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Bond yields Working Party

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31 March 2015

Agenda

- Our remit
- Are rates too low?
- Historic Analysis
- Potential future impacts on interest rates
- Reaction of Pension Schemes to changes in Interest Rates
- Open Discussion

Bond Yields Working Group

- The members of the Working Group are:
  - Daniel Banks, P-Solve
  - Anup Dodhia, Aon Hewitt
  - Gerald Forrester
  - Nick Hatherley, Aon Hewitt
  - William Weir, Towers Watson
  - Guy Whitby-Smith, RBS

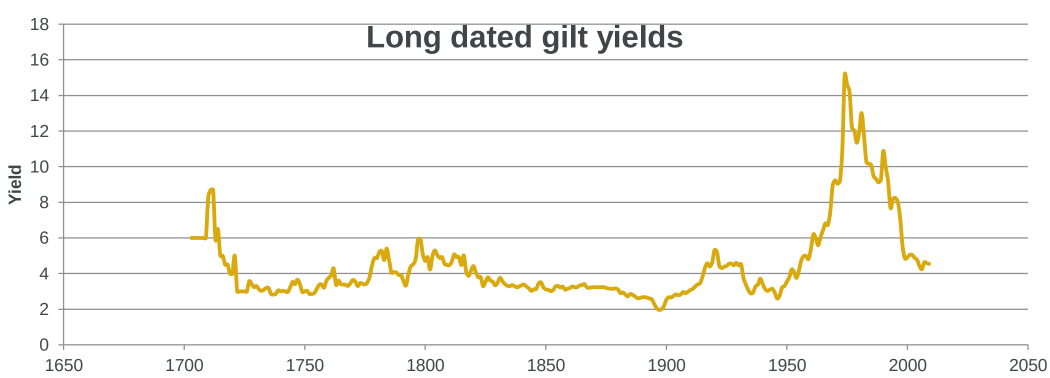
Our remit

- Working party was set up by the Pensions Research Sub-Committee Institute and Faculty of Actuaries
- To consider the current level of bond yields…
- …and a number of questions around this.
- The working party outlined this remit further to consider:
  - What had been the historical effects on interest rates
  - Some potential scenarios for future interest rates
  - And the possible reaction of pension schemes to these changes.
- **This talk today is to feed back some of our research and conclusions and to receive your views.**

Interest Rates are too low…

Source: Bank of England

Or are they…



Source: Bank of England

- Should the question be – What is a fundamental long term rate that is reasonable for the economy?

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Historic Effects on rates

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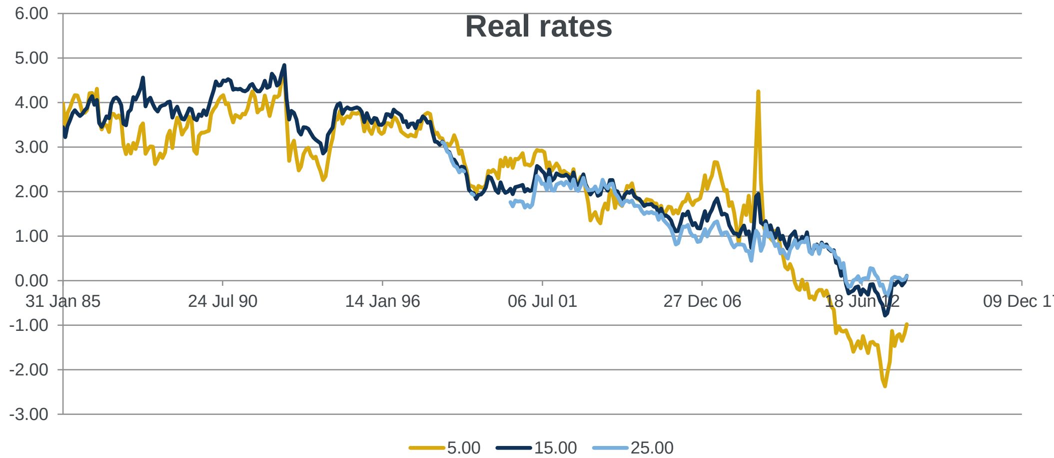
The Key Players

