Lecture 6:
The New Art of Central Banking.

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Outline of Arguments

- Monetary policy turned out to be constrained at the zero lower bound leading to rediscovery of the importance of open market operations
- Fiscal policy helped aggregate demand but also to recapitalise banks i.e. fiscal 'backstop' s.t. borrowing constraints
- Banks are maturity transformers and have insufficient liquidity/capital in the event of risk aversion and may require control via macro-prudential instruments
- Balance sheet operations expand the size and composition of the central bank balance sheet and reduce the duration of financial markets' bond holdings and increase liquidity
- Involve the issuance of short term debt-fiscal instruments (interest rate bearing reserves or T-Bills)
- Monetary-fiscal operations hedge liquidity risk but in the presence of significant sovereign risk - not clear whether operations involve some signalling about path of short rates -
- **Question: what will the new policy nexus look like?**

The Art of Central Banking

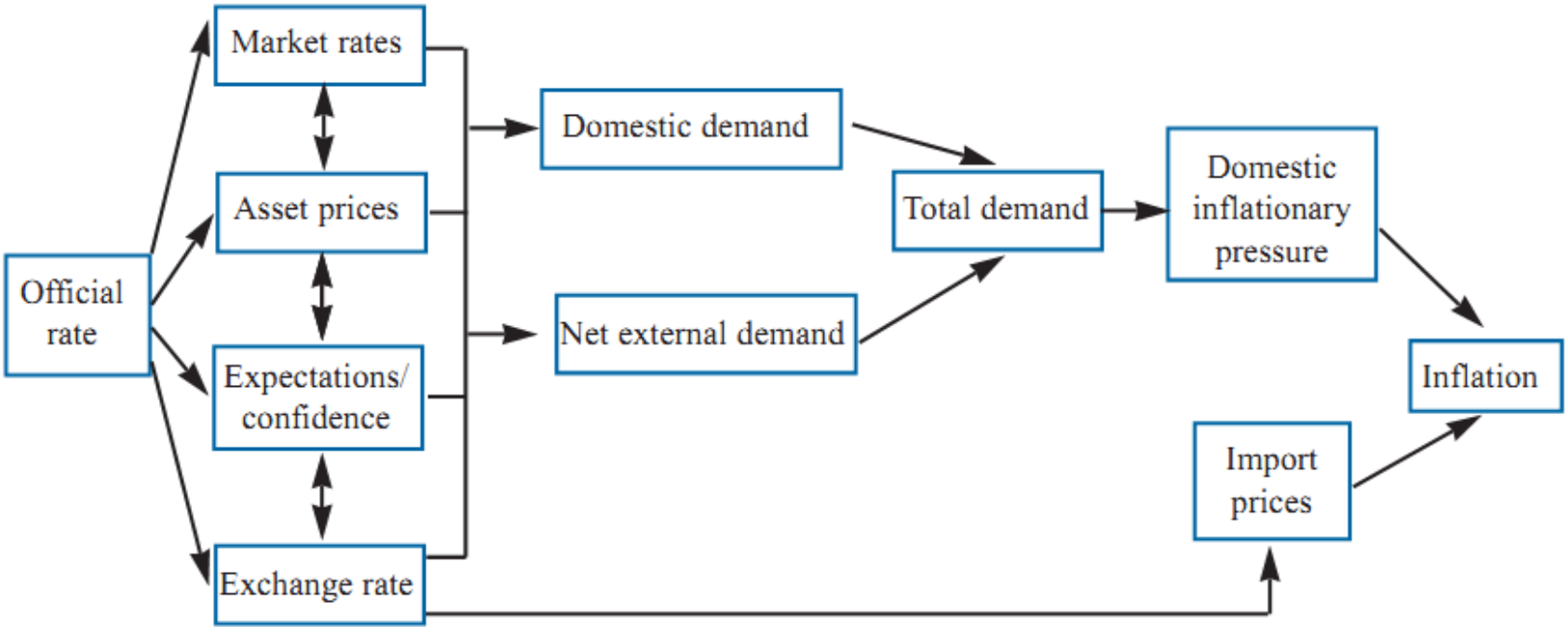
"[T]he result has been not merely that the world has been insufficiently prepared to deal with the new problems of Central Banking which have arisen in the years since the War, but that it has failed even to attain the standard of wisdom and foresight that prevailed in the nineteenth century."

"Moreover, they should endeavour to adapt their measures of credit regulation, as far as their domestic position permits, to any tendency towards an undue change in the state of general business activity. An expansion of general business activity of a kind which clearly cannot be permanently maintained should lead Central Banks to introduce a bias towards credit restriction into the credit policy which they think fit to adopt, having regard to internal conditions in their own countries. On the other hand, an undue decline in general business activity in the world at large should lead them to introduce a bias towards relaxation. " In pursuing such a policy the Central Banks will have done what is in their power to reduce fluctuations in business activity..."

R. G. Hawtrey (1934).

The Traditional Monetary Policy Transmission Mechanism

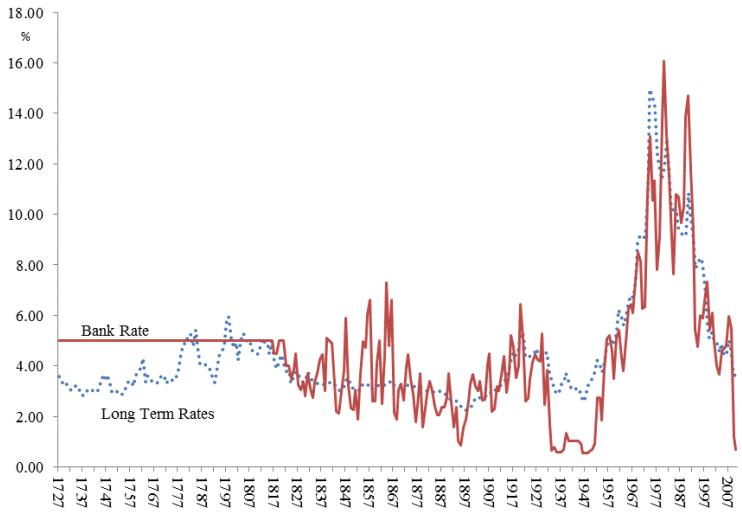
The transmission mechanism of monetary policy

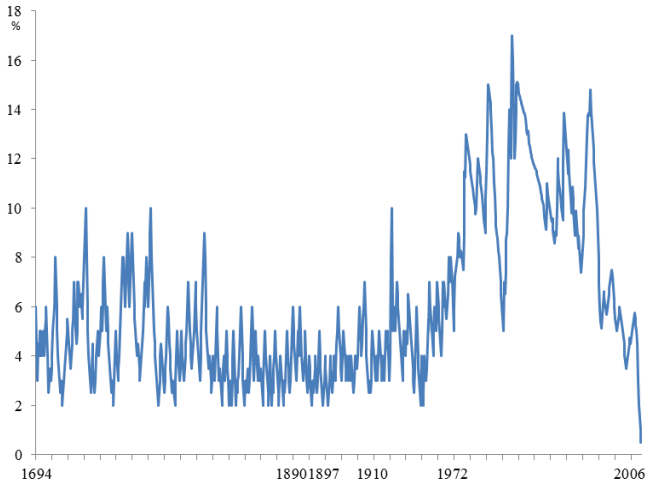


Note: For simplicity, this figure does not show all interactions between variables, but these can be important.

- Source: MPC 1999 report to the Treasury Committee
- Not a lot about banks or money - key element of the MTM.

