BANK OF ENGLAND

Speech

Remarks to Open Policy Panel

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ECB Forum on Central Banking – 20 Years of European Economic and Monetary Union
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Introduction

It is an honour to participate in such a distinguished panel on such a special occasion.

Before I begin, I should emphasise that the usual caveat of the past providing no guide to future performance applies particularly to my remarks today. My reflections are on history alone. I am speaking in the MPC's blackout period, so my comments have no bearing whatsoever on the decision to be announced by the MPC on Thursday.

There are no messages – coded or clarion – in what follows … about policy.

But there is one message that my presence here today is meant to convey. I want to pay homage to President Draghi's extraordinary leadership of the ECB, the ESRB, the FSB and, by example, of the G7 and G20. The crisis years here have been extraordinarily challenging but these challenges have been met because of his leadership, innovation and determination.

The theme for this year's conference is "20 years of European Economic and Monetary Union".

I will focus my remarks today on how monetary policy has evolved over that period, drawing on the experiences of the ECB and Bank of England.

Economic performance

The global financial crisis divides the past twenty years.

In the decade prior to the crisis, in both the euro area and the UK, inflation was low, stable and predictable. Inflation targets were achieved without causing undesirable volatility in output and employment, the so-called "divine coincidence".[1] Both regions experienced continuous expansions in activity. It is not entirely surprising that "end of history" declarations of the Great Moderation were increasingly commonplace.

But such nominal stability masked growing financial imbalances and increasing strains in competitiveness.

The financial crisis would expose how a healthy focus on price stability had become a dangerous distraction. Central banks had won the war against inflation only to lose the peace.

When the music stopped, the consequences for the real economy were dire. In both the euro area and UK, output fell by around 6% and unemployment rates rose initially by 2½ percentage points. It took 7 years for GDP per capita to recover to pre-crisis levels.

In response, the financial system and the institutional architecture have been fundamentally reformed. The capital requirements of large global banks are ten times higher than the pre-crisis standard. Liquid assets –

[1] See Blanchard, O., and J. Galí (2007). "Real Wage Rigidities and the New Keynesian Model". Journal of Money, Credit, and Banking, 39(1), pp. 35-65.

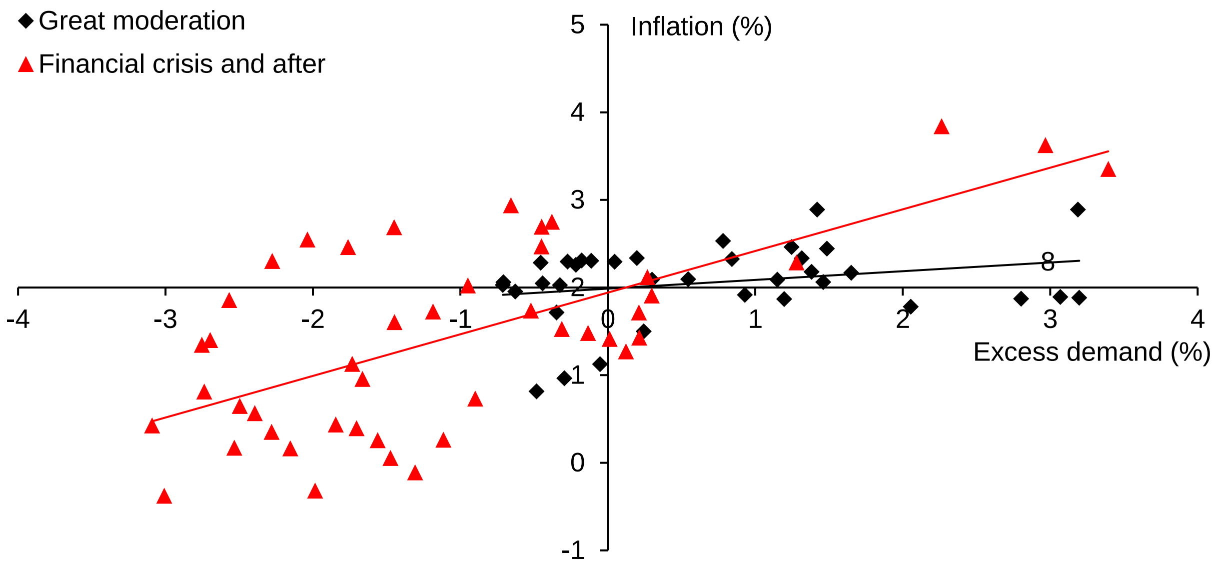
relative to liabilities that can readily run – are also tenfold higher now than before crisis. We are ending too big to fail and transforming the resilience of financial market infrastructure. Macroprudential is no longer the policy that dares not speak its name.

To safeguard these hard-won reforms, Europe now has a Single Supervisory Mechanism and European Systemic Risk Board. The Bank of England now houses the Prudential Regulation Committee and the Financial Policy Committee. The independence of these committees and their accountability to the people they serve through their respective parliaments are essential bulwarks against the inevitable recidivism that follows a financial crisis. The longer we go without disruption the more important it is to remember, remember that when it comes to financial stability, success is an orphan.

