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## The Age of Peak LDI

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Download report at <http://hymans.co/peakLDI>  
or <http://www.nomuraconnects.com/focused-thinking-posts/the-age-of-peak-ldi/>

### 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?



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# A brief history of LDI

30 May 2018

## Changing zeitgeist ...

The Investment Co  
Ordinary Stocks and Shar  
the proportion so invest  
through to its logical c  
Equities.

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.'

HYMANS + ROBERTSON

NOMURA  
Connecting worldwide & local

## The Age of Peak LDI

April 2018

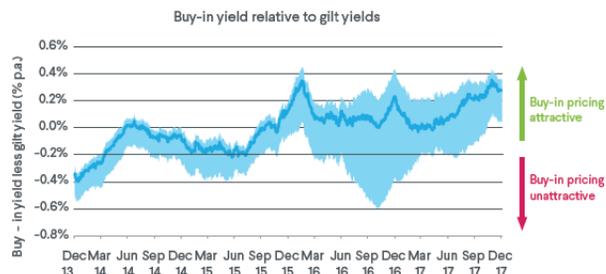


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## The age of unrewarded risk – the LDI “consensus”

- 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

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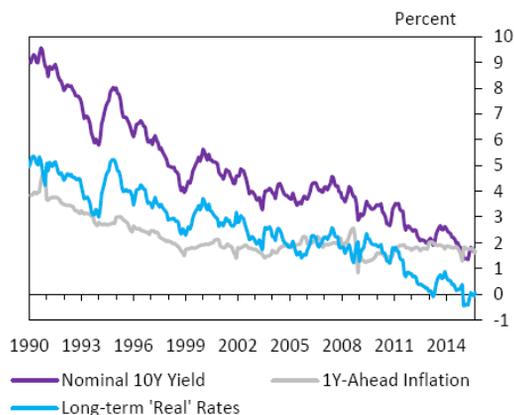
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## Global real yields

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## Global real yields ... 450bps fall in last 30y

Chart A1: Real rates in advanced economies



Source: Bank of England



### Staff Working Paper No. 571 Secular drivers of the global real interest rate

Lukasz Rachel and Thomas D Smith

Sources: IMF, DataStream, Consensus Economics & Authors' calculations

Notes: Purple line shows the GDP-Weighted average of 10-year sovereign yields for 20 advanced economies (G7, Australia, Austria, Belgium, Denmark, Finland, Ireland, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland). Grey line uses 1-year ahead inflation expectations from Consensus Economics as a proxy for 10-year inflation expectations for each country (again GDP-weighted together). The blue line simply shows the difference – so this measure of real rates does not take account of changes in risk premia.



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## 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



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## Yield curve theories: Preferred Habitat



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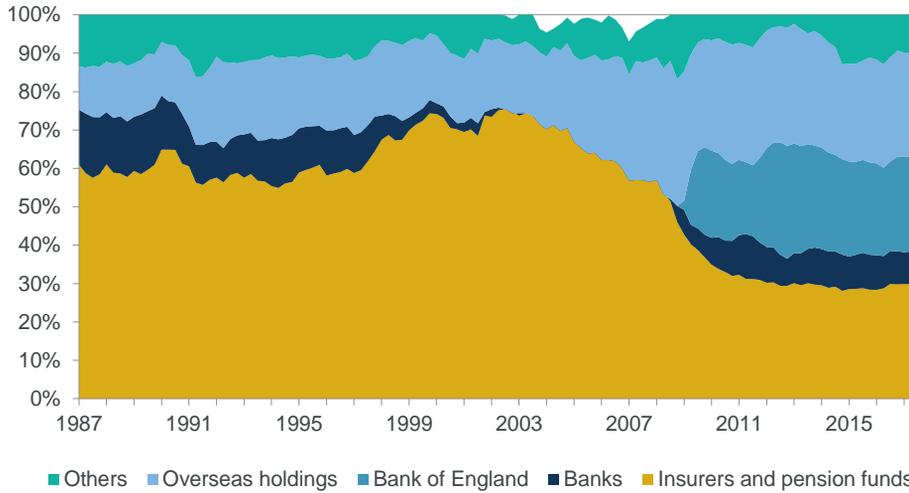