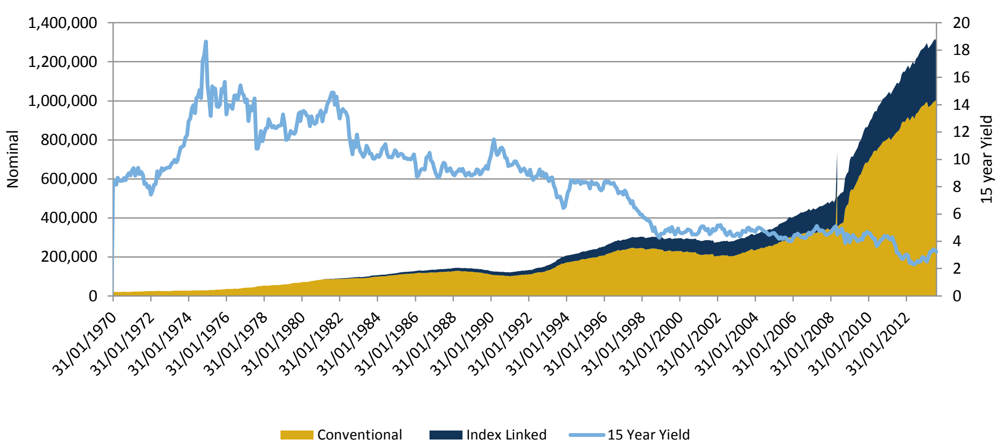
- Buyers
  - BoE
  - Banks
  - Insurance Companies
  - Pension Schemes
  - Overseas Investors
  - Other Financial Institutions
- Sellers
  - UK Government

But first - Inflation



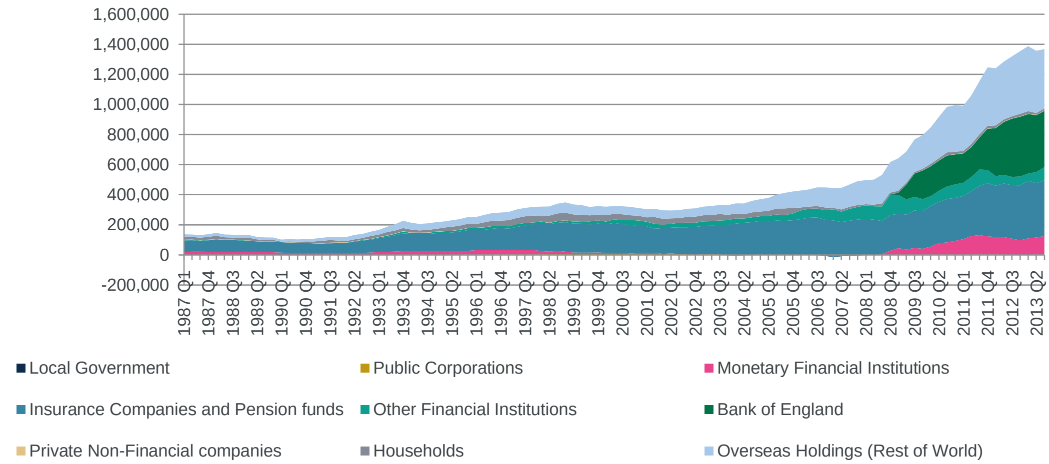
Source: Bank of England

The seller – Government Issuance



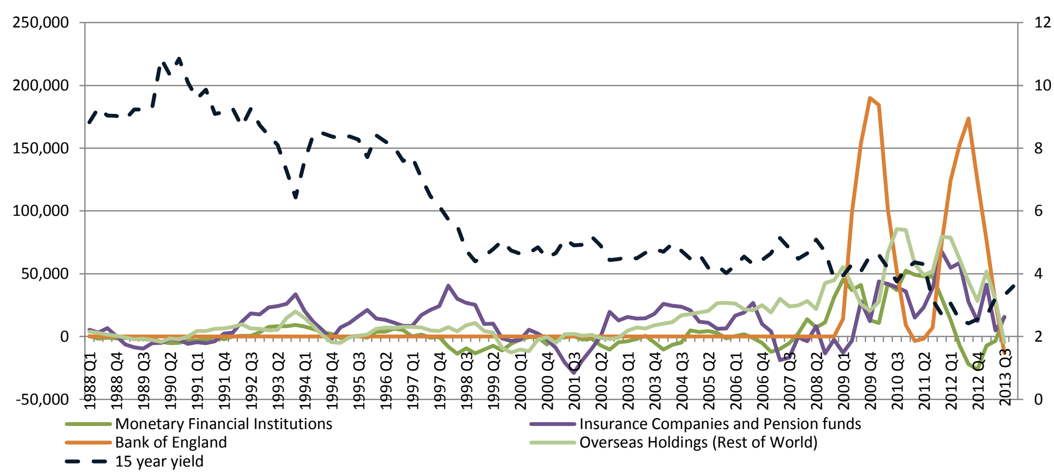
Source: Bank of England, Debt Management Office