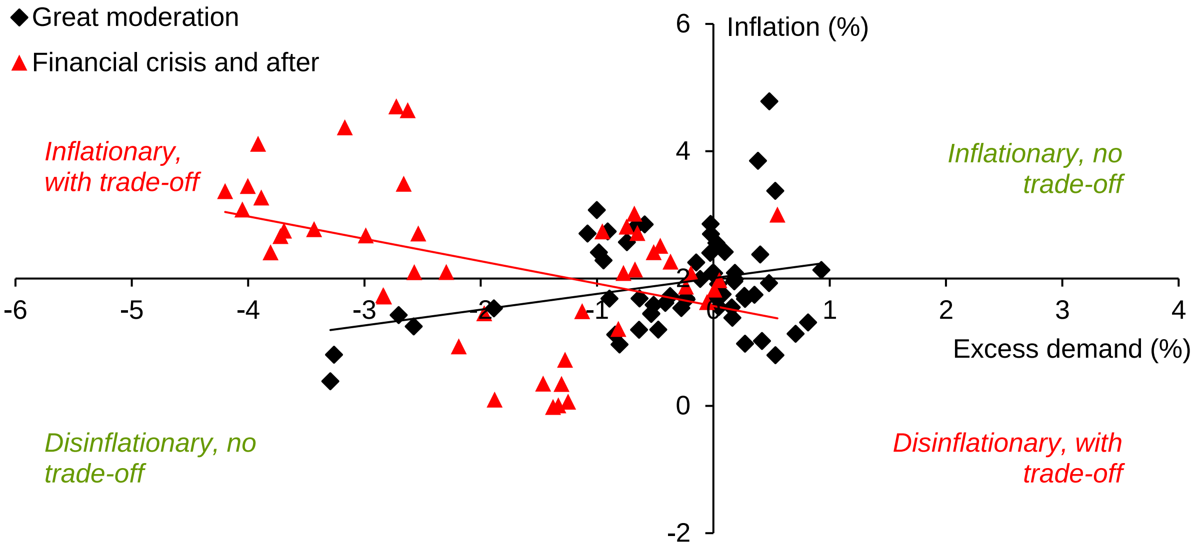
Since the crisis, macroeconomic outcomes have been much less benign. Growth in both the euro area and the UK has been, on average, a percentage point lower; and inflation has been twice as volatile. There has been a persistent margin of spare capacity, with unemployment, on average, 1-1½ percentage points higher.

But there have also been important differences. While the euro area has continued to experience ‘divine coincidence’ the UK has not (**Chart 1**). In the euro area, inflation has averaged half a point below target, reflecting in part the drag from persistent slack in the labour market. In contrast, UK inflation has been above target, averaging 2.3%, during a period where the economy was operating well below potential. That reflects the inflationary impacts of two large exchange rate depreciations and weak productivity that have offset a major positive shock to labour supply. This has created tensions between short-term output and inflation stabilisation in the UK that have not been evident in other major economic regions.

Chart 1: Divine coincidence has continued in the euro area



But not in the United Kingdom



In these circumstances it has been critical for the Bank of England to pursue flexible inflation targeting.[2] Since 2013, the MPC's remit has explicitly recognised that there are circumstances in which bringing inflation back to target too quickly could cause undesirable volatility in output and employment. It directs the MPC to "promote understanding of the trade-offs inherent in setting monetary policy" including importantly "the horizon over which the Committee judges it appropriate to return inflation to target".

The MPC used this flexibility to support activity following the referendum in the wake of the large depreciation.

In exceptional circumstances, like Brexit, when the economy is facing profound structural change, the MPC can extend the horizon over which it returns inflation to target from above in order to balance the effects on jobs and activity. After all, even though monetary policy cannot prevent the weaker real income growth likely to accompany the transition to new trading arrangements with the EU, it can influence how this hit to incomes is distributed between job losses and price rises.

This flexibility cannot be used without limit of course, and the MPC has set out its framework for managing the trade-off including guidance for its tolerance of the overshoot of inflation.[3]

Developments in monetary policy

In response to the challenging post-crisis environment, the conduct of monetary policy has made important advances that have helped to shape the expectations of both market participants and the public we serve.

[2] The ECB also has flexibility to pursue its inflation target, but given the absence of trade-off inducing shocks has not yet had cause to use it. The ECB General Council adopted a quantitative definition of price stability in 1998 as a year-on-year increase in the Harmonised Index of Consumer Prices (HICP) for the euro area of below 2%; and from 2003, they clarified that this objective was to maintain inflation rates below, but close to, 2% over the medium term.
[3] See Carney M (2017), Lambda, speech given at the London School of Economics, 16 January 2017.

To provide stimulus, central banks have taken policy rates to the effective lower bound and beyond by using forward guidance, new lending facilities and asset purchase programmes.

In parallel, monetary policy communications have been transformed. Committee decisions are now explained more fully, in a more timely and targeted way. Given greater supply uncertainty, more details are provided about the assumptions underpinning forecasts. And in the face of large downside tail risks, more facets of the reaction function are being spelt out.

While there have been many innovations, given the time available today, I will focus on two: communications including forward guidance; and central bank facilities.

Communications including forward guidance

For both the euro area and UK, the past decade has been marked by increased transparency and more focused communications.

The ECB has followed each monetary policy decision with a statement and press conference at each meeting since its creation in 1999 and these were supplemented a year later with macroeconomic projections. In 2015, it dropped the frequency of meetings from twelve to eight to allow for a fuller passage of time between decisions, and supplemented the statement with a fuller account of its monetary policy deliberations, published four weeks after policy announcements.

Twenty years ago, the Bank of England was publishing minutes of its monthly policy meetings and quarterly economic forecasts in its Inflation Reports. It didn't however always issue statements following decisions.

Following the Warsh Report in 2015, we overhauled our communications. For similar reasons to the ECB, we moved from twelve to eight meetings per year, and we began publishing a statement every time we met and releasing Minutes, Inflation Reports and Monetary Policy Summaries simultaneously on the logic that one decision should merit only one news event.

