



BANK OF ENGLAND

Speech

The Monetary Policy Toolbox in the UK

Speech given by

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Society of Professional Economists

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1. Introduction

It's a pleasure to be speaking once again at the Society of Professional Economists' Annual Conference. When I last addressed this conference it was two years ago, in person, in the impressive surroundings of the Bloomberg building near to the Bank of England. Today we're meeting in rather different circumstances, and for many of us at least in slightly less impressive surroundings! I'm delighted that we are able to meet virtually, and I'd like to thank Kevin Daly and all the SPE team for their work to make this event possible.

The theme of today's conference is "Policy Challenges for the Global Economy". What I want to do as my contribution to that theme is to give you my perspective, in my role as Deputy Governor for Markets, Banking and Resolution at the Bank of England and member of the UK's Monetary Policy Committee (the MPC), on one part of our response to the particular policy challenges of the Covid pandemic. And I will frame my contribution in terms of the use the MPC has made of what has come to be known as the "monetary policy toolbox": the range of policy tools that MPC has used so far, what tools are available to us now, and which ones we might decide to use in the near future.

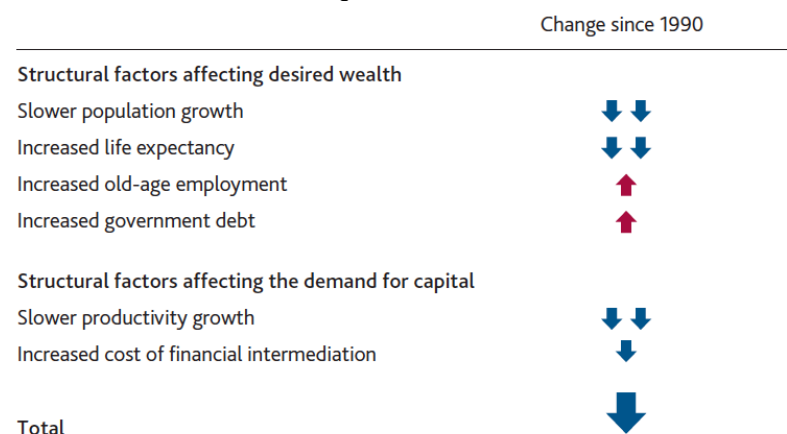
The idea of a range of monetary policy tools is itself quite a new one. For many years monetary policy makers used one tool, the policy rate, to achieve their goal – in the UK case, that meant Bank Rate. And the Bank used a small, focused set of central balance sheet operations to keep money market rates, and so rates in the wider economy, close to that policy rate.

Two developments changed all that: first, the secular decline, over several decades, in the trend real interest rate; and second, the global financial crisis and the great recession that followed it.¹

The trend real rate – big R^* , in central bankers' jargon - has fallen over the past few decades across advanced economies. **Figure 1**, taken from the August 2018 Inflation Report, sets out the MPC's view of what explains that fall. Much of it can be explained by structural factors such as an ageing global population, which have raised the demand for savings. Other structural factors, including a decline in trend productivity growth, have reduced businesses' demand for capital. Over time, these developments reduced the trend real interest rate, big R^* , required to bring actual stocks of wealth and capital into line. And policy rates, including in the UK, followed the trend rate downwards.

Figure 1: Changing demographics and a fall in trend productivity growth have reduced R^*

Indicative contributions to changes in the trend real interest rate

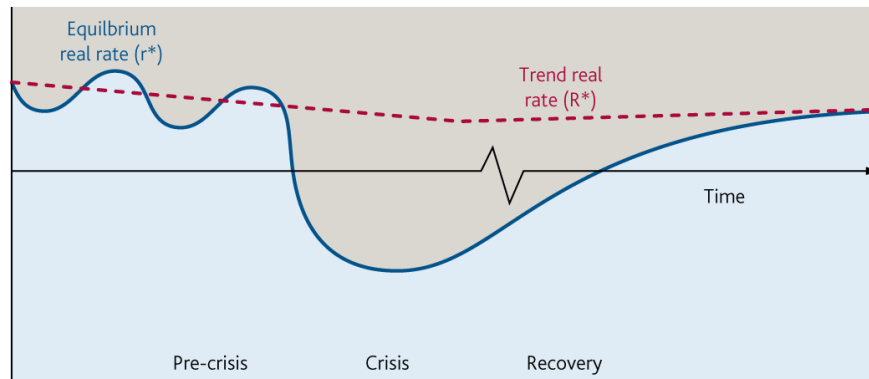


¹ In my 2018 SPE conference speech, available at <https://www.bankofengland.co.uk/-/media/boe/files/speech/2018/finding-the-right-balance-speech-by-dave-ramsdén.pdf>, I gave more detail on the evolution of the Bank's balance sheet tools during and following the global financial crisis.