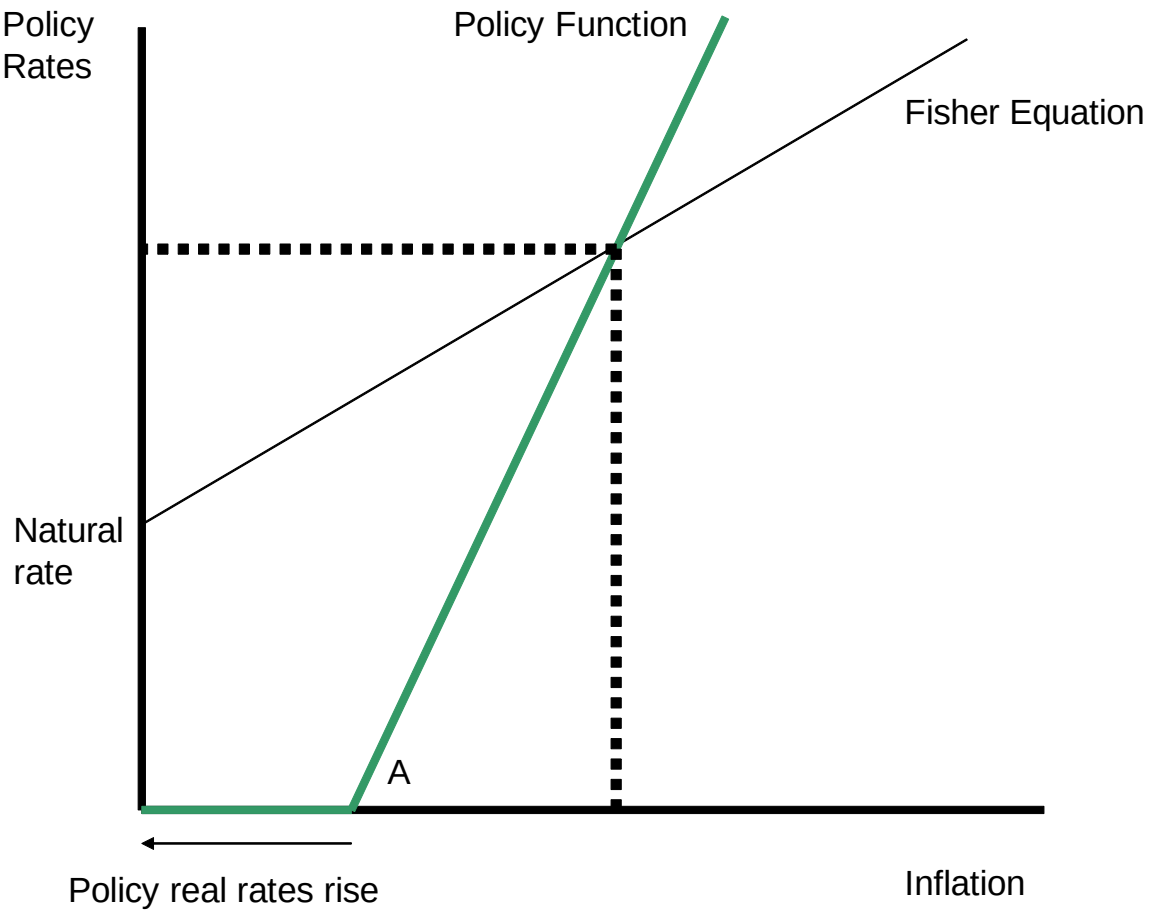
Bank Rate





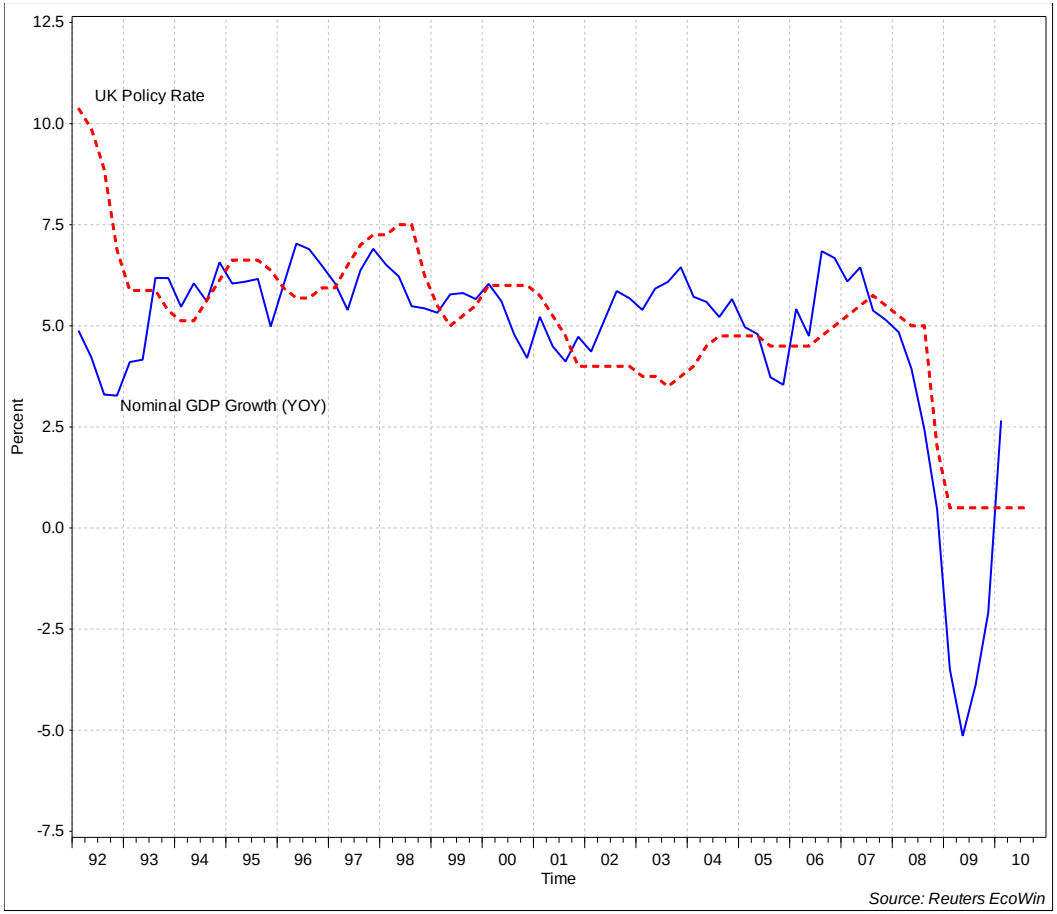
- Increase in policy activity over time, until 2009!
- Long Rate is genrally moving average of expected short

Simple Monetary Policy



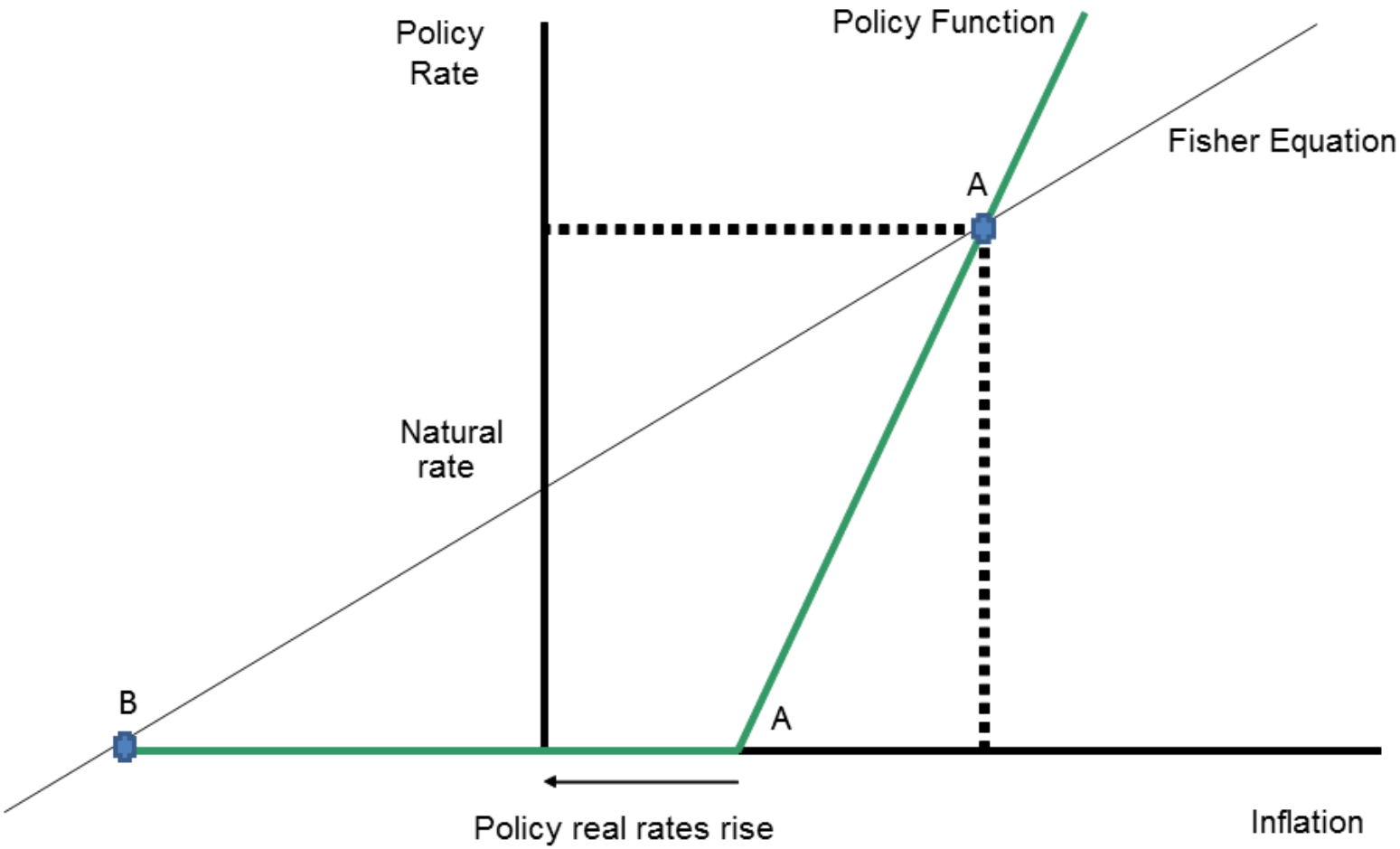
- Policy Rate sufficient statistic to stabilise output and inflation
- Long Rate returns to normal in normal times at 5% or so.