The MPC now provides much more detailed information on the assumptions that underlie our forecasts and regularly assesses them versus actual outturns. We release our key judgements for the global economy, domestic demand and the pace of demand relative to supply capacity, and we publish paths for variables that we and others can monitor to see whether the forecast is on track. We also now publish annual stock takes of the supply side of the economy and of the forecast errors we have made over the past year.

Last year, the MPC introduced layered communication to reach the broadest possible audience. In addition to the Inflation Report we now publish a visual summary, or top layer, which distils the document down to its main messages with a few accompanying diagrams. It is intended for a non-technical audience. Following the changes, we have seen web traffic to Inflation Report pages increase by a third and research suggests that public understanding has increased by a quarter.[4]

The biggest innovation in communication has been the introduction of forward guidance as a tool to influence short-term interest rates once policy rates hit the effective lower bound. The objective has been the same for both the ECB and the Bank of England – to clarify our reaction function in a highly uncertain world.

In a perfect world, guidance would be redundant. People would know how the Committee intends to set rates over the future and how those intentions would adjust to economic developments in all eventualities – the so-called reaction function. But the world is complex and people (outside this audience) don't have endless time to devote to understanding monetary policy. In practice, therefore, guidance can be useful in providing people with information about how the Committee sets policy and, over time, in improving the understanding of how monetary policy will adjust to news.

This can make monetary policy more effective by reducing unwarranted volatility in interest rate expectations and the extent to which the central bank has to move the policy rate to meet the inflation target. The more those expectations are aligned with the policy path necessary to achieve the inflation target, the higher the probability that the policy objective will be achieved.

The ECB's experience provides a classic example.

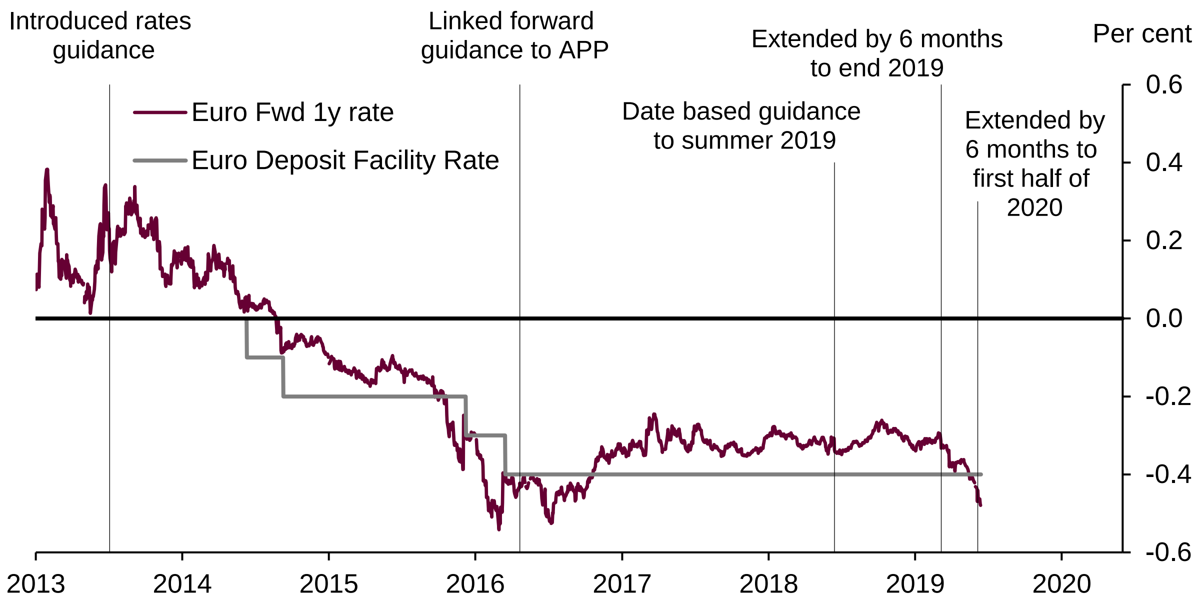
The ECB's use of forward guidance has evolved over time with the first use in 2013. The previous year President Draghi had skilfully given assurance that the ECB would do "whatever it takes to preserve the euro"[5] and the Governing Council followed through with a program of Outright Monetary Transactions which restored sovereign bond spreads to more sustainable levels.

In the wake of spillovers from the US taper tantrum, guidance was used to anchor policy expectations in the face of a still fragile euro-area recovery (**Chart 2**). The ECB stated that rates were expected to remain at present or lower levels for "an extended period of time" based on "an overall subdued outlook for inflation extending into the medium term and subdued monetary dynamics".

In subsequent episodes, ECB guidance on interest rates has always been tied to the outlook for inflation, with its time contingent nature becoming more specific, first with links to the duration of asset purchases and more recently to specific calendar dates. In its most recent statement, the ECB indicated it expected interest rates to "remain at their present levels at least through the first half of 2020".

[4] See Bholat, Broughton, Parker, Ter Meer and Walczak (2018), Enhancing central bank communications with behavioural insights, Bank of England Staff Working Paper No. 750.
[5] See verbatim of the remarks made at the Global Investment Conference in London, 26 July 2012.

Chart 2: ECB forward guidance has helped to anchor forward interest rates through the euro area recovery



The ECB has also innovated with guidance on its asset purchase programme. In the September 2014 press conference the President said that the aim of policy was to steer the balance sheet towards its size at the beginning of 2012. This guidance was important to dispel any doubts about the ECB's ability to deliver.

