BANK OF ENGLAND

# Speech

## The potential long-term economic effects of Covid

Speech given by

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## 1. Introduction

It's a pleasure to be back speaking at the University of Nottingham again, and I'm very grateful to my old friend and former colleague Stephen Meek, director of the Institute for Policy and Engagement at the university, for the invitation to speak this evening.

There are many links between the University of Nottingham and the Bank of England. Indeed my last physical visit to the University was three years ago to address an event organised by our Agent for the East Midlands for the then newly-launched Decision Maker Panel, a collaboration between the Bank, the University of Nottingham and Stanford University. We have combined today's lecture with virtual visits to speak with local businesses and contacts of Agent, visits which really help me to build a detailed and granular picture of what's really going on in the economy. And after starting today speaking to pupils at Welland Park Academy in Market Harborough it's appropriate to end it speaking to an audience including students.

I want to start by looking back to another speech that I gave last spring, on another regional visit, this time to Scotland. That speech was titled "Resilience: three lessons from the financial crisis", and in it I argued that the financial crisis had indeed taught us three lessons: first, that the past is not always a good guide to the future; second, that there is more to resilience than just being responsive to the narrow economic cycle; and third, that policy needs to prepare for the unexpected.[1]

I have to admit that a global pandemic was not quite what I had in mind when writing that speech. The UK has had its resilience tested in the broadest sense possible in the face of what has been a truly extraordinary and unprecedented global shock.

What I want to talk about today, then, is the ways in which the UK has been affected by the shock of the pandemic and the many changes in behaviour that it has brought about – including changes to what we buy, what we make and how we work. I'll start by saying a bit about how the economy has responded to those changes so far and the role of monetary policy in supporting that response. But what I really want to focus on is the longer-term impacts of those changes and how the economy is likely to respond to them in future. How long, for instance, will the shifts in behaviour and demand that we have seen persist for? How quickly can the labour market and the supply side of the economy adjust? And, most importantly, how smoothly can that adjustment be achieved – will the downturn that we are currently experiencing prove temporary, or will there be more permanent economic scarring?

These are big and difficult questions and I'm not going to pretend that the Bank has all the answers: we are still uncertain about how the Covid pandemic will play out let alone about what may follow it. The analysis I am going to share with you today is very much a preliminary attempt at starting to

[1] The full speech is available online at https://www.bankofengland.co.uk/-/media/boe/files/speech/2019/resilience-three-lessons-from-the-financial-crisis-speech-by-dave-ramsden.pdf.

**Figure 1: The UK has seen its deepest downturn in nearly 400 years**
Historical UK GDP

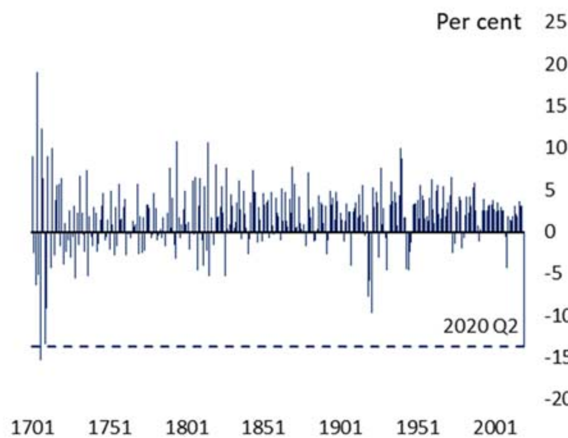
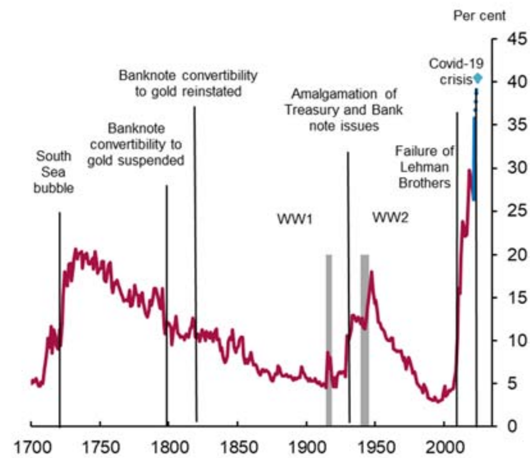



**Figure 2: The Bank's balance sheet has reached an unprecedented size**
Bank balance sheet as % of lagged nominal GDP




answer them. But it is analysis that I have found useful in thinking through what the answers might look like, as well as in making my monetary policy decisions. I hope it will also encourage all of you watching this lecture to engage in the issues, in order to further our understanding of developments and the appropriate range of policy responses to these critical questions for the UK economy.

