

Financial Markets Group, Systemic Risk Centre
and Centre For Macroeconomics public lecture



Giving Guidance On Future Monetary Policy In A Very Uncertain World

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Mensch tracht und Gott lacht: Giving guidance on future monetary policy

David Miles

Monetary Policy Committee

Bank of England

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Mensch tracht und Gott lacht



“men plan and God laughs”

Source: Bank of England

Woody Allen version...



“If you want to make God laugh tell him
about your plans”

Mike Tyson version...



“Everyone has a plan until they get punched in the mouth”

The Spectrum



Consider a spectrum of choices a central bank might face on guidance:

At one end (the Montagu Norman side) the central bank just says it will continue to do what it sees as most appropriate over time.

At the other end is an explicit commitment to set policy in a specific way at each point into the future – not just a rule but a commitment to a particular policy setting.

A spectrum suggests that there is just one dimension in which communication can be varied, but there is more than one dimension.

Even so I think it is helpful to think about forward guidance as being a choice about which point to settle on along the spectrum I have described.



“Why don’t we get more certainty and less flip-flopping? “

- Most vocal criticism is that Bank does not say what it is going to do.
- Might it makes sense to commit to a particular setting of policy for some horizon?
- In many models sticking to a particular path for interest rates over a specific horizon can mean that at the end of that horizon interest rate may need to move dramatically to prevent serious instability.
- If the certainty about the path of rates for some near horizon comes at the cost of far higher uncertainty down the road that hardly looks ideal.
- To explore this issue of the effects of committing to a specific path for interest rates I will use a simple model of the economy which accounts for uncertainty and explores how that should affect monetary policy.



4 sources of uncertainty

- about the degree of spare capacity in the economy. How much slack is there?
- about the impact of monetary policy. Interest rates have been at such low levels for so long there is unusual uncertainty about how the return towards more usual levels will affect the economy.
- about how fast the economy grows in the absence of monetary stimulus (i.e. at a neutral setting for policy).
- about the extent to which productivity growth responds positively to output growth.
- Calibrated as uniform distributions, eg slack is uniform on interval 0-4%.