The Financial Crisis

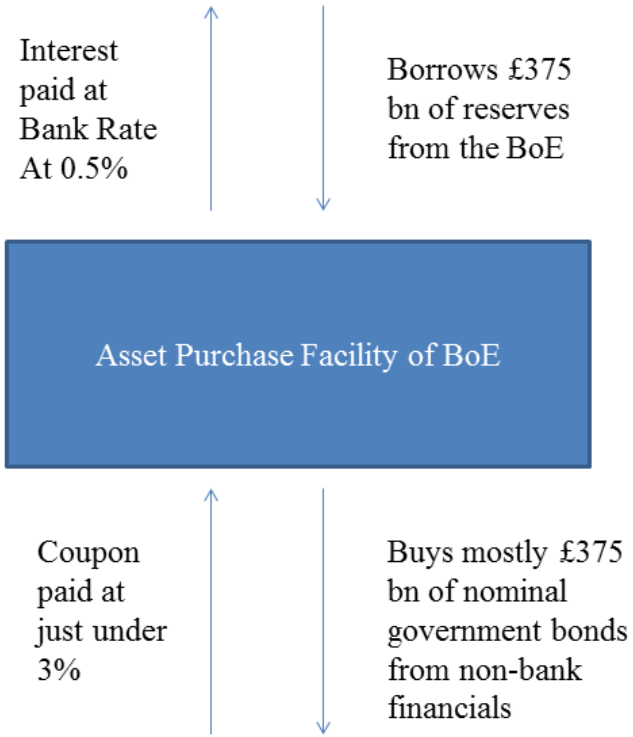


- Negative growth in nominal GDP led to policy gap for Bank Rate.

Not So Simple Monetary Policy

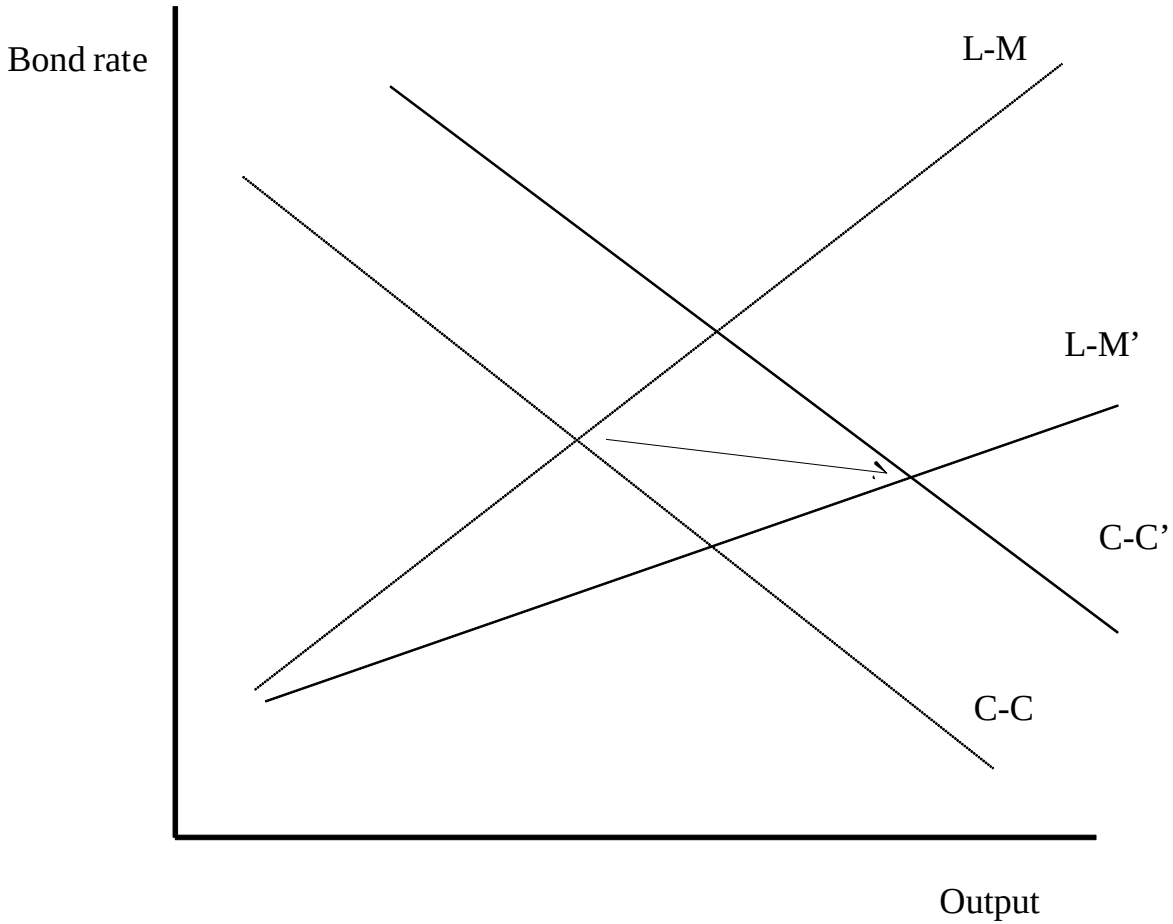


Outline of a Typical Swap



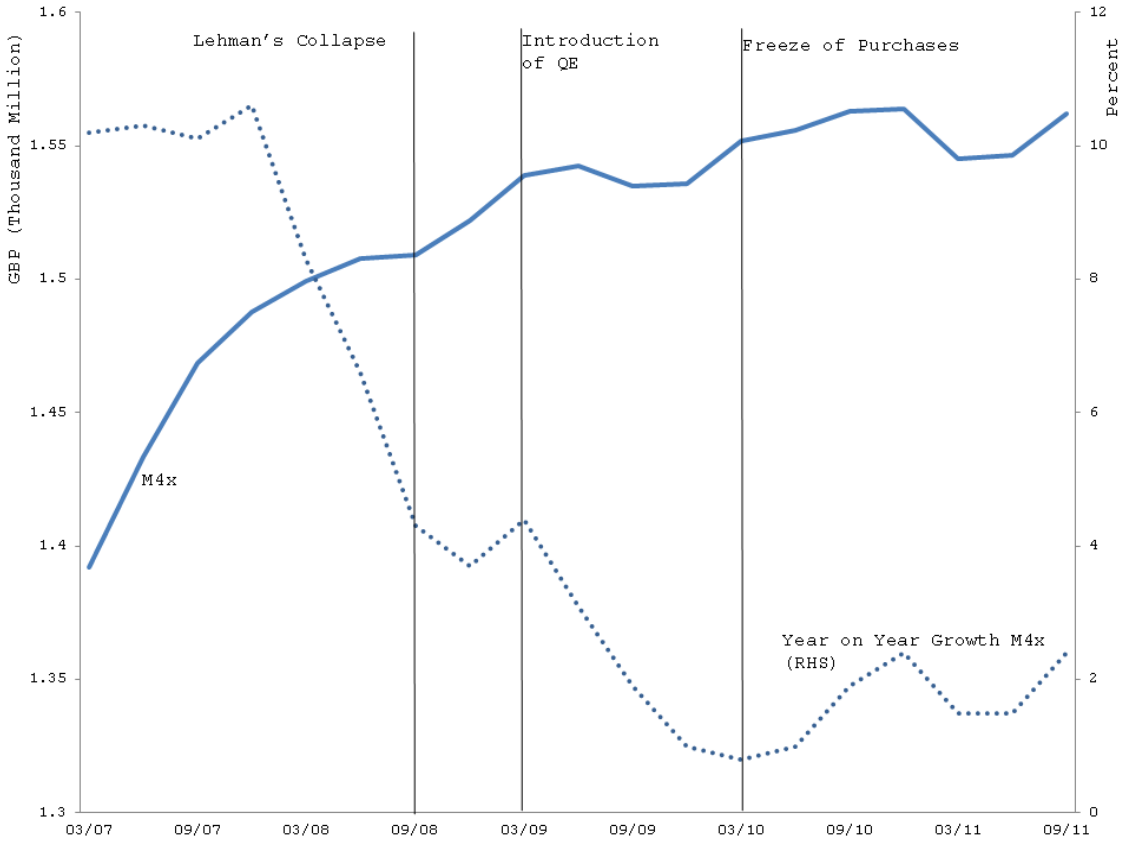
- Reserves up, bonds removed from system and APF collects coupons.