And the buyers



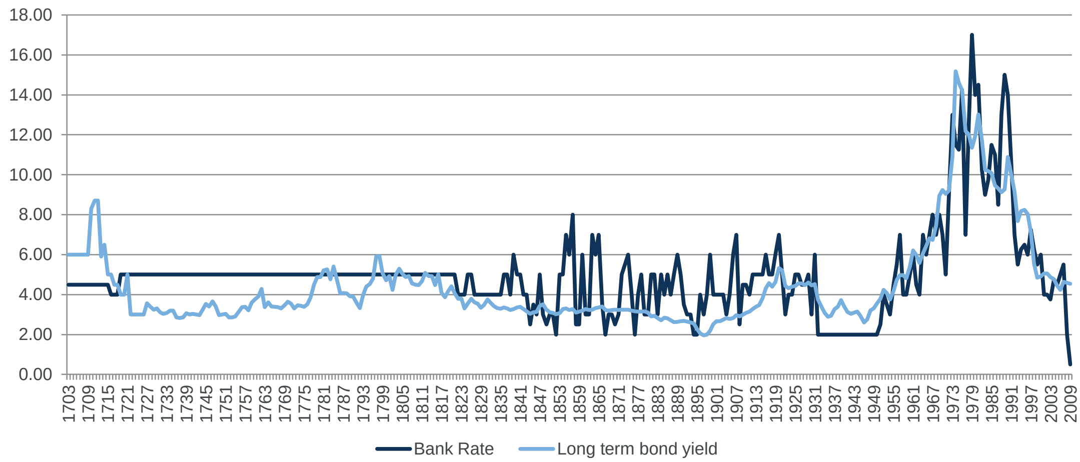
Source: Debt Management Office

Or the rate of change of buyers



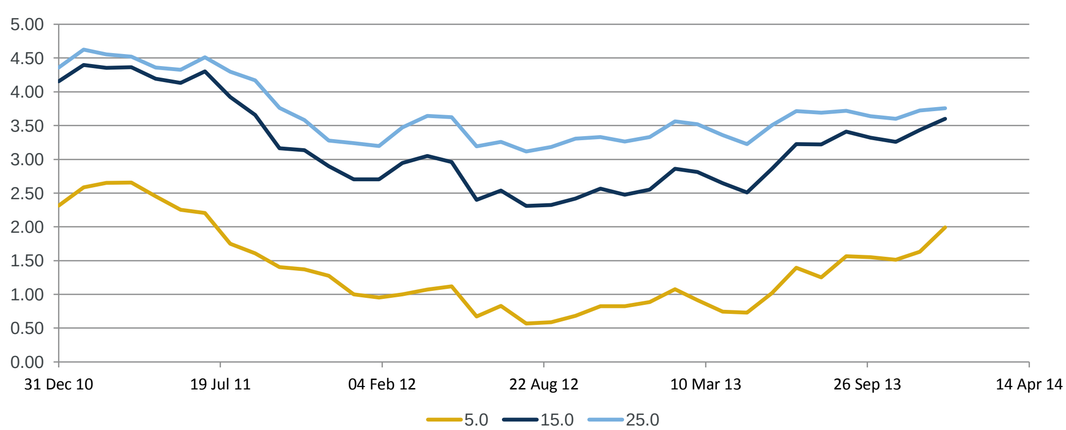
Source: Bank of England, Debt Management Office