Figure 1: Output Gap, simulation

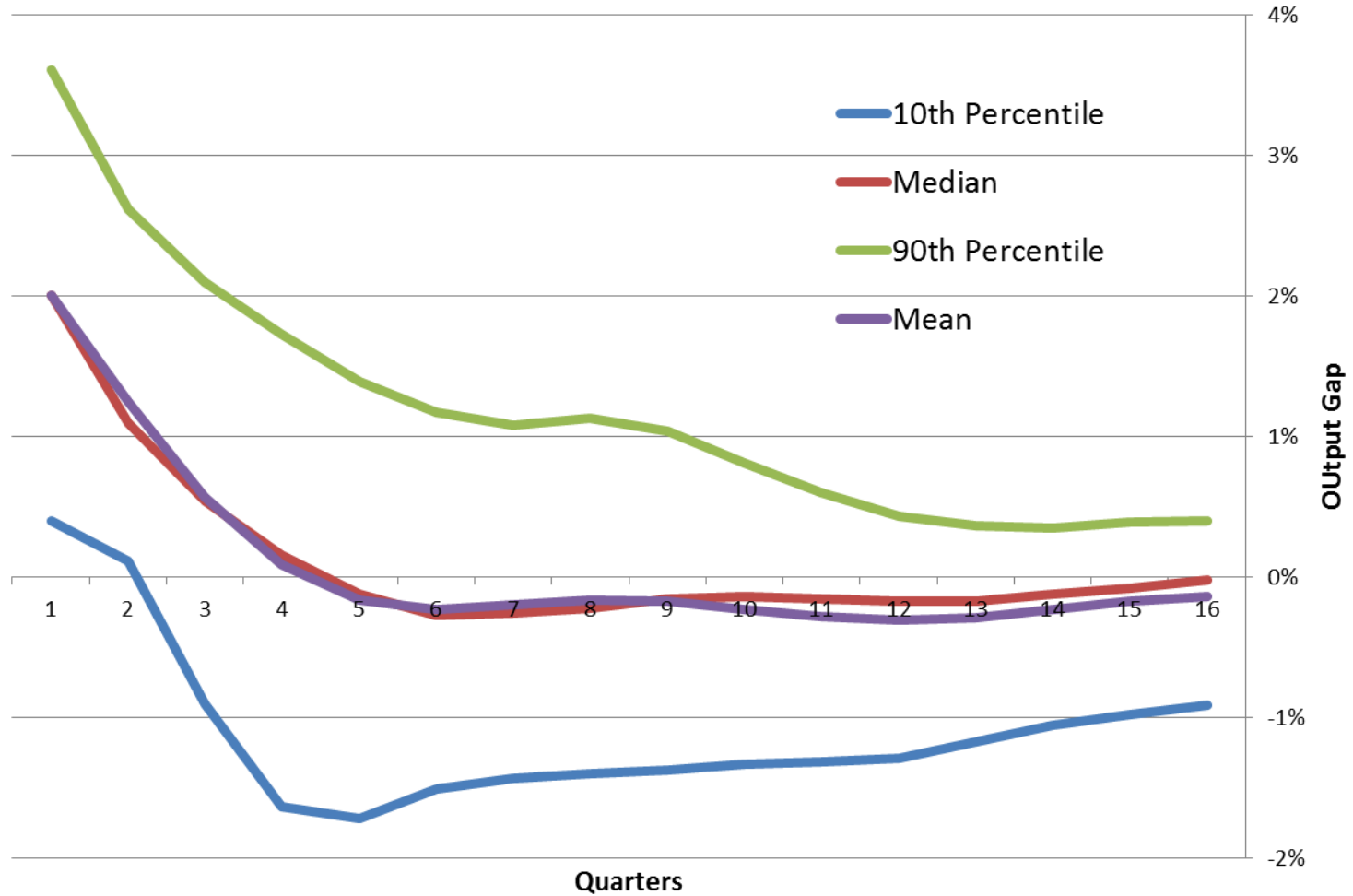




Figure 2a: Output Growth (y-o-y), simulation

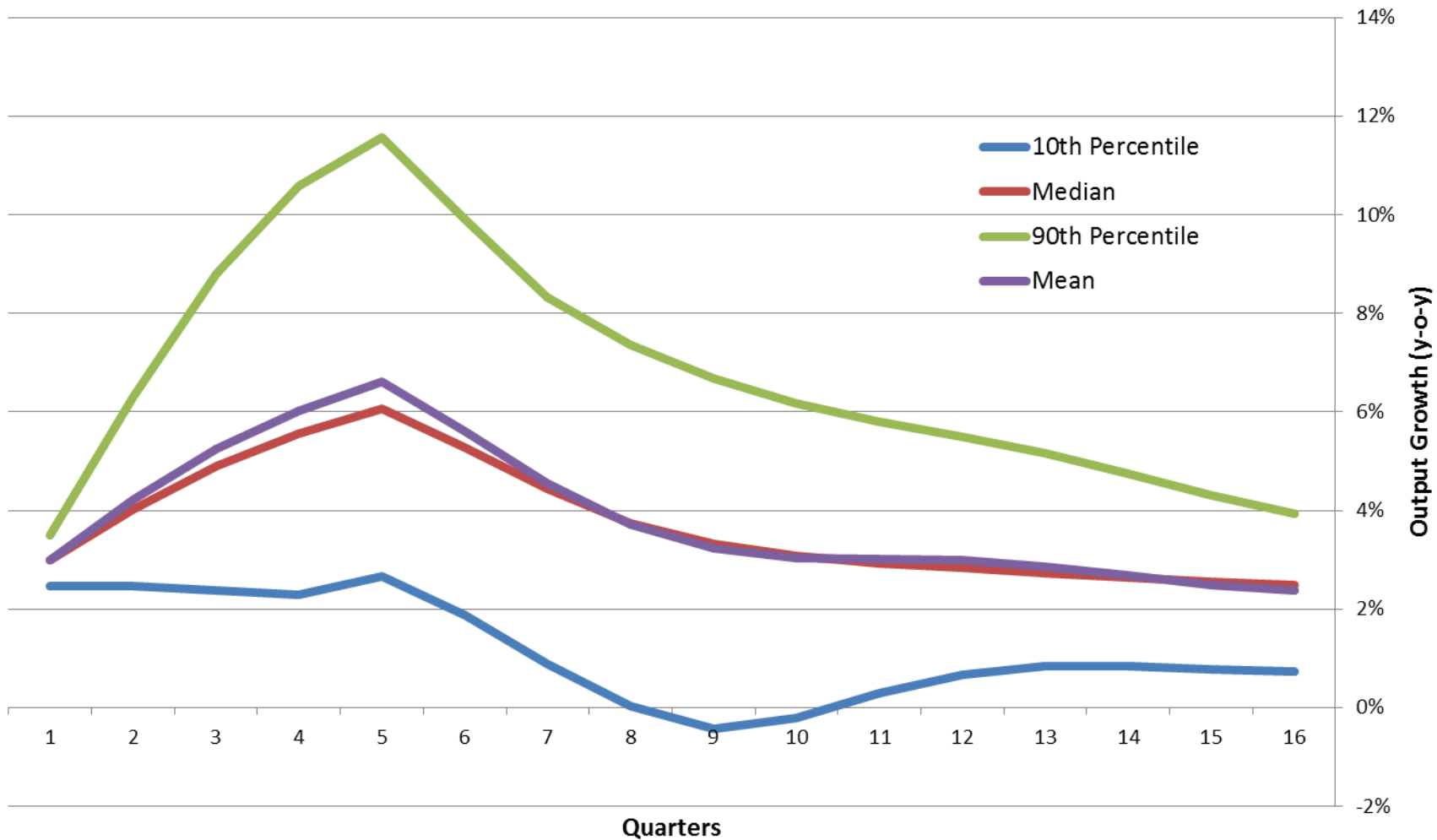




Figure 2b: GDP projection based on market interest rate expectations, August 2014 *Inflation Report*

