions for commodities

Whilst the JLT MFG assumed returns are not as low as the Barrie and Hibbert returns, the long term expected return is below many other growth asset classes. Long term returns from commodity investment have historically been cash like. The use of futures contracts can also be a drag on investments. However, an investment in commodities could be a reflection of an expectation of increased demand due to growing populations and emerging market growth that cannot be met from current supply. If considering an allocation to commodities, active management should be strongly considered as well as the potential to also take short positions.

Illiquid assets

Property (illiquid)

Description	Pension schemes often invest in commercial UK property such as offices, industrial buildings, retail outlets etc. There are two main sources of return from property: ▪ rent; and ▪ capital appreciation of the property value. The total return on property is its rental yield plus any capital appreciation of the properties and the annual rent on a property divided by its value is the "rental yield". High rental yields suggest properties are valued attractively and low yields suggest property is overpriced. The rental yield is typically compared to bond yields in determining whether the rental yield is currently "high" or not. The value of a property depends crucially on location; properties in a prime location (such as central London for office properties) can be more easily re-let than an office block in a small town in a rural location. Over time a property ages, and the rent that can be achieved will fall significantly below that of new properties. If the property is in a prime location, the owner could refurbish the building to generate a higher rental income, but at some stage, the owner will need to consider demolishing the building and rebuilding to the then current standards. The credit standing of the tenant is also crucial because if a tenant defaults, there will rent outstanding and it may take some time to find an alternative tenant. In addition, it is often the case that incentives have to be offered to attract a new tenant. It is expensive to invest in property, not least because of the high level of stamp duty, and investment in property should be considered to be a long term investment. Property tends to perform well when the economy is performing well, as demand for space is greater at this time.
Current conditions	The rental yield on the IPD UK Monthly Property Index – a comprehensive survey of commercial UK property investments, is currently around 7% p.a.. This is a very attractive yield when compared to government bond and corporate bond yields, particularly when considering the potential for capital appreciation. However, at present the return on property has been less than the yield, because the value of commercial UK properties has on average been falling. This is due to a fairly negative outlook for the UK economy and implies an expectation that companies may cut their use of properties, increasing "void rates" which will ultimately reduce rent, in response to weak demand both within the UK and from markets to which UK goods are exported. Whilst there are concerns and uncertainty in the global economy as well, there are potentially many opportunities in overseas markets from developing nations and regions benefiting from this growth. Increasing populations further add pressure on space. There are opportunities both within the UK and overseas for an active manager to take advantage of.

<table>
<tr><td>Impact of inflation</td><td colspan="2">Rent levels are expected to have an indirect link to inflation. Some rental contracts will actually stipulate rental increases in line with inflation. As the value of the property is intrinsically linked to its rental value, this is also expected to have a link over the longer term to inflation. However, capital values will reflect supply and demand and the current financial outlook rather than changes in the outlook for inflation. It is expected that, over the longer term, capital values will provide a real return expectation so this will not necessarily reduce the volatility to the funding level that arises from changing inflation expectations.</td></tr>
<tr><td>Implications for ESG policy</td><td colspan="2">There has been an increase in the level of activity to make properties more environmentally sustainable as fund managers believe this can lead to superior returns over the longer term. New buildings are expected to have a strong focus on environmental sustainability.</td></tr>
<tr><td>Short term forecasts (3 years) as at:
31 December 2012</td><td>Barrie and Hibbert
UK Property: 3.6% p.a.

</td><td>JLT Market Forecast Group
Central range: 2.0% p.a. to 5.0% p.a.
Central forecast: 4.0% p.a.
Premium over cash: 3.2% p.a.
Premium over gilts: 3.7% p.a.</td></tr>
<tr><td>Short/Medium term forecasts (5 years) as at:
31 December 2012</td><td>Barrie and Hibbert
UK Property: 4.0% p.a.

</td><td>JLT Market Forecast Group
Central range: 4.5% p.a. to 6.0% p.a.
Central forecast: 5.3% p.a.
Premium over cash: 3.7% p.a.
Premium over gilts: 4.6% p.a.</td></tr>
<tr><td>Medium term forecasts (10 years) as at:
31 December 2012</td><td>Barrie and Hibbert
UK Property: 4.9% p.a.

</td><td>JLT Market Forecast Group
Central range: 6.0% p.a. to 9.0% p.a.
Central forecast: 7.0% p.a.
Premium over cash: 4.0% p.a.
Premium over gilts: 5.3% p.a.</td></tr>
</table>

Conclusions for property

Whilst property holdings can be illiquid, particularly in times of market stress, the cashflow profile of property investment is attractive to a pension scheme in that property income has an indirect link to the rate of inflation which means that it is an appropriate match for the fund's liabilities that are linked to the rate of inflation. The Fund currently invests directly (albeit through funds) in UK and overseas property.

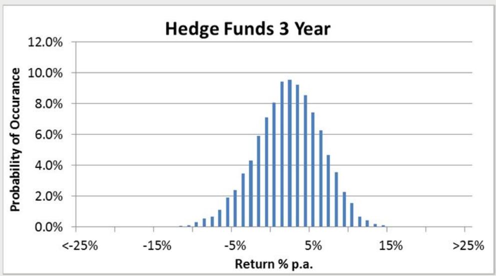
Hedge funds (illiquid)

Description	The term hedge funds includes myriad of strategies and investment styles. The key differentiator to traditional asset classes is that a hedge fund manager will typically aim to generate a return independently of the movement of markets (although hedge funds may have net positions to certain markets from time to time). For example, a long / short equity fund will aim to generate returns by betting on the relative change in value one company relative to other – such a strategy can make or lose money regardless of whether markets are going up or down. Hedge funds have traditionally been associated with attracting the most innovative and ambitious talent in financial markets. They also attract high management fees. Certain strategies can be illiquid, particularly those linked to debt and credit strategies.
Current conditions	During the financial crisis of 2008/09, hedge funds generally protected value relative to equities, falling by around a third to a half of the level of the falls in equity markets. However, returns have not rebounded in the same way as equities either. This is at least partially due to a reduction in the amount of leverage utilised by hedge funds to generate returns compared to prior to the financial crisis. Volatility has also fallen as a result. Hedge fund returns have been higher during the recent equity market rally, benefiting both from exposures to equity markets and credit. The current economic climate does present opportunities in certain hedge fund strategies. For those investors that can afford greater illiquidity, there are opportunities in distressed debt and credit, as companies suffer from banks withdrawing finance. In addition, in a world where markets are increasingly driven by macro factors and policy, funds that can take advantage of the consequences of this have the potential to out (or under!) perform. However, those strategies that utilise systematic trading based on quantitative processes have suffered in a world where macro policy announcements have driven markets. There has also been an increase in the number of hedge funds starting in Asia and emerging markets and these funds have the potential to take advantage of certain emerging market themes that may lead to superior growth in these regions. However, as hedge fund returns are typically targeted against cash, returns are also lower due to the low cash rates within the major economies. This also means that fees have a greater impact.
Impact of inflation	There is no direct link to inflation from investing in hedge funds. The target return for hedge funds is linked to cash rates, which are expected to increase if inflation increases. However, this is unlikely over the short to medium term as short term interest rates are being held low by actions from the Bank of England.
Implications for ESG policy	There is little scope to reflect the Fund's ESG policy in this area of investment due to the nature of the investments.

Short term forecasts (3 years) as at: 31 December 2012

Barrie and Hibbert

Hedge FoFs: 1.6% p.a.



JLT Market Forecast Group

Central range: 2.0% p.a. to 5.0% p.a.

Central forecast: 3.5% p.a.

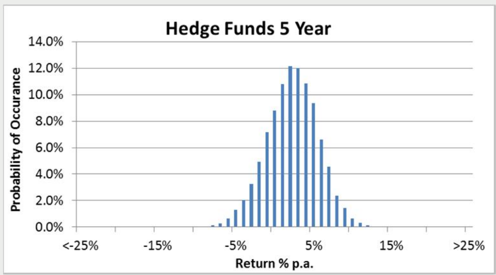
Premium over cash: 2.7% p.a.

Premium over gilts: 3.2% p.a.

Short/Medium term forecasts (5 years) as at: 31 December 2012

Barrie and Hibbert

Hedge FoFs: 2.1 p.a.