## 2. An unprecedented year

Let me start by describing what has happened so far. The Covid crisis is an unprecedented economic shock. With no comparable global events since the 1919 Spanish Flu outbreak, it really is a one-in-a-hundred year event. The necessary restrictions on activity that were put in have been to contain the pandemic have had no counterpart in living memory. And the economic effects were similarly dramatic. Financial markets endured a period of turmoil that tested the resilience of the global financial system.[2] And UK GDP fell 22% in the first half of this year, the largest fall in nearly 400 years (**Figure 1**), with near-simultaneous falls to varying degrees seen across the world.

The fiscal and monetary policy response, in the UK and elsewhere, has also been 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 to companies.

The Bank of England's Monetary Policy Committee, of which I am a member, has deployed its full range of monetary tools. We have cut Bank Rate to a new low of 10 basis points; launched a new

[2] The Bank's Financial Policy Committee has tracked the performance of the financial system and evaluated the underlying vulnerabilities that led to the market turmoil including in its May and August Financial Stability Reports. The Financial Stability Board's "Holistic Review of the March Market Turmoil", published today, also gives a good overview.

Term Funding Scheme with additional incentives for SME lending (TFSME for short); and announced three additional programmes of gilt and corporate bond purchases totalling £450bn, most recently at our November policy meeting two weeks ago. Those actions, together with the Bank's actions in support of market and financial stability, have taken the Bank's balance sheet from 27% of pre-Covid GDP, already very large by historical standards, to around 40%; and set to grow to nearly 50% of GDP by the end of 2021, more than double its largest size in the 326 year history of the Bank (**Figure 2**).[3]

The primary focus of those actions has been to support economic activity and employment in the near term, in the MPC's case ultimately with the goal of meeting our remit to return inflation sustainably to our 2% target. But they have also been taken with an eye to the longer term: by supporting the economy during the outbreak economic policy has also been able to provide a bridge, to minimise the potential for longer-term damage or scarring to the economy's potential. That was true of the MPC's initial response in March; and it has remained true as our understanding of the pandemic and its effects have developed and we have responded with additional doses of stimulus.

### 3. The shorter and longer-term effects of economic shocks

The concept of economic scarring is an important one so I want to spend a bit of time on it. Economic downturns are bad events in themselves: they reduce wages, income and wealth and increase unemployment; those effects, particularly in the labour market, are felt disproportionately by those on lower incomes and the young. In addition to the direct financial impacts these effects can also have significant psychological impacts – it's a well-established fact that unemployment has a large negative impact on wellbeing, and the source of this shock from a global health crisis will have intensified the psychological scarring. That in itself is a reason for monetary policy to do what it can to counteract downturns, subject to its primary objective of meeting the inflation target.

But downturns can also have longer-lasting effects, which can persist even after the original shock has faded. Unemployment itself tends to be persistent – the unemployment rate took seven years to return to pre-recession levels after both of the past two recessions (**Figure 3**). On top of that, during periods of high unemployment, the number of unemployed people who have been out of work for a prolonged period typically increases (**Figure 4**), and those people become less likely to find new jobs, perhaps because their skills deteriorate with lack of use or because they may also reduce the intensity of their job search over time. Temporary, demand-side unemployment can harden into permanent, structural unemployment – what economists call "hysteresis" or, less formally, "scarring".[4] That effect can be particularly material when it is accompanied by structural shifts in the economy, as

[3] I gave a fuller account of our response and an overview of our monetary policy tools in my recent speech "The monetary policy toolbox in the UK".

[4] There is a lengthy history of economic research on labour market scarring going back at least to Blanchard and Summers (1986), "Hysteresis and the European unemployment problem". Following the financial crisis David Bell and David Blanchflower drew particular attention to issues of youth unemployment and scarring in the UK, for instance in their papers on "UK unemployment in the Great Recession" and "Young people and the Great Recession".

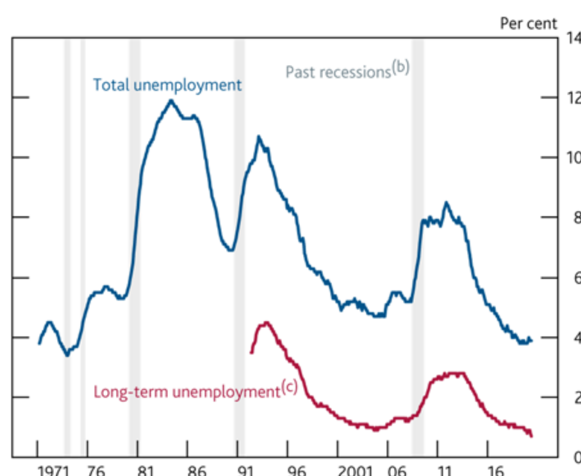
**Figure 3: Flows from unemployment to employment were subdued for several years after the financial crisis**

Flows between employment and unemployment

Sources: ONS and Bank calculations.
(a) Two-quarter flows. Based on employment and unemployment of people aged 16–64. Data are to 2019 Q4.
(b) Recessions are defined as at least two consecutive quarters of negative GDP growth.