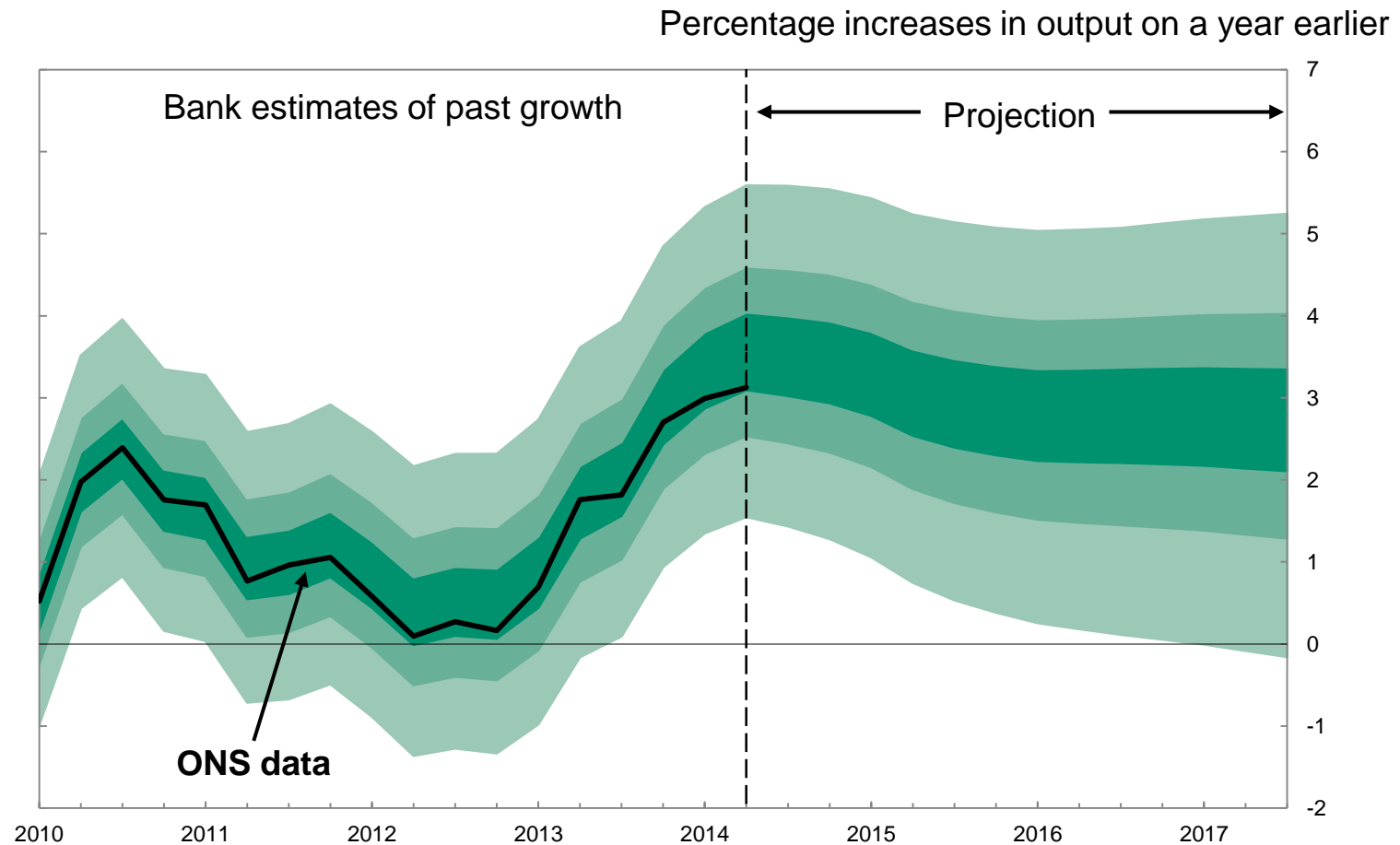


Figure 3a: Inflation, simulation

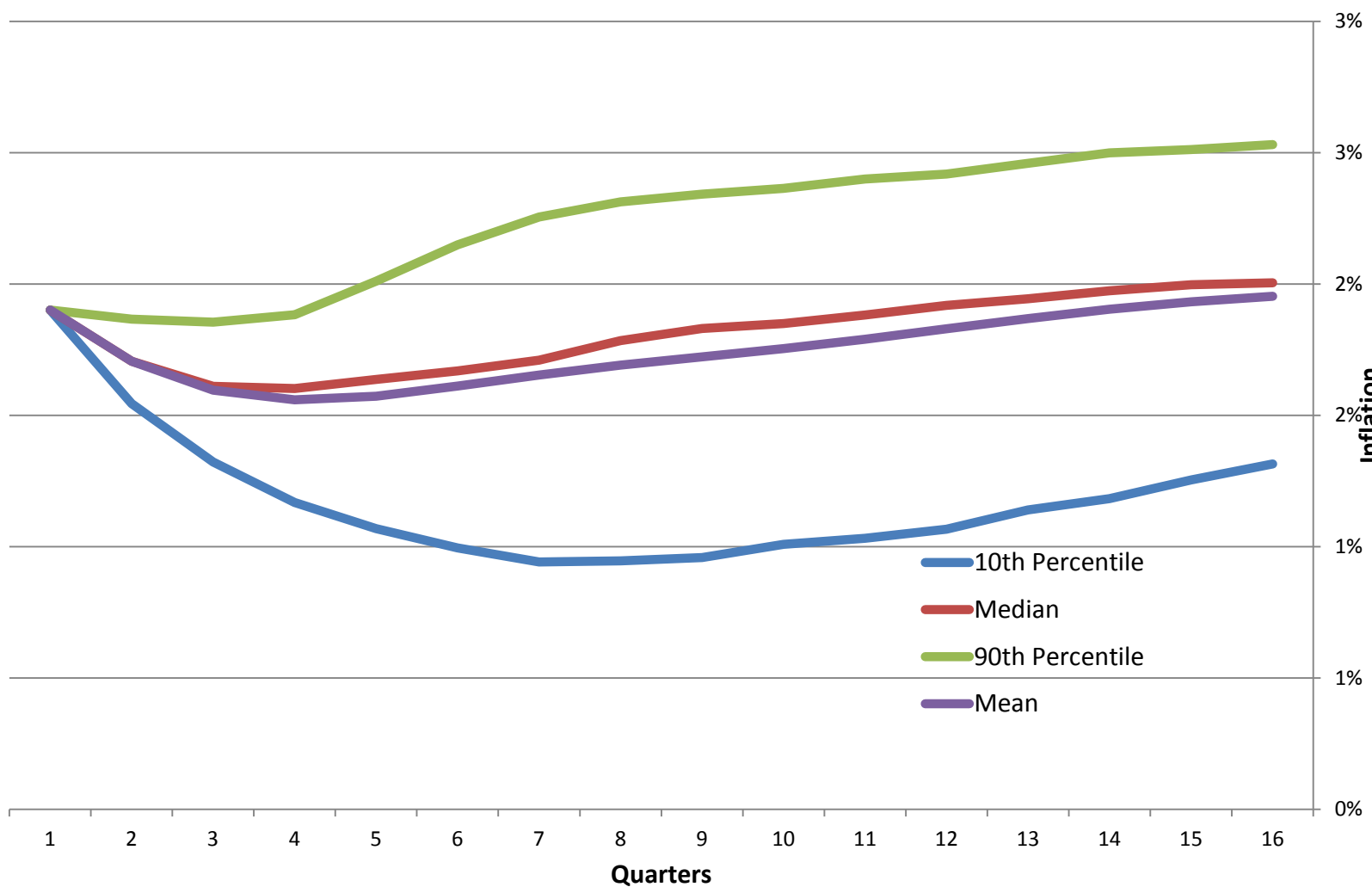