Credit, Money and Spending



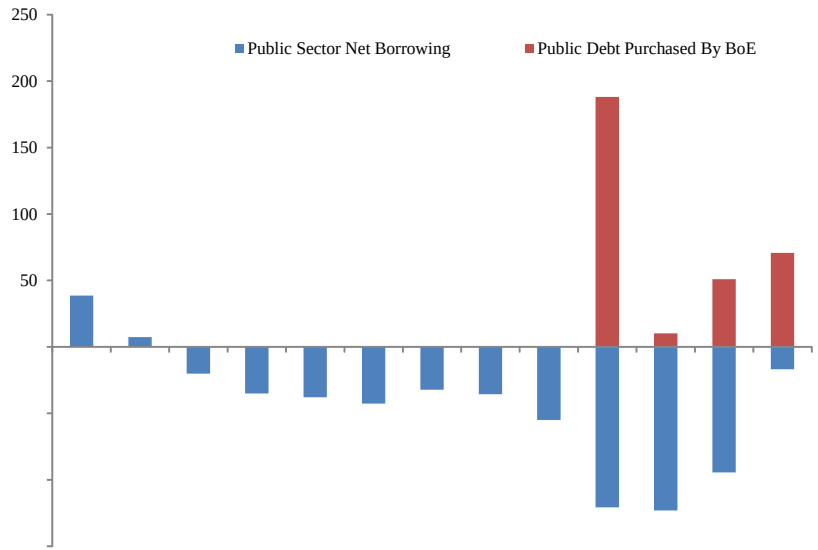
- If Reserves (swapped for bonds) increase the money supply, in bond rate-output space the L-M' shifts out (QE 1?)
- But if spending (C-C') also increases then rates may not respond very much (QE

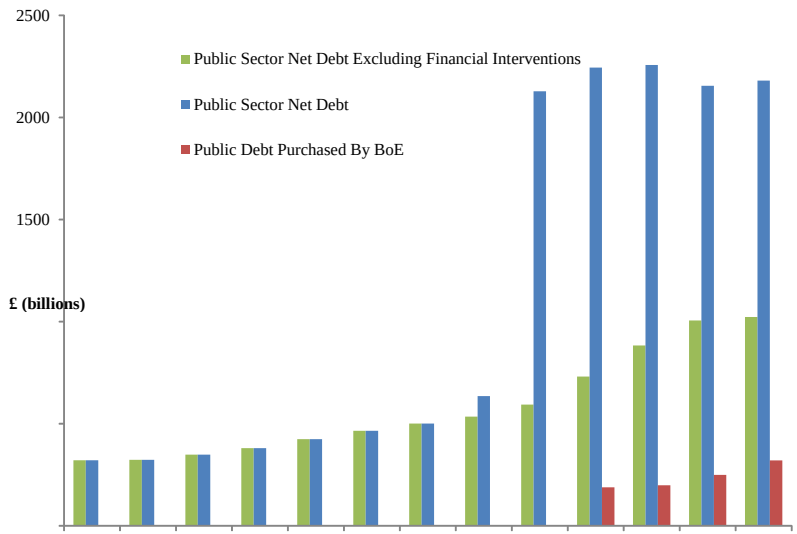
Broad Money



- Little response in broad money deposits or in lending. Some evidence of additional corporate credit as debt was issued. Counterfactual difficult.

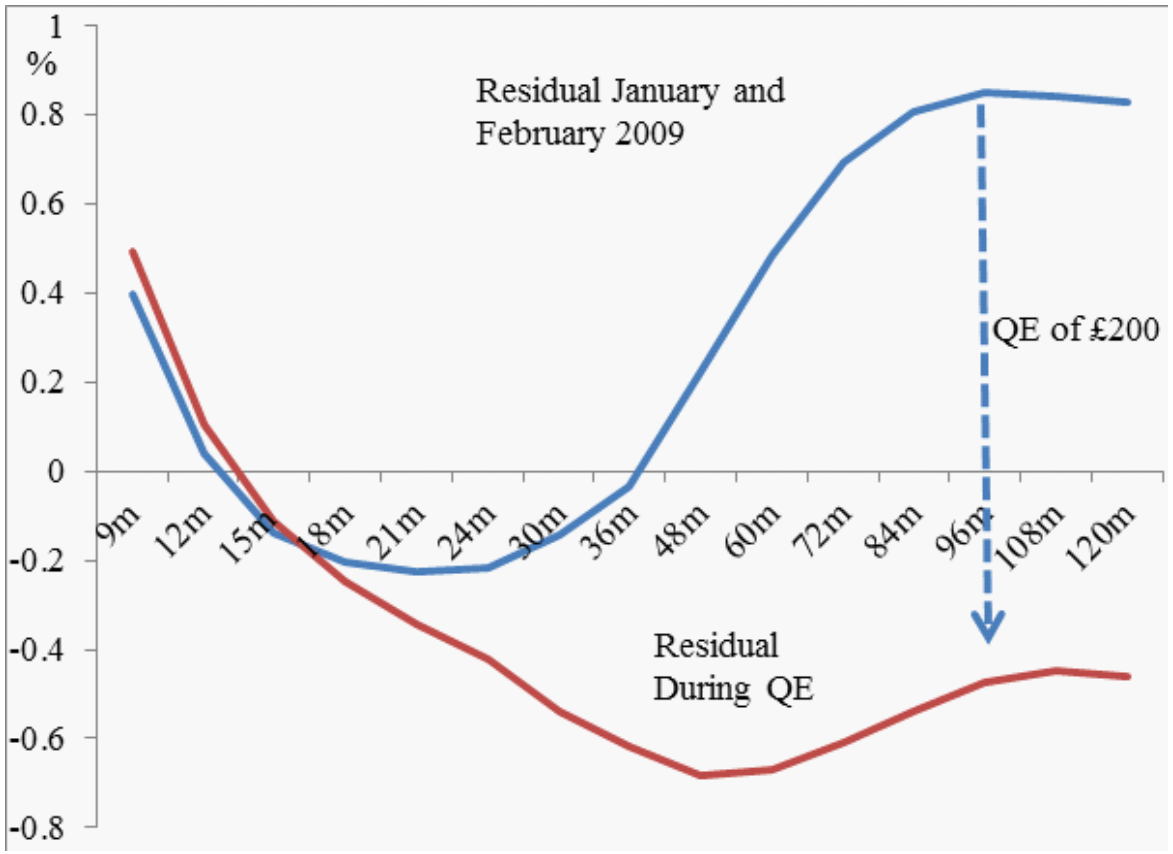
Fiscal Policy and Consolidation





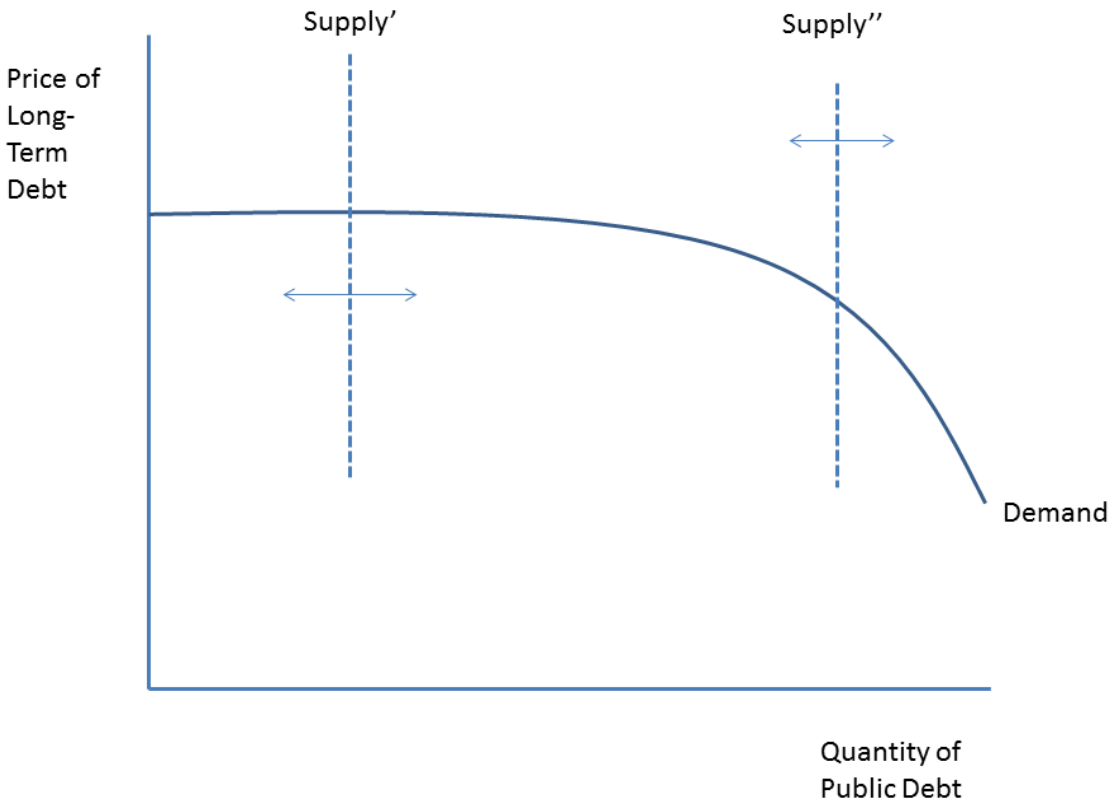
- QE matches post-crisis fiscal deficits and accounts for some 30% of non-financial intervention public debt.