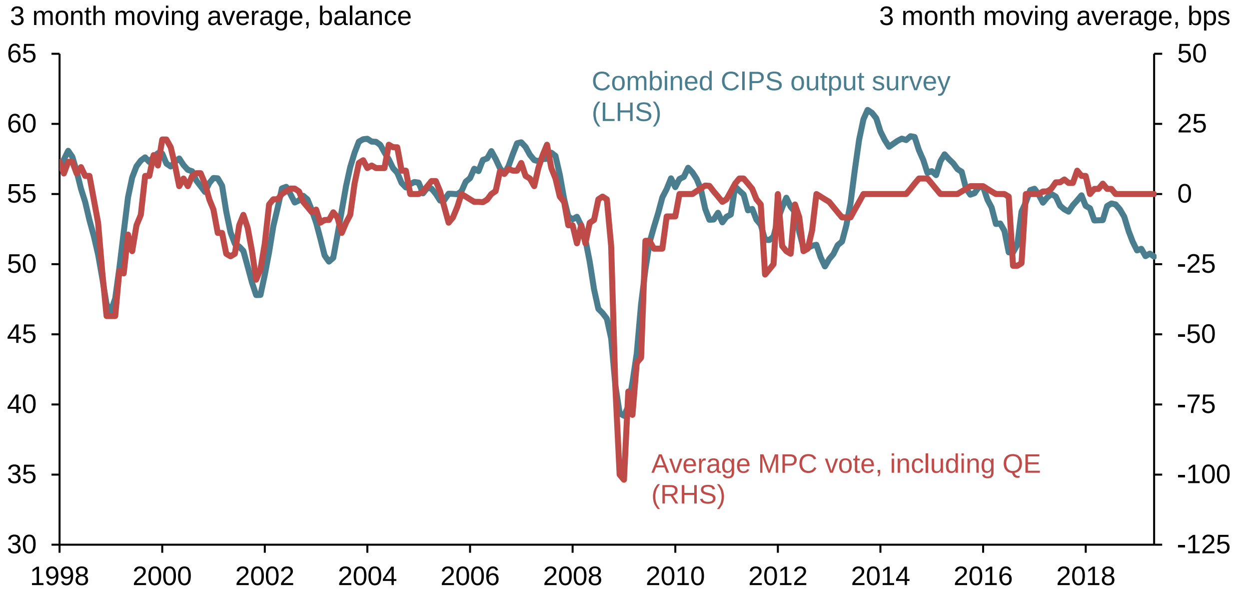
The Bank of England introduced guidance in 2013 in order to secure the nascent recovery while granting the MPC the flexibility to learn more about the rapidly changing supply capacity of the economy. When the long-awaited UK recovery began to take hold, even though inflation had been persistently above target, there remained a significant but highly uncertain margin of spare capacity in the economy and it was unclear whether productivity growth would pick up.

We felt that guidance was essential to help clarify our reaction function so that stakeholders could learn alongside the MPC.

During previous periods of accelerating growth and firming business confidence, the MPC had always tightened policy significantly. Indeed, on the basis of this past behaviour in the great moderation, the MPC would have raised interest rates by 2 to 3 percentage points between August 2013 and the end of 2014 (**Charts 3 and 4**).[6]

[6] See Carney M (2018), 'Guidance, Contingencies and Brexit'. For anyone who might suggest the MPC should have followed that reaction function, note that, even on unchanged policy, CPI inflation by the summer of 2016 was running at only about ½% and core CPI inflation around 1¼%.

Chart 3: Close correlation between output and monetary policy pre-crisis



Sources: IHS Markit, ONS and Bank calculations.
Notes: Combined CIPS output survey is a weighted average of the Markit/CIPS PMIs for services, manufacturing and construction. Average MPC vote includes both decisions on Bank Rate and QE, with every extra £25bn of asset purchases (gilts and corporate bonds) treated as equivalent to a 25bp cut in Bank Rate (see Joyce, Tong and Woods, 2011).

Six years ago, the MPC recognised that past should not be prologue. The MPC was pretty certain there was a large amount of slack, although it had questions over how much productive capacity had been destroyed following the crisis; how quickly productivity growth would recover; and whether labour supply would change in the wake of reforms and a heavy burden of household debt.

Such uncertainties about supply meant that knowing what was happening to demand was no longer sufficient for gauging the appropriate policy response.