Central Banks – Base Rate



Source: Bank of England

Buyers – Flight to Safety



Source: Debt Management Office

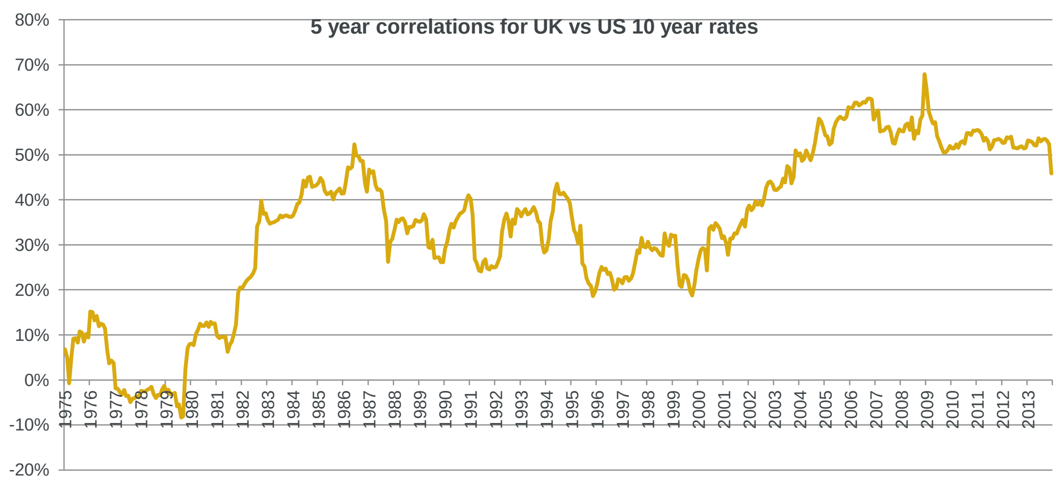
Regulation

1995
MFR

2004
Pensions
Act

Now
Solvency II
Basel III
DC Regulations

Buyers - Substitution



Source: Bank of England, US Federal Reserve

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Potential future impact on interest rates

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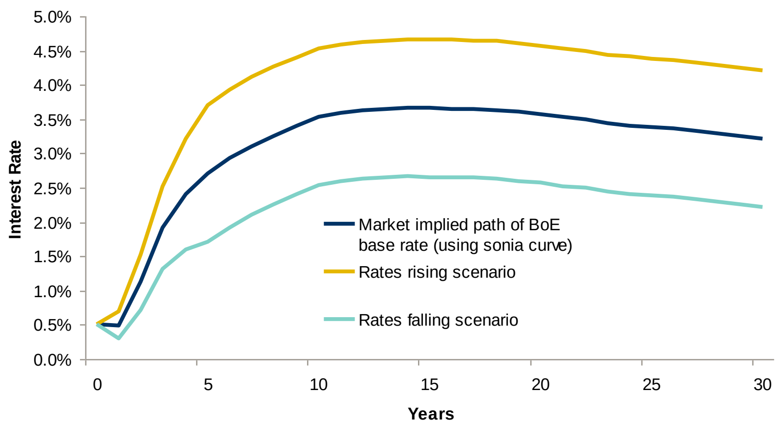
Potential Scenarios

- Consider three broad scenarios
  - **Base case –** Interest rates follow forwards
  - **Positive rates scenario –** Interest rise faster and further than expected
  - **Negative rates scenario –** Interest rise slower and by less than expected

Potential Scenarios



Potential Scenarios

- **Base case:** Continuation of modest global recovery/Slowdown in the BRIC economies
- **Positive scenario:** Sustained global economic recovery
- **Negative scenario:** Global economic weakness, perhaps caused by flair up in Eurozone

Potential Scenarios – Base Case

- **Overview:** This will drag on economic growth in the UK as well as reduce inflationary pressures. The combination of these is may lead to a continuation of low interest rate policy, with any interest rate rises being cautious
- **Short interest rates:** Very gradual move away from near zero interest rate policy
- **Long interest rates:** With low inflation and slow pace of rate rises, long term rates may only rise slowly
- **Realised inflation:** Weak global economy will keep commodity prices down and relative strength of UK economy should keep pound strong. Inflation may be low.
- **Long term inflation expectations:** Should fall, although ultra loose monetary policy may stoke long term inflation worries so fall may be modest
- **Equity markets:** Modest equity market performance, the benefit from low rates and modest economic growth

Potential Scenarios – Positive Scenario

- **Overview:** Interest rates will start to rise and BOE may consider selling off some/all of QE bonds. This is may coincide with lower fiscal deficits and hence lower government borrowing, which may partially offset QE unwind.
- **Short interest rates:** Interest rates start to rise. Due to the high levels of debt in economy BOE may do this gradually to give time to access the impact
- **Long interest rates:** While market already pricing in rate rise from 2015, expect long rates to rise once this becomes a reality as will change lower for longer sentiment.
- **Realised inflation:** May start to see re-emergence of wage inflation leading to higher levels of domestic inflation combined with global inflation strengthening as recovery takes hold.
- **Long term inflation expectations:** Depends on the balance between rate rises and inflation.
- **Equity markets:** Positive for equity markets