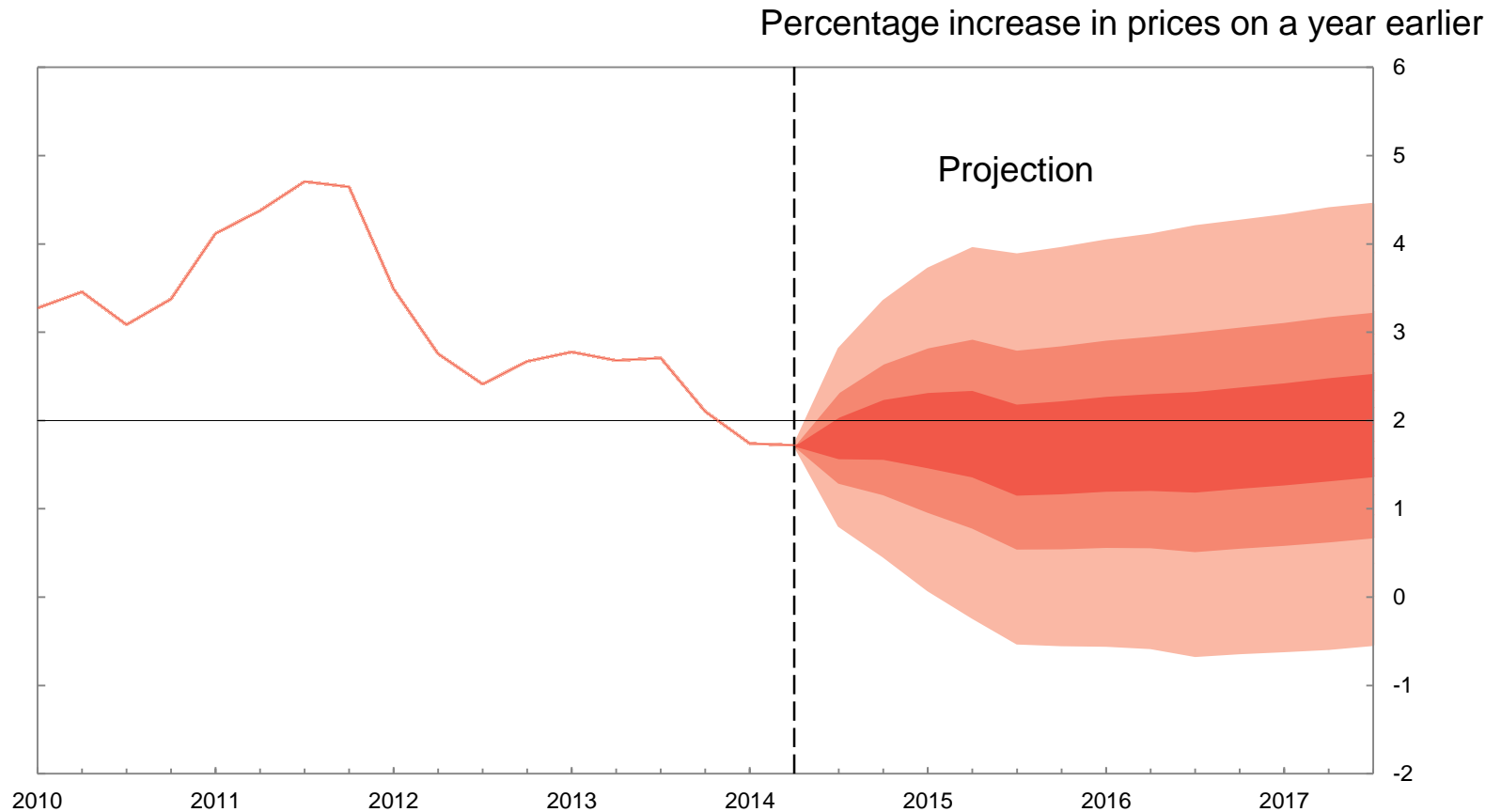
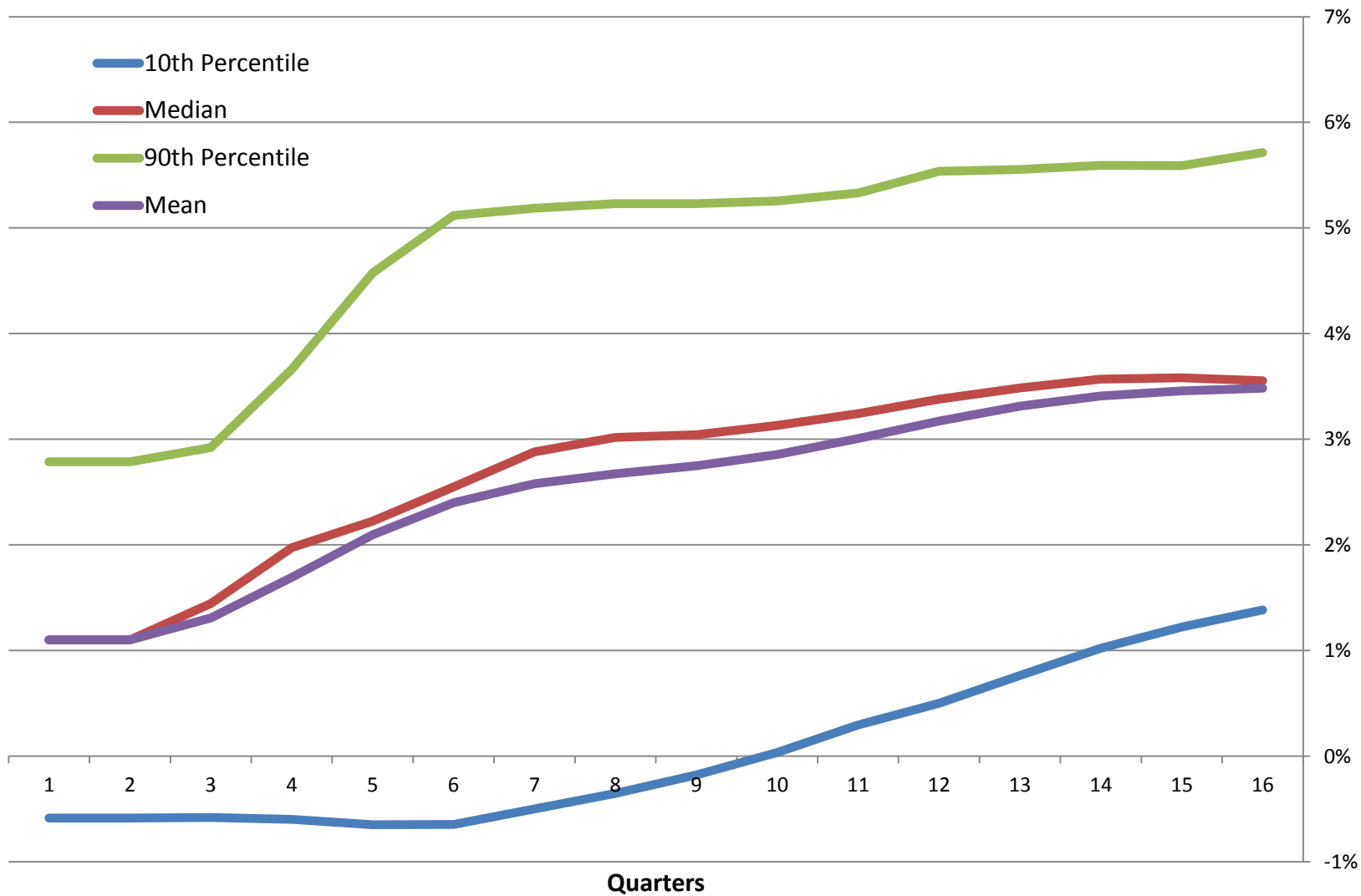


