COMMENTARY: INTEREST RATE NORMALISATION

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"She had many opinions but taken together they did not add up to a point of view".

V. S. Naipaul, *Guerrillas*, 1975.

On 5 March 2009 the Monetary Policy Committee of the Bank of England cut Bank Rate to 0.5 per cent from 1.0 per cent. This was an historic low in the policy rate and reflected both the extent of the financial crisis and its prospective impact on the real economy. It was 89 MPC meetings later that Bank Rate moved again on 4 August 2016 but to an even lower level of 0.25 per cent. In this Commentary I shall outline why it has proved so difficult to get away from the low interest rate trap but also suggest that it is time to start thinking about reversing and returning to 'normal' times.

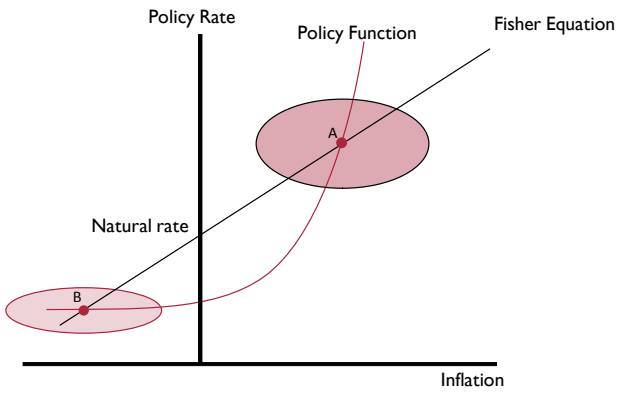
The policy function

In normal times, the monetary authorities picked an inflation target that was thought both to be reasonably consistent with price stability and yet not likely to induce too many costly deflations. Eventually a target of 2 per cent for the CPI was settled upon. To that we can add a market clearing level of the Wicksellian natural rate of around 2–3 per cent and that gives us an expected level of Bank Rate in the region of 4–5 per cent.[1] The policy function in these times involved changing Bank Rate by more than any change in actual or expected inflation.

Figure 1 illustrates that the policy function was arrayed to be steeper than the Fisher Equation, which simply links interest rate proportionally to inflation. By moving Bank Rate by more than inflation, the monetary authority raises or lowers the real rate above or below the natural rate in order to propel the economy back to its normal state, point A. Many authors have written about the stability of this 'active' rule and the extent to which it guarantees a unique equilibrium, as well how it led to outcomes that were close to optimal.

At or near zero, policy rates give a rate of return similar to cash and so the demand for cash as a substitute for deposits paying zero might limit the extent to which interest rates can go negative. This observation implies that the policy function is not linear and at, or close to, zero may become horizontal, with policy facing little room for manoeuvre. And, if so, we have another possible equilibrium at which monetary policy is 'passive', B, in the sense that Bank Rate moves by less than any change

Figure 1. Monetary policy rule



Source: NIESR; author's calculations.

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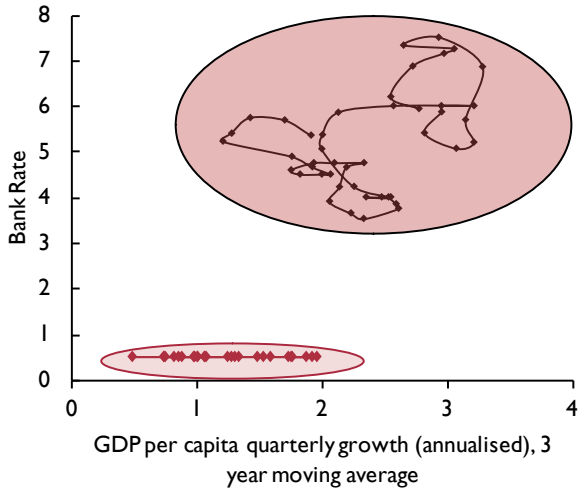
in inflation and cannot by itself get the economy back to the 'normal' equilibrium. This outcome left monetary policy authorities with a choice over affecting longer-term rates by making signals about the future stance of policy or influencing premia by exchanging central bank liabilities for assets held by the private sector, which it might be argued allowed for activism by other means – or by accepting the diagnosis of 'passive' monetary policy and allowing fiscal policy to take the strain. And yet fiscal policy was, at least in terms of the normal perception of the acceptable level of public debt to GDP, already exhausted, so activism by other means was the prescription.

