Fixed income: the sleeping elephant
Scenarios for fixed income and strategies to help pension schemes avoid losses

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Following on from the credit crisis of 2007-2009 and the subsequent sovereign crisis, in some countries across the developed world interest rates and bond yields are now close to the lowest levels in recorded history.

Indeed, there is now a negative real or ‘inflation adjusted’ yield on cash and most government bonds\(^1\), meaning they yield less than the current rate of inflation. Similarly, traditionally ‘riskier’ corporate bond yields have fallen considerably, having been dragged down by lower government bond yields.

Drawing on the work of our Fixed Income Team, this paper looks at the impact on gilt and corporate bond returns of three scenarios - a return to ‘normal’, inflationary and deflation/depression. We find that the first two scenarios, a return to normal and inflation, are expected to be particularly unfavourable for government and corporate bonds and even in the third scenario, returns are predicted to be weak given the low base that yields are starting from.

Although traditional bond investments are expensive, pockets of better value may exist in the broader fixed income universe. A more unconstrained approach can potentially find and capitalise on these opportunities. We will discuss two such approaches in this paper, and how they might fit into a pension scheme’s investment strategy.

The starting point

Fixed income has traditionally been seen as a safe haven asset for investors. Indeed the historic volatility of gilts and credit has been below that of ‘growth’ assets such as equities. However investors should also take account of the starting point. If an asset is very expensive there is a greater chance of poor returns in the future. The chart below shows the yields on corporate bonds, an aggregate index and gilts as of April 2013, compared to historic values. The blue bars represent the range between the highest and lowest value for each index over the period December 1996 to April 2013.

Figure 1: Current yields (as of 26th April 2013) compared to historic ranges

Source: BoA Merrill Lynch Index monthly data using effective yield. Indices used are the BoA ML Sterling Corporate Bond Index (UR00), BoA ML UK Gilt Index (G0L0), BoA ML Sterling Broad Market Index (UK00), BoA ML Global EM Sovereign Index (IP00) and the BoA ML Global High Yield Index (HW00), as at 26th April 2013.

\(^1\)Source: Schroders, at 30 April 2013.
The chart clearly demonstrates the valuation risk inherent in these asset classes – a normalisation in yields has the potential to lead to very poor returns. Even if yields remain low, negative real yields mean that investors will lose money in inflation adjusted terms.

Three scenarios

Here, we consider three simplified scenarios for the UK economy and their potential impact on fixed income yields and returns. This draws on the work of Schroders’ Fixed Income Multi-Sector team.

Scenario 1: Return to Normal

- Monetary and fiscal initiatives take hold and steady economic growth returns
- The Bank of England raises interest rates to ‘normal’ levels
- Short-term interest rates return to 4\(^\%\)\(^2\), gilt yields rise to 5\(^\%\)\(^3\) and (investment grade) corporate bond yields rise to 6\(^\%\)\(^4\)

Scenario 2: Inflation

- Too much liquidity is injected into the economy/liquidity is not withdrawn quickly enough when economic growth returns
- Growth and inflation rise sharply
- The Bank of England raises interest rates sharply to counter inflation
- Short-term interest rates rise to 6\%, gilt yields rise to 6.5\% and corporate bond yields rise to 8\%

Scenario 3: Deflation/depression

- Recessionary forces overwhelm central bank efforts
- The world economy contracts
- Short-term interest rates fall to 0\%, gilt yields fall to 1\%, and corporate bond yields remain at around 4\%

The table below sets out projected five year annualised returns in each of these scenarios:

<table>
<thead>
<tr>
<th>Asset Class / Product</th>
<th>1) Return to Normal</th>
<th>2) Inflation</th>
<th>3) Deflation/Depression</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sterling Corporate Bonds</td>
<td>0.3%</td>
<td>-2.4%</td>
<td>2.7%</td>
</tr>
<tr>
<td>Sterling Aggregate Bonds</td>
<td>-2.7%</td>
<td>-5.8%</td>
<td>2.4%</td>
</tr>
<tr>
<td>UK Gilts</td>
<td>-3.7%</td>
<td>-6.7%</td>
<td>3.1%</td>
</tr>
</tbody>
</table>

Source: Schroders Fixed Income Multi Sector team forecast.

Data at 30 April 2013. Analysis not adjusted for the convexity of bonds.

Representative indices would be the BoA Merrill Lynch Sterling Corporate Bond Index, Sterling Broad Market Index and UK Gilt index.

The opinions stated in this report include some forecasted views. We believe that we are basing our expectations and beliefs on reasonable assumptions within the bounds of what we currently know. However, there is no guarantee that any forecasts or opinions will be realised.

\(^2\)Between 2000 and 2008 the Bank of England base rate ranged between 3.5\% and 6\%. The Taylor rule, which states that the equilibrium rate is equal to the trend rate of real economic growth + the Bank’s inflation target (currently 2\%), also provides a guide. With long term growth likely to remain sluggish, even in a normalised scenario, a figure towards the bottom of the historic range seems appropriate.

\(^3\)In an equilibrium scenario and the absence of quantitative easing, we might expect gilt yields to reflect the expected long term base rate, plus a margin to compensate investors for the risk of holding longer duration instruments compared to cash.

\(^4\)Prior to the credit crunch UK investment grade credit spreads were around 1\% for most of the decade.
In the **return to normal scenario**, investors take a more pro-risk stance, favouring assets such as equities over gilts and credit. Monetary easing is likely to be reduced or withdrawn in this scenario, which also alleviates downward pressure on yields. For credit, the higher ‘carry return’ from corporate bond yields partially compensates for the losses incurred when yields rise, however the total return is still likely to be modest.

The **inflation scenario** is particularly painful for gilt holders. Steps to counter inflation might include a sharp rise in the Bank of England (BoE) base rate or a rapid withdrawal of quantitative easing. Both of these are likely to lead to a rise in gilt yields. Even if the BoE is successful in controlling inflation, investors may require a higher inflation risk premium on gilt yields. Finally, investors may turn away from gilts in favour of assets such as equities that are more likely to participate in economic growth. All of these factors will have a detrimental impact on gilt returns. Corporate bonds also suffer in this scenario due to rising gilt yields (which tend to be closely correlated with yields on investment grade credit, especially when credit spreads are narrow).

In a **deflation/depression scenario** we would normally expect gilts to perform well – interest rates are anchored at close to zero, investors are more risk averse and inflation concerns abate/are replaced by deflation concerns. However, even in this scenario we expect gilt returns to be modest. With current 10 year gilt yields under 2% (at 26 April 2013), even a fall in yields to 1% produces modest gains when annualised over five years. We also expect corporate bond returns to be modest, as we would expect credit spreads to widen in this scenario as companies come under increased stress.

**Conclusions from scenario analysis**

The scenario analysis above illustrates the risk of losses in fixed income portfolios containing assets such as gilts and investment grade corporate bonds. Also, the extremely high price of these assets limits the upside available in more favourable scenarios. The bond bull market, which has been in place since the early 1980s, has driven yields to record lows. As, at least in theory, nominal yields are bounded at zero, there is a cap on how much further the bull market can run. As yields get closer to zero, the potential upside reduces, making traditional fixed income investments look poor value in risk adjusted terms.

While interest rates remain at these low levels for the foreseeable future, a beta (or ‘benchmark constrained’) approach is unlikely to generate strong returns. The global economy now has to rebalance. While developed markets must deleverage to reduce their growing debt levels, developing markets have to increase consumption. This global shift is going to create its own form of volatility; macro research and a wider opportunity set are essential to understand this change and capture the opportunities from it. Active alpha (or ‘unconstrained’), strategies allow managers the flexibility to invest away from traditional benchmarks and benefit from macro rebalancing in the environment. We describe two such approaches in the next section.

**A good environment for fixed income alpha?**

Prior to the credit crisis, market volatility was low meaning that active managers needed to take very large (and therefore risky) positions to generate excess returns. Fortunately, managers could ride the bond rally to generate strong absolute returns without necessarily taking excessively large bets in their portfolio. Post financial crisis the balance has changed. Bond markets (or ‘beta’) are generally expensive, meaning that active managers are much more reliant on their own skill (or ‘alpha’) to generate returns. Fortunately, the current elevated level of market volatility means that managers can take smaller positions to generate returns. This also makes it easier for managers to diversify their portfolios as they can spread their risk budget across a number of small positions.

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5This is broadly the interest rate an investor earns for lending money to a company or government. Carry is usually higher for investment grade corporate bonds compared to (most) developed government bonds to compensate for the higher perceived credit risk of companies.

6In our paper “Fixed Income Benchmarks: Time to think again?” (February 2013) we discuss some further weaknesses of traditional fixed income benchmarks. One particular drawback is that the composition of a fixed income index is partly determined by the volume of debt issuance. This can expose investors to higher than desired concentrations in certain markets (for example sovereign debt in a time of uncertainty about some governments’ creditworthiness).
Unconstrained approaches

Unconstrained approaches can be classified broadly into two types:

1) **Libor plus strategies**: These are measured against a neutral benchmark such as cash.

2) **Unconstrained benchmark strategies**: These are measured against a traditional benchmark, but give the fund manager a great deal of freedom to invest away from the benchmark.

In the first approach, returns will be generated though a combination of manager skill (alpha) and the return of the market in general (beta). In the second approach, the emphasis will be more on the manager’s skill. A Libor plus fund can also sit alongside a liability driven investment (LDI) strategy, which allows trustees to fine tune their liability matching, whilst running an independent fixed income strategy to generate returns and diversify their assets.

We set out some typical features of these approaches in the table below (and also compare them to a more traditional benchmark relative approach):

<table>
<thead>
<tr>
<th></th>
<th>Libor plus strategies</th>
<th>Unconstrained benchmark strategies</th>
<th>Benchmark driven strategies</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Return</strong></td>
<td>Seek to generate <strong>absolute returns</strong> through the exploitation of opportunities across a range of alpha sources</td>
<td>Seek to generate a <strong>total return</strong> through the exploitation of opportunities across a range of alpha sources</td>
<td>Often constrained in their ability to exploit one or a number of alpha sources</td>
</tr>
<tr>
<td><strong>Portfolio construction</strong></td>
<td>Underlying cash often invested in <strong>benchmark</strong> – i.e. cash-like assets (short dated bonds, floating rate notes, commercial paper, etc.)</td>
<td>Underlying cash invested in <strong>best ideas</strong> which may or may not include the benchmark</td>
<td>Underlying cash invested in <strong>benchmark like assets</strong> even where benchmark assets seen as unattractive</td>
</tr>
<tr>
<td><strong>Liquidity profile &amp; style of management</strong></td>
<td>Liquidity <strong>paramount</strong>. Underlying cash portfolio conservatively managed, alpha generated primarily through use of derivative instruments</td>
<td>Liquidity preference varies depending on where the portfolio invests. Greater usage of derivatives than benchmark relative strategies.</td>
<td>Liquidity preference varies but portfolio will typically contain less liquid securities partly because they are in benchmark. <strong>Lower alpha targets often involve limited use of derivatives</strong></td>
</tr>
<tr>
<td><strong>Investment management focus</strong></td>
<td><strong>Drawdown sensitivity high</strong>. Focus on generation of high Sharpe / Sortino ratio</td>
<td><strong>Drawdown sensitivity low</strong>. Focus on generation of high total return seeking to maximise Sharpe / Sortino ratio</td>
<td><strong>Drawdown sensitivity low</strong> in absolute terms but focus on generating a high information ratio</td>
</tr>
<tr>
<td><strong>Performance measurement period</strong></td>
<td>Performance measurement period typically <strong>1 year or less</strong></td>
<td>Performance measurement period typically <strong>3-5 years</strong></td>
<td>Performance measurement period typically rolling <strong>3 years</strong></td>
</tr>
</tbody>
</table>

Source: Schroders at May 2013

1A recent example might be tactically buying undervalued European financials in a ‘risk on’ trade, whilst selling the Australian Dollar as a partial hedge against worsening economic conditions.
Considerations for pension schemes

Long term expected returns: Expected returns are important inputs into pension schemes’ funding plans. They are also often used in the liability discount rate. Of the three strategies above, the unconstrained strategy is likely to have the highest expected return (assuming its target is achieved). The relative long term expected returns of the Libor plus and benchmark relative strategies will depend on the assumptions used for cash, government bonds and credit. Another consideration is the extent that alpha is allowed for in the pension scheme’s discount rate(s), which can vary from scheme to scheme.

Risk: Trustees’ risk tolerance will often be closely linked to their time horizon. Generally speaking, the shorter the time horizon, the less tolerant trustees will be to losses. Trustees’ time horizon may be short because they are nearing the end of their de-risking plan and looking to buy out their liabilities with an insurance company. They may also have a shortened time horizon if they are approaching a key valuation date where large losses might translate to higher contributions. Trustees may also be sensitive to short term volatility due to the sponsor’s or other stakeholders’ scrutiny of the funding position of the pension scheme.