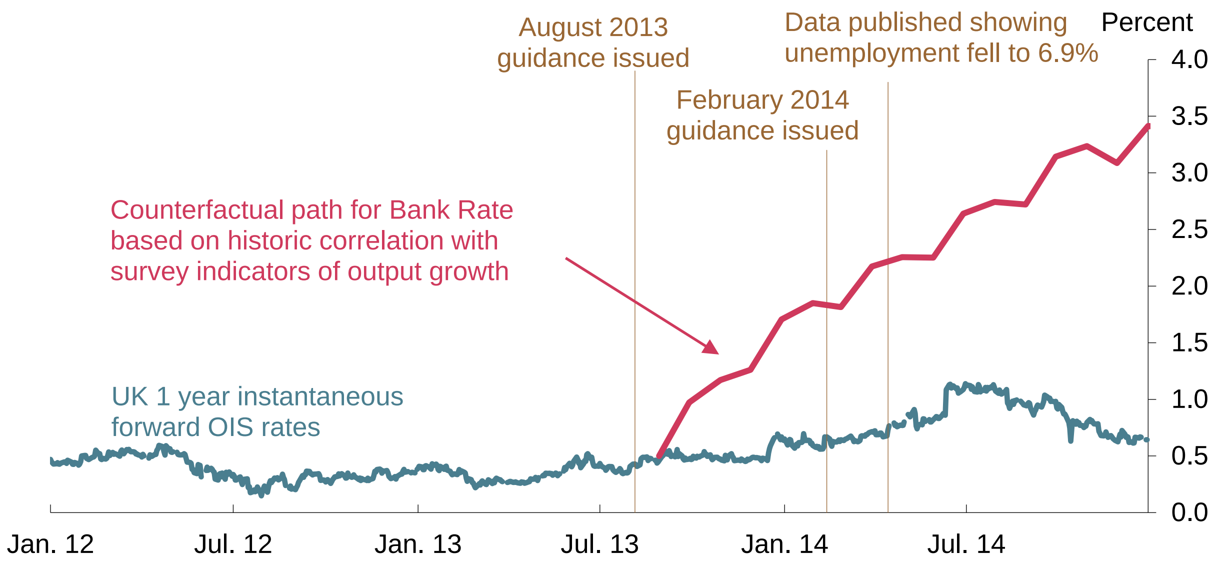
That is why the Committee provided forward guidance that explicitly linked any potential change in interest rates to the unemployment rate – a clear and widely understood indicator of the degree of slack.

The message the Committee gave UK households and businesses was simple: the MPC would not even think about tightening policy at least until the unemployment rate had fallen below 7%, consistent with the creation of around three quarter of a million jobs.

What we – and others – learnt as the recovery progressed was that the UK economy had substantially more spare capacity than previously thought. The MPC could be patient.

As a consequence, even as the recovery strengthened and survey indicators of output growth reached levels previously associated with sharp policy tightenings (**Chart 4**), market expectations about the future path of policy remained subdued (**Chart 3**). Participants understood the conditionality of guidance, as they and the MPC learnt that there was still considerable spare capacity in the economy.

Chart 4: Forward market interest rates rose only modestly as unemployment fell towards 7%



The MPC's second use of guidance responded to another structural development: the sharp fall in the equilibrium real interest rate, or r*. Out of that guidance came the phrase 'limited and gradual', so often repeated it is now part of the monetary policy furniture. In fact, it recently celebrated its fifth birthday.

This guidance was grounded in an early exposition of why r* was low and not expected to recover soon.[7] Secular drivers that had pushed down the equilibrium rate prior to the crisis – including slower potential growth, demographic forces, changes in income distribution and excess saving in emerging markets – were likely to persist. The MPC judged there is a further wedge pushing r* in the UK below global r* because of fiscal drag and heightened uncertainty.[8]

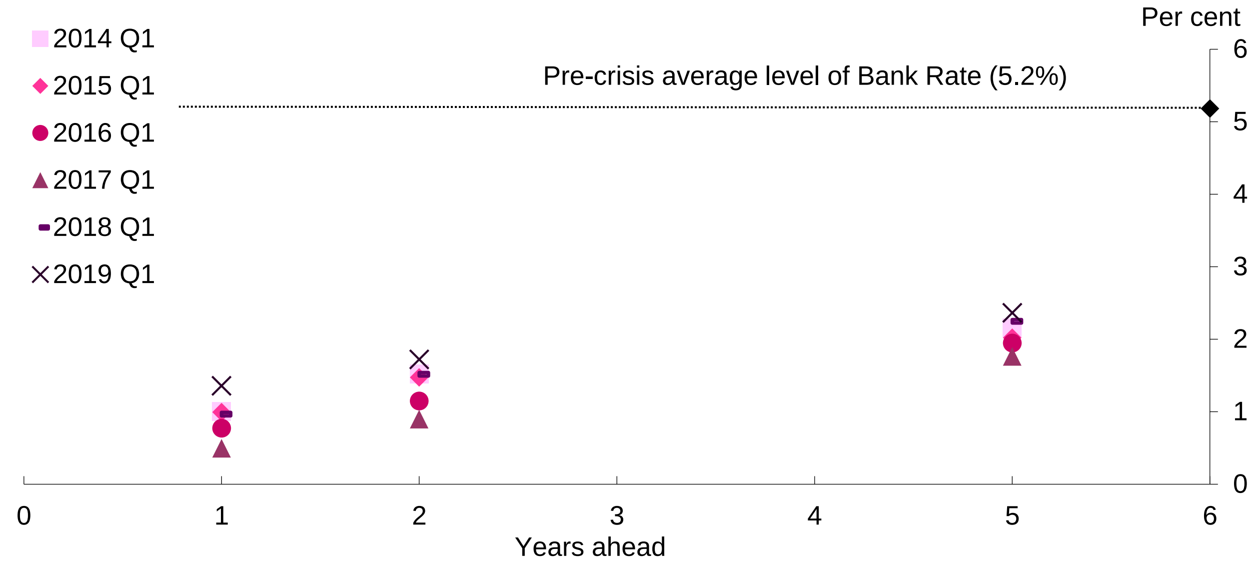
The MPC clearly signalled that the policy path was likely to be very different from during past recoveries. It observed that the appropriate path of interest rate increases to eliminate slack and keep inflation close to the target was expected to be gradual and, even once spare capacity had been absorbed, the appropriate level of Bank Rate was expected to be materially below the pre-crisis average of 5%.

This may be obvious now, but it wasn't then when it mattered most.

Importantly, the interest rate expectations of UK households and businesses have remained well anchored both as the recovery has progressed and even as policy was tightened in November 2017 and August 2018 (**Chart 5**).