Figure 2: r^* fell sharply during the financial crisis

Stylised diagram of the equilibrium real interest rate

- Restrictive policy (real policy rate $> r^*$)
- Accommodative policy (real policy rate $< r^*$)



The shock of the financial crisis then added a further downward impetus to equilibrium real interest rates. A number of headwinds to demand — including a rise in uncertainty and a tightening in the financial conditions facing households and firms — meant that the medium-term equilibrium real interest rate, “little r^* ” fell sharply below “big R^* ”, itself already much lower than in previous decades, and so well below the so-called “zero lower bound” (Figure 2).

In response, monetary policy makers cut policy rates as low as they could go – in the UK Bank Rate was cut to 0.5% in late 2008, its then effective lower bound. But with equilibrium rates deeply negative, further stimulus was needed. With conventional tools having reached their limits, policy makers enhanced their toolkits, developing what were dubbed unconventional monetary policy tools. These took the form of: quantitative easing or asset purchase programmes, designed to lower longer-term interest rates rather than short-term ones; new funding operations; forward guidance; and, in some jurisdictions, negative policy rates. I’m going to leave funding operations such as the TFSME and also lending programmes mostly to one side in my remarks today. That’s not to downplay their importance – they’ve played a key role in aiding the effectiveness of monetary policy and supporting the flow of credit to the private sector.

Unconventional tools are not perfect substitutes for policy rates. The effects of many of them were, and indeed remain, uncertain compared to the relatively well-understood effects of rate cuts. And at least as much if not more so than with policy rates, their effects were and are state contingent, with the transmission through to the real economy determined both by the characteristics of the financial system in which they operate and by the economic situation in which they are applied. Nevertheless, from a starting point of a single tool approaching the limits of its usefulness, central banks came out of the great recession and the years which followed with new, much fuller sets of tools, as well as a much better understanding of how to apply them. This expanded toolkit was put to effective use in the MPC’s response to the 2016 referendum result on membership of the EU.²

2. Responding to the unprecedented shock of Covid

It has become almost a cliché to describe Covid as an unprecedented shock. But with no comparable global events since the 1919 Spanish Flu outbreak, this really is a one-in-a-hundred year event. The necessary restrictions on activity that were put in place to contain the pandemic have had no counterpart in living memory. And the economic effects were similarly unprecedented – UK GDP fell 22% in the first half of this year, the largest fall in nearly 400 years (Figure 3), with similar, near-simultaneous falls seen across the world. The fiscal and monetary policy response, in the UK and elsewhere, has been similarly unprecedented. The UK Government launched a substantial, innovative and necessary programme of fiscal measures, with a particular and understandable focus on the labour market, as well as schemes to support the flow of finance

² The BIS Committee on the Global Financial System (CGFS) report on unconventional monetary policy tools, available at <https://www.bis.org/publ/cgfs63.htm>, provides an informative overview of the range of unconventional policy tools used in the aftermath of the crisis, along with an assessment of their benefits and side-effects.

Figure 3: The UK has seen its deepest downturn in nearly 400 years
Historical UK GDP

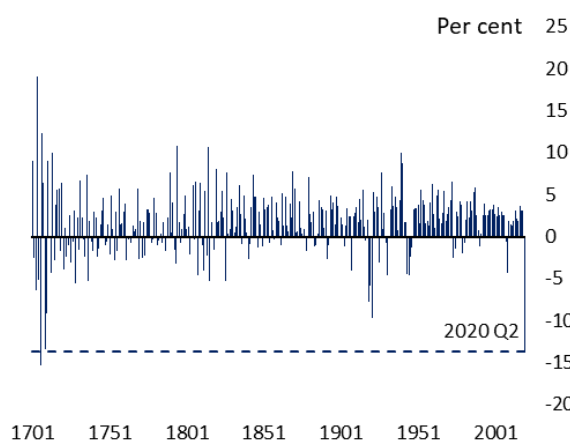
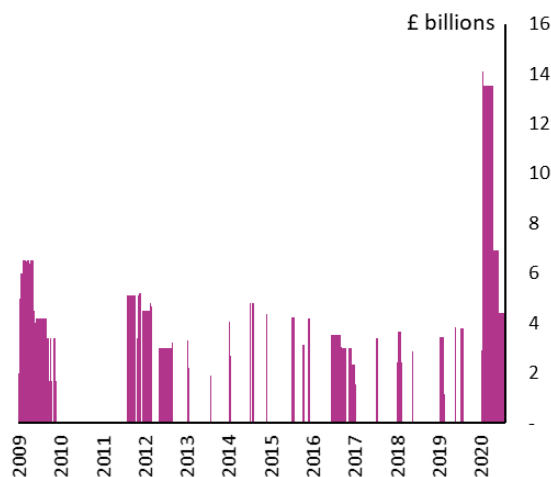