**Figure 4: Unemployment has tended to remain elevated for a period following recessions**

Unemployment and long-term unemployment




Sources: ONS and Bank calculations.
(a) Per cent of the 16+ economically active population.
(b) Recessions are defined as at least two consecutive quarters of negative GDP growth.
(c) Those who have been unemployed for longer than twelve months.

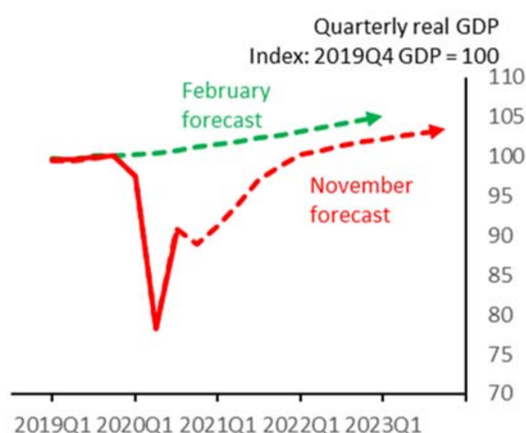
happened in the 1970s and 1980s and also to an extent to the 1990s when a number of developments including increased competition from abroad led to a painful and protracted shift away from manufacturing and towards services in the UK.

Downturns can also have persistent effects on investment, innovation and productivity. Those effects are not always ultimately negative – if less productive firms fail and more productive firms survive, that can be net positive for productivity, notwithstanding the adjustments required, often difficult, to get to that position. But in practice in previous recessions that effect has been outweighed by falls in the productivity of surviving firms. That productivity scarring effect was particularly marked following the financial crisis, which left business investment and labour productivity well below their pre-crisis trends, due to the initial negative shock and sustained hit to growth which followed.[5] And that in turn has left wages and household incomes substantially lower than they might otherwise have been.

The MPC's assumption in its November Monetary Policy Report is that the long-term effects of Covid, taken together, are likely to reduce the supply capacity of the economy – its potential level of output – by around 1¾ %. I'll come back to the broad channels through which we expect that to happen and the analysis that estimate is based on later. For now I want to pose a simpler question, which is – does it matter? After all compared with some of the numbers I have mentioned 1 ¾% is pretty small. I already said the economy shrank by 22% in the first half of this year. The latest data release showed that it then grew by 15% in the third quarter; and even after that we are still 10% below where we

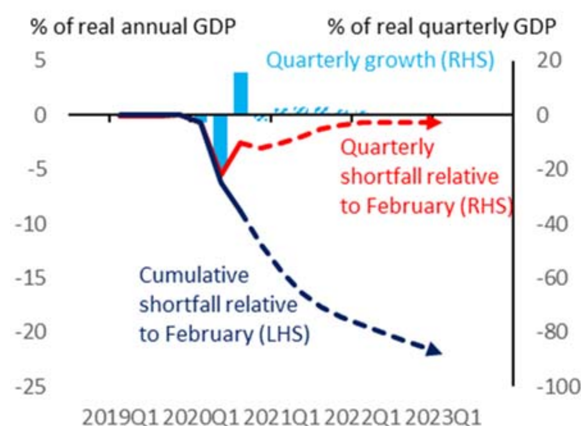
[5] I discussed the impact of the financial crisis in my 2018 speech "The UK's productivity growth challenge".

**Figure 5: GDP was 10% below the MPC's February forecast in Q3, and we are expecting a persistent 1 ¾% scarring effect[(a)]**




(a) The total shortfall in GDP by the end of the forecast is larger than the 1¾% attributed to scarring; this additional element of the shortfall reflects other, non-permanent, factors.

**Figure 6: The cumulative impacts of the long-term GDP shortfall dwarf the impacts of the initial downturn**




expected to be before Covid in real terms (**Figure 5**). Compared with numbers like that, which go to the unprecedented shock which Covid-19 represents – is 1¾% really worth worrying about?

The answer is definitely yes, for two reasons. First, a 1¾% shortfall as a share of annual GDP for the UK, a £2.2 trillion economy in 2019, represents roughly £39bn – for context that's about a third of the education budget. And second, that 1¾% represents a permanent shortfall, or at least a very persistent one, on top of the impact of the immediate downturn. If you lose 1¾% of GDP every year for ten years then in total you have lost 17.5% of one year's GDP, or around £390bn in 2019 terms.

To see how these short and longer term effects can interact, over the MPC's three year forecast horizon the cumulative shortfall in real GDP comes to 22% of annual GDP – equivalent to what would have been foregone if the peak Q2 impact of Covid had persisted for an entire year (**Figure 6**). So that is £490bn of resources lost to the economy, either for consumption or investment or trade; lost incomes or spending which would have generated tax revenues which could have financed public spending. And that cumulative shortfall, as well as the reduction in living standards that it represents, will continue to grow beyond the forecast horizon for as long as the scarring effects persist.

So scarring matters profