The Age of Peak LDI
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Alex Darsley, Hymans Robertson
Paul Fulcher, Nomura International plc

Summary

• LDI has been a dominant investment trend for 15-20 years
• Global yields have dropped dramatically over this time
• But UK real yields have fallen further than most
• Buying of LDI by UK schemes will slow significantly by 2021
• What could this mean for yields and for pension schemes?
A brief history of LDI

John Watson, Chairman of the Trustees, comments:

‘Through careful transition management we have been able to sell equities and buy long-dated AAA sovereign bonds, including 25% inflation-linked, from such issuers as The World Bank and European Investment Bank.

The bonds have virtually no credit risk and are the closest possible match for the Scheme’s pension liabilities’.

‘The Boots Company supported the move as it significantly reduces its financial risk and fixes its pension contributions.’

Changing zeitgeist …
The age of unrewarded risk – the LDI “consensus”

- End goal: self-sufficiency or buyout
- Gilt+/swap+ based discounting
- Deficit is an unsecured corporate loan
- Explicitly rate/inflation sensitive assets to match funded liabilities
- Rate/inflation risk is unrewarded – in absence of views

Source: Hymans Robertson
Global real yields … 450bps fall in last 30y

Chart A1: Real rates in advanced economies

Staff Working Paper No. 571
Secular drivers of the global real interest rate
Lukasz Rachel and Thomas D Smith

Why are yields so low – a global perspective

1. Real GDP growth <> an indicator for where real yields might end up.

2. The central expectation is for modest yield rises (<1%).

3. Demographics could act either way

4. There is a great deal of uncertainty around the central expectation

Which of itself makes a strong case for LDI to reduce risk …

… in the absence of a directional view
Yield curve theories: Preferred Habitat

- Pure expectations
- Liquidity preference
- Market segmentation
- Preferred habitat

UK focus
UK focus: Composition of gilt market

Composition of gilt market – another perspective …
Real yields – UK vs. US

Source: Bloomberg and Nomura

Forward UK nominal & real yields

Source: Bloomberg and Nomura
Inflation spreads – UK vs US

Forward real yields

Source: Bloomberg and Nomura
Peak LDI

When will we hit Peak LDI?

1. How much hedging has already been done?
2. How quickly are schemes increasing hedging levels?
3. When will schemes slow down their hedging?
4. How sensitive is the result to our assumptions?

Some key figures

- Total liabilities: £2.1tn (gilts basis)
- Total assets: £1.5tn
- UK private sector DB schemes, 31 March 2017

Break this down into four questions
How much is already hedged?

55% of gilt liabilities hedged equates to c£1.2tn

How quickly are schemes hedging?

<table>
<thead>
<tr>
<th>Year to 31 March</th>
<th>Net purchases = FI govt bonds (£bn)</th>
<th>Net purchases = IL bonds (£bn)</th>
<th>Total net purchases (£bn)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2014</td>
<td>4</td>
<td>10</td>
<td>14</td>
</tr>
<tr>
<td>2015</td>
<td>7</td>
<td>11</td>
<td>18</td>
</tr>
<tr>
<td>2016</td>
<td>20</td>
<td>41</td>
<td>61</td>
</tr>
<tr>
<td>2017</td>
<td>38</td>
<td>9</td>
<td>47</td>
</tr>
</tbody>
</table>

Source: PPF (2017) approximately adjusted for year on year changes due to market movements by author calculations

Notional exposure is roughly double physical exposure for UK schemes in aggregate

Schemes added c£100bn pa of exposure over past two years
Results of modelling

![Graph showing the results of modelling with key assumptions and other assumptions listed.]

**Key assumptions**
- Starting hedging exposure: 55% of gilts liabilities
- Rate of adding hedging: £100bn per year

**Other assumptions**
- Asset return: Gilt + 2.5% on growth assets
- Future accrual: £22bn new liabilities in year 1
- All schemes closed within 14 years
- Deficit reduction contributions: £24bn in year 1
- Transfer values: £20bn in year 1

Next few years – in detail

![Graph showing the next few years in detail with key assumptions and other assumptions listed.]

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Next few years – in detail

Assume hedging exposure never goes above asset value

"Peak LDI" is reached around 2021

Summary – in simple terms

- £1.2tn hedging already in place
- £0.1tn of hedging being added each year
- Assume schemes won't hedge materially above assets of £1.5tn
- So will hit peak LDI by 2021 at the latest

Peak LDI means a dramatic slowing in the rate of hedging
### How robust is our result?

<table>
<thead>
<tr>
<th>Assumption</th>
<th>Change</th>
<th>Peak LDI year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate of adding hedging</td>
<td>Decreased from £100bn pa to £50bn pa</td>
<td>2026</td>
</tr>
<tr>
<td>Starting hedging exposure</td>
<td>Decreased from 55% to 50% of gilt liabilities</td>
<td>2022</td>
</tr>
<tr>
<td>Deficit contributions</td>
<td>Deficits paid off in four years rather than 24</td>
<td>2022</td>
</tr>
<tr>
<td>Ongoing accrual</td>
<td>Accrual ceases completely after three years rather than 14</td>
<td>2021 (no change)</td>
</tr>
<tr>
<td>Transfer values</td>
<td>Making no allowance for any transfer values to be paid</td>
<td>2021 (no change)</td>
</tr>
<tr>
<td>Growth asset outperformance relative to gilts</td>
<td>Doubling (halving) the asset outperformance</td>
<td>2022 (2020)</td>
</tr>
<tr>
<td>Interest rate shock</td>
<td>+/- 50bps pa at all durations, with nil assumed impact on ‘growth’ asset values</td>
<td>2021 (no change)</td>
</tr>
</tbody>
</table>

Very few scenarios that push the peak out meaningfully

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### Implications
Implications for pension schemes

Global yields
- Allowance in funding?
- Contingency plans?
- Flexibility on target or timescales?
- IRM
- Hedging rates or hedging inflation?
- Reducing risk or seeking return?
- What other assets might you hold?
- Brexit
- DMO
- QE

At the margin, reduce attractiveness of hedging

Questions

Comments

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