Long Rate Policies



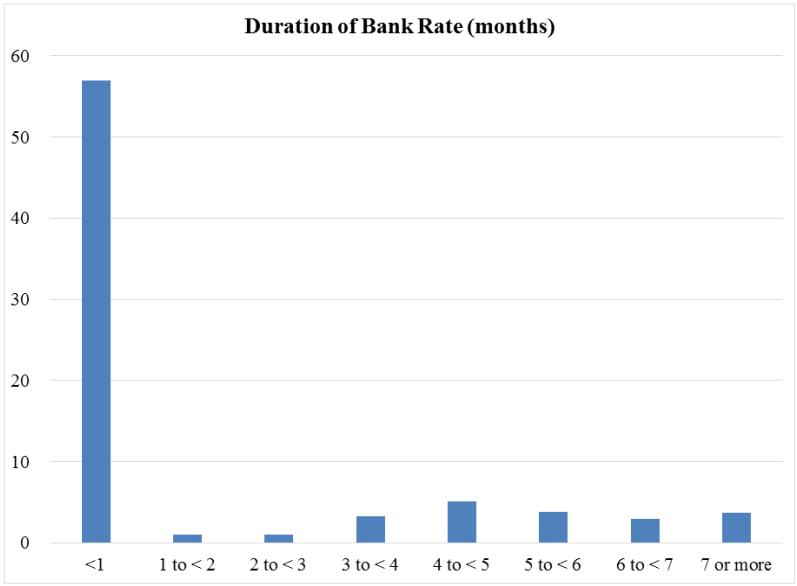
- Expansion of balance sheet - showed that it is possible to influence medium term bond rates - underprediction turned into overprediction of bond rates - impact of 20-100bp.

Sovereign Debt Management and Liquidity



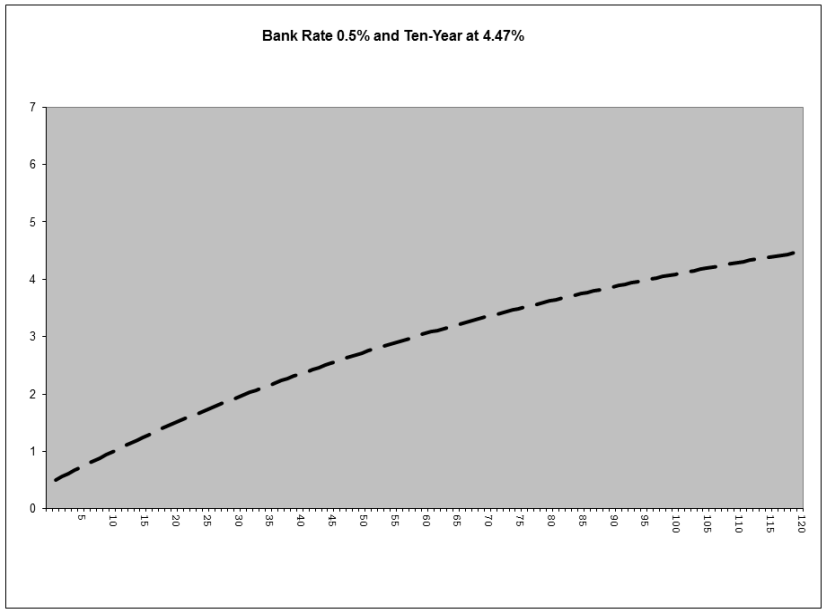
- Shocks to net supply of debt may impact on prices (yields) if demand in inelastic e.g. in bad times (Supply'') vs good times (Supply')
- Price of Long Term Debt may not only reflect portfolio risk in CAPM-world.

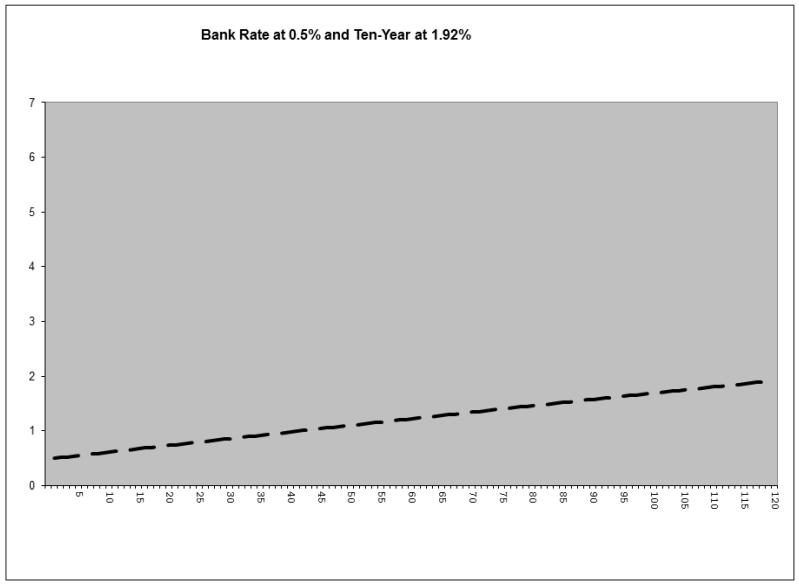
Stuck in the ZLB



- Bank Rate has got stuck and an important part of plotting a route of the doldrums is a compass
- Low probability (long duration) of rate change implies different regime

Long Rates and Signalling





- Moving from 5-year half life to 10-year half life: up to 250bp off 10-year bonds (using standard one factor term structure model). Could reverse of its own accord - if signalling is not smoothed

Impact of US QE on 10-year Yields

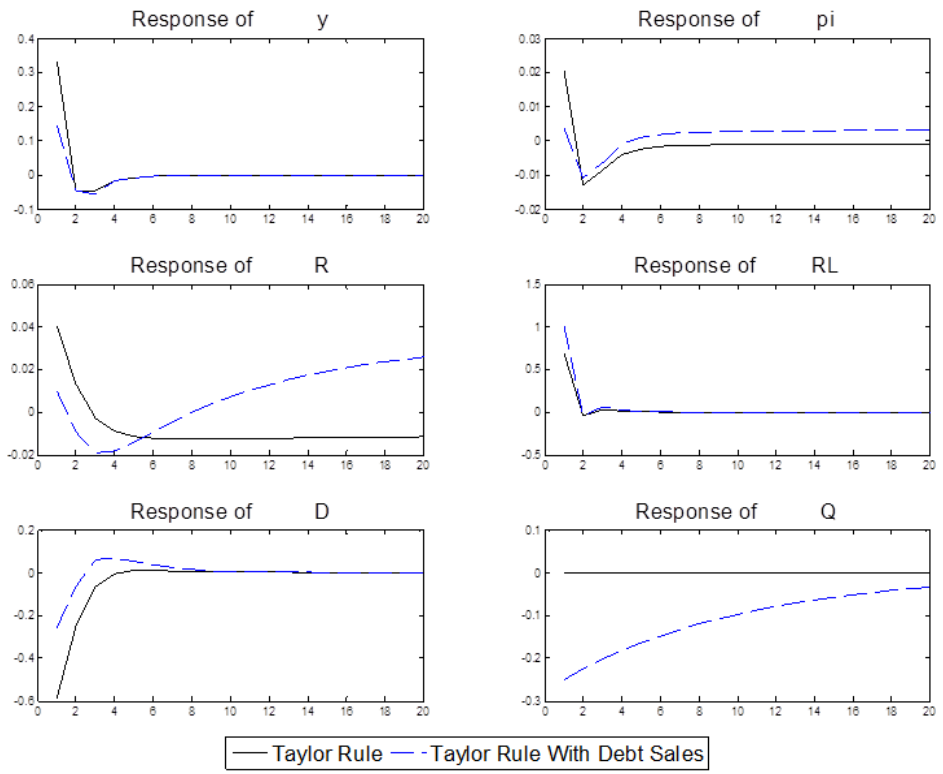
Table 4: Potential effects of central bank purchases of Treasuries since November 2008

		5y forward 10y rate				10y term premium			
	Change	Marginal effect (range)		Total effect (range)		Marginal effect (range)		Total effect (range)	
Privately-held debt (% of GDP)	7	*1.7*	*2.1*	12	15	*0*	*1.2*	0	8
Average maturity (months)	7	*11.6*	*14.3*	81	100	*9.6*	*12.7*	67	89
Total effect (bps)				93	115			67	97

Notes: Change in the first column refers to changes in privately-held debt which could be attributed to central bank interventions since November 2008. The range is selected by taking the min and max estimated coefficients in Table 1-2 (forward rate) and Table 3 (term premium).