Potential Scenarios – Negative Scenario

- **Overview:** EU is the UK's biggest trading partner so any worsening of Eurozone crisis may have negative effect on economy and UK financial system. BoE may respond with measures to weaken pound and boast economy, e.g. QE or strengthening forward guidance
- **Short interest rates:** Continuation of near zero interest rate policy
- **Long interest rates:** If inflation is subdued then risk of more QE. Long term rates may stay at historically low levels
- **Realised inflation:** Pound may strengthen relative to the Euro and weak wage growth should keep inflation low
- **Long term inflation expectations:** Should fall, although ultra loose monetary policy may stoke long term inflation worries so fall may be modest
- **Equity markets:** Negative for equity markets

Impact on Pension Scheme Funding Level

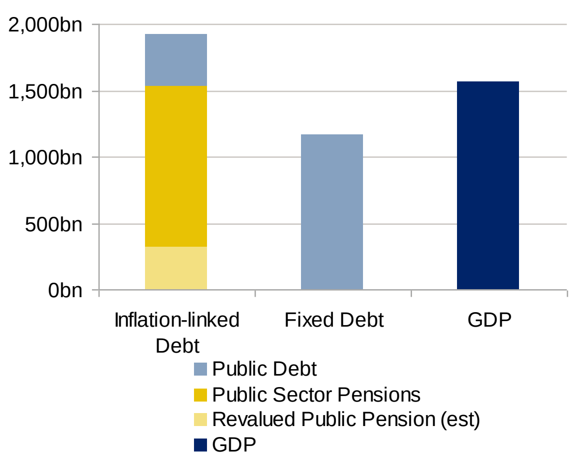
- Considered a typical DB pension scheme:
  - 80% Funding Level
  - 18y liability duration, 75% inflation linked
  - Closed to new accrual and not allowing for additional contributions
  - Hedge ratio expressed on a funding level basis and relative to liabilities
  - Considering changes in gilt yields in isolation

	Change in Funding Level		
Interest rate scenario	25% Hedge Ratio	50% Hedge Ratio	75% Hedge Ratio
1 Follow forwards	0%	0%	0%
2 Rising 1% more than expected	10%	6%	3%
3 Rising 1% less than expected	-10%	-7%	-4%

Impact on Bond Holdings

- In relation to current bond holdings, consideration needs to be given as to whether the bonds will be:
  - Held to maturity
  - Regularly traded to maintain the duration of the bond portfolio linked match an index
  - Regularly traded to maintain the duration of the bond portfolio linked match an liability duration

Inflating away National Debt



Here we compare the inflation linked obligations of the UK to the size of the economy. We consider the following:

- Market Value of Public Debt*
- Accounting value of Public Sector Pensions**
- Revalued Public Sector Pension (estimate)
- Nominal UK GDP

*Bloomberg, **Fiscal Sustainability Report July 2013

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Likely reaction and behaviours of pension scheme to changes in gilt yields

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Likely reaction and behaviours of pension scheme – Positive rates scenario

- Improved governance so that schemes can act quickly to improvements
- Accelerated triggers on flight paths
- Increased level of hedging of risk
- Increased buy-in/buy-out activity
- Increase focus on end destinations asset portfolio
- Concerns form employers about trapped surplus
- Lack of capacity in buy-out market may lead to innovations such as synthetic annuities

Likely reaction and behaviours of pension scheme – Negative rates scenario

- Accelerated closure of pension schemes to new entrants and accrual
- Increase in number of schemes entering PPF
- Small minority of schemes may re-risk to make good deficit
- Increase in length of recovery plans

Likely reaction and behaviours of DC pension scheme to changes in gilt yields

- Asset allocation less sensitive to market levels pre-retirement
- Will impact attractiveness on annuitisation
- Following March budget pensioners have more discretion so rate of annuitisation likely to be more highly correlated with interest rates in future

Questions

Comments

Expressions of individual views by members of the Institute and Faculty of Actuaries and its staff are encouraged.

The views expressed in this presentation are those of the presenters.