JLT Market Forecast Group

Central range: 3.0% p.a. to 7.0% p.a.

Central forecast: 4.0% p.a.

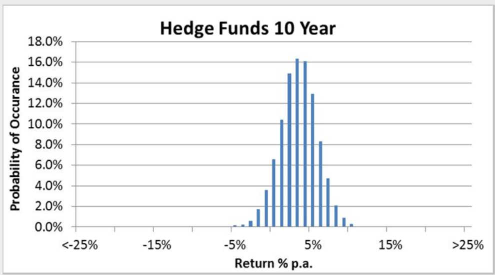
Premium over cash: 2.4% p.a.

Premium over gilts: 3.3% p.a.

Medium term forecasts (10 years) as at: 31 December 2012

Barrie and Hibbert

Hedge FoFs: 3.0% p.a.



JLT Market Forecast Group

Central range: 4.0% p.a. to 7.5% p.a.

Central forecast: 5.0% p.a.

Premium over cash: 2.0% p.a.

Premium over gilts: 3.3% p.a.

Approaches to hedge fund investment

Single managers

There is a strong record of new hedge funds. This is because individuals with appropriate capital and contacts tend to launch hedge funds when they have innovative new strategies and ideas to generate returns. Compared to traditional equity or bond investment, there are clearly many more opportunities for strategies if not limiting oneself to investing in companies. It is therefore hard to gauge how many hedge funds exist but it is understood to be greater than 7,000. Many are very small with just a few employees, whilst some have grown to very large funds.

Certain strategies are vulnerable to large, shock falls, particularly where excessive leverage is used (Long Term Capital Management is one example). Hedge funds can also be vulnerable to fraud. It is therefore important to thoroughly research a fund before investing, and be confident that the necessary risk controls and infrastructure is in place for

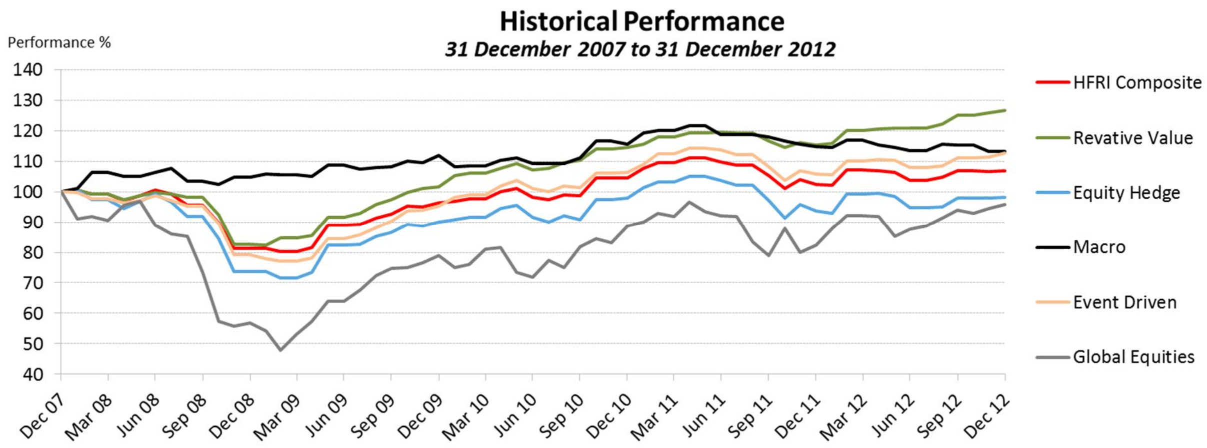
	the strategies that are being managed.
Fund of funds	Given the vast array of hedge funds, the pipeline of new funds and the detailed research that needs to be undertaken prior to investment, fund of funds have been popular for institutional investors, despite providing an additional layer of fees. Fund of funds should give access to experts identifying the best talent; manager diversification but not dilution; active asset allocation and manager rotation.

Conclusions for hedge funds

Suitably diversified strategies and fund of funds should significantly reduce risk relative to equities. However, returns in general are expected to be low due to low cash rates. There is the potential for superior returns but this could be the expense of liquidity or riskier strategies. An allocation to hedge funds at present should be targeted in such a way as to generate the required return by identifying opportunities as a traditional, static multi-strategy approach is unlikely to lead to the level of returns required for this part of the portfolio.

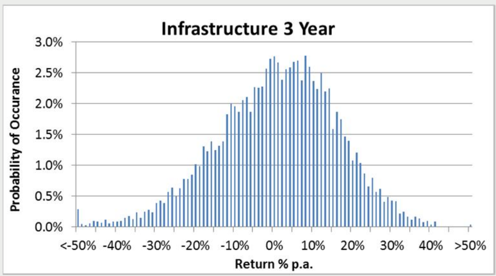
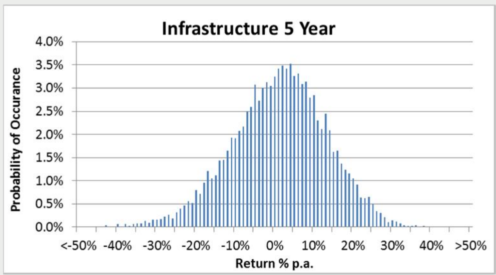
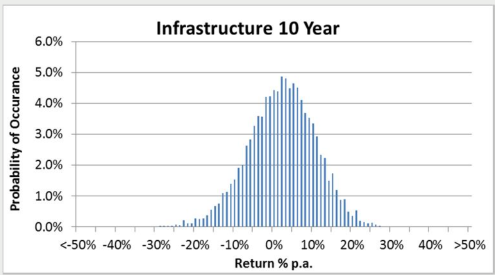
Strategy analysis – 5 Years to 31 December 2012

Hedge Fund Strategy	Return % p.a.	Volatility	Sharpe Ratio	Maximum Drawdown (Peak to Trough)	Correlation to Global Equities
Composite	1.4	8.9	0.0	-20.1	0.29
Equity Hedge	-0.4	12.5	-0.1	-28.9	0.27
Macro	2.5	5.7	0.3	-6.9	0.16
Event Driven	2.4	9.4	0.2	-22.8	0.28
Relative Value	4.8	7.8	0.5	-18.0	0.29
Global Equities	-0.8	21.9	-0.1	-52.1	1.00



Infrastructure (illiquid)

Description	Infrastructure has characteristics similar to both private equity and property and involves investment in large-scale public systems, services and facilities such as power, transport or water systems. Investment in Infrastructure has the ability to provide long-term, stable, inflation-protected cashflows.
Current conditions	There is currently a substantial Infrastructure investment requirement with an average annual global infrastructure spend of US$2.5bn. European transport, energy and communications Infrastructure needs €1.5 – 2 trillion in the next decade. Governments are simply unable to meet the required investment needed above. There is a political will to encourage private sector investment, particularly in the UK. Current market dynamics are creating compelling investment themes: ■ Utility disposal programmes for non-core assets. ■ Divestments and restructuring due to refinancing pressures. ■ Privatisation activity as a result of national and local government budgetary constraints. ■ Renewable opportunities driven by capital requirements to meet EU “green” targets.
Impact of inflation	For many investors, inflation protection is one of the key attractions of investing in Infrastructure, as often there are contracts in place that enable operators to index tariffs with inflation. However, the inflation protection is not always directly explicit in Infrastructure assets. In order to achieve the desired real asset characteristics of a genuine Infrastructure portfolio, it is therefore necessary to carefully understand and analyse how inflation will affect a specific investment. The impact of different variables of inflation sensitivity such as regulated tariffs, contractual indexation, pricing power and replacement value considerations will determine how directly any Infrastructure assets will react to changes in economic inflation and consequently the implicit inflation protection it offers. It is also crucially important for an Infrastructure manager to comprehensively consider the implied inflation assumptions built into the valuation models for Infrastructure assets and compare them to prevailing and expected future inflation rates in the wider investment market in order to avoid overpaying for inflation protection through aggressive assumptions embedded in any Infrastructure investment case.
Implications for ESG policy	An investment in infrastructure can take advantage of an increased political will to support social projects, although whether a sufficient return is offered for risks taken on needs to be carefully considered. The risks of disposal of no longer useful assets must be carefully considered, as must any environmental impact of building work, both of which could have financial implications for any investment.