- Quantity and maturity effects on long term rates.

Future Debt Sales



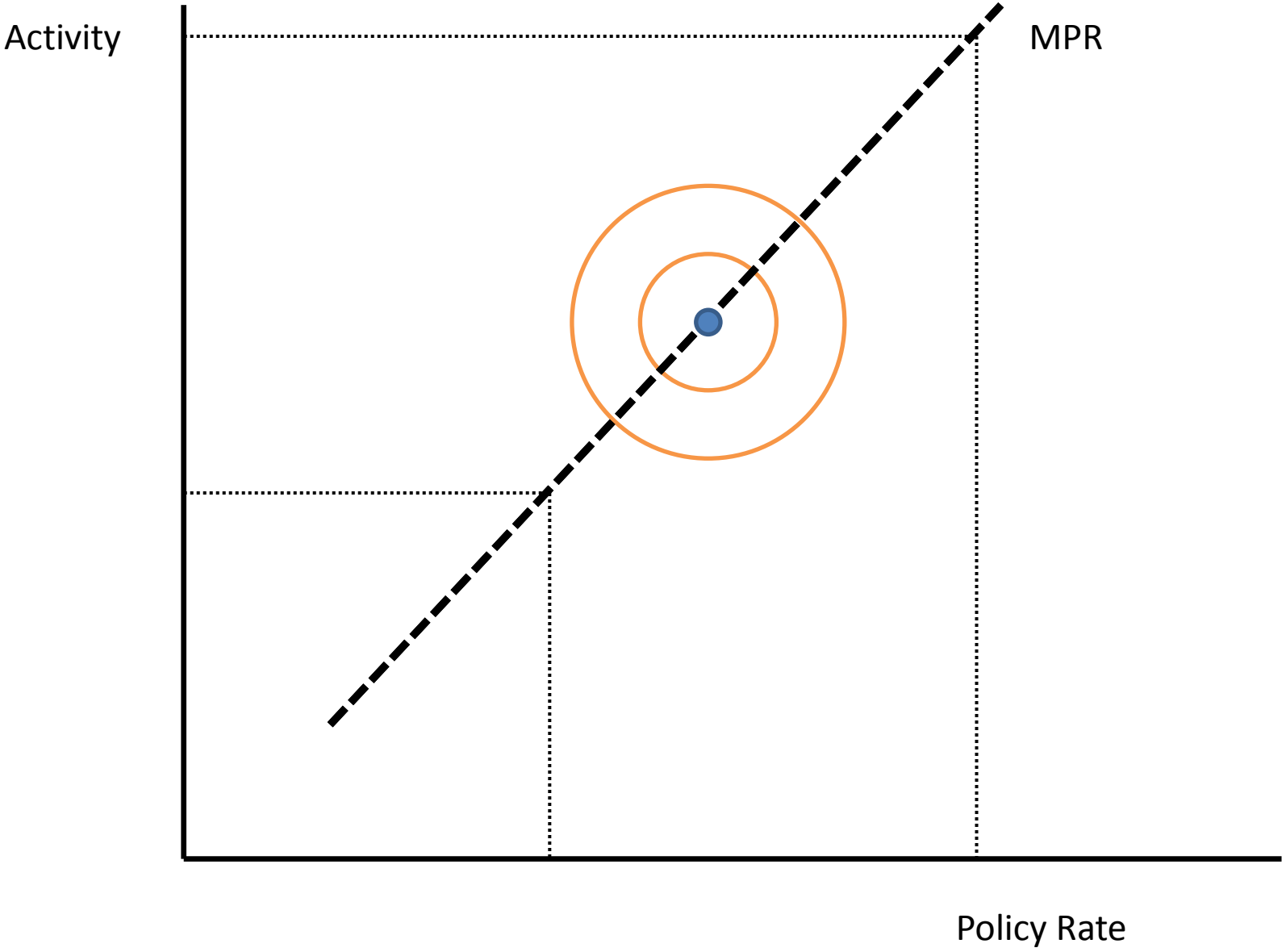
[Source: Chadha, Turner and Zampolli (2013)]

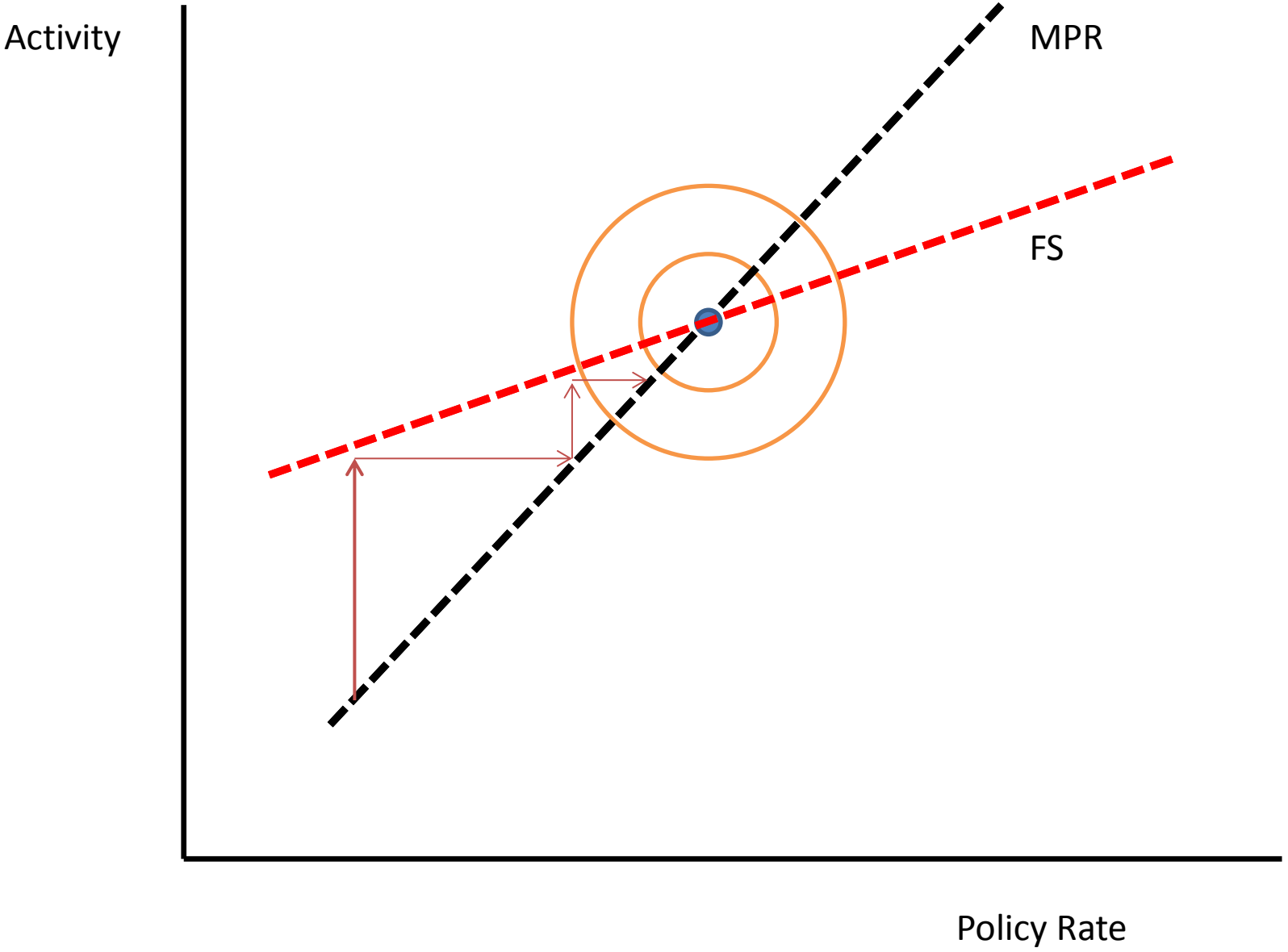
Macroprudential Instruments

- 'One Club' monetary policy has not only insufficient to prevent booms and busts but may have played a role in nurturing volatility.
- The newly formed FPC at the BoE has asked for extra instruments countercyclical capital, sectoral capital, leverage ratio and LTIs.
- No liquidity or LTVs, yet...
  - See Chadha and Corrado (JBus 2012) and Chadha, Corrado and Meaning (BIS WP 66) on welfare and output enhancing role of liquidity because it can reduce the volatility of the external finance premium.
- MPIs are 'untested and with little evidence' - no established models or data
- House of Commons Treasury Committee Evidence, see

http://www.publications.parliament.uk/pa/cm201213/cmselect/cmtreasy/writev/macropru/mpt13.htm

- Does the financial sector stabilise or not?