Figure 3b: CPI inflation projection based on market interest rate expectations, August 2014 *Inflation Report*



Source: Bank of England August 2014 *Inflation Report*.

Figure 4: Bank Rate, simulation



Guidance in everyday language



How you might describe in everyday language the message that figure 4 conveys.

Interest rates are likely to rise gradually from their current exceptionally low point, but probably to a level that is meaningfully short of the level of around 5% that used to be thought normal.

But the exact path that interest rates should follow cannot be known for certain since how the economy will evolve is not known in advance.

So this guidance is more in the way of an expectation and certainly not a commitment.



Table 1: Other forecasters' probability distribution for GDP growth as of Q1 2007

GDP Growth	Range:						Growth Outturn
	< -1%	-1 - 0%	0 - 1%	1 - 2%	2 - 3%	>3%	
Probability, per cent							
Q1 2008 (1 year ahead)	0	0	17	43	32	8	2.8%
Q2 2009 (2 years ahead)	6	12	21	27	21	13	-6.8%
Q1 2010 (3 years ahead)	3	7	12	22	34	24	0.5%

Source: Projections of outside forecasters as of Q1 2007. Outturn from ONS



Table 2-3: Other forecasters' probability distribution for CPI Inflation

Table 2: Other forecasters' probability distribution for CPI inflation as of Q1 2007

CPI Inflation Probability, per cent	Range:							CPI Outturn
	<0%	0 - 1%	1 - 1.5%	1.5 - 2%	2 - 2.5	2.5 - 3	>3%	
Q1 2008 (1 year ahead)	0	5	14	28	30	16	8	2.4%
Q1 2009 (2 years ahead)	9	17	21	23	16	8	6	3.0%
Q1 2010 (3 years ahead)	3	8	14	25	26	15	10	3.3%

Source: Projections of outside forecasters as of Q1 2007. Outturn from ONS.

Table 3: Other forecasters' probability distribution for CPI inflation as of Q1 2011

CPI Inflation Probability, per cent	Range:							CPI Outturn
	<0%	0 - 1%	1 - 1.5%	1.5 - 2%	2 - 2.5	2.5 - 3	>3%	
Q1 2012 (1 year ahead)	4	9	22	29	19	12	6	3.5%
Q1 2013 (2 years ahead)	3	7	12	21	26	19	12	2.8%
Q1 2014 (3 years ahead)	3	7	12	23	24	19	12	1.7%

Source: Projections of outside forecasters as of Q1 2011. Outturn from ONS.



Table 4: Range of external forecasts for the Exchange Rate Index as of Q1 2006

Exchange Rate Index	Min	10th Percentile	Median	90th Percentile	Max	Outturn
Q1 2007 (1 year ahead)	91.70	92.82	98.00	100.37	100.62	104.65
Q1 2008 (2 years ahead)	90.10	92.20	97.10	99.98	100.70	95.87
Q1 2009 (3 years ahead)	88.80	91.00	96.40	99.98	101.10	77.75

Source: Projections of outside forecasters. Outturn from ONS.