[7] See Carney, M (2013), "The spirit of the season" at The Economic Club of New York; and the box on page 42 of the August 2014 *Inflation Report*.
[8] See the box on page 39 of the August 2018 *Inflation Report*.

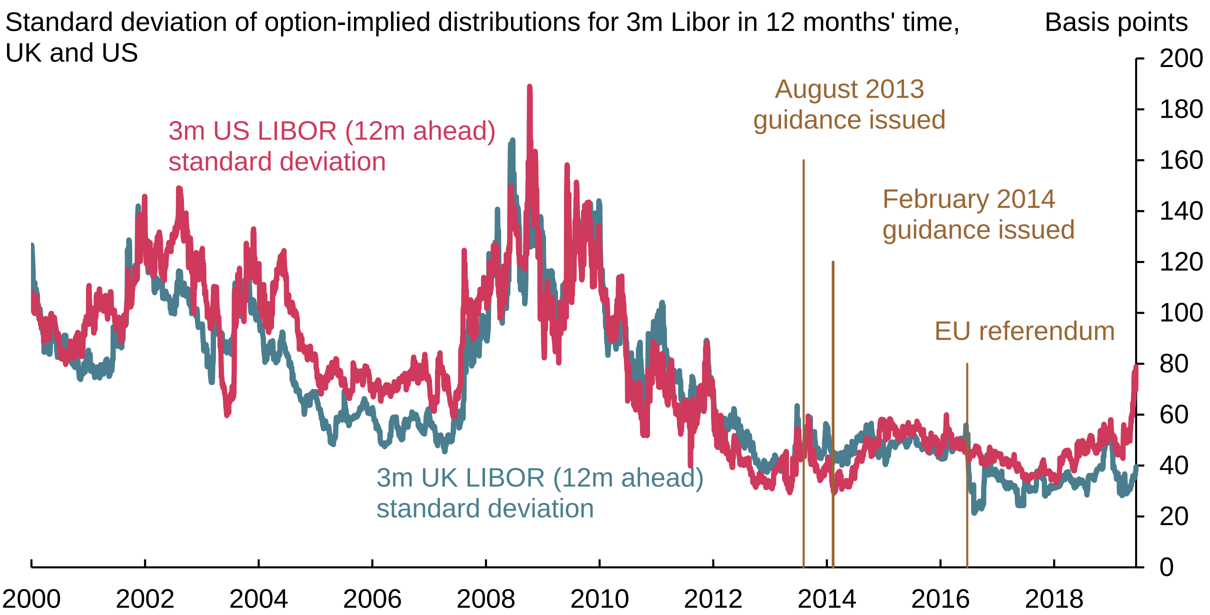
Chart 5: Households and businesses have consistently expected increases in interest rates to be gradual and limited



The experience in the euro area and UK demonstrates how guidance can be effective in managing expectations as circumstances change.

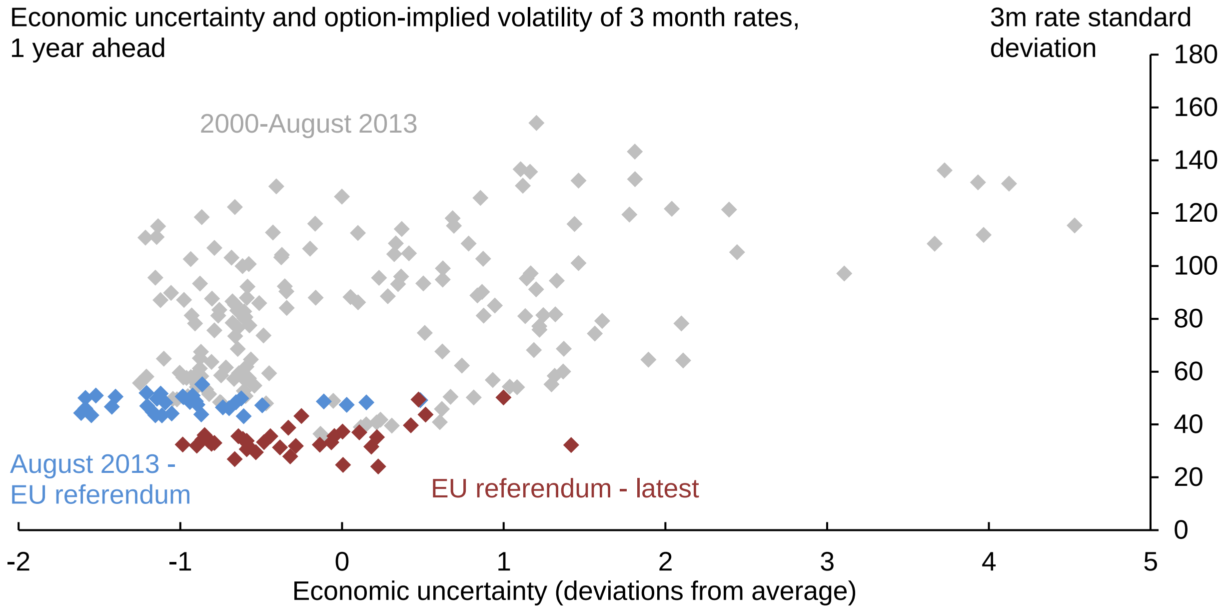
As intended, "limited and gradual" guidance has dampened interest rate volatility (**Chart 6**) and reduced the correlation between interest rate volatility and economic uncertainty (**Chart 7**). Both developments have increased the degree of monetary policy stimulus, thereby reinforcing the recovery during turbulent times.