Activity
MPR
Policy Rate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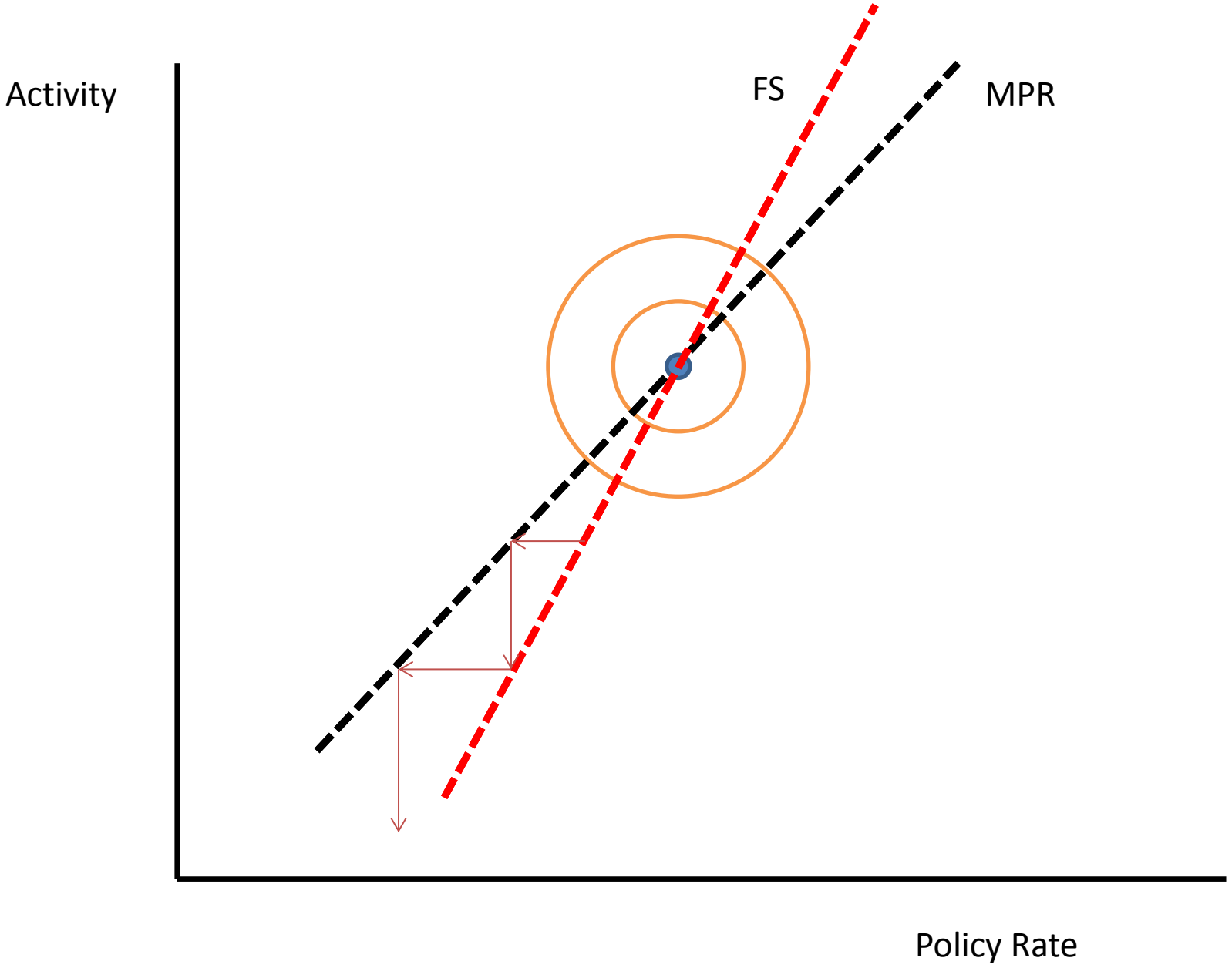
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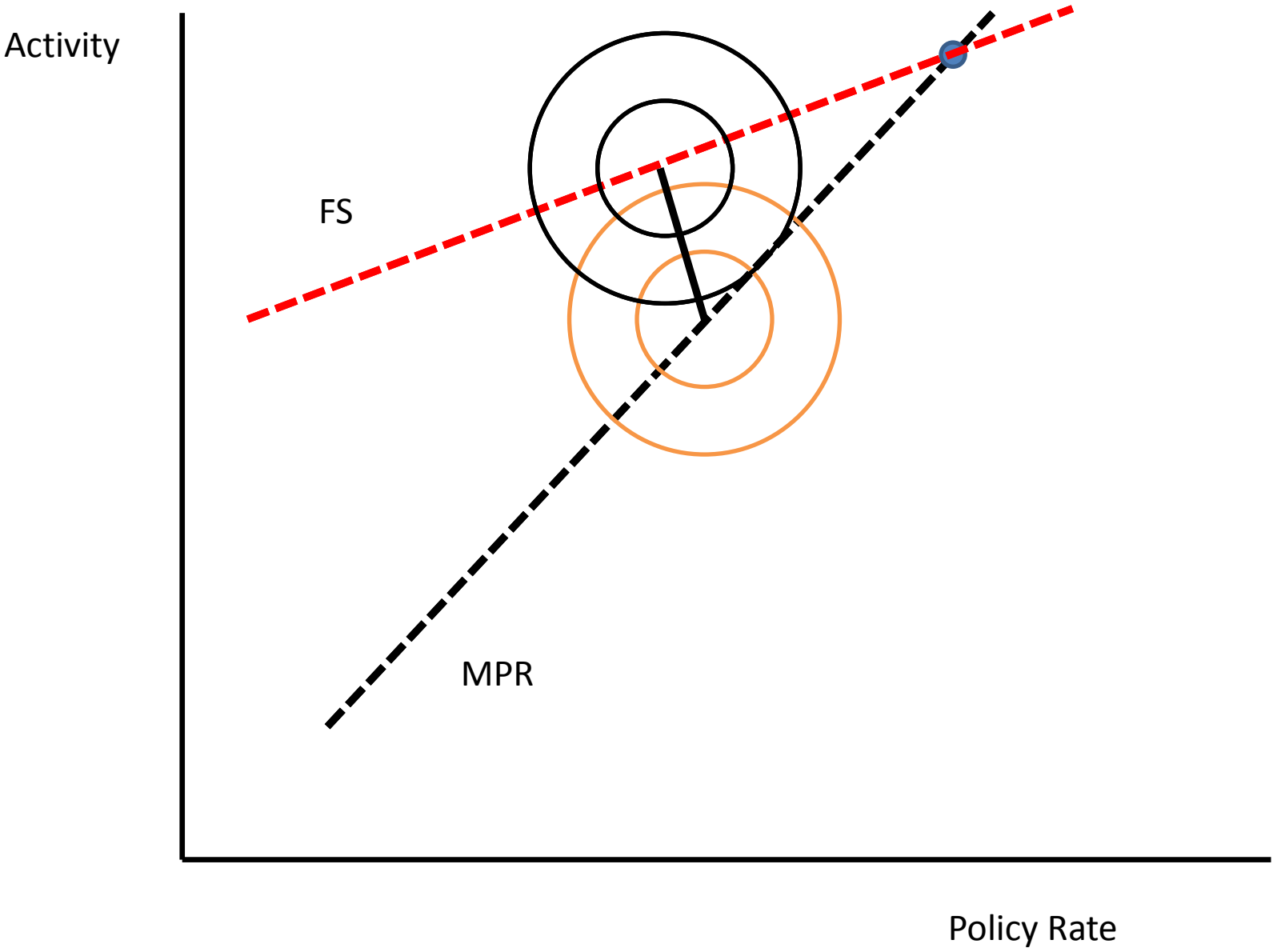
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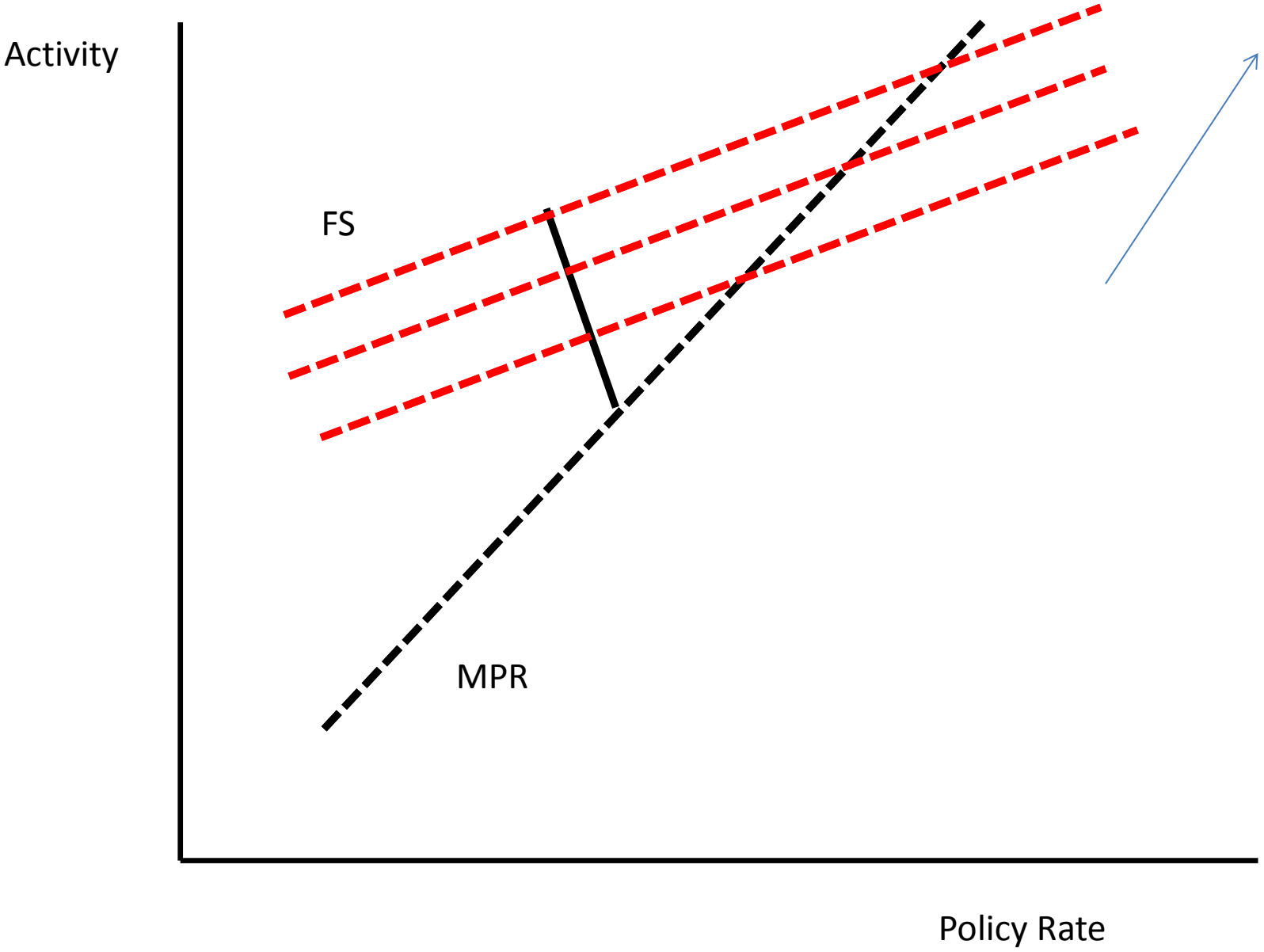
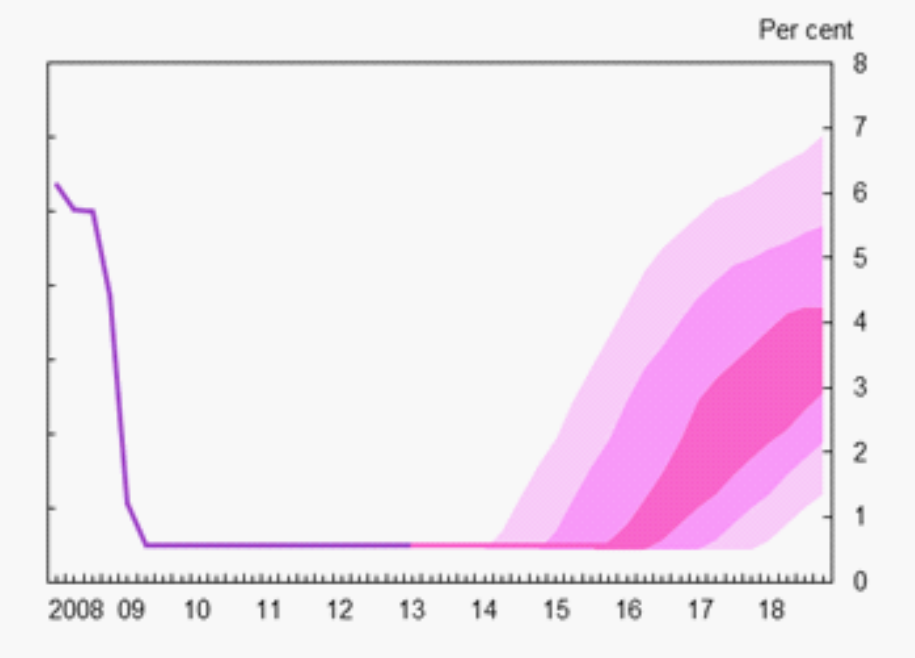