Figure 4: The MPC's asset purchases in March were carried out at record pace
Weekly gilt purchases



to companies, involving the Bank where appropriate. These have had the aim of supporting the economy during the outbreak, and in so doing to minimise the potential for longer-term damage or scarring to the economy's potential.

On the monetary side the MPC likewise deployed its full range of monetary tools in March as the pandemic intensified. In March the Committee cut Bank Rate in two steps to a new low of 10 basis points and launched a new Term Funding Scheme with additional incentives for SME lending (TFSME for short). And against a backdrop of accelerating market dysfunction – brought on by the “dash for cash” – the MPC announced an additional £200bn of gilt and corporate bond purchases, to be carried out at a record pace of £13.5bn of gilt purchases per week (**Figure 4**).³ In June the Committee voted for a further £100bn of gilt purchases. And in August we gave new forward guidance.

The size and pace of the asset purchase programme launched in March reflected its twin objectives – both to provide stimulus to the economy by lowering longer term interest rates, and to counteract any tightening of monetary and financial conditions that might result from the deterioration in gilt market conditions.⁴ Those twin objectives were successfully met. Orderly functioning was quickly restored to the market – market functioning indicators, which had been flashing increasingly red, rapidly turned back to green as pricing and liquidity metrics like bid-ask spreads returned to normal levels (**Figure 5**). And as a result the spike in gilt yields reversed – a tightening in monetary and financial conditions was averted – and yields continued to decline as the purchase programme got under way (**Figure 6**).

Reflecting the improvement in functioning, the MPC concluded in June that purchases can now be conducted at a slower pace. The rate of APF gilt purchases has therefore been reduced first to £6.9bn/week in June and then £4.5bn/week in August. At that pace we expect the current programme of purchases to be completed at around the turn of the year.

Where does that leave the policy toolbox today? Bank Rate stands at 0.1%, the lowest it has ever been. The Bank's balance sheet has increased in size from 27% of pre-Covid GDP, already very large by historical standards, to nearly 40%; and still growing (**Figure 7**). And market interest rates remain historically low at all horizons.

³ Corporate bond purchases take place on a separate schedule, designed to reflect the more complex characteristics of the UK corporate bond market.

⁴ This was just one of a wide range of interventions to support the UK financial system that the Bank carried out over this period. Andrew Hauser's speech “Seven moments in spring”, available at <https://www.bankofengland.co.uk/-/media/boe/files/speech/2020/seven-moments-in-spring-covid-19-speech-by-andrew-hauser.pdf>, gives a comprehensive, first-hand account of developments.

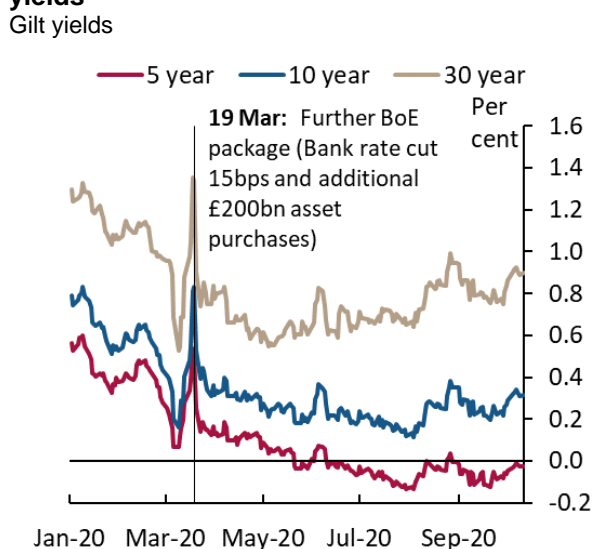
Figure 5: Market functioning indicators returned to normal levels following the MPC's actions