Policy at the zero lower bound

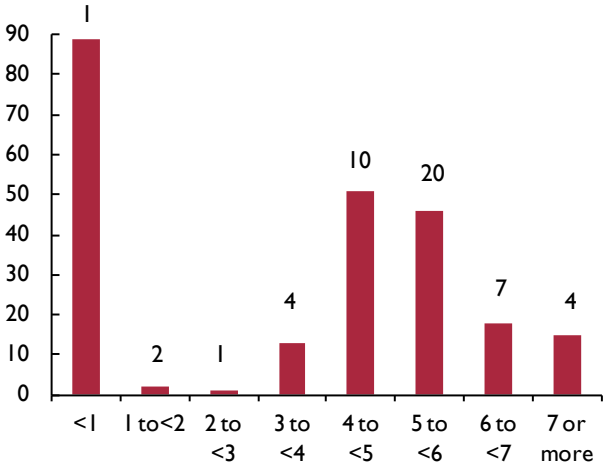
In figure 2 we show the performance of the economy at a medium-term frequency to capture the business cycle – using three year moving averages in output per head – since the inception of the MPC against Bank Rate. Broadly speaking, activity, as measured by output growth per head, and Bank Rate conform to the two regimes suggested by the previous figure. The upper set of observations we might think of as normal times and the latter as our recent period of torpor. It would appear that we have moved from a higher to a lower level of activity and the unusual level of Bank Rate confirms that, rather than having pushed us back to normal times, policy has become stuck. There are, though, periods at the end of the long expansion and since 2014 or so where the level of activity seems consistent with either high or low Bank Rate, which suggests that there are two quite separate regimes and the policy problem is one of transition rather than stabilisation.

Figure 2. Cyclical GDP growth versus Bank Rate



Source: Bank of England and ONS data; NIESR calculations.

Figure 3. Duration of Bank Rate, January 1997–July 2016 (months)[a]



Source: Bank of England; NIESR calculations.
Note: (a) The number above the bar represents the number of changes in Bank Rate at the given interval.

Indeed we can cut the performance of Bank Rate in another dimension and examine the number of months that Bank Rate has been at various levels (figure 3). The earlier period is characterised by normal draws in Bank Rate around an average of 5 per cent with reasonably frequent changes in Bank Rate.[2] The average duration of Bank Rate at any level prior to 2007 was 6–7 months. But since 2009 we can see exactly how peculiar the situation has been with, until August 2016, a single level of Bank Rate prevailing with a duration of 89 months. At first glance it might appear that not a lot has been done by the MPC as it sat on its collective hands.

But that is simply not the case. Let us hold the operations on the Bank of England's balance sheet on one side for the moment (see Allen in this *Review*). Figure 4 shows the swathe to one standard deviation in the expected path of Bank Rate from the overnight indexed swap market up to 60 months from 2009 to 2016. We also show the expected path on the day that Bank Rate was cut to 0.5 per cent and for comparison the current expectation, dated 21 July 2017. There clearly has been considerable variation in the expected path of Bank Rate and the rate at which normalisation would eventually occur. Indeed altering these medium term expectations through signalling or forward guidance (see Farmer in this *Review*) has been a key instrument of policy when

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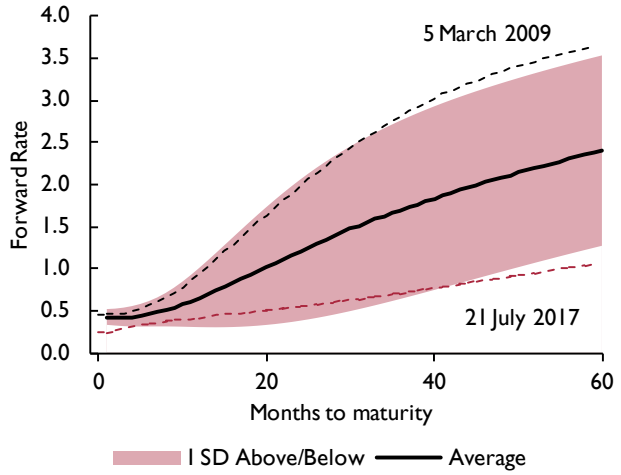
Table 1. Coefficient estimates for regression (1)

Period	Δ2yr	ΔFTSE100index	Δ£/€ exchange rate	Cointegrating term	Constant
(1) 2009–2015	0.56***	1.07***	–0.48**	–0.0075***	–0.0005
(2) 2001–2006	0.53***	0.21***	–0.18	–0.03***	0.0001

Note: * denotes a 10 per cent confidence interval, ** a 5 per cent confidence interval and *** a 1 per cent confidence interval. We regress the change in 10-year forwards on the change in 2-year forwards, the change in the level of the FTSE 100 index, the change in Sterling:euro exchange rate and a long-run cointegrating term. Standard errors are corrected using the Huber-White method.

