



BANK OF ENGLAND

Speech

Twenty years of Bank of England independence: the evolution of monetary policy

Speech given by

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Earlier this year saw the 20th anniversary of the Bank of England's independence, though you would be forgiven for not being aware of it on the day itself. The 6th of May, a Saturday, fell in the midst of the election campaign, so there was not much pomp at the time. So to celebrate this bold and dramatic change to the conduct of monetary policymaking in the United Kingdom, the Bank of England hosted a conference last week.¹ And here I stand, doing my part in spreading the good word.

I believe that the decision to grant independence to the Bank of England, and the era of low and stable inflation that it helped cement, was one of the most successful institutional reforms to economic policy in my professional lifetime. The inflation targeting framework, buttressed by operational independence, has worked well. And independence, and the credibility that it has engendered, have allowed monetary policy to adapt successfully to the dramatic challenges of the last twenty years, developing innovative policy tools in response.

So what happened on 6 May 1997? In a nutshell, the Bank of England was given sole responsibility for setting the short-term policy interest rate, with a view to achieving an inflation target, set by Her Majesty's Government, of 2.5% as measured by the then-preferred measure of inflation, RPIX. In economist speak, the BoE was granted "instrument" or "operational" independence. 'Operational' in the sense that the Bank is responsible for the delivery of the inflation target, and for designing and operating the tools to do so, but the choice of that target remains with the Government, and the Bank is required to explain and justify its decisions to Parliament.

The announcement, by Gordon Brown, was a complete surprise, coming only four days after Labour's election win. There were in fact two surprises: the Chancellor didn't just give with one hand, he also took with the other. While entrusting monetary policy to the Bank of England, the new government transferred much of the responsibility for banking supervision to the Financial Services Authority, nearly causing then-Governor Eddie George to resign on the spot!

The new institutional set-up had to be designed rapidly and from scratch, given the paucity of international precedents. A new Committee was set up – the Monetary Policy Committee (MPC) – made up of the Governor, his deputy, a new second deputy, two bank executive directors and four experts (the "Externals"), appointed from outside the Bank. It would meet monthly and each member would be entitled to one vote, on the prevailing level of Bank Rate. Minutes of the meetings would be published every month.

That this still broadly describes the MPC and its functions and processes is testament to the robustness of the system and the skill of its architects.

¹ See "Independence – 20 Years On" (2017).

Operational independence gave a further boost to the mini-industry within the City, which still flourishes – a whole army of analysts and commentators who examine and pontificate on the MPC's every move.

Nigel Lawson once described them, less than flatteringly, as “teenage scribblers”. Much earlier in my career, I must admit to having spent some time working in the City, so I have been both poacher and gamekeeper, and suspect I have a little more sympathy for what they are trying to do.

What, you may wonder, pushed politicians to give away a critical demand-management tool with huge political significance to technical experts? After all, politicians are not known for their willingness to relinquish their power.

In handing the operational control of monetary policy over to the MPC, and thus insulating it from the demands of the electoral cycle and political interference, politicians effectively conferred a key characteristic onto the new policy regime – credibility.

Credibility is critical if monetary policy is to be fully effective.

Credibility, in the case of monetary policy in an inflation–targeting regime, means that households and firms trust the Bank to be able to deliver predictably low and stable inflation, and act accordingly. As such, a credible monetary policy helps to anchor households' and firms' inflation expectations around the target, and shapes their behaviour, for instance when negotiating wages or setting prices. This in turn helps policymakers to achieve the inflation target, by creating a virtuous circle, in which a track-record of low and stable inflation further acts to anchor households' and firms' expectations around the target, and reinforces behaviour patterns consistent with continued low and stable inflation.

But operational independence does more than simply remove monetary policy from the political arena to build credibility. That credibility also allows the Bank to be nimble and innovative in adapting its tools and processes to deal with changes in the economy and serious shocks to the system. This was demonstrated most clearly in recent years as the MPC grappled with the once-in-a-generation economic challenges posed by the financial crisis and its aftermath. The Bank of England, alongside other central banks, was required to expand the policy tool kit beyond interest rates into what have become known as unconventional policy tools, most noticeably the purchase of gilts and other financial instruments. This marked a dramatic departure from the simple – some have said “boring” – policy climate that prevailed during the decade following independence in 1997, and provides a dramatic illustration of how far the conduct of monetary policy has evolved over the past twenty years.