Stylistic summary of market functioning indicators

METRIC TYPE	Mid-March (pre-announcement asset purchases)	Mid-April (£200bn asset purchases underway)	Today (Further £100bn gilt purchases announced in June)
Price and volatility	Red	Green	Green
Liquidity and depth of market	Red	Yellow	Green
Gilt financing (repo)	Red	Green	Green

■ All or most indicators >95% percentile of 3 year historical distribution
■ All or most indicators 75-95% percentile of 3 year historical distribution
■ Indicators within 'normal' range

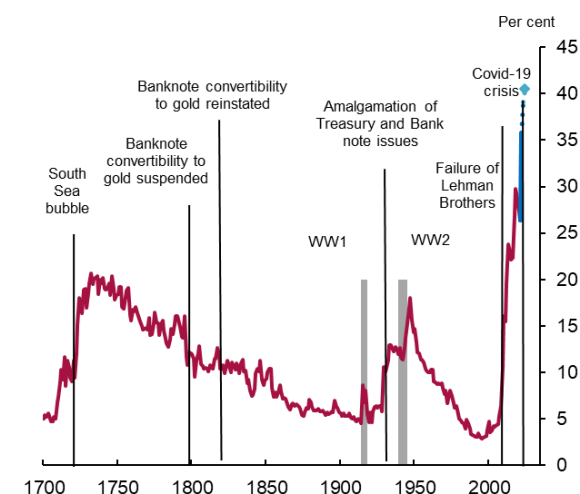
Figure 6: The MPC's intervention lowered gilt yields



Sources: Bloomberg Finance L.P and Bank calculations

Figure 7: The Bank's balance sheet has reached an unprecedented size

Bank balance sheet as % of lagged nominal GDP



For some, these facts might suggest that the MPC is once again running out of policy room for manoeuvre. My own view is that this is not the case – we have policy tools still available, and scope remaining to use those tools. The question is not so much what tools are available as which is the best tool for the job at hand.

3. The state of the policy toolbox

What I want to do for the rest of this talk is set out the current state of the policy toolbox. While I will include my personal view where appropriate, I am keen to draw as much as possible on recent MPC statements or judgements and on Bank analysis. There are no definitive rules or prescriptions when it comes to monetary

policy tools, and no such thing as a manual for monetary policy makers.⁵ I'll start by looking at QE, then come on to forward guidance, and finish with some thoughts on the possibility of negative Bank Rate.⁶

a. QE – plenty of headroom

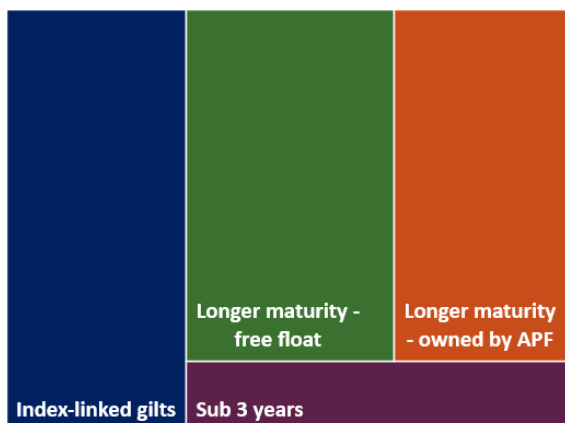
QE has been an effective tool for stimulating demand through the 11 years of its use in the UK. Even though we are well on the way to purchasing £300 billion between March and December 2020, we have QE “headroom” remaining. And while it is increasingly clear its implementation and impact is state contingent⁷, to my mind it is a tried and tested tool and for me it is the MPC’s marginal policy tool at present.

The headroom point is worth expanding on because it is one that isn’t always appreciated. There are £1.7trn of conventional gilts in “free float” by market value (as well as another £790bn of index-linked gilts which are out of scope)⁸. The Bank’s Asset Purchase Facility holds approximately £740bn of those⁹: so there is a further £940bn remaining in the market that could potentially be available for purchase.

In practice the Bank does not buy very short maturity gilts. And to avoid distorting the market it avoids specific gilts where it holds more than 70% of the free float, and attempts to buy evenly across three maturity “buckets”.¹⁰ But even with those constraints applied we have considerable headroom after the current programme is completed, reflecting a range of considerations. And many of those considerations are within our control - while those constraints are there for good, pragmatic reasons, they are not set in stone, and there would certainly be scope to re-evaluate them based on Bank advice if the MPC judged that even more monetary policy headroom was needed (**Figure 8**).

Figure 8: There is plenty of QE headroom remaining

Stylised map of the gilt market¹



(1) The area of each block represents the market value of the gilts in that sector of the market.

Taking as a given that the MPC has more headroom to buy more gilts, the question then becomes whether we have the scope to impact their pricing. This is a trickier calculation– it depends not just on the quantity of headroom, but on how effective any action might be, which is highly state contingent. But again my starting point is we have plenty of scope to affect prices. While yields on longer-dated gilts are at historically low levels, that doesn’t mean they couldn’t still go lower. As the March episode illustrates, there may also be occasions when the absence of action – the counterfactual – would mean an increase in those yields.

Of course the quantity of QE purchases is not the only policy variable available to the MPC. The pace of purchases, as illustrated by our March intervention, is another. And the kind of asset purchased is a third variable. UK QE purchases have mostly been concentrated on the gilt market, as well as much smaller quantities of sterling corporate bond purchases. But during the financial crisis the APF also purchased

⁵ Perhaps the closest thing to a policy makers’ manual is the CGFS report referenced in footnote 2. On the operational side a detailed guide to the Bank of England’s own facilities is available at <https://www.bankofengland.co.uk/markets/bank-of-england-market-operations-guide>.

⁶ I have not covered funding or lending schemes in detail today. But it is worth noting that the TFSME, which was designed to help reinforce the transmission of the reduction in Bank Rate as well as incentivise banks to provide credit particularly to SMEs, continues to expand in size; current usage at £45bn and is expected to exceed £100bn.

⁷ See for instance “QE: the story so far”, available at <https://www.bankofengland.co.uk/working-paper/2016/qe-the-story-so-far>.

⁸ Buying index linked gilts could potentially create the wrong incentives for the MPC in delivering on our remit. It could also crowd out a key tool for managing inflation risk which is already subject to significant private sector demand, and is often highly illiquid as a result.

⁹ This number is greater than the approximately £700bn of gilts purchased to date because some of the gilts in the portfolio have increased in market value since being purchased.

¹⁰ Buying short maturity gilts would have a reduced duration impact and would require more frequent reinvestment; it could potentially also distort market expectations of policy rates. Buying a large proportion of specific gilts could create local distortions in yields and restrict market liquidity.

£2.4bn of sterling non-financial commercial paper.¹¹ And central banks in other jurisdictions have purchased a range of other asset types.

Perhaps the best way to think of QE is not as a single tool but as multiple tools, each best suited to a different job. For delivering a defined dose of economic stimulus a large, steady programme of gilt purchases may be most appropriate. For addressing market dysfunction a faster or more targeted programme might do the job better. Our March QE announcement aimed at both these objectives at once and so combined elements of both these options – as Andrew Bailey put it, we went both “big and fast”.

In this speech I have focused on QE as a monetary policy tool, in other words one which is used in pursuit of the MPC’s remit to maintain price stability. Our March intervention met this requirement, although one of its immediate objectives was to address market dysfunction, our ultimate reason for doing that was to counteract any tightening of monetary and financial conditions that might result from that dysfunction.

One natural question raised by that episode, though, is whether the need for such a large scale intervention could be avoided by addressing the structural causes of the “dash for cash”, and if not whether central banks should have facilities to provide the necessary liquidity to the financial system more efficiently. Those are topics that I don’t have time to get into in detail today but they are hugely important questions for central banks and ones with which the FPC is actively engaging.¹² In the meantime the MPC has made clear that it stands ready to respond to any re-emergence of market dysfunction, and so avoid any associated tightening in monetary and financial conditions, as appropriate.