Table 5-6: Range of external forecasts of oil prices



Table 5: Range of external forecasts of oil prices as of August 2007

WTI Oil Price (US\$ per barrel)	Min	Mean	Max	Standard Deviation	Outturn	(Outturn-Mean)/S.D.
End of Nov 2007 (1 qtr ahead)	59.0	69.3	75.0	3.7	88.6	5.2
End of Aug 2008 (1 year ahead)	51.4	68.2	80.0	6.1	115.6	7.8

Source: Projections of outside forecasters from Consensus Forecasts, Consensus Economics Inc. Outturn from Thomson Reuters.

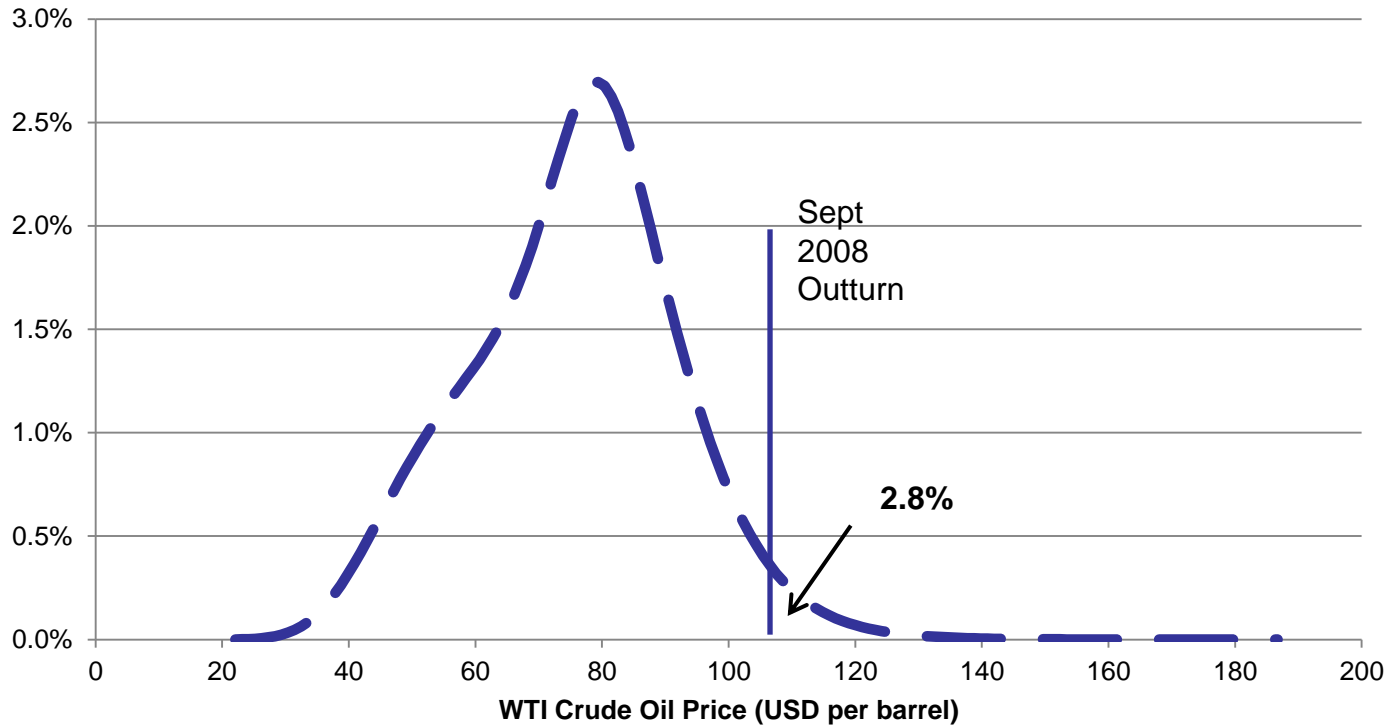
Table 6: Range of external forecasts of oil prices as of Feb 2008

WTI Oil Price (US\$ per barrel)	Min	Mean	Max	Standard Deviation	Outturn	(Outturn-Mean)/S.D.
End of May 2008 (1 quarter ahead)	66.0	84.6	100.0	6.1	127.4	7
End of Feb 2009 (1 year ahead)	65.0	82.0	102.0	8.1	44.2	-4.7

Source: Projections of outside forecasters from Consensus Forecasts, Consensus Economics Inc. Outturn from Thomson Reuters.

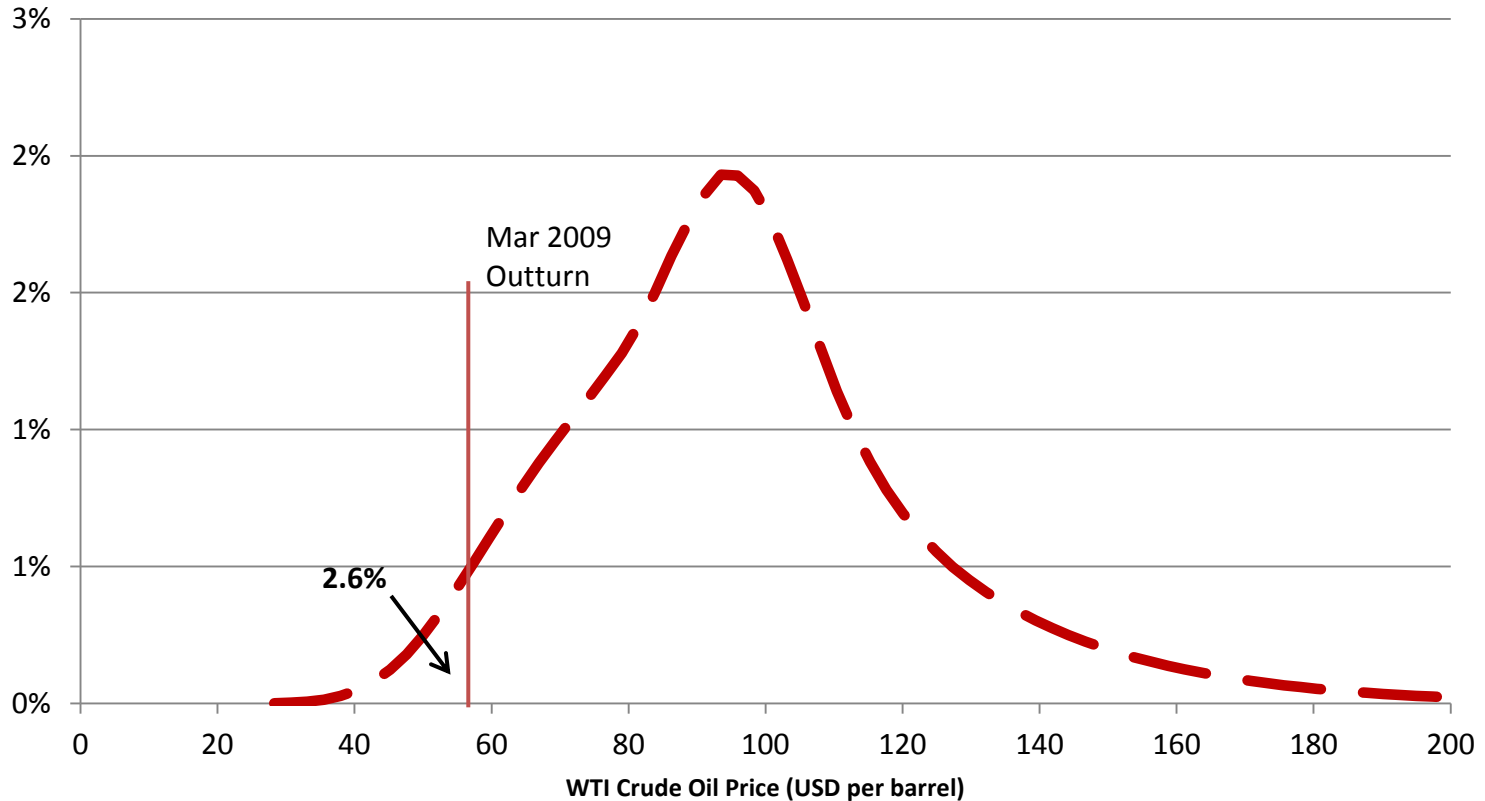


Figure 5: Option-implied distribution for crude oil price 1 year ahead - as of end Sep 2007



Source: Bloomberg, Chicago Mercantile Exchange and Bank calculations.

Figure 6: Option-implied distribution for crude oil price 1 year ahead - as of end March 2008



Source: Bloomberg, Chicago Mercantile Exchange and Bank calculations.

If fixing a path is bad what should we do? What does economics tell us?



- There may be no role for guidance in a world of (a) complete information *and* (b) ability to commit to a strategy.
- People could work out what policy would be in any state.
- But in practice people cannot do this.
- Might supplying a “reaction function” be the answer?
- There are practical problems: to be accurate it might need to be complex.
- With a diverse and changing committee what is ***the*** reaction function?
- People would still need to know about likely economic environment.



What a reaction function might look like...

The Committee intends at a minimum to maintain the current highly stimulative stance of monetary policy until economic slack has been substantially reduced, provided this does not entail material risks to either price stability or to financial stability. In particular, the MPC intends not to raise Bank Rate from its current level of 0.5% at least until the Labour Force Survey headline measure of the unemployment rate has fallen to a threshold of 7%, subject to the conditions below.

The MPC stands ready to undertake further asset purchases while the unemployment rate remains above 7% if it judges that additional monetary stimulus is warranted. But until the unemployment threshold is reached, and subject to the conditions below, the MPC intends not to reduce the stock of asset purchases financed by the issuance of central bank reserves and, consistent with that, intends to reinvest the cash flows associated with all maturing gilts held in the Asset Purchase Facility. The guidance linking Bank Rate and asset sales to the unemployment threshold would cease to hold if any of the following three 'knockouts' were breached:

in the MPC's view, it is more likely than not, that CPI inflation 18 to 24 months ahead will be 0.5 percentage points or more above the 2% target;

medium-term inflation expectations no longer remain sufficiently well anchored;

the Financial Policy Committee (FPC) judges that the stance of monetary policy poses a significant threat to financial stability that cannot be contained by the substantial range of mitigating policy actions available to the FPC, the Financial Conduct Authority and the Prudential Regulation Authority in a way consistent with their objectives.

The Committee will continue to set the level of Bank Rate and the size of the asset purchase programme each month, taking these criteria into account. The action taken by the MPC if any of these knockouts were breached would depend upon its assessment at the time as to the appropriate setting of monetary policy in order to fulfil its remit to deliver price stability. There is therefore no presumption that breaching any of these knockouts would lead to an immediate increase in Bank Rate or sale of assets.