1997-2007: the NICE decade

But to understand that evolution more fully, we need to begin at the beginning.

The experience of the first ten years of monetary policy independence was perhaps best summed up by Mervyn King. In his first speech as Governor in 2003, Lord King coined the acronym NICE to describe the decade of Non-Inflationary Consistently Expansionary growth that had prevailed in the United Kingdom since the mid-1990s.² The decade that followed Bank independence in 1997 turned out to be very NICE indeed. Between 1997 and 2007, GDP growth averaged 3%, and consumer price inflation averaged 1.6%. Perhaps more importantly, and more unusually, the macroeconomic environment was characterised by remarkable stability – what former chairman of the US Federal Reserve Ben Bernanke called “The Great Moderation”³ – with little volatility in GDP growth and inflation rates, compared to the decades before and since (**Chart 1**).

How much the “Great Moderation” owed to an improved monetary policy framework, and how much to “good luck” in the guise of quiescent macroeconomic shocks, remains an open question.⁴ There is no doubt that the decade of the “Great Moderation” was characterised by a confluence of favourable economic conditions. The accession of China to the World Trade Organisation in 2001 ushered in an era of global disinflation in consumer prices, while at the same time providing a source of demand for developed economies. And, importantly, there were no major adverse supply shocks during the period – no major supply disruptions eroding the productive capacity of the economy, sending growth down but inflation up.

In other words, monetary policymakers were able to focus on addressing benign demand-side shocks that acted to push growth and inflation in the same direction. When growth and inflation are both rising, or both falling, the direction of the required change in Bank Rate is obvious. There is no tension – no “trade-off” – between the MPC’s primary objective of price stability and its subordinate objective of supporting growth and employment. Rates can be raised or cut in order to achieve both objectives together. For policymakers, difficulties arise when those objectives are in conflict – when inflation is rising but growth is slowing, or more accurately, when inflation is above target, but the economy is operating below full capacity. This poses a policy trade-off: a need to judge how far above-target inflation can be tolerated, in order to support activity.

During the NICE decade, such trade-offs were remarkably absent. This was an era of easy success for monetary policymakers, where the command of a single policy tool – the short-term interest rate – seemed broadly sufficient to steer activity and prices.

But as economists like to say, “There is no such thing as a free lunch”. Alongside the benign rates of consumer price inflation emerged rapid asset-price inflation, which was symptomatic of an excessive

² King (2003).

³ Bernanke (2004).

⁴ In support of good policy, see Bernanke (2004) for the United States and King (2007) for the United Kingdom; in favour of good luck, see Ahmed et al (2002) and Stock and Watson (2003) for the United States and Benati (2007) for the United Kingdom.

build-up of debt or leverage. It now appears that central bankers' focus on low and stable consumer price inflation overlooked, as an unintended consequence, the rapid credit expansion that contributed to the financial crisis.

The build-up of the financial crisis is of course a complex phenomenon, reflecting the confluence of many factors. In establishing a narrative, it's important to keep in mind the distinction between proximate causes or triggers – the factors that precipitated the crisis – and the underlying causes that underpinned its build-up in the preceding years.

The rapid credit expansion that built up in the run-up to the financial crisis was fuelled in part by increased credit supply, driven by deregulation and increased securitisation, as well as increased confidence in the long expansion. By keeping short-term interest rates low in the face of low consumer-price inflation, monetary policy can be said to have played some role in this, but the low level of long-term interest rates had less to do with the stance of monetary policy than with one-off factors reshaping the global economy, as former Fed Chairman Alan Greenspan has argued.⁵

So while low interest rates were a contributory factor in the build-up of the crisis, I believe that excessive risk-taking and inadequate regulation in the financial sector played a much more critical role.

The excessive leverage that preceded the financial crisis provided a stark reminder of an important, but often overlooked, principle in designing economic policy structures.