Libor plus strategies tend to have a greater focus on short term risk management than unconstrained strategies. This is reflected in the shorter performance measurement period of Libor plus strategies. The broad market exposure in unconstrained strategies makes them more sensitive to falls in the general bond market than Libor plus strategies. However the unconstrained fund manager is free to allocate away from very expensive markets or markets that offer poor risk adjusted returns. This potentially makes unconstrained strategies less risky than benchmark relative strategies in an environment where most benchmark assets are very expensive. Broadly, this means that Libor plus strategies are more appropriate when the trustees’ time horizon is short/they are very sensitive to losses. Unconstrained strategies might be appropriate when the time horizon is more medium term. For some pension schemes, a blend of Libor plus and unconstrained strategies might be appropriate.

Liquidity: Liquidity is also linked to a pension scheme’s time horizon. The longer a scheme’s time horizon, the more able it is to invest in illiquid assets. Schemes with a longer term time horizon can also potentially earn an illiquidity premium from holding less liquid assets. Libor plus strategies are typically more liquid than unconstrained strategies.

Liability matching: Historically pension schemes have often held bonds to partially offset increases in the pension scheme’s liabilities due to falling real or nominal long-term interest rates. Actuaries of UK defined benefit pension schemes will usually use gilt yields in the discount rate for funding valuations (plus a margin for asset outperformance) and buy-out/solvency calculations. Investment grade corporate bond yields will usually be used for accounting valuations. This means that benchmark relative strategies will be the closest match to a pension scheme’s liabilities.

Unconstrained strategies will have duration, i.e. they will be sensitive to falling interest rates. However this may not be UK duration. The duration will also vary much more over time than the duration of a benchmark relative strategy. Therefore, unconstrained strategies provide a lesser hedge than benchmark relative strategies. The duration in Libor plus strategies will vary the most, as duration is only one of the tools available to the fund manager. At some points the duration may be close to zero, or even slightly negative.

From a liability matching perspective the most appealing strategy will depend on:

- The trustees’ views and risk tolerance: The funding position of most schemes is usually very sensitive to falling long term interest rates. Before reducing the duration of their bond portfolio, trustees should consider the likelihood of a further fall in interest rates and their scheme’s ability to tolerate the funding losses that would follow.

- The duration of their existing strategy: For example, replacing a small allocation in a short duration benchmark relative fund with an allocation to an unconstrained fund is unlikely to have a material impact on overall liability risk exposure.
Whether other strategies might be used to control liability risk: Liability Driven Investment (LDI) strategies can be used by trustees to control their pension scheme’s exposure to rising or falling interest rates. LDI allows schemes to fine tune the amount of duration in their strategy to a greater extent than physical bonds. LDI also allows trustees to choose which liability risks to protect against. For example inflation risk can be hedged in isolation. Furthermore, as LDI strategies require only a small allocation to physical assets, they can sit alongside an unconstrained fixed income strategy. This allows trustees to separate out their liability matching strategy (predominantly a risk management strategy) from their fixed income strategy (which becomes primarily a return generating/diversification strategy). This is illustrated below. The strategy on the right is a traditional fixed income strategy. In the strategy on the left we have replaced the benchmark relative fund with a Libor plus strategy and an allocation to cash, which supports the LDI strategy.

**Figure 2: Using an unconstrained bond fund alongside an LDI strategy**

**Summary**

In this paper we have described two plausible economic scenarios which we expect to be unfavourable for investments found in a traditional fixed income benchmark. In particular, a return to more substantial economic growth and/or rising inflation is likely to lead to losses in these asset classes.

Fixed income has enjoyed a multi-decade bull market that has driven yields to record lows. Therefore, the potential for upside is limited, even in weaker economic environments.

The current market is difficult for passive or benchmark relative strategies. However, it is potentially more favourable for unconstrained approaches. Unconstrained managers are freer to exploit market volatility and the opportunities presented by the rebalancing of the global economy.

These unconstrained fixed income approaches also combine well with explicit liability matching strategies.

*If you would like to discuss any of the topics raised in this paper please contact your Client Director or a member of the UK Strategic Solutions team.*

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