Chart 6: Interest rate volatility has remained low since guidance was provided



Sources: Bloomberg Finance L.P., Chicago Mercantile Exchange (CME), Intercontinental Exchange (ICE) and Bank calculations.

Chart 7: Guidance has reduced the correlation between economic uncertainty and interest rate volatility



Sources: Bloomberg Finance L.P., ICE, Bank calculations and Haddow, A, Hare, C, Hooley, J and Shakir, T (2013) "Macroeconomic uncertainty: what is it, how can we measure it and why does it matter?", Bank of England Quarterly Bulletin, 2013 Q2..

<u>Liquidity and lending facilities</u>

I would also like to touch on the critical but sometimes underappreciated role that liquidity and lending facilities have played in securing the recoveries in both our economies.

During the crisis and its immediate aftermath, the focus of these innovations was to maintain market functioning.

At the first signs of tension in 2007, the ECB was quickest to respond to demands for additional liquidity, injecting additional reserves in August as asset-backed commercial paper markets dried up. As the crisis intensified, the ECB launched innovative long-term repo operations, with wider collateral eligibility. And the ECB worked with the Bank of England, the Federal Reserve and the Bank of Canada amongst others on a network of central bank swaps to make liquidity available in G10 currencies across a range of jurisdictions.

The Bank of England's initial response was not as comprehensive as that of the ECB, not least because its framework for providing liquidity lagged market developments. Once under pressure, the Bank could neither stabilise overnight rates nor support the banking system. Fortunately, in the jaws of the crisis, the Bank innovated rapidly and admirably to avoid the collapse of the system.

In 2013, following the Winters review, we overhauled our facilities drawing on the ECB's example and made it clear the Bank was 'open for business'. Facilities were made cheaper, available at longer terms and against a much broader pool of collateral. We also begun a broadening access to our facilities both within the banking sector and beyond it to reach central counterparties and large broker dealers.

The most recent addition to the toolkit came in March of this year when the Bank launched a new Liquidity Facility in Euros (LiFE) as part of our Brexit contingency planning. This is backstopped by the swap line between our two institutions, and underpinned by our open communications and effective supervisory cooperation. The LiFE is a testament to the commitment of central banks to cooperate to secure the stability of the system to the benefit of all our citizens.

Liquidity facilities have not just been about firefighting. Given the constraints of the effective lower bound (ELB), lending facilities have been recast into stimulus tools.

Drawing on the 3-year long-term refinancing operations (LTROs) launched by ECB the previous year, the Bank of England launched a Funding for Lending Scheme (FLS) in 2012, as the nascent recovery was threatened by a sharp rise in banks funding costs and subsequent tightening in credit conditions amid the euro-area crisis.

The FLS combined four year funding with sharp incentives to support lending to households and businesses. Banks expanding lending were able to access the scheme for a 25bp fee, a sizeable discount to retail and market funding costs at the time, with higher fees, of up to 150bp, for those that were contracting their lending. Banks could access 5% of their initial stock of lending immediately and to provide a further incentive to lend this allocation was adjusted upward by the amount of their net lending in the 18 months following the launch of the scheme.[9]

Building on the experience of the FLS, the Bank launched a Term Funding Scheme (TFS) in August 2016 as part of a package of measures in response to the hit to confidence in the UK following the vote to leave the European Union.

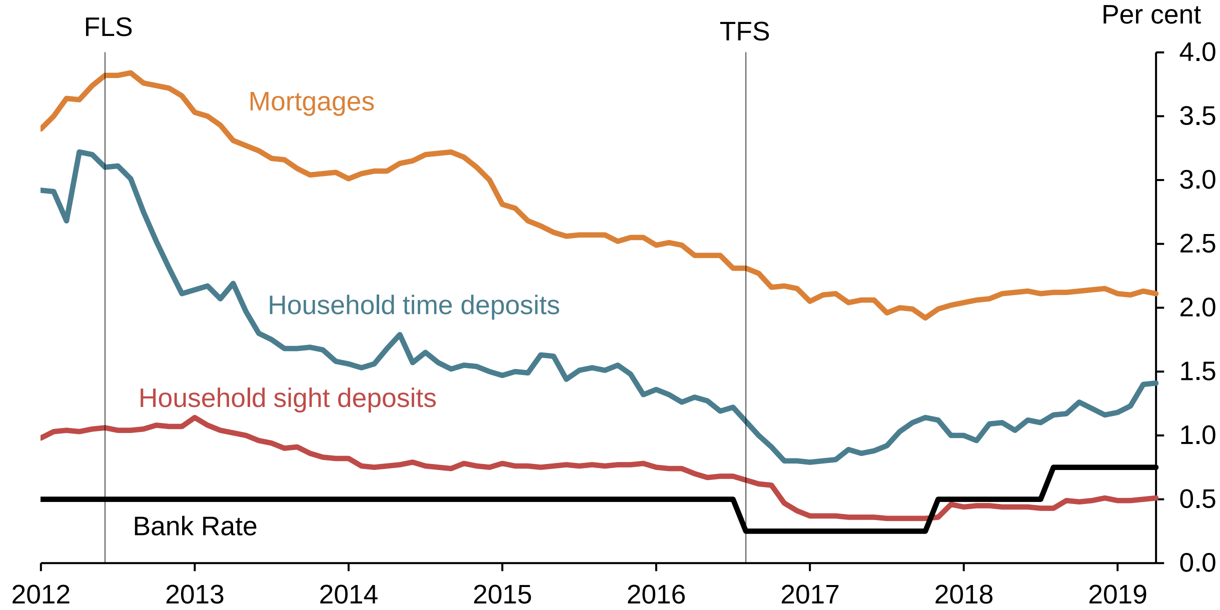
The TFS was designed to reinforce pass-through of a cut in Bank Rate from 0.5% to 0.25% and in doing so reduce the effective lower bound in the UK.

The pricing was calibrated so that the combination of the TFS and cuts in Bank Rate, if passed through fully, would have no impact on the margins of banks and building societies. The subsequent behaviour of lending and deposit rates suggest the scheme worked in reinforcing pass-through (**Chart 8**).[10]

The existence of the TFS meant that the MPC reduced its estimate of the effective lower bound from 0.5% to close to, but a little above, 0%.

[9] The scheme was subsequently amended to give sharper incentives for participants to lend to SMEs.
[10] See Nardi, Nwankwo and Meaning (2018), The Term Funding Scheme: design, operation and impact.

Chart 8: Pass through of Bank Rate to lending and deposit rates facilitated by TFS



Source: Bank of England.

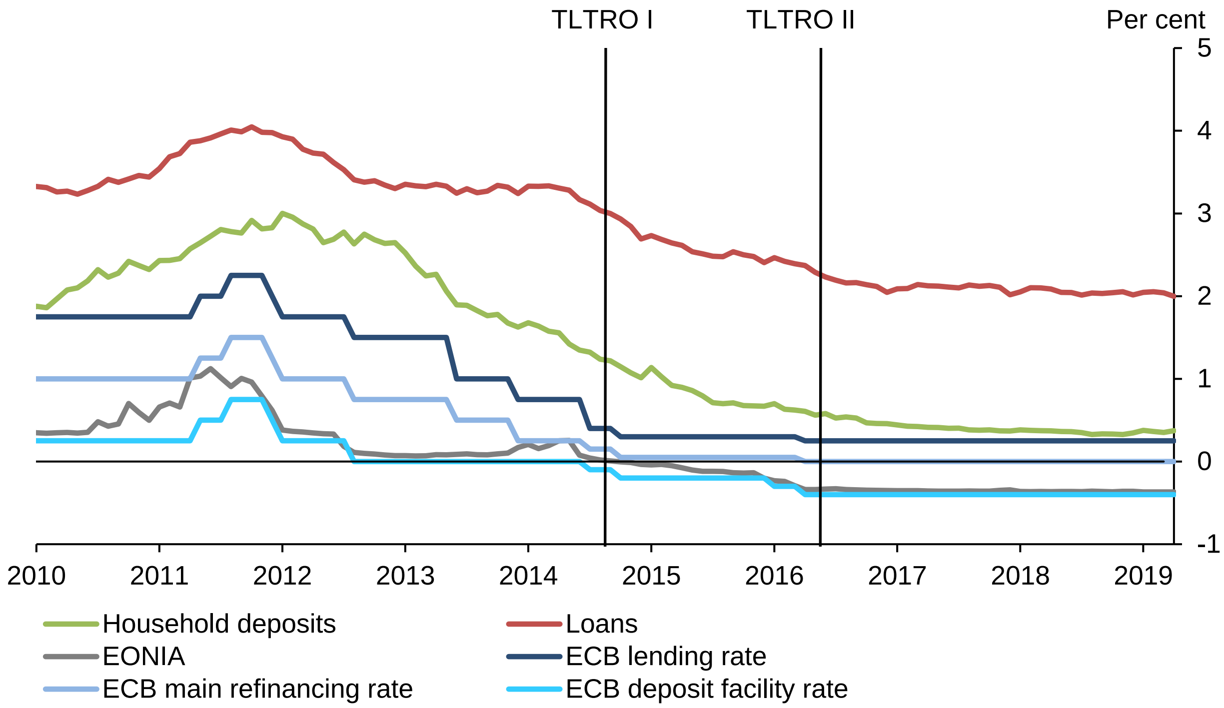
When conditions had improved enough to warrant an increase in Bank Rate to 0.5% in November 2017, the TFS was no longer needed and it was closed to further drawings in February 2018. The Bank of course retains the ability to relaunch the scheme as necessary and in light of that the MPC judges the effective lower bound to Bank Rate to be now close to but a little above 0%.

The ECB's targeted long-term refinancing operations (TLTROs), first launched in 2014, also built on the experience of the FLS, as part of the three-pronged easing strategy, which also included cuts in the ECB deposit rate into negative territory and the launch of asset-backed security and corporate bond purchase programs.

The facility was initially launched at margin of 10bps over the ECB's marginal lending rate, though over time the pricing was reduced and tied instead to the deposit rate. As with the FLS and TFS, higher interest rates for banks that are contracting lending provide an incentive to lend.

As with the UK, the TLTRO provided an innovative way to reduce the effective lower bound. With the link to the ECB's deposit rate the TLTRO provided a way for the ECB to take wholesale interest rates significantly below zero without counterproductive compression to margins in the banking sector (**Chart 9**).

Chart 9: Pass through of ECB rate cuts to lending and deposit rates facilitated by TLTRO



Source: ECB.

To sum up on liquidity and lending facilities, reforms over the crisis leave behind a much more comprehensive backstop to dysfunction in funding markets. Liquidity is available more freely, against a wider range of collateral and in all major currencies. Moreover, through careful calibration targeted lending schemes can lower the effective lower bound on interest rates, unlocking more stimulus.

To return to where I started, the past ten years have spurred tremendous advances in the conduct of monetary policy.

In this as in so many other respects, Europe has a rich past. And in part because of that past, it now has the possibility of a bright future.

For a perspective on the challenges faced by central banks today I will hand over to Stan Fischer.