Back in the 1950s, Jan Tinbergen, the economic Nobel Laureate, demonstrated that, in an open macro economy, if you have two separate policy goals – in this case, stable prices and financial stability – you need two separate policy tools. Interest rates alone cannot necessarily deliver both simultaneously. So the creation⁶ of a new macroprudential regulatory body – the Bank's Financial Policy Committee (FPC), with specific and separate authority for financial stability, using its own balance-sheet and terms-of-lending tools, has also strengthened monetary policy. It has allowed the MPC to focus on its primary objective of delivering low and stable inflation, and the MPC has made it clear that monetary policy is the last, not first, line of defence against financial instability.

2008-2017: the UGLY decade

But let's go back to the financial crisis itself, and how it profoundly affected the conduct of monetary policy.

The disruption to the economy that followed the financial crisis has now persisted for so long that, following Mervyn's lead, I feel we can give it its own name. The decade since 2007 has been one in which, in sharp

⁵ Greenspan (2010).

⁶ 2012 Financial Services Act.

contrast to the NICE decade, growth has repeatedly disappointed, interest rates have remained at their lowest for 300 years and have not once been increased, and quantitative easing has been a feature for far longer than originally envisaged. So perhaps we can sum it up as UGLY – the Unconventional, Growthless, Low-Yield, decade.

As money and credit markets seized up following the failure of Lehman Brothers in September 2008, the Bank and other central banks intervened in financial markets in a number of ways.

The first interventions stemmed from central banks' role as lender-of-last-resort. Against the backdrop of severe liquidity shortages in a number of financial markets, the Bank provided direct liquidity support to banks (under the Special Liquidity Scheme and later the permanent Discount Window Facility) and to the non-bank private sector (under the Corporate Bond Facility), helping to improve market functioning and liquidity.⁷

These emergency liquidity measures were distinct from the Bank's monetary policy response. Monetary policy itself was initially deployed in a conventional manner, as the MPC cut Bank Rate from 5% in October 2008 to 0.5% in early March 2009. But it soon became apparent that the shock to economic activity was such that even the lowest level of Bank Rate in over 300 years was not in itself sufficient to address the challenges thrown up by the crisis.

The first challenge was how to conduct policy in a world where nominal interest rates had already fallen close to zero – what economists call the Zero Lower Bound (ZLB). At the policy meeting of March 2009, the MPC agreed that further stimulus was required, if the inflation target was to be met, but decided that cutting Bank Rate below 0.5% was problematic.⁸ It was judged that reducing Bank Rate below this level risked squeezing the profit margins of banks and building societies, given that they had a contractual obligation to cut lending rates to reflect the lower Bank Rate, but had only a limited capacity to cut deposit rates further, as they were already close to zero. This margin squeeze would threaten their ability to lend to households and firms, thus reducing the effectiveness of any cut in Bank Rate, and depriving the economy of a much-needed source of support.

But the fact that nominal rates were already close to zero was not the only challenge faced by my predecessors. To gauge the degree of monetary stimulus imparted to the UK economy, the level of Bank Rate needs to be compared with what policymakers call the 'neutral' interest rate – the rate that is consistent with delivering the two percent inflation target when labour and capital resources are fully employed. For policy to be truly stimulatory, the actual level of Bank Rate needs to be below that neutral rate.

⁷ John et al (2012).

⁸ Minutes of the MPC meeting on 4 and 5 March 2009.

Now, the level of the neutral rate is not directly observable, and will vary depending on such factors as household and business confidence, and the functioning of credit markets. But at the height of the financial crisis, the dislocation of financial markets, as well as the lack of confidence and elevated risk aversion amongst all actors in the system – consumers, business people and investors – will have caused the neutral rate to fall sharply, probably to a level substantially below zero.

This meant that even with Bank Rate close to zero, a sustainable economic recovery required further monetary stimulus, and the development of some unprecedented and innovative policy measures. At the height of the crisis, in March 2009, a series of tools was introduced, including the programme of asset purchases known as Quantitative Easing (QE), designed to drive the effective interest rate lower than possible through changes in Bank rate alone. And more recently, in 2013, to shore up the early-stage recovery by preventing a premature tightening in market rates, the use of explicit communication through Forward Guidance was adopted.

Unconventional policy

Let me start with the unconventional tools

In the first phase of QE, between March 2009 and January 2010, the Bank purchased £200 billion of gilts, amounting to roughly 14% of UK nominal GDP. The second phase, from October 2011 to May 2012 – largely in response to the growing sovereign debt crisis in the euro area – saw the Bank purchase £125 billion of gilts, and, when the crisis intensified in the summer of 2012, introduce with HMT the Funding for Lending Scheme (FLS), in order to provide strong incentives for banks to increase their lending to the real economy.⁹ The third phase of QE, from July to November 2012, concluded with the purchase of another £50 billion of gilts.

And last year, in August 2016, in the wake of the European Union referendum results, the MPC decided to purchase another £60bn of gilts as well as introduce a scheme to purchase up to £10bn of corporate bonds, in addition to cutting Bank Rate for the first time since March 2009, to 0.25%.¹⁰

QE has proven a controversial policy, and has attracted a number of criticisms.

The first is that QE has been ineffective, or has become less effective over time. There are two hurdles in assessing how effective QE has been. The first is that it is almost impossible to know the precise counterfactual – how the economy would have evolved if QE had not been deployed. The second is to isolate the effects of QE from the host of other factors that also influenced the economy during its

⁹ Churm et al (2012).

¹⁰ This cut was accompanied by the introduction of the newly created Term Funding Scheme (TFS), designed to reinforce the monetary transmission mechanism. The MPC also revised down its estimate of the effective lower bound to close to, but a little above, zero, in light of lenders' improved capital positions.

implementation. In spite of these hurdles, a number of econometric studies have attempted to assess the effects of QE on the UK economy. In a 2011 seminal analysis, Bank staff found that a series of quantitative approaches, applied to the initial £200bn of asset purchases, yielded a range of estimates, suggesting that QE had raised the level of real GDP by between 1½ and 2%, and had increased the level of prices by between ¾ and 1½pp.^{11,12} According to the Bank's forecasting model, this effect on inflation suggests that the impact of the first round of QE was equivalent to a reduction of Bank Rate of some 150-300 basis points. In other words, it was a large stimulus at a critical time, representing a continuation of Bank Rate cuts by unconventional means.

A more subtle criticism is that QE is now less effective than when it was first introduced. Back in 2013, I argued in my maiden speech that the impact of QE is state-contingent. That is, QE's effects on both financial markets and the broader economy depend on the economic conditions that prevail at the time.¹³ As the financial crisis has receded and the recovery taken hold, I think it stands to reason that some of the channels through which QE operates – improved market liquidity and greater investor confidence – may have become less potent, but on the evidence of the most recent bout of QE – last year – other channels look to have remained at least as effective.¹⁴

So overall, I believe that QE has been and remains effective, and that its scope to support the economy if required has not been exhausted. As such, despite having come close to the ZLB, I am confident that, contrary to some commentary, we have not run out of ammunition.

A second criticism is that QE has distorted the distribution of income, with adverse impacts on savers, pensioners and other groups.

Let me make a few points about this distributional impact. The first point is that *all* monetary policy actions have distributional effects. Changes in Bank Rate will affect savers and borrowers differently, by influencing the interest received on deposits and paid on loans. And as long as financial assets are unevenly spread across the population, changes in asset prices will be felt differently by different groups. However, as my colleague Ben Broadbent has pointed out,¹⁵ changes to savings rates, pension values, and other asset prices do not move in the same direction, as monetary policy changes, so the benefit or loss to specific individuals is more difficult to trace than may appear at first sight.

In addition, these distributional consequences have to be considered alongside the macroeconomic benefits of QE for growth and employment. Rates of interest on savings may have declined, but without QE, the

¹¹ Joyce et al (2011).

¹² Weale and Wieladek (2014) suggests that asset purchases have a statistically significant effect on real GDP, with a purchase of 1% of nominal GDP leading to a 0.18% rise in real GDP and a 0.3% rise in the level of consumer prices in the United Kingdom.

¹³ McCafferty (2013).

¹⁴ Haldane et al (2016).

¹⁵ Broadbent (2014).

economy as a whole would have performed much worse, with adverse consequences for all groups in society, including savers.

In a more normal cycle, the distributional impacts will be relatively short-lived, and will balance out over the course of the cycle. In the recent past, though, these distributional impacts have been more greatly felt because of the persistence of the low rate environment.