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## UK focus

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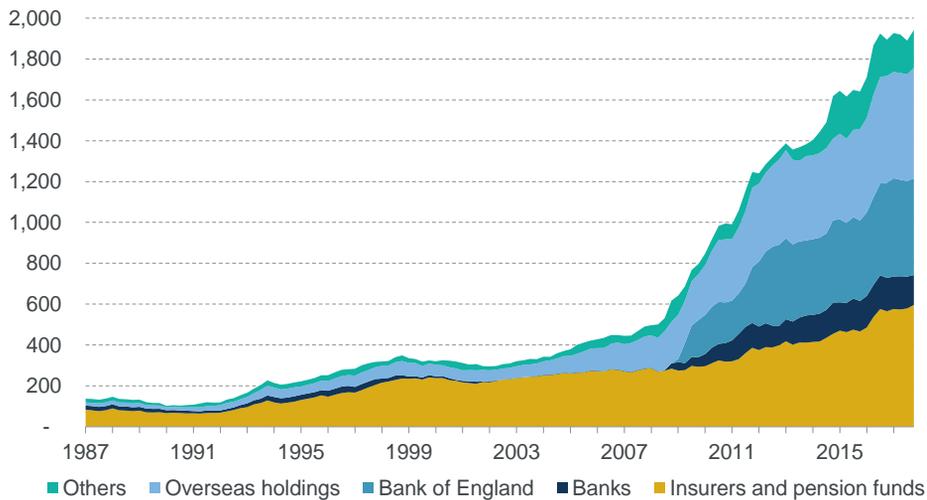
## UK focus: Composition of gilt market



Source: DMO

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## Composition of gilt market – another perspective ...



Source: DMO

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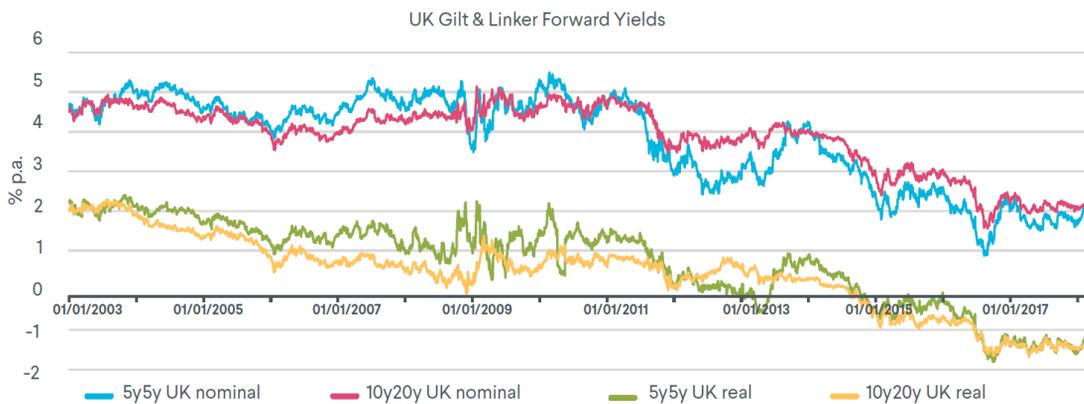
## Real yields – UK vs. US



Source: Bloomberg and Nomura

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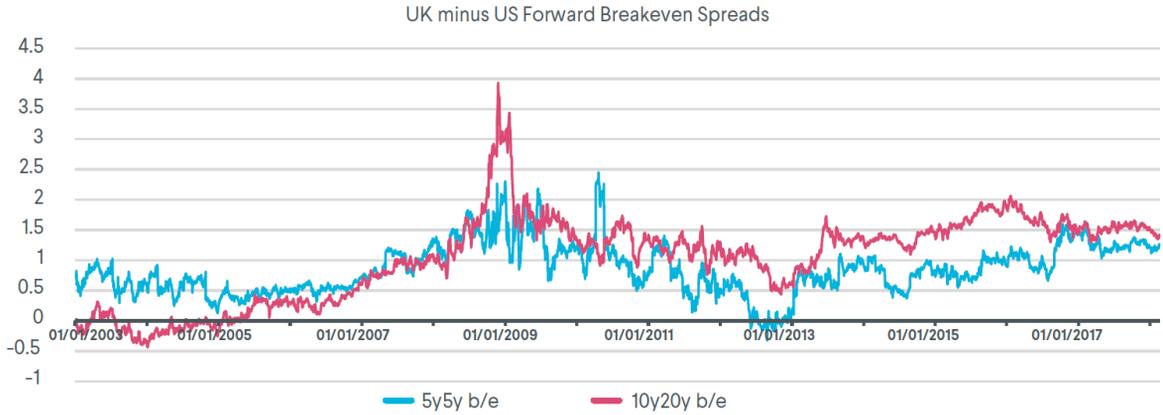
## Forward UK nominal & real yields