	Barrie and Hibbert	JLT Market Forecast Group
Short term forecasts (3 years) as at: 31 December 2012	Infrastructure: 3.7% p.a.  	Central range: 3.0% p.a. to 5.0% p.a. Central forecast: 4.0% p.a. Premium over cash: 3.2% p.a. Premium over gilts: 3.7% p.a.
Short/Medium term forecasts (5 years) as at: 31 December 2012	Infrastructure: 4.1% p.a.  	Central range: 4.0% p.a. to 7.0% p.a. Central forecast: 5.0% p.a. Premium over cash: 3.4% p.a. Premium over gilts: 4.3% p.a.
Medium term forecasts (10 years) as at: 31 December 2012	Infrastructure: 5.0% p.a.  	Central range: 4.5% p.a. to 8.5% p.a. Central forecast: 6.0% p.a. Premium over cash: 3.0% p.a. Premium over gilts: 4.3% p.a.

Approaches to infrastructure investment

Listed infrastructure	Similar to what REITs are to property, this involves investing in listed companies (equities) that are involved in infrastructure investment. However, the volatility of such an investment will be similar to the volatility of equities, although it will be liquid and readily realisable. However, this may lead to concentrations in some sectors (eg. mining) and certain sectors being underrepresented (eg. renewable energy).
Greenfield investment	This involves investing in at the development stage of a project. This therefore includes planning risk and construction risk, and a yield is not earned until later in the life of the investment. The return is expected to be higher than Brownfield investment (see below) but there is greater risk.
Brownfield investment	This involves purchasing fully operational assets. There is a track record of operation and a yield is earned immediately. The return is more moderate but there is lower risk. One specific risk is what occurs at the end of the useful life of the asset, if there are any particular disposal costs.

Conclusions for infrastructure

Understanding the underlying risk characteristics of Infrastructure investments and appropriate diversification
Understanding the underlying risk characteristics of Infrastructure investments and appropriate diversification
across different sets of risks is essential. In private markets however, this approach is far from straightforward to implement. It requires not only a deep understanding of the risks inherent in different Infrastructure assets but also the ability of investment managers to originate a sufficient number of actionable quality investment opportunities in order to build a portfolio in a reasonable amount of time and independent of the market cycle. For instance, one of the implications of the potential tail risk exposure of returns in core, Brownfield Infrastructure assets is that an investor could balance this by adding a proportion of projects with Greenfield exposure to their portfolio. Similarly, in order to be able to access the market during times of capital constraint and avoid vintage year concentration, an investor should have the ability to add secondary investments to their portfolio.

For a first investment in Infrastructure we would typically see an investment in a fund where the underlying projects are in developed countries, where the regulatory framework is strong and predictable. Products do exist for investments in developing countries.

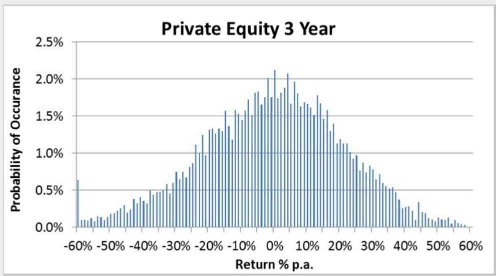
An allocation to infrastructure could be attractive from the point of view of providing income for the fund that is inflation linked.

Private Equity (illiquid)

<table>
<tr><td rowspan="2">Description</td><td colspan="2">As well as owning companies that are listed on public markets, investors can own companies that are not listed on a stock exchange. This is termed private equity. Returns are expected to be generated from an active management team making significant changes to the way in which the business is run to streamline it and increase efficiency. A typical holding period for such a company is typically 7-15 years and this can therefore be a very illiquid asset class.

Certain private equity investments will include leverage – the use of borrowed funds to supplement shareholder capital. This can increase risk but also returns. However, the very highly leveraged deals have significantly diminished since the onset of the financial crisis.</td></tr>
<tr></tr>
<tr><td>Current conditions</td><td colspan="2">Risk aversion and a preference for liquidity has meant that this is not as an active an area as prior to the credit crunch. Continued uncertainty over the Euro crisis in particular has meant that investors may have been less willing to take on the illiquidity risk, as once an investment has been entered it is difficult to exit if, for example, there is a change in the view of the economic circumstances. However, this means that there are potentially opportunities available for those investors able to bear the shorter term uncertainty and who can afford illiquidity in a proportion of their portfolio. However, the recent improvement in market sentiment could see this become a more active area as investors seek out higher returns. Deals are unlikely to be as highly leveraged as prior to the credit crunch with the sources of return being more focused on picking up undervalued business and improving operational and strategic performance, rather than previously where cheap credit was a much greater source of returns.</td></tr>
<tr><td>Impact of inflation</td><td colspan="2">Private equity is generally expected to outperform public equity over the longer term and is similarly expected to provide a link over the longer term of inflation.</td></tr>
<tr><td>Implications for ESG policy</td><td colspan="2">There is potentially more scope to ensure the ESG policy of the fund manager and company management teams is in the best of interest of shareholders.</td></tr>
<tr><td>Short term forecasts (3 years) as at: 31 December 2012</td><td>Barrie and Hibbert

Private Equity: 5.9% p.a.

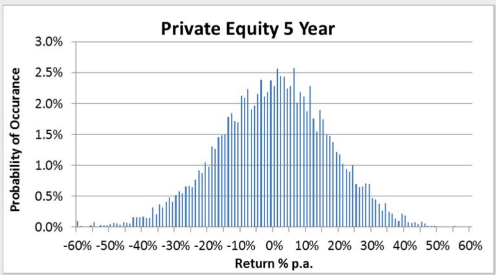
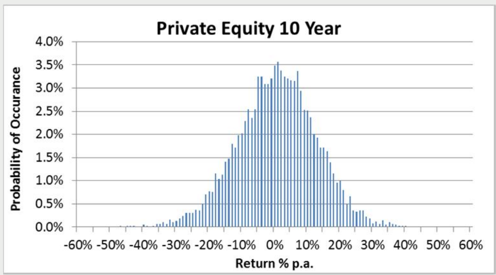

</td><td>JLT Market Forecast Group

Central range: 4.0% p.a. to 8.0% p.a.

Central forecast: 6.5% p.a.

Premium over cash: 5.7% p.a.

Premium over gilts: 6.2% p.a.</td></tr>
</table>

Short/Medium term forecasts (5 years) as at: 31 December 2012	**Barrie and Hibbert** Private Equity: 6.3% p.a. 	**JLT Market Forecast Group** Central range: 5.0% p.a. to 9.5% p.a. Central forecast: 7.5% p.a. Premium over cash: 5.9% p.a. Premium over gilts: 6.8% p.a.
Medium term forecasts (10 years) as at: 31 December 2012	**Barrie and Hibbert** Private equity: 7.3% p.a. 	**JLT Market Forecast Group** Central range: 7.0% p.a. to 10.5% p.a. Central forecast: 8.5% p.a. Premium over cash: 5.5% p.a. Premium over gilts: 6.7% p.a.

Approaches to private equity investment

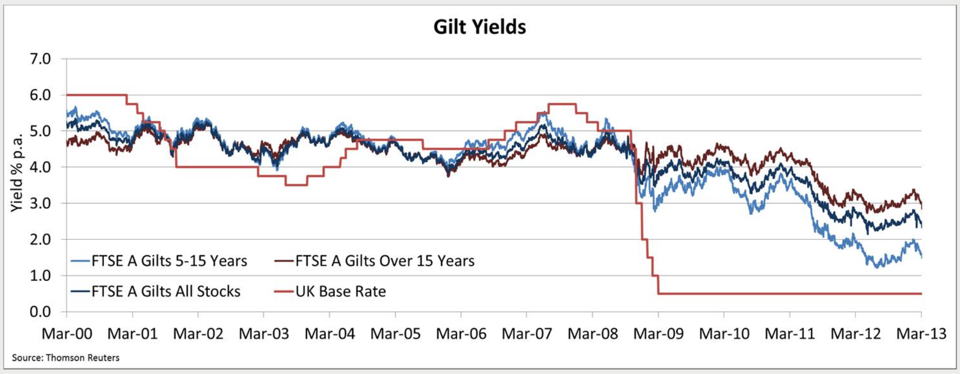
Direct	It is very difficult to achieve sufficient diversification if entering into deals on an individual basis.
Fund of funds	Private equity investment is prone to the risk of entering into deals at what later emerges to be an inopportune time, as well as the risk of exiting deals at a poor time. Diversifying by vintage year – the year at which investments are made – as well as diversification within deals is possible within fund of funds.

Conclusions for private equity

There is the potential for returns in excess of publicly quoted equity markets, albeit with a greater risk and the potential for negative returns even over the longer term. This is a particularly illiquid investment and the returns can be dependent on market conditions at the time of realisation, as many exit strategies revolve around returning companies to the public markets. The lack of credit to leverage opportunities potentially reduces the scope for returns and deal flow although the recent improved sentiment in markets is likely to result in greater activity.

Stabilising assets

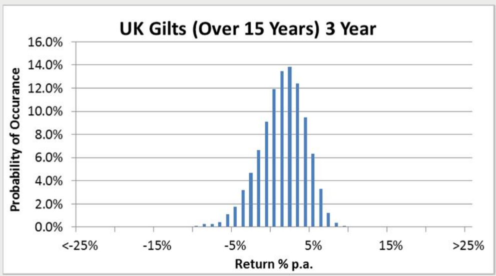
UK government bonds - Gilts

Description	A bond is similar to a bank loan; in essence, the issuer of the bond borrows money and, in return, pays a preordained rate of interest at specified times and, on maturity, repays the capital. Government bonds, or gilts, are debt securities issued by the government. They pay the same interest payment every 6 months (in most cases) interest payments and repay the capital on maturity of the bond. The current yield to maturity is the return that would be received if the gilt was bought today and held to maturity, with all payments being made as scheduled.
Current conditions	The yields on UK government bonds are at historic lows, reflecting the poor outlook for economic growth, the policy of Quantitative Easing (QE) and sovereign debt crisis in the Eurozone. Whilst the payments from gilts stay the same so long as there is no default, there will be a fall in capital values if yields rise. Many feel the current low level of gilt yields is unsustainable (see chart) and when the economy recovers and the policy of QE  comes to an end or there is a solution to the sovereign debt problems in the Eurozone, yields will increase as the government will still need to finance the on-going high budget deficit. Nevertheless, Japan is an example of how low government bond yields can persist for a prolonged period of time despite a high debt to GDP ratio. As the value of the Fund's liabilities is linked to gilt yields, the funding level will improve if gilt yields rise (all else being equal) and vice versa. This is because only a proportion of the Fund's assets are invested in gilts.
Impact of inflation	Since the payments from gilts are fixed, the "real" value of these payments falls as a result of inflation. Gilt yields generally rise if the outlook for inflation deteriorates although this has not necessarily been the case in recent times when investors, concerned about the possibility of default in the Eurozone, have invested in 'safe haven' government bond markets and have accepted "negative real interest returns".

Short term forecasts (3 years) as at: 31 December 2012

Barrie and Hibbert

UK long gilts: 0.7% p.a.



JLT Market Forecast Group

Central range: -5.5% p.a. to 2.8% p.a.

Central forecast: 0.3% p.a.

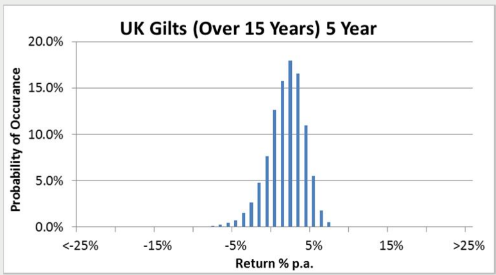
Premium over cash: -0.2% p.a.

Expected yield at end of period: 3.2% p.a.

Short/Medium term forecasts (5 years) as at: 31 December 2012

Barrie and Hibbert

UK long gilts: 1.1% p.a.



JLT Market Forecast Group

Central range: -0.5% p.a. to 2.2% p.a.

Central forecast: 0.7% p.a.

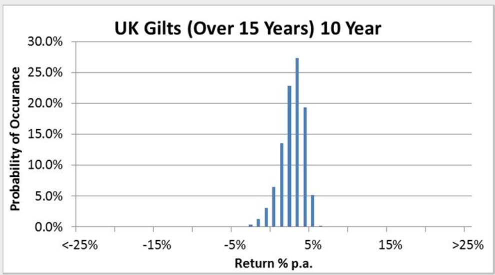
Premium over cash: -0.9% p.a.

Expected yield at end of period: 3.5% p.a.

Medium term forecasts (10 years) as at: 31 December 2012

Barrie and Hibbert

UK long gilts: 2.0 p.a.



JLT Market Forecast Group

Central range: -0.5% p.a. to 2.5% p.a.

Central forecast: 1.7% p.a.

Premium over cash: 0.5% p.a.

Expected yield at end of period: 4.0% p.a.

Conclusions for Gilts

Following a period in which gilts have performed exceptionally well, gilts are expected to provide a relatively poor return over the next few years. The current return on long-dated gilts of around 3% compares with range of between 4% and 5% over the past 10 years. At some stage the UK economy will start to recover and as inflationary pressures increase, interest rates will have to be increased. At the same time the policy of Quantitative Easing (under which the Bank of England has bought £385bn gilts) will come to an end. Overseas investors have invested heavily in UK gilts over the last 2 years but when it becomes apparent that the problems in the Eurozone are abating, these investors are likely to disinvest from the gilt market leading to more upward pressure on yields.

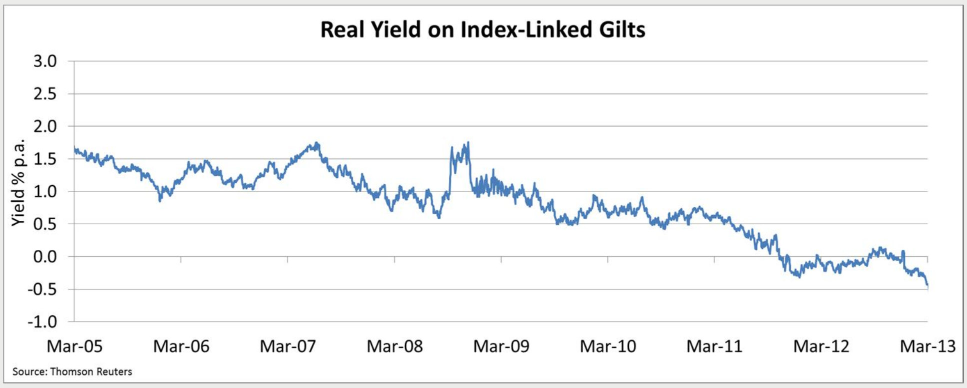
UK index-linked gilts

Description

These are debt securities issued by the UK government but, unlike conventional gilts, they pay a variable rate of interest every 6 months that increases in line with the retail Price Index and repay the capital, inflated by the increase in the RPI since the date of issue on maturity of the bond. The current yield to maturity is the return that would be received if the gilt was bought today and held to maturity, with all payments being made as scheduled.

Current conditions

The yields on UK index-linked government bonds are at historic lows, reflecting the demand from insurance companies and pension schemes for inflation protection (see chart). Over the longer term, unless there are real concerns that the rate of inflation is likely to breech significantly the government's target rate for inflation, real yields of



Source: Thomson Reuters

around -0.4% are unsustainable. To the extent that the liabilities of a scheme are linked to changes in the assumed rate of future inflation, increasing the holding of index-linked gilts will reduce the inflation risks inherent in a scheme but in an environment of low inflation and low real returns will reduce the investment return.

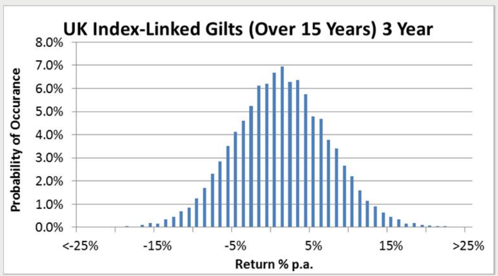
Impact of inflation

Since the payments from gilts are linked to the rate of RPI inflation, provided that real return at the time of the original investment is positive the "real" value of these payments is maintained whatever the rate of RPI inflation. Conventional gilt yields generally rise if the outlook for inflation deteriorates but if there are concerns about the future outlook for inflation, the real yield on index-linked gilts can fall as investors seek inflation protection.

Short term forecasts (3 years) as at: 31 December 2012

Barrie and Hibbert

UK long index-linked gilts: 1.0% p.a.



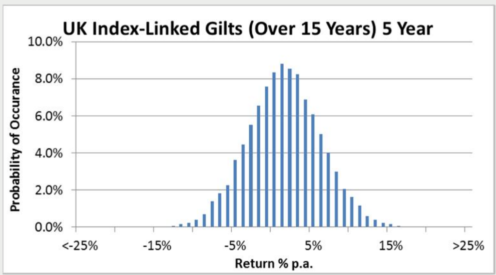
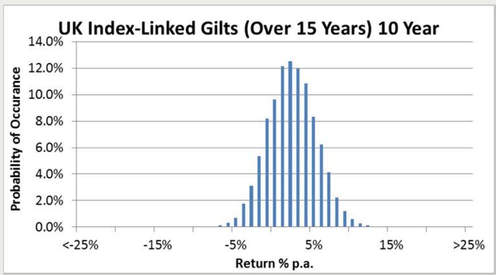
JLT Market Forecast Group

Central range: 1.0% p.a. to 3.0% p.a.

Central forecast: 1.9% p.a.

Premium over cash: 1.4% p.a.

Expected yield at end of period: 0.2% p.a.

<table>
<tr>
<td>Short/Medium term forecasts (5 years) as at:
31 December 2012</td>
<td>Barrie and Hibbert
UK long index-linked gilts: 1.4% p.a.

</td>
<td>JLT Market Forecast Group
Central range: 1.0% p.a. to 3.0% p.a.
Central forecast: 1.7% p.a.
Premium over cash: -0.6% p.a.
Expected yield at end of period: 0.5% p.a.</td>
</tr>
<tr>
<td>Medium term forecasts (10 years) as at:
31 December 2012</td>
<td>Barrie and Hibbert
UK long index-linked gilts: 2.2% p.a.

</td>
<td>JLT Market Forecast Group
Central range: 1.5% p.a. to 3.5% p.a.
Central forecast: 2.4% p.a.
Premium over cash: 0.0% p.a.
Expected yield at end of period: 0.7% p.a.</td>
</tr>
</table>

Conclusions for index-linked gilts

Following a period in which index-linked gilts have performed exceptionally well, the real return on these stocks has fallen to around -0.4%. Unless the rate of inflation significantly breaches the government's target rate for inflation, index-linked gilts are likely to provide a relatively poor return over the next few years. However, no other asset class produces a return that is directly linked to the current rate of inflation and since some of the schemes liabilities will change with the rate of inflation, it is appropriate to have a holding in this asset class as a risk reduction measure.

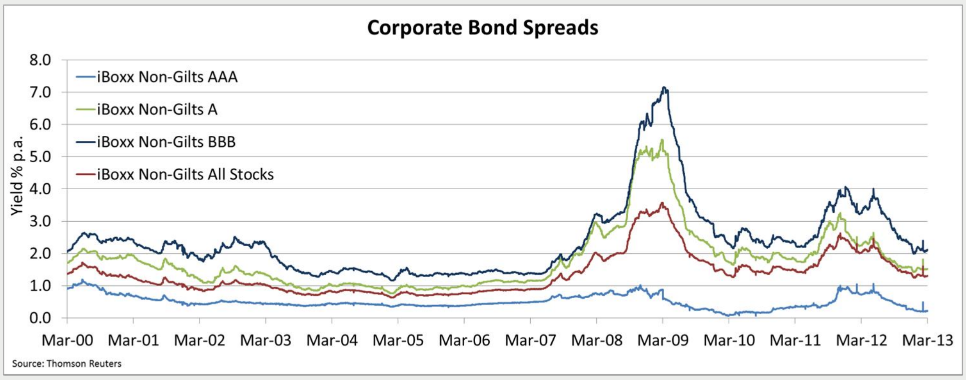
If there is an allocation to index linked gilts, passive management offers a high probability of generating a return close to the market return and for slightly lower fees than active management. In particular, we note that the dealing expenses, the bid/offer spreads, are high within this asset class which can limit the ability of active managers to achieve a significant level of outperformance net of fees and costs.

Sterling corporate bonds

Description	Sterling corporate bonds are debt securities issued by the companies and also pay regular interest payments and repay the capital on maturity of the bond. Corporate bonds are considered to be a higher risk than government bonds. As a result, they offer a higher yield than government bonds with a similar maturity date, with the difference in the yield (the 'spread') reflecting the credit standing of the issuer. In many cases, the bond holders have a charge over some or all of the issuers assets and there are often covenants that restrict the overall level of borrowing and require that the issuer to have a minimum level of income/profit to meet interest payments. Most large issues are rated by the various ratings agencies and those with a BBB rating or better are classed as investment grade bonds. In the event that an issuer defaults, which is a very rare event for an investment grade sterling bond, the bondholders rank ahead of the equity holders when the company is 'wound up'. This means that after staff wages have been paid and the claims of the Inland Revenue have been met, the proceeds from the sale of the company's assets will meet in turn the claims of lenders secured on specific assets, the claims of lenders with floating charges on assets and then the claims of unsecured creditors (including unsecured bond holders). If there are any remaining assets, these can be sold and the proceeds paid to the equity holders.

Current conditions

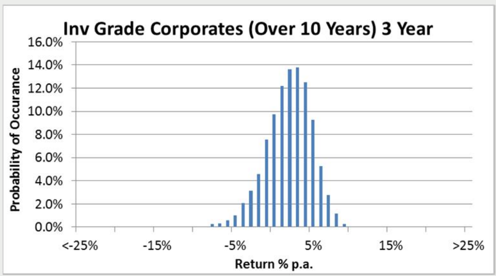
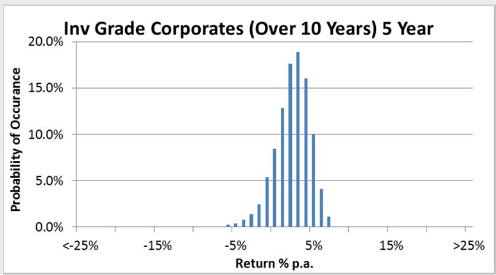
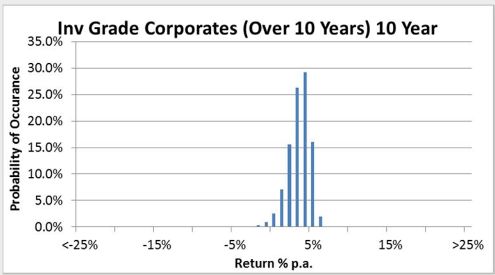
The spreads on corporate bonds have fallen significantly since the peak of the financial crisis in 2008/09, although corporate bonds still offer an additional return relative to gilts that more than compensates for the additional risk (see chart).



As described in the section on gilts, gilt yields are at historical lows. The recent strong performance of corporate bonds means there is little scope for spreads to fall further despite the significant improvement in corporate balance sheets over the past few years. Corporate bonds provide a reasonable additional return relative to gilts, but the costs of trading means that investors have to take a medium to long term view when switching into this asset class. As stated earlier, the value of the Fund's liabilities is linked to gilt yields, and given the linkage between the yield on corporate bonds and that on gilts, the funding level will usually improve if corporate bond yields rise and vice versa. Nevertheless in periods of turbulence, such as in 2008/09, as shown in the chart, the linkage can be broken.

Impact of inflation

As is the case with gilts, since the payments are fixed, the "real" value of these payments falls as a result of inflation. Similarly, corporate bond yields generally rise if the outlook for inflation deteriorates.

<table>
<tr>
<td>Short term forecasts (3 years) as at:
31 December 2012</td>
<td>Barrie and Hibbert
UK corporate bonds: 1.5% p.a.

</td>
<td>JLT Market Forecast Group
Central range: -5.5% p.a. to 5.0% p.a.
Central forecast: 1.9% p.a.
Premium over cash: 1.1% p.a.</td>
</tr>
<tr>
<td>Short/Medium term forecasts (5 years) as at:
31 December 2012</td>
<td>Barrie and Hibbert
UK corporate bonds: 1.9% p.a.

</td>
<td>JLT Market Forecast Group
Central range: -4.0% p.a. to 4.0% p.a.
Central forecast: 1.9% p.a.
Premium over cash: -0.3% p.a.</td>
</tr>
<tr>
<td>Medium term forecasts (10 years) as at:
31 December 2012</td>
<td>Barrie and Hibbert
UK corporate bonds: 2.8% p.a.

</td>
<td>JLT Market Forecast Group
Central range: 0.7% p.a. to 4.0% p.a.
Central forecast: 2.7% p.a.
Premium over cash: 1.25% p.a.</td>
</tr>
</table>

Conclusions for corporate bonds

Although corporate bonds had a dreadful performance in 2008, more recently they have produced a better return than gilts even during a period in which gilts have performed exceptionally well. As set out in the section on gilts, we expect gilts to provide a relatively poor return over the next few years. Despite the strength of corporate balance sheets, the recent fall in corporate bonds spreads means that any rise in gilt yields is likely to be mirrored by a rise in corporate bond yields.

Employing an active corporate bond fund manager for this element of the portfolio enables the portfolio to avoid investment in bonds where the issuer's finances are deteriorating or which are new emergency capital raising issues. There are a number of corporate bond fund managers who consistently achieve a return above that of the benchmark with only a limited increase in risk and this more than compensates for the small additional cost in annual management charges.

Senior secured loans - illiquid

Description	Senior secured loans are loans made to companies which are generally below investment grade (i.e. BB+ and below) and typically have a term to maturity of between five to seven years. They are secured with a charge on some or all of the company's assets and are the most senior debt obligations of a company. This ensures that, in the case of default, investors are repaid ahead of bond or equity holders provided that the value of the assets is in excess of the outstanding loan. In addition there are covenants in place that enhance the protection that the senior secured loan investors enjoy by placing restrictions as to what a company can and cannot do regarding asset sales, the value of the charged assets etc. The interest paid to investors is variable and is typically a margin above a specific cash benchmark such as Sterling 3-month Libor, US 3-month Libor or 3-month Euribor. In general, the rate of interest payable is periodically reset to reflect any changes to the benchmark rate of interest, e.g. if the benchmark is 3-month Libor, the interest rate payable would be reset every 3 months. In addition, the documentation usually provides for a minimum rate of interest to be payable on the loan. Investing in this asset class involves some 'liquidity' risk as secured loans are less liquid in comparison with investment grade corporate bonds. Senior secured loan pooled funds typically deal monthly rather than daily, but this should not be a concern for long-term investors such as pension schemes. This liquidity risk was highlighted during the financial crisis of 2008/09 when there was forced selling by highly leveraged funds that led to high price volatility which resulted in 2008 being the only year since 1998 that this asset class produced a negative return; US loans fell by around 29% in 2008 although these losses were recovered in 2009. The variable nature of the interest payments provides a valuable protection in a rising interest rate environment and in such periods secured loans usually outperform traditional fixed income investments. Traditional fixed income investments typically fall in price as interest rates rise but, for senior secured loans, there is the expectation that the price of the loan should not vary greatly as a result of changes in interest rates alone. This is because the interest rate payable on the loans is variable and will respond quickly to a rise in interest rates as increases as the interest rate payable is linked to a cash benchmark.
Current conditions	The secured loans market comprises two major elements with differing dynamics with regard to patterns and supply of issuance: ■ US Senior Secured Loans ■ European Senior Secured Loans The US market is larger than the European market and has a much greater retail presence which has led to higher volatility in that market. Currently, the average margin over cash for new issuance in the US and Europe is around 4.5% and 5%, respectively, which provides a significantly higher potential return than investment grade corporate bonds. At present, the problems in the Eurozone have meant that the European market offers better value than the US market although the difference in pricing is not as stark as it was in 2011.

Impact of inflation	The variable and increasing nature of the interest payable in this environment can also help to provide some level of inflation protection, as interest rates tend to rise during periods of higher inflation.

Conclusions for secured loans

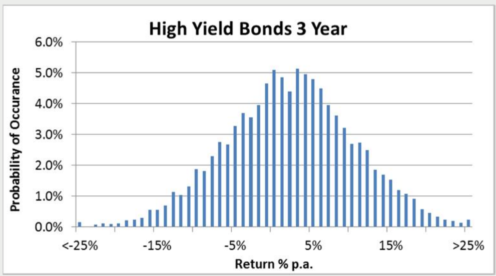
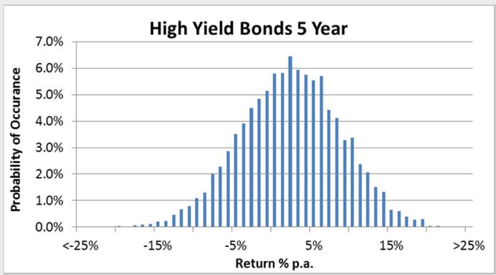
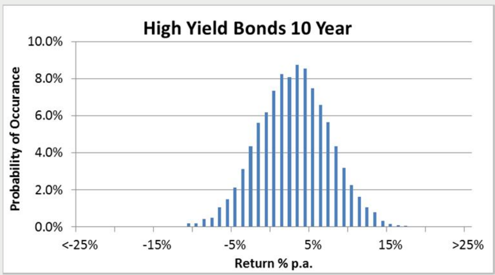
Senior Secured Loans potentially offer an attractive secure yield in an uncertain market environment, with meaningful default protection. The variable nature of the interest rate payable means that they can offer protection from rising interest rates, unlike other fixed income assets, and the longer term return expectations are in the region of 6% p.a. which is significantly higher than that for gilts or corporate bonds.

The expected additional return more than compensates for higher management charges and the additional default risk although it is essential to select an experienced manager that has a rigorous approach to analysing secured loans. The lower level of liquidity and higher transactions costs mean, however, that investment in this asset class must be considered as a medium to long term investment.

Given the outlook for conventional bond markets over the next few years, we believe that it would be appropriate to consider investing a proportion of the portfolio in senior secured loans in order to benefit from both the higher expected returns and from the capital protection afforded by the variable nature of the interest payable on the loans.

High yield debt - illiquid

Description	A high yield bond is a bond that has a sub-investment grade credit rating (a credit rating below BBB-). The issuer is generally a company, although some government issued bonds are also included in this category. The issuers include companies that need finance to continue growing or finance an acquisition as well as companies that are reorganising or have fallen on hard times and been downgraded from investment grade. The low credit rating means there is a significantly higher risk of default than for an investment grade bond and as a consequence these bonds offer a much higher yield than investment grade bonds. Typically this is of the order of 150 to 300 basis points above the yield on an investment grade bond. Investing in this asset class also involves 'liquidity' risk as these bonds are less liquid in comparison with investment grade corporate or government bonds. If problems arise, at the company, sector or country level, it can be very difficult to realise an investment and the price of the bonds can be very volatile. In 2008/09, for example, as the financial crisis gained momentum, the price of these bonds fell sharply even for issuers that were little affected by these events. Whist some pooled fund have daily liquidity, some do not and in periods of stress, there may be restrictions on sales. The investment managers will research the issuers in detail and managers should be able to select bonds that are unlikely to default, given the generally shorter time to maturity (compared with investment grade bonds). Investing in shorter date bonds will also provide liquidity as many holdings will be held to maturity.
Current conditions	Investment managers may invest across global markets or specialise in the major US and/or European high yield bond markets. As is the case for secured loans, the high yield bond market in the US is larger than the European market and has a much greater retail presence. In the past, this has led to higher volatility in the US market although more recently the problems of the Eurozone have led to increased volatility in the European market. Currently, the average margins over UK gilts in the US high yield bond market and the European high yield bond market around 4.5% and 5.5%, respectively, which provides a significantly higher potential return than investment grade corporate bonds. In addition, the high yield and the shorter duration relative to gilts and corporate bonds will provide a degree of protection against a likely rise in interest rates in the future.
Impact of inflation	As is the case with investment grade corporate bonds, since the payments are fixed, the "real" value of these payments falls as a result of inflation. However, the higher yield on these bonds means that a rise in inflation will have a less adverse effect compared with investment grade bonds.

Short term forecasts (3 years) as at: 31 December 2012	**Barrie and Hibbert** Global high yield: 2.6% p.a. 	**JLT Market Forecast Group** Central range: 2.5% p.a. to 4.5% p.a. Central forecast: 3.5% p.a. Premium over cash: 2.7 % p.a.
Short/Medium term forecasts (5 years) as at: 31 December 2012	**Barrie and Hibbert** Global high yield: 2.6% p.a. 	**JLT Market Forecast Group** Central range: 5.0% p.a. to 7.0% p.a. Central forecast: 6.0% p.a. Premium over cash: 3.0% p.a.
Medium term forecasts (10 years) as at: 31 December 2012	**Barrie and Hibbert** Global high yield: 3.1% p.a. 	**JLT Market Forecast Group** Central range: 4.0% p.a. to 8.0% p.a. Central forecast: 6.0% p.a. Premium over cash: 3.0% p.a.

Conclusions for high yield debt

High yield debt potentially offers a much higher return than an investment in investment grade corporate bonds and the longer term return expectations are in the region of 6.0% p.a. which is significantly higher than that for gilts or corporate bonds. The high yield and the generally shorter duration of the holdings compared with gilts or investment grade bonds will also provide a degree of protection against a rise in interest rates in the future.

In a period of falling interest rates, the probability of default generally falls and as a result the spread over government bonds narrows, so they can perform better than government bonds. However, the shorter duration means that the increase in expected return is at the expense of an increase in interest rate risk as the price movements on high yield debt will be a less than perfect match for the change in value of the liabilities.

The expected additional return more than compensates for higher management charges and the additional default risk although it is essential to select an experienced manager that has a rigorous approach to analysing bonds. The lower level of liquidity and higher transactions costs mean that investment in this asset class must be considered as a medium to long term investment. For this reason, we believe that there is a good case for an investment in this asset class being treated as part of the alternative asset class holding of the Fund rather than part of the stabilising asset portfolio.

Given the outlook for conventional bond markets over the next few years, we believe that schemes should consider diversifying part of their bond portfolios into high yield debt in order to benefit from both the higher expected returns and from the degree of capital protection provided by these assets.

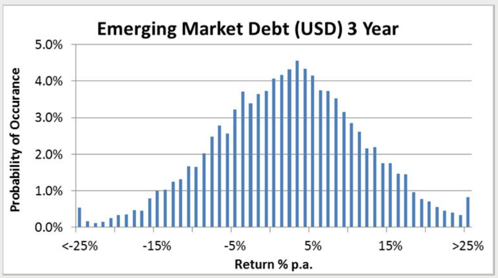
Emerging Markets Debt - illiquid

Description	Emerging Market Debt (EMD) has become a mainstream asset class over the last few years driven by the higher returns that are available and a growing realisation that the emerging markets economies are expected to grow faster than the developed economies in the future because of higher productivity growth rates, lower exposure to debt (both private and public sector), favourable demographics and rapid urbanisation and wealth creation. Investors are now able to invest in bonds, issued by both governments and companies, which have similar characteristics to bonds issued by the developed economies. In some cases, the bonds will be denominated in US dollars but, increasingly, bonds are being denominated in the currency of the issuer. The EMD markets are less liquid than those in the developed markets and, in the case of corporate bonds, there is not the same degree of investor protection as corporate governance standards are often lower than in the developed economies, the legal system may offer less protection to lenders and, in many cases, the loan documentation provides few covenants to restrict the issuer from operating in the interests of the shareholder to the detriment of lenders.
Current conditions	The emerging market debt universe is undergoing rapid growth for a variety of reasons. Many countries have implemented sound fiscal and monetary policies that have resulted in a structural improvement in creditworthiness and served to reduce considerably the historically high volatility of the asset class. Most importantly, EMD, both hard and local currency, has been seen to offer low correlation to developed bond markets. Emerging markets long-term growth expectations are supported by solid fundamentals that include positive demographics, economic reform, improving governance and increasing industrialisation. As the EMD market has developed, investors have been more confident about the outlook for the EMD currencies and more aware that a sharp appreciation in US dollar could cause problems for countries that have issued a significant amount of US dollar denominated bonds. EMD issuance has been increasing each year for some time and for every year since 2004, corporate issuance has been higher than government issuance; the corporate market is now larger than the external sovereign market. Increasingly new issuance is being denominated in local currency. The credit profile of the EMD market is improving and since 2008, there have been a significant number of ratings upgrades, and more than 75% of local currency EM sovereign bonds are now investment grade. Despite this improvement in the EMD environment, the yield on emerging market government debt denominated in US dollars is around 2.75% higher than that on gilts.
Impact of inflation	The returns on EMD have only a low correlation with the return on sterling bonds and little, if any correlation with the rate of UK inflation.

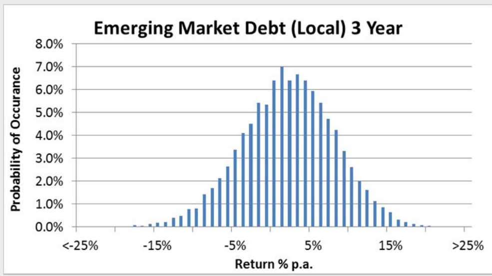
Short term forecasts (3 years) as at: 31 December 2012

Barrie and Hibbert

Emerging market debt (USD): 2.8% p.a.



Emerging market debt (local currency): 1.9% p.a.



JLT Market Forecast Group

Central range: 2.5% p.a. to 4.5% p.a.

Central forecast: 3.0% p.a.

Premium over cash: 2.2% p.a.

Central range: 1.5% p.a. to 4.0% p.a.

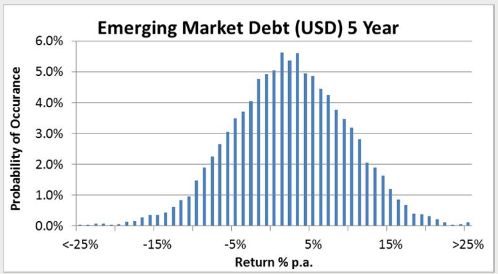
Central forecast: 3.0% p.a.

Premium over cash: 2.2% p.a.

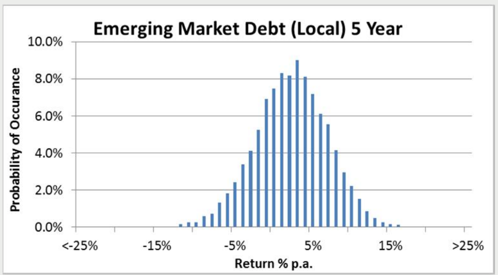
Short/Medium term forecasts (5 years) as at: 31 December 2012

Barrie and Hibbert

Emerging market debt (USD): 2.9% p.a.



Emerging market debt (local currency): 2.3% p.a.



JLT Market Forecast Group

Central range: 3.5% p.a. to 5.5% p.a.

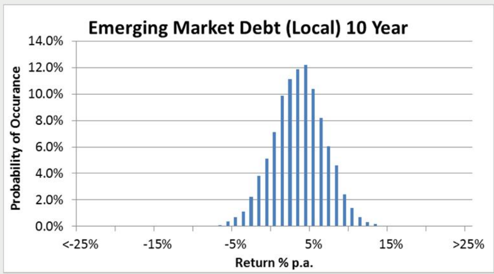
Central forecast: 4.0% p.a.

Premium over cash: 1.4% p.a.

Central range: 2.5% p.a. to 5.5% p.a.

Central forecast: 4.0% p.a.

Premium over cash: 1.4% p.a.

Medium term forecasts (10 years) as at: 31 December 2012	**Barrie and Hibbert**	**JLT Market Forecast Group**
	Emerging market debt (USD): 3.2% p.a.  	Central range: 4.0% p.a. to 7.0% p.a. Central forecast: 5.5% p.a. Premium over cash: 2.5% p.a.
	Emerging market debt (local currency): 3.2% p.a.  	Central range: 5.0% p.a. to 7.5% p.a. Central forecast: 6.0% p.a. Premium over cash: 3.0% p.a.

Conclusions for EMD markets

Emerging market debt provides an attractive investment opportunity given the favourable dynamics of low and falling levels of government debt and economies not constrained by weak banking systems. Many governments have a better credit rating than those of developed countries and many corporate issuers are major international companies that just happen to be based in an emerging market economy.

The expected additional return more than compensates for higher management charges but it is essential to utilise the services of an experienced manager that has a rigorous approach to research. Given the outlook for the developed bond markets over the next few years, we believe that the Fund should consider diversifying part of its bond portfolios into EMD in order to benefit from the higher expected returns. The lower level of liquidity and higher transactions costs mean, however, that investment in this asset class must be considered as a medium to long term investment.

Global rebalancing is likely to produce a structural shift in exchange rates between developed and emerging currencies. As the de-leveraging of developed economies continues to act as a drag on economic growth, the central banks are likely to continue their policies of QE to try to stimulate the economy and prevent deflation. This, in turn, is likely to result, in a decline in the real exchange rates of developed countries which will boost exports. At the same time, the governments of emerging countries are under pressure from developed countries to allow their currencies to appreciate. While this will reduce their competitiveness in export markets, they recognise on the one hand that demand from developed countries is likely to remain sluggish, but on the other, that gradual currency appreciation will actually benefit the burgeoning ranks of their domestic middle class consumers. Since a relative appreciation of emerging market currencies in the coming years would benefit sterling investors, we believe that exposure to emerging markets should be generally unhedged.

Investors in this asset class should always use a specialist actively managed emerging markets debt fund.

Absolute Return Bond Funds - liquid

Description	Absolute Return Bond Funds seek positive absolute returns over the medium to long term, regardless of market conditions. Typically they aim to deliver a positive return over rolling 12-month periods with a target return of the order of LIBOR plus around 2.5% per annum, gross of fees, over rolling 3-year periods. In many ways they are akin to Diversified Growth Funds which have demonstrated an ability to produce equity type returns with a lower level of volatility than that of the equity market. As with Diversified Growth Funds, it is essential for investors to understand the approach to investment being adopted by an absolute return bond fund manager and be aware of the risks inherent in the various strategies that are utilised by the manager. Whilst, capital preservation is of paramount importance, the managers seek to maximise the potential for absolute returns by combining a broad range of macro and tactical positions to create a portfolio of strategies that complement each other, chosen specifically to work well together in a wide array of economic outcomes. Absolute Return Bond Funds are not constrained to invest in sterling bonds and can invest in most of the global bond markets, seeking to benefit from favourable movements in interest rates and bond yields in the global bond markets and avoiding markets where rates are expected to rise. They implement a diversified set of strategies that can include country, currency and sector rotation strategies, yield curve positioning, asset allocation to government corporate or index linked bonds and duration management in an effort to generate performance. In general, there is extensive use of derivatives for investment and hedging purposes and positions are often taken in currencies in which the fund may, or may not, have bond holdings. The funds are generally, but not always, daily dealing, and for this reason the majority of the portfolio will usually be in readily realisable assets. Having the majority of their holdings in liquid instruments (including cash), means that managers are able to react quickly to changes in the financial outlook.
Current conditions	The yields on UK bonds are near to historic lows, reflecting the poor outlook for economic growth, the policy of Quantitative Easing (QE) and sovereign debt crisis in the Eurozone. Whilst the payments from gilts stay the same so long as there is no default, there will be a fall in capital values if yields rise. Many feel the current low level of gilt yields is unsustainable and when the economy recovers and the policy of QE comes to an end or there is a solution to the sovereign debt problems in the Eurozone, yields will increase as the government will still need to finance the on-going high budget deficit. Nevertheless, Japan is an example of how low government bond yields can persist for a prolonged period of time despite a high debt to GDP ratio. As the value of the Fund's liabilities is linked to gilt yields, the funding level will improve if gilt yields rise (all else being equal) and vice versa. This is because only a proportion of the Fund's assets are invested in gilts.
Impact of inflation	The returns on Absolute Return Bond Funds have a degree of correlation with the actual rate of UK inflation as the target return of these funds is LIBOR plus a margin. In a period of rising inflation, LIBOR rates will rise and, if the managers meet their return targets, this will provide a degree of inflation protection.

Conclusions for Absolute Return Bond Funds

In a rising interest rate environment, Absolute Return Bond Funds are an appropriate alternative to investment in corporate bonds or gilts because of the managers' primary objective of preserving capital. In the current environment, where interest rates are likely to rise over time, this asset class provides an attractive opportunity although as described above, they are not a long-term substitute for investment in gilts or corporate bonds because if yields fall, liability values will increase but the asset values are unlikely to rise in tandem.

Cash - liquid

Current conditions	The return on cash net of expenses is near zero and this situation seems likely to continue for some time. However, if the Bank of England successfully targets a CPI rate of inflation of 2%, most analysts suggest that a neutral level of Bank Base rates is between 4% and 5%. If the economy is growing, together with a rise in inflationary pressures, interest rates will rise towards the top of the range and visa versa. The long-term returns on growth assets are expected to be between 3% and 5% higher than that on cash, which we class as short dated Government Bonds.. Similarly the expected returns on non-government bond assets are also expected to produce a higher long-term than cash. Since, over the longer term, the expected returns on cash are lower than that available on most other asset classes, we believe that for most pension funds, cash holdings should only be held to meet outgoings or a more favourable investment opportunity. Against this background, it is essential that the cash holdings are readily realisable without penalty. Depending on the size of the cash holding, it may be appropriate to diversify any cash holding away from a deposit with a single bank in order to avoid the problems that some pensions experienced following the collapse of a number of AAA rated Icelandic banks. Many fund management groups offer cash funds that invest in short-dated money market instruments and can be traded on a daily basis at a low cost.
Impact of inflation	The returns on cash can have a degree of correlation with the actual rate of UK inflation over the longer term as, in a period of rising inflation, Bank Base rates will be increased and visa versa.

Conclusions for Cash

From time to time, the Fund may sell assets because of a strongly held view that the value of these assets was likely to fall significantly and, in uncertain times, when bond and equity prices are falling, cash can be a very appropriate asset for the Fund. However the expected returns are lower than that available on most other asset classes and, except to meet known outgoings, cash should be treated as a temporary holding whilst awaiting a more opportune time to invest in the financial markets. In particular, it should be noted that if bond yields fall, the return on cash will usually be reduced but there will be little, if any appreciation in capital values although the value of the liabilities will have increased.

However, cash should be included in a strategic benchmark to enable cash to be held tactically or to facilitate changes within a portfolio.

6 Summary of Asset Class Characteristics

Asset Class	B&H 10 year Forecast	JLT 10 year Forecast	Volatility	Inflation Hedge	Interest Hedge	ESG Risks to be Managed	Income Available	Liquid
Growth Assets								
Equities	5.3%	7.5%	17.5%	Partial	X	√	√	√√
Emerging Market Equities	7.3%	8.0%	29.9%	X	X	√	X	√
DGF	N/A	7.0%	10.0%	Partial	X	√	X	√
Commodities	1.9%	4.0%	20.9%	X	X	X	X	√√
Illiquid Assets								
Property	4.9%	7.0%	14.9%	√	X	√	√	X
Hedge Funds**	4.0%	6.0%	7.6%	X	Possible	√	X	X
Infrastructure	5.0%	6.0%	27.0%*	√	√	√	Possible	X
Private equity	7.3%	8.5%	38.3%	X	X	X	X	X
Stabilising Assets								
Gilts	2.0%	1.7%	4.9%	X	√	n/a	√	√√
Index-Linked Gilts	2.2%	2.4%	9.8%	√	X	n/a	√	√
Corporate Bonds	2.8%	2.7%	8.1%	X	√	X	√	√
Senior Secured Loans	NA	6.0%		Partial	√	X	X	X
High Yield Debt	3.1%	6.0%	14.4%	X	√	X	X	X
Emerging Market Debt	3.2% (USD) 3.2% (Local)	5.5% (USD) 6.0% (Local)	16.1% 10.5%	X	√	X	X	X
Absolute Return Bonds	NA	3.5%		Partial	√	X	X	√
LDI	NA	NA	NA	√	√	X	√	X
Cash		3.0%	0.7%	X	X	n/a	√	√√

* The volatility number shown relates to public listed infrastructure. For funds this volatility is expected to be significantly lower (in the order of 8.0%).
** The return numbers shown here are for Multi Strategy Funds rather than the Fund of Fund numbers shown within the main section.

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