But QE is not the root cause of the low-yield decade. It cannot be stated often enough that large-scale asset purchases by Central Banks are not the driving force behind the fall in interest rates to levels that would have been unthinkable before the crisis. As Charlie Bean has argued, the fall in yields has been a feature of government debt, not just in the UK, but in most of the world, since well before the financial crisis and the onset of QE (**Chart 2**).¹⁶ To a large extent, policy rates have simply accommodated that downward global trend.

A number of explanations have been put forward to explain the downward trend in international long-term interest rates. The fall of *nominal* interest rates is on the face of it easy to explain – the introduction of inflation targeting in the early 1990s by a number of central banks around the world brought down both realised inflation and expected inflation, as central banks established a credible track record of achieving their inflation targets. But the reasons behind the fall of global *real* interest rates are perhaps not as obvious. A consensus has emerged in recent years that this fall has reflected a decline in the *equilibrium* level of the real interest rate, reflecting big and long-lasting structural changes in the world economy.

The main structural factor looks to have been a shift in global saving and investment preferences over the past thirty years. An increase in desired savings driven by demographics, as advanced-economy baby-boomers save more for retirement, and the accumulation of precautionary savings by emerging markets scarred by the Asian financial crisis of 1998 (generating what Ben Bernanke called the “global savings glut”)¹⁷, will have pushed down on global equilibrium real interest rates. At the same time, weaker investment across countries, reflecting a fall in the relative price of capital goods, lower public investment and the rise in the spread between the risk-free rate and the rate of return on capital, will also have weighed on the global equilibrium real rate.¹⁸

Another explanation behind the downward trend in real interest rates has been slower global trend growth – slower growth in the productive capacity of economies. This has probably reflected slower growth in the supply of labour as well as slower growth in the productivity of labour. The slowdown of productivity growth in

¹⁶ Bean (2012).

¹⁷ Bernanke (2005).

¹⁸ See Rachel and Smith (2015).

advanced economies, including in the United Kingdom,¹⁹ has been exercising policymakers and remains something of a puzzle to this day.

So it seems that structural forces – changes in saving and investment preferences, as well as slower trend growth – have been the main driver pushing down global real interest rates over the past decades.²⁰ Why does that matter for UK monetary policymakers?

As a small economy that is open to the outside world, UK financial conditions are influenced by those in the rest of the world. Put differently, the global equilibrium real interest rate can be thought of as an anchor for the UK's own equilibrium interest rate, the neutral interest rate I mentioned earlier.

This matters because the stance of UK monetary policy is determined by where Bank Rate sits relative to that neutral rate. And the neutral interest rate in the UK will have fallen in tandem with the global equilibrium real interest rate, compounding the effect of shorter-term, UK-specific factors.

As I noted earlier, the neutral rate probably became significantly negative at the height of the financial crisis, reflecting the severe dislocation of markets and the high levels of risk aversion throughout the economy. And tight credit conditions, bank and household deleveraging, fiscal consolidation and weak global demand will have acted to keep the neutral rate at a historically low level for some time after the financial crisis. So to provide monetary stimulus, Bank Rate had to remain close to zero, and the effective Bank Rate (including QE), negative.

But more recently, those cyclical factors depressing the neutral rate will have diminished. Both in the United Kingdom and globally, the economic recovery has taken hold, households and banks have repaired their balance sheets, and the effects of fiscal consolidation have abated. As such, it would be reasonable to expect the neutral interest rate to have started to recover, such that leaving Bank Rate at its current level means imparting a greater degree of stimulus to the economy.

But many of the longer-term structural factors that have depressed the neutral rate in recent years, in particular demographic trends, will take longer to unwind. As a result, the neutral rate is likely to remain well below that deemed normal before the financial crisis for some years – suggesting that interest rates will remain at levels below those seen pre-crisis for some time to come.

¹⁹ Barnett et al (2014).

²⁰ Rachel and Smith (2015) attempt to apportion weights to these different explanations, and find that of the 450bp fall in international long-term real interest rates over the past 30 years, the shift in saving/investment preferences explains 300bp, lower trend growth explains 100bp and 50bp is left unexplained.

Communication as a policy tool

In the current regime of low nominal interest rates, QE is not the only innovation. Other tools have also become more important for central bankers, including the development of much more open and transparent communication. At one time, Central Banks were known for their reliance on constructive obfuscation, captured well by Alan Greenspan, when he said, speaking to a Senate Committee in 1987, “Since becoming a central banker, I have learned to mumble with great incoherence. If I seem unduly clear to you, you must have misunderstood what I said.”²¹ More recently, Central Banks have developed more open and used more transparent methods of communication.

Since independence, the Bank of England has sought to become increasingly open and transparent about the factors behind its decisions. In 1997, the MPC continued the practice of the previous four years, in publishing the quarterly *Inflation Report*, presenting the MPC’s collective judgment of the inflation and growth outlook and explaining its policy decisions in light of it. The publication of the minutes of the (now six-weekly) policy meetings provides both a summary of the issues discussed by the MPC at each meeting and an explanation of and reasons behind individual voting patterns. Public speeches and press articles also allow members to provide guidance on their individual “reaction function”, that is, how they will react to future economic developments.

This pattern, established at the outset, is still largely in place today. Although here, too, there have been a number of innovations. Almost exactly five years ago, the Stockton review of the MPC’s forecasting capability was published,²² which included an external assessment of the MPC’s forecasting record showing an over-prediction of output growth and under-prediction of CPI inflation since the crisis. And some three years ago, at the request of the Governor, the Warsh review on “Transparency and the Bank of England’s Monetary Policy Committee” was undertaken as the Bank reaffirmed its commitment to openness and accountability.²³

The Warsh Review recommended the adoption of a number of reforms, including a quicker publication of the policy decision following the policy meetings, the switch from twelve to eight policy meetings annually, and, importantly for transparency, the publication, with an eight-year lag, of the transcripts of the second day of policy discussions, together with the key inputs informing those discussions. All these recommendations have since been adopted by the MPC.

But such communications are essentially a form of governance. The bigger innovation, in 2013, was the use of communication as a policy tool, with the introduction of Forward Guidance on the future direction of monetary policy. By stating its intention not to raise Bank Rate at least until there was a clear decline in

²¹ As quoted in the *Wall Street Journal*, September 22, 1987.

²² Stockton (2012).

²³ Warsh (2014).

spare capacity, measured by the unemployment rate – so long as there was no threat to either price or financial stability – such explicit guidance made more transparent the MPC's collective reaction function, providing greater predictability of future policy moves. The goal was two-fold: to alter market expectations, which implied more rapid withdrawal of stimulus than the Committee felt likely, and to boost confidence by providing reassurance to households and businesses that they should not fear imminent increases in interest rates.

Forward Guidance was therefore designed to increase the effectiveness of monetary policy, by lowering market expectations for the path of short rates and by pushing down on term premia through lower interest-rate uncertainty.

Such guidance sets out how the MPC will respond to particular economic circumstances, and is therefore state-contingent, rather than time-contingent. It therefore heavily depends on the evolution of the economy; and can only be an expectation, rather than a promise.

And while some commentators have argued that because such guidance is conditional rather than absolute, it falls short of providing complete certainty, I would argue that it can steer expectations of the future path of interest rates effectively, especially when there are differences between the expectations of the markets and the views of the Committee.

A case in point is the Minutes of our most recent meeting. Until recently, financial markets had appeared to believe that, almost regardless of how the economy behaved, Brexit-related uncertainties effectively tied our hands until after the United Kingdom had left the European Union. This, we felt, was a misreading of our reaction function, risking unnecessary surprise and therefore an unwelcome snapback in bond yields were the policy stance to change. For the MPC, while Brexit uncertainties are an important consideration, we are currently facing an economy, according to our latest forecast, in which the little slack that currently remains is likely to disappear quite quickly, while inflation is projected to persistently overshoot the target. For a couple of members of the Committee, including myself, these considerations are already sufficient to justify a modest reduction in monetary stimulus, which is why Michael Saunders and I have been voting for a small rate rise since June. Others have been waiting for further evidence to confirm that the economy is running in line with that forecast, but their earlier fears of the risks of a sharper slowdown have diminished.

So, more explicit guidance was redeployed in the September Minutes, specifying that, for a majority of MPC members, “if the economy continued to follow a path consistent with the prospect of a continued erosion of slack and a gradual rise in underlying inflationary pressure some withdrawal of policy stimulus was likely to be appropriate in the coming months”.²⁴ This has had the effect of bringing forward expectations of the first rise in Bank rate from mid-2019 to late 2017, reducing the risks of an unwelcome surprise.

²⁴ Minutes of the MPC meeting ending on 13 September 2017.

So that brings us to the present day. The decade following the financial crisis has been difficult, even UGLY, as interest rates have remained low and the economy has undergone a long period of adjustment and repair following the financial crisis.

Ten years of lost growth may seem a long time, and it is clearly much longer than most business cycles. But perhaps it is not such a long time for an economy to recover from a shock of such scale. The work of Reinhart and Rogoff showed us that economies take much longer to recover from financial crises than from other types of shock.²⁵ Given the magnitude of the financial crisis of 2008, and its global nature, a full decade of adjustment and repair is not out of line with the experience of other debt crises. Nevertheless, there are now some early signs, in financial markets, in measures of business and consumer confidence, that in some important ways, the global economy is starting to normalise again.

2017 onwards: new challenges

The twenty years of Bank independence have seen monetary policy evolve dramatically in response to the challenges of the financial crisis, and in my view the policy changes and innovations have proven broadly successful. The MPC has adapted to very different economic circumstances in its use of monetary policy, using its discretion to expand the set of instruments at its disposal in order to achieve the inflation target.

But we cannot become complacent, nor can monetary policy stand still. Looking ahead, I can see new challenges appearing on the horizon. I will finish by mentioning three that the MPC is likely to have to grapple with in coming years.

The first, and most topical, is the prospect of Brexit. How should monetary policy respond to the economic implications of the United Kingdom leaving the European Union?

At one level, there is little that monetary policy can do. Monetary policy can prevent neither the necessary real adjustment as the United Kingdom moves towards its new international trading arrangements, nor the weaker real income growth that is likely to accompany that adjustment over the coming years. It is also likely to be the case that much of that adjustment in supply potential takes place over the medium term, currently well beyond the monetary policy horizon.

Of more immediate concern to the setting of monetary policy are the sharp changes in asset prices and the shifts in consumer and business confidence that we are witnessing, that have a more immediate impact on demand, and hence inflation over the policy horizon. Monetary policy can, and will, react to these as needed. This is why we on the MPC continue to pay close attention to indicators of economic sentiment, and any

²⁵ Reinhart and Rogoff (2009).

changes in consumer and business behaviour caused by the uncertainty about the journey towards Brexit, and are relying heavily on the business intelligence collected by the Bank's Agents around the country.

The second challenge the MPC will face in coming years is how best to normalise policy, when the time comes, after a decade of unconventionality. This is a challenge that the Federal Reserve is already grappling with, as it begins the process of unwinding its asset purchases of the past ten years.

We on the MPC are not yet in a position to have to deal with this; policy interest rates in the United Kingdom have yet to start to rise, whereas they have been increasing in the United States since December 2015. And even after Bank Rate starts to rise, it may be some time before it becomes appropriate to consider unwinding QE. The MPC still sees Bank Rate as its primary instrument, and there are good arguments for allowing Bank Rate to rise to a level that would then allow policy to be set effectively in either direction before starting to reduce the level of assets the Bank holds on its balance sheet. That would suggest that there is no need to consider the unwinding process until Bank Rate has been increased several times.

As such, this is more an issue for my successors to deal with; under the terms of my appointment as an External Member of the MPC, I will have stood down from the Committee by this time next year. But even if this is some way from being a live policy issue, there is more research to be done to understand how the economy is likely to react to the unwind, when it comes.

In my view, it is most likely that the effects on the economy of asset sales will not simply be the reverse of asset purchases. The transmission channels and the multipliers on the way out are unlikely to be equal and opposite to those on the way in, given that financial markets are less dysfunctional and the signalling channel present at the onset of QE – that Central Banks had not run out of policy road and that rates could be driven lower than with Bank Rate alone – are likely to be less potent.

Moreover, I believe that, whereas at one level, an unwinding of QE can be seen as equivalent in its effect on the economy to a rise in Bank Rate, at a more micro level its effects may differ slightly. Conceptually, it can be argued that a rise in Bank Rate lifts the yield curve in its entirety, while a QE unwind alters the steepness of that yield curve. The implications for the economy may therefore subtly differ in a number of areas, including the balance between consumption and investment, the housing market, pensions, corporate finance and public debt issuance, to mention a few.