Source: Bloomberg and Nomura

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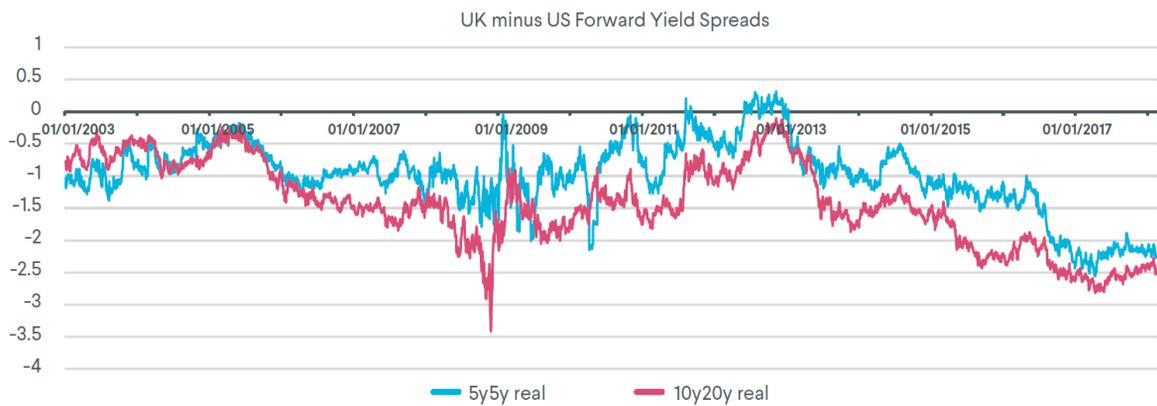
## Inflation spreads – UK vs US



Source: Bloomberg and Nomura

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## Forward real yields



Source: Bloomberg and Nomura

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## Peak LDI

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### 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**

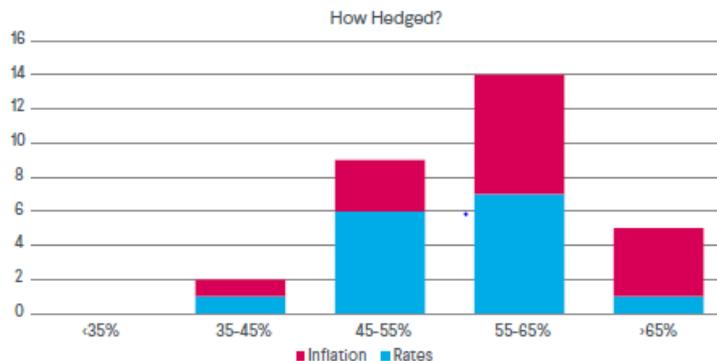
*UK private sector DB  
schemes,  
31 March 2017*

Break this down into four questions



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## How much is already hedged?



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



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## How quickly are schemes hedging?

Year to 31 March	Net purchases – FI gov't bonds (£bn)	Net purchases – IL bonds (£bn)	Total net purchases (£bn)
2014	4	10	14
2015	7	11	18
2016	20	41	61
2017	38	9	47

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

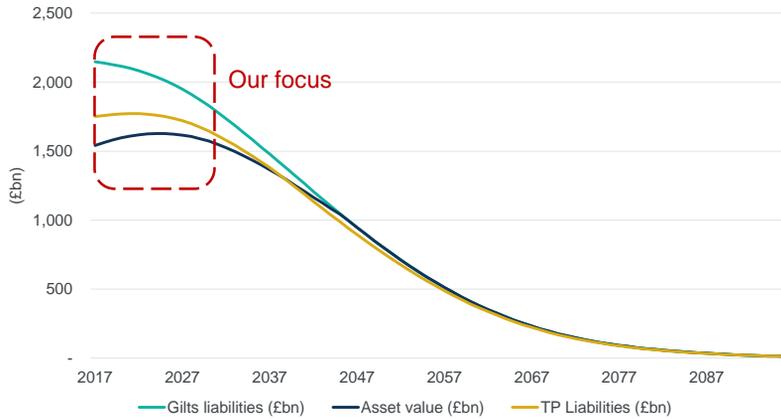
Schemes added c£100bn pa of exposure over past two years



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## Results of modelling



### Key assumptions

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

### Other assumptions

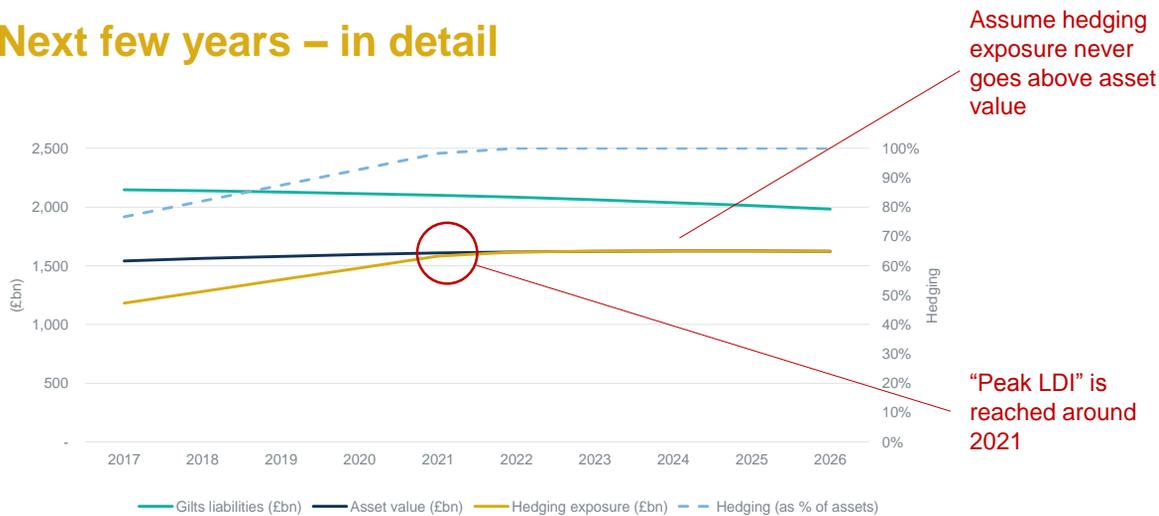
Asset return **Gilts + 2.5% on growth assets**  
**£22bn new liabilities in year 1**  
 Future accrual **All schemes closed within 14 years**  
 Deficit Reduction contributions **£24bn in year 1**  
 Transfer values **£20bn in year 1**



## Next few years – in detail



## Next few years – in detail



## 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?

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

**Very few scenarios that push the peak out meaningfully**



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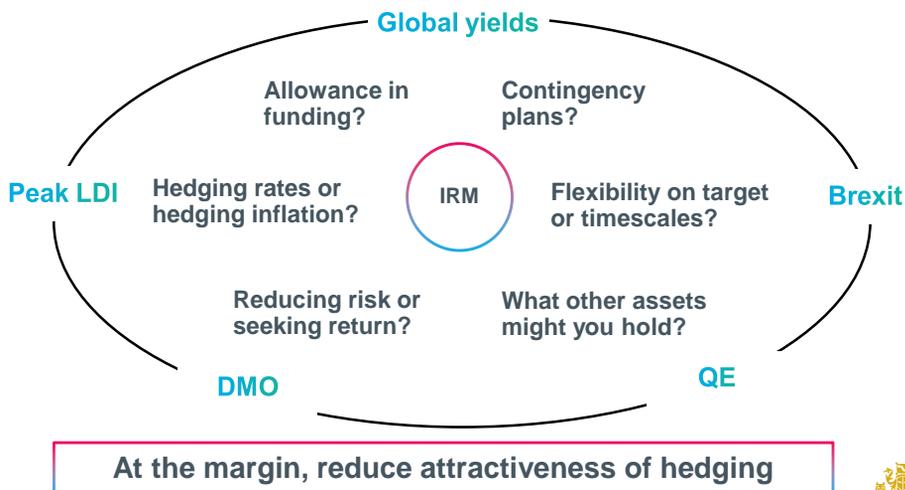


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## Implications

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## Implications for pension schemes



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Questions

Comments

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