Activity
FS
MPR
Policy Rate

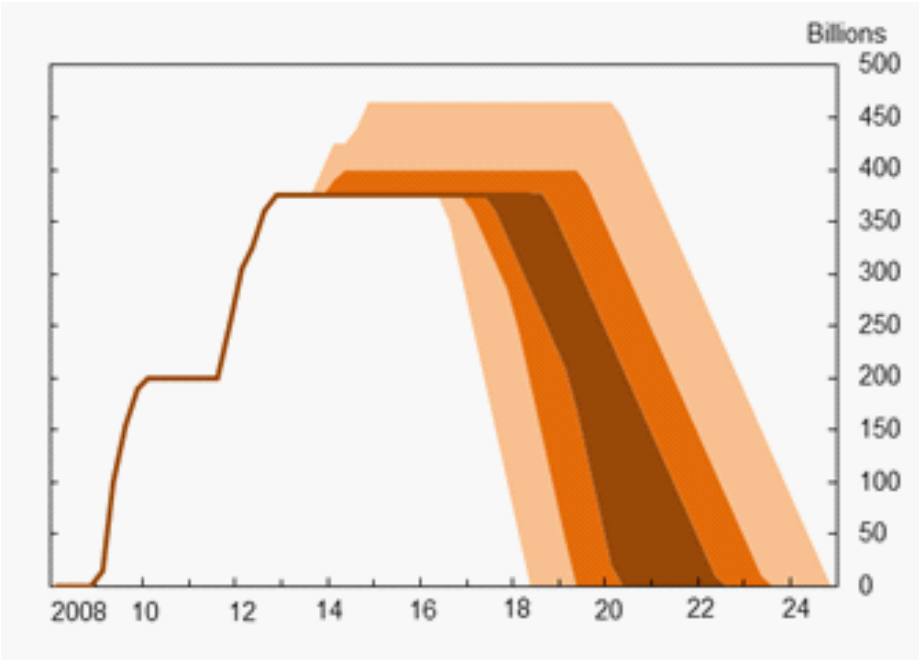
Complete Forward Guidance

- Debate in c2006-7 about publishing interest rate forecast
- 'Conservative' view: (i) do not tie future decision-makers hands, (ii) forecasts subject to news and 'error', (iii) may prevent private sector views being traded into market prices and (iv) practically difficult to agree on path
- 'Transparency' view: (i) level and path of interest rates matter, so provide more clarity; (ii) produce explicit projections conditional on expected state of economy; (iii) invites alternate views.
- Forward Guidance on first change in rates only, although helpful, seems to be somewhere between the former and the latter
- Are low expected long term rates a sign of the bad or good regime?

Publish Instrument Forecasts



Possible Bank Rate Paths



Possible stock of APF paths

- Consider complete 'state contingent-time dependent' guidance that respects uncertainty
- Question whether this would lead to herding but would allow various stories to be

Information for Financial Markets

- ZLB represented about regime change and we need to avoid precipitous movements that may delay return to normal times
- Forward Guidance - helpful transparency about reaction function - but did it reveal (new) or confirm (explain)?
  - we are far from the normal equilibrium and it is uncertain how we will return to neutral;
  - the MTM via bond prices is highly sensitive; and
  - we may wish to normalise at different speeds to trading partners
- But we do not know the plan for Bank Rate normalisation, what the plans are for the APF and have no quantified measure of the uncertainty in the 'true' state in terms of interest rate space
- Complete forward guidance by proving explicit probability density forecasts of Bank Rate.

Concluding Remarks

1. Inflation targeting cannot prevent "boom and bust"
2. Money supply and its counterparties matter and complicates the path and long run level of Bank Rate
3. Financial frictions act through traditional supply and demand side - making capacity judgements very hard
4. Fiscal policy underpins aggregate demand but also supports fragile financial institutions - further restrictions apply.
5. Debt will take 10-15 years to get back to 'normal' and demand is inelastic, meaning that supply impacts on price
6. Sensible application of liquidity and capital targets via MPIs seem likely to reduce business cycle variance albeit at some cost of permanent output
7. Plotting the policy path is considerably more complicated and requires significantly more explanation than we had in the past.