b. Forward guidance – a high bar to tightening

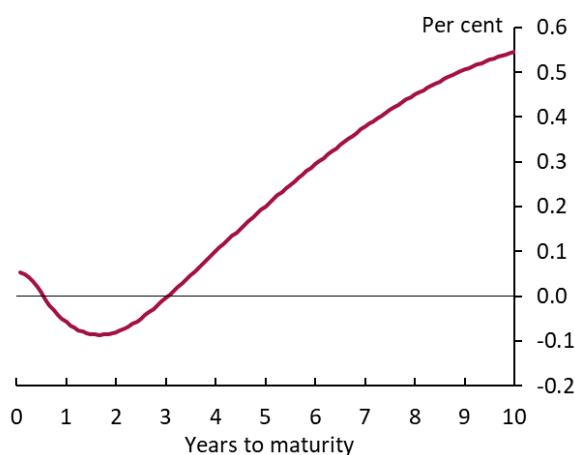
The second tool I want to consider is forward guidance – in other words future commitments on interest rates and other policy tools. Like QE, forward guidance is a tool the MPC had used several times before this crisis. In its 2013 review of the MPC remit, HM Treasury explicitly clarified that the Committee had the ability to deploy forward guidance as a policy tool, including where appropriate making it conditional on future developments.

The MPC gave new guidance in August, which we repeated in our September minutes, that we did “not intend to tighten monetary policy until there is clear evidence that significant progress is being made in eliminating spare capacity and achieving the 2% inflation target sustainably”.

That guidance was a significant step and is likely to become more significant as time goes on. It provides a commitment not to tighten policy until we’re confident that it is appropriate to do so and that we have seen clear evidence that we are well on the way to recovery. It reinforces current market expectations that Bank Rate

Figure 9: Markets expect Bank Rate to remain low for some time

UK nominal OIS forward rate curve



Sources: Bloomberg Finance L.P and Bank calculations

¹¹ More recently the Bank’s Covid Corporate Finance Facility, acting as agent for HM Treasury, has purchased commercial paper amounting to around £17bn. This is not a monetary policy scheme but the MPC takes its size into account when taking its monetary policy decisions.

¹² Andrew Bailey addressed these questions, as well as coining the “big and fast” terminology, in his recent speech at Jackson Hole, available at <https://www.bankofengland.co.uk/-/media/boe/files/speech/2020/the-central-bank-balance-sheet-as-a-policy-tool-past-present-and-future-speech-by-andrew-bailey.pdf>. The FPC has noted the importance of taking remedial action to ensure the resilience of the financial system, as well as of re-examining central bank facilities, including in the Summary and Record of its most recent meeting, available at <https://www.bankofengland.co.uk/-/media/boe/files/financial-policy-summary-and-record/2020/october-2020.pdf>. At an international level the Financial Stability Board has commenced a holistic review of resilience in the non-bank financial intermediation sector in light of the Covid-19 shock, due to be delivered to the G20 summit in November. The Bank and FCA are actively participating in the FSB’s review.

will remain low for some time (**Figure 9**). But for me, the key point to emphasise is that our current guidance reflects the ongoing uncertainties and means that the burden of proof for any future tightening is high.

One other point I want to make on forward guidance is that I see it as particularly valuable in reinforcing the effects of other tools. In general I think it makes sense to think of different monetary policy tools as complements rather than substitutes. And that is particularly true of forward guidance. It can serve to enhance the impact of individual policy actions by clarifying policy maker intentions, and can link separate policy actions together into a coherent package – in the words of the BIS Committee on the Global Financial System, providing “connecting material” and “giving meaning”. That is consistent with how the MPC have used it in the past and in its current incarnation.

c. Negative rates – in the toolbox

The final tool that I want to cover today is Bank Rate, and specifically the question of whether Bank Rate could go negative.

The MPC set out its collective assessment of the potential issues that a negative policy rate in the UK could raise, and how that might impact the effectiveness of negative rates as a monetary policy tool, in its August 2020 Monetary Policy Report.¹³ I won't repeat all of the analysis from the Report; instead I want to draw out three key points.

The first is that the effective lower bound is likely to be different across different countries, reflecting different macro-economic circumstances, structural features and financial systems. This is a simple point but an important one. Just because negative rates are appropriate in one country does not mean they would be appropriate in another, and for some countries and in some circumstances the effective lower bound may well be positive.

The second point is that while some aspects of the transmission mechanism would be the same as any other rate cut, others could be quite different. In all use-cases, market interest rates would fall, asset prices would rise and the exchange rate would depreciate, and that would stimulate demand and raise inflation in the usual way. But evidence from other countries' experience suggests that while corporate deposit rates can turn negative, household deposit rates would be unlikely to fall below zero, meaning that pass-through could be somewhat weaker than for a normal rate cut.