Figure 4. UK OIS forward rates 2009-present



Source: Bank of England data; NIESR calculations.

the very short end has been pinned down to the zero lower bound.

One lacuna though is that much of the variation in medium-term expectations seems to have been related to time itself.[3] A possible explanation here is that market participants have learnt about the extended duration of Bank Rate at 0.5 per cent in response to their own 'mistakes' about the likelihood and scale of a return to normal. To the extent that the extended duration at or near the zero lower bound had been learnt might tell us that the depth of this crisis was a surprise even to the policymakers, or that guidance about the duration was insufficiently clear.

We have also estimated the pass-through from 2-year forwards to 10-year forwards prior to and following the crisis (table 1) and find that the sensitivity of longer-term interest rate expectations do not seem to be significantly altered with around 50 per cent of any change in 2-year forwards passing through to ten years. This finding would suggest that there has not been a substantive disruption in the transmission mechanism from short-term interest rate expectations to longer-term expectations, which may have been *a priori* expected in a period of severe financial market dislocation. The finding also implies that if the central bank continues to influence the business cycle frequency in policy rates, it still has considerable leverage over the longer-term rates that matter for household and firm borrowing decisions.

We are thus left with a mixed state of affairs. Bank rate has been pinned in the doldrums for a surprisingly long time and yet market participants have learnt to adjust their expectations in a manner that ought to provide considerable stimulus to the economy. Indeed there has been a fall in 5-year OIS expectations of some 200Bp since Bank Rate fell to 0.5 per cent. And yet the economy remains fixed in a low growth-low interest rate bind.

Escape velocity

The danger from a premature interest rate normalisation is that there is a sharp correction in long-term bond prices (as we saw in 1993 and 1994), which are most sensitive to changes in Bank Rate at or near the zero lower bound. And this sensitivity may be particularly extreme if normalisation is accompanied by the reversal of quantitative easing and other schemes supporting the financial sector. The risks of waiting therefore did not seem terribly large compared to those of a potentially critical policy error of raising rates prematurely.

There are, though, a number of arguments for starting the process of normalisation. The August 2016 cut to 0.25 per cent was a reaction to an extreme set of circumstances and was not the originally chosen minimum for Bank Rate; withdrawing that stimulus would allow us to signal that the immediate consequences of financial market dislocation following the referendum vote have dissipated. Any increase in rates would still leave Bank Rate far below historic levels and so be more a case of withdrawing extraordinary levels of policy stimulus

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rather than moving to tight monetary policy. It seems likely that raising Bank Rate will also help the financial sector repair its balance sheet by helping the deposit base and allow lending margins to be restored. We think that an impaired financial sector may be a root cause of the disappointing supply-side performance since 2008 (see Chadha *et al.*, this *Review*). But more importantly, it may be time to signal a return to normality and that may be a key to unlocking private sector confidence (see Schmitt-Grohe and Uribe, 2013, on this point).

There are two simple reforms that might help normalisation. First the MPC may also wish to complete its forward guidance by providing projections of Bank Rate and the holdings of assets by the Asset Purchase Facility over the policy horizon. These projections might be given by each member individually, as the Federal Open Markets Committee tends to do, but would allow market participants to form a clearer view on the likely path of any normalisation. Secondly, given the extraordinary circumstances, the MPC may wish to consider smaller or baby steps in the normalisation process (See Sinclair and Allen in this *Review*). It would be quite possible to move in, say, steps of 10Bp to demonstrate intent but also the gradual nature of the process.

Next steps

Ultimately, decisions on the appropriate level of Bank Rate and the stance of policy rely ultimately on judgement, which is backed by theoretical models and empirical findings. There is an obvious room for disagreement in the presence of judgement. And to that we can add considerable uncertainty about the current state of nature and the impact of any interest rate normalisation. Indeed the introduction to the articles in the *Review* suggests that "it would seem that plotting the policy path will be considerably more complicated during recovery and the return to normality and so requires significantly more explanation than we have had in the past". These factors call for caution but a return to normality needs to start at some point. And so, a decade after the last increase in Bank Rate, it is maybe time for normalisation to begin, and in the UK and World Sections we have started to outline these scenarios.

NOTES

1 The Wicksellian natural rate is that which clears the market for savings and investment and has been on a secular downward trend for the past 20 years.
2 The draws in Bank Rate from 1997 to 2016 do not reject the null of normality using the Shapiro-Wilk's test.
3 We have run a number of regressions on the slope and level of OIS curve and a time dummy with a negative coefficient seems significant. We will examine the possibility of a learning mechanism in future work.

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