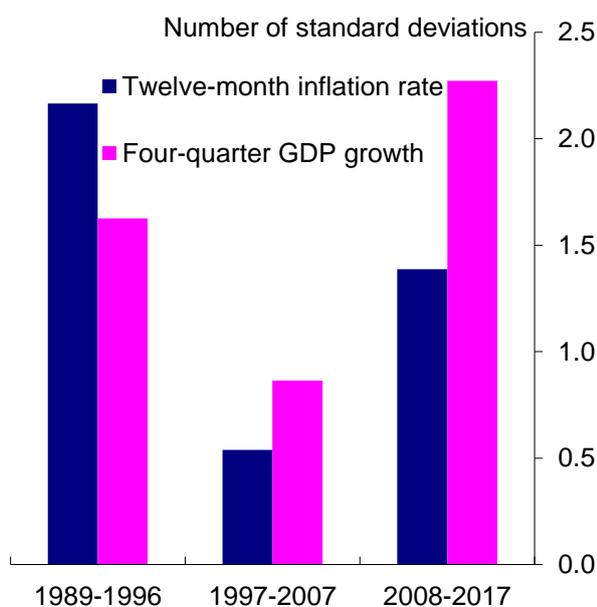
If the past twenty years are a benchmark, I am sure that the Bank, and my colleagues on the MPC, will rise to these challenges, and that monetary policy will continue to adapt and evolve to tackle the challenges that the economy will throw up.

But there is a further challenge, one that is not only the responsibility of the MPC, though it has a role to play. And that is to ensure that the undoubted benefits of an independent monetary policy do not become taken for granted, and the advantages of the system overlooked.

Over the past twenty years, inflation has had its ups and downs, but compared with the previous experience of the United Kingdom, it has been remarkably low and stable. You now need to be as old as me, and I am in my early sixties, to have had first-hand experience of the high and volatile inflation of the 1970s and early 1980s and its damaging effects on the livelihoods of British households and businesses, and the economy at large.

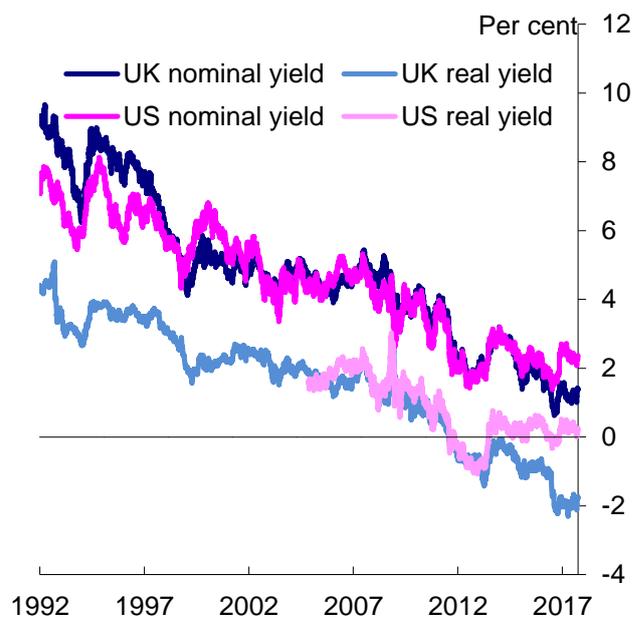
As time passes, and memories of what persistent double-digit inflation did to incomes, savings and welfare fade, there is a danger that the merits of inflation targeting, and of the flexibility and effectiveness afforded by operational independence, are taken for granted. As memories fade, there will inevitably be calls for such independence to be curbed, and for policy to be returned to the hands of our politicians. This, I believe, would be a retrograde step, and a return to the boom-and-bust cycles of previous decades. Central bankers need to play their part, by being open, transparent and accountable to the electorate through Parliament. But it is in the interest of everyone, and it is the responsibility of all, to protect and defend what has been one of the most successful economic policy initiatives of the past fifty years, such that the economy continues to benefit from low and stable inflation for many more years to come.

Chart 1: Dispersion of UK GDP growth and inflation



Source: Office for National Statistics and author's calculations

Chart 2: International 10-year sovereign bond yields



Source: Bloomberg, TradeWeb and Bank calculations

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