Press coverage of forward guidance

Common in the media to describe guidance in the language of promises (or time-contingent guidance):

“New Governor Mark Carney announced the bank was unlikely to raise rates until the end of 2016, at the earliest.” *Mirror*, 7 August 2013

“Bank on good times rolling” – “The Bank of England aims to keep interest rates at record low for as long as three years”. *The Sun*, 8 August 2013

“I will keep rates low for 3 years says Bank of England boss”. *The Daily Express*, 29 August 2013

The risks of interpreting guidance meant to convey expectations as commitments is not just hypothetical

Elements needed for optimal policy swathe



- 1. An assessment of all the random factors (or shocks) that can impinge on the economy and their probabilities**
- 2. A model of how those shocks then impact on the outcome you care about – inflation, growth, output etc.**
- 3. A model for how monetary policy affects those outcomes and can be used to offset the impact of shocks**
- 4. An assessment of what the optimal policy response to such shocks is (use 1-3 above to derive a rule that maximises some specified target function)**
- 5. Committee need to reach an agreement on 1-4:**
 - if members responsible for their own votes need to reconcile a unique path of rates (for given realisation of shocks) with individual accountability in an environment where people will take different views



Conclusion

- In an ideal world (and in idealised models) the Central Bank can just explain its objectives and reaction function.
- But unless outsiders have as good information on the economic outlook – and can plug that into the reaction function – then they may be left floundering in attempting to assess the prospects for interest rates.
- Any reasonable approximation to a reaction function might be very complex. (Indeed it is very likely that it is; otherwise MPC meetings would be mechanical affairs lasting 5 minutes).
- The central bank's giving some assessment of the likelihood of interest rates following different paths is likely to be helpful, particularly in situations in which past action and communication is not so helpful.



Conclusion

- Constructing an explicit probability distribution for the central banks own policy rate that is based on the realities of how policy is made and gets across a message that can be widely understood is a major challenge.
- Attempting to provide a specific central path with probability bands may go beyond what is feasible and useful. Spurious accuracy is unhelpful.
- I am open minded about whether the MPC should provide fan charts for interest rates, but I am not convinced that is clearly a step forward.
- Currently, it might be just as useful – and probably less misleading and possibly even more accurate – to give forms of guidance which are more qualitative, such as:

“interest rate rises will probably be gradual and likely to be to a level below the old normal”.

- That says something substantive; **and** most people can understand it.

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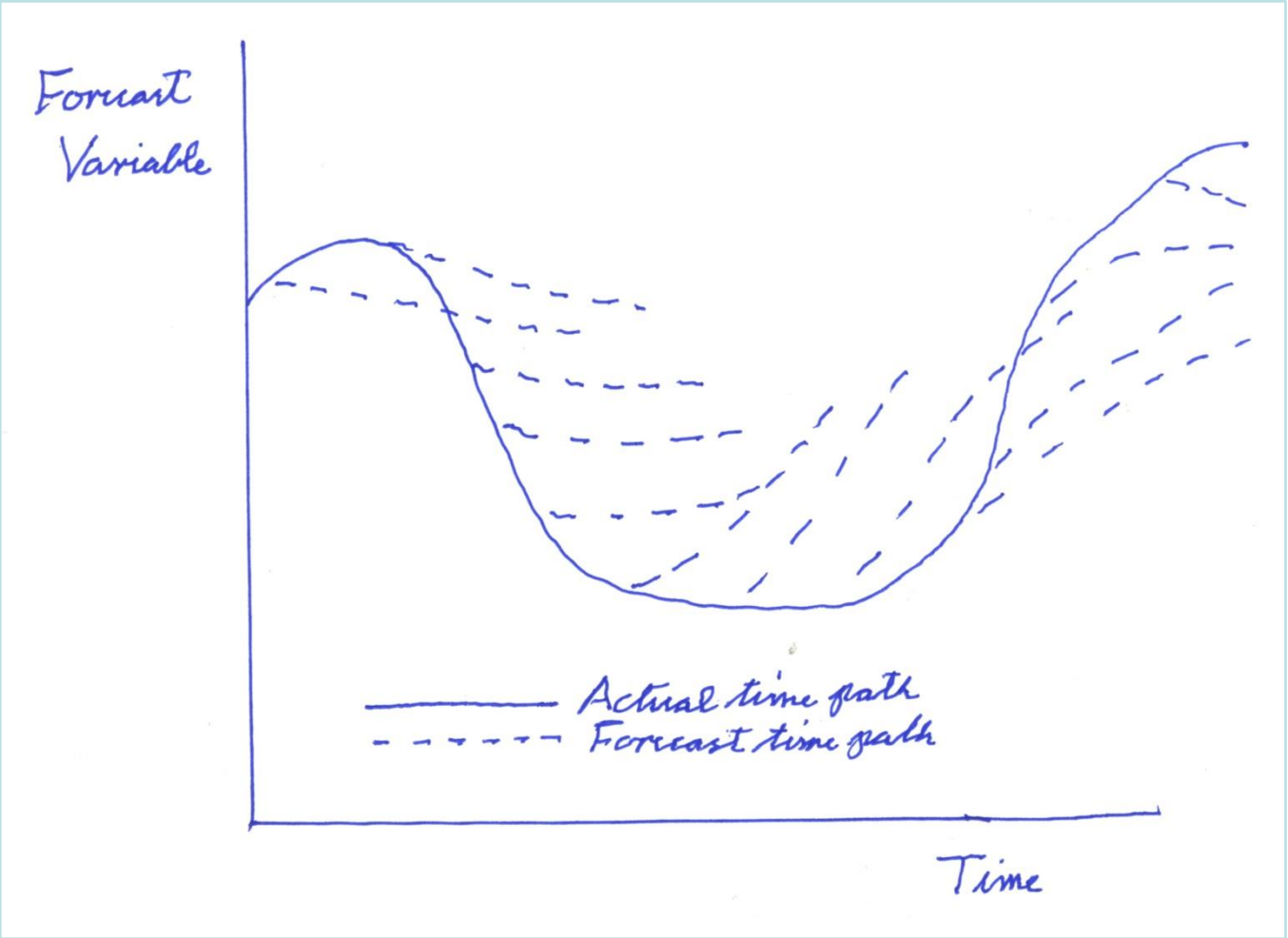
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Bank of England

September 2014

Response from Charles Goodhart
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Science





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