Building on this, the third point I want to draw out is that there can be knock-on economic effects through the banking system. These effects could reduce or even counteract the stimulus from negative rates. If deposit rates don't fall but loan rates do, that will impact banks' profitability, particular for those who are most reliant on retail deposit funding – in the UK that is small banks and building societies. Banks can offset the impact on profitability by not reducing lending rates, but in doing this they would further reduce the amount of stimulus provided. Some banks, particularly those already under balance sheet pressure, could even be incentivised to reduce lending. That would be a particular concern in the current situation where, while the banking sector as a whole starts from a position of strength, risks to balance sheets are likely to be rising.

These considerations led the MPC to note in its August Monetary Policy Report analysis that, given the effects of Covid-related disruption on banks' balance sheets at present, at a time when they have an important role to play in helping the UK economic recovery, “negative policy rates at this time could be less effective as a tool to stimulate the economy”. That consideration still applies as far as I am concerned. While there might be an appropriate time to use negative rates, that time is not right now, when the economy and the financial system are already grappling with the effects of an unprecedented crisis, as well as the myriad uncertainties the crisis has created. But they are certainly in the toolbox for potential use in future as my assessment of their effectiveness changes. As the MPC has made clear, we will keep the appropriateness of all tools, including negative rates, under review.

It is for that reason that the Bank is taking steps to understand how negative rates might be implemented in practice. It would be wrong to claim a tool is in your toolbox if you aren't able to use it when it's needed. For

¹³ The analysis is set out in Box 1 of the Report, which is available at <https://www.bankofengland.co.uk/-/media/boe/files/monetary-policy-report/2020/august/monetary-policy-report-august-2020>.

that reason, in my own areas of responsibility in the Bank, we are working to ensure all our systems would be able to handle negative rates if needed.

The September MPC Minutes flagged that the Bank and the PRA would also begin structured engagement on operational considerations with the wider financial sector. We launched that engagement on 11 October with a letter to CEOs of all UK banks and building societies, as well as large international banks and insurers – over 180 firms in total – asking them to identify any operational challenges associated with implementation of zero or negative Bank Rate, with a deadline for responses of November 12th.¹⁴ That letter will be followed up by supervisory engagement with firms where needed to understand key themes and timeframes. And we will also be engaging with trade bodies and relevant financial market infrastructure firms, and would of course welcome responses from any other interested firm.

We are not asking firms at this stage to begin taking steps to ensure they are operationally ready to implement a negative Bank Rate. But the information we receive will deepen the MPC's understanding of the operational aspects of a negative policy rate, as well as the Bank and PRA's understanding of its implications for firms and the UK financial system.

4. The economic outlook

I want to conclude by saying something about the economic outlook which will frame decisions by the MPC on making any further use of the tools I have covered.

An important feature of our August projections was the uncertainty embodied in them, as reflected in the shape of our fan charts. The fans were wider than usual, reflecting the unusually high uncertainty about the outlooks for the UK and global economies created by the Covid epidemic. And the risks to those projections, and in particular to our conditioning assumption that the direct impact of Covid would fade over the forecast, was judged to be to the downside (**Figure 10**).

How things actually develop from here will depend on the evolution of the pandemic, measures taken to protect public health, and how governments, households and businesses respond to these factors. In our August forecast, we made the conditioning assumption that the high levels of uncertainty over health and economic outcomes dissipate gradually, with improved treatments or other health interventions, and therefore reduced risks facing households and businesses.

UK GDP has recovered fairly rapidly in aggregate so far from its trough earlier in the year. In our August Monetary Policy Report forecasts, we projected that recovery to continue, though at a slower pace. Unemployment was projected to peak in Q4 and decline only gradually. And inflation was projected to return to target from its current low level as domestic price pressures picked up. (**Figures 11-13**) Those projections were conditioned on the assumption that the direct impact of Covid-19 on the economy would dissipate gradually over the forecast period, as well as on market interest rates and the monetary and fiscal policy support measures that were in place at the time.

This summary is in no sense intended to downplay the unprecedented impact the virus continues to have on individuals, on particular businesses and sectors, and on different regions and nations of the UK at different times. As flagged in the MPC's September Minutes, there is a real risk of a more persistent period of higher unemployment, and the recent strength in income growth might not be sustained.

I remain particularly concerned that we could also see structural headwinds to recovery in the labour market, with particular impacts on younger workers and those joining the workforce. The negative impact on the supply side of the economy, or degree of scarring, could potentially be greater than the 1½% we have assumed to date based on very preliminary work, a risk the MPC has previously highlighted. There could be further supply side impacts from the structural economic change or repurposing that could be needed if the behavioural changes that we have seen in response to the pandemic persist, as seems highly likely, although the sign of these impacts is perhaps more ambiguous.

¹⁴ The letter is available on the Bank's website at <https://www.bankofengland.co.uk/-/media/boe/files/prudential-regulation/letter/2020/info-request-operational-readiness-policy-rates.pdf?la=en&hash=E973B09B00A6EC1D2B5AB9B845BF20EB5EF7BBB6>.

The November MPC decision isn't for another two weeks and we have a full round of forecast and policy meetings to come between now and then. In these uncertain times, and with an array of risks to contend with, from Covid, from Brexit and from wider geopolitical developments, the MPC is clear that the range of actions that could be taken remains under review, consistent with our remit. I head into our upcoming meetings in the belief that we are equipped with an effective set of tools in our toolbox which we will be able to use to meet our remit, however the economy might evolve from here.

Figure 10: Uncertainty around those projections was higher than usual and the risks were to the downside.

Stylised representation of the MPC's views on uncertainty and risks around the central projection for GDP

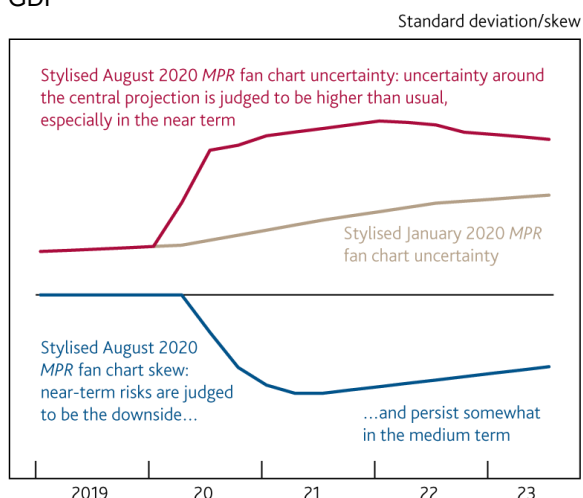


Figure 12: ... unemployment to peak in Q4 then decline gradually ...

Unemployment projection based on market interest rate expectations, other policy measures as announced

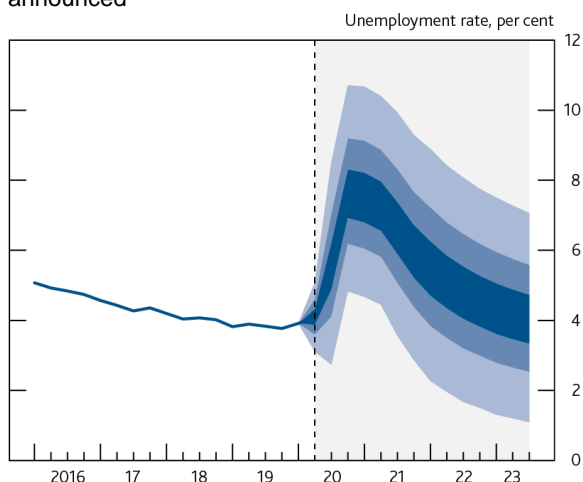


Figure 11: In the August MPR GDP was projected to continue to recover...

GDP projection based on market interest rate expectations, other policy measures as announced

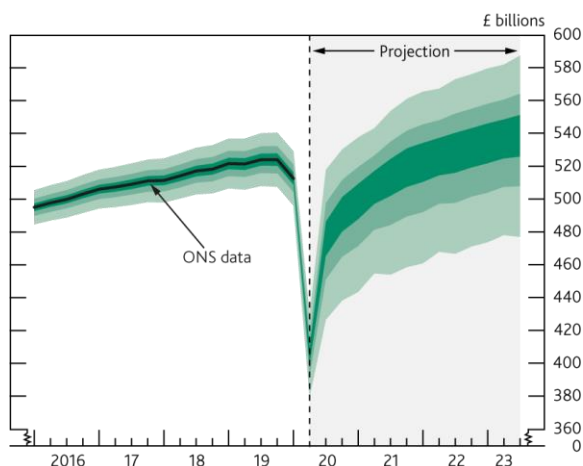


Figure 13: ... and inflation to return to target in the medium term.

CPI inflation projection based on market interest rate expectations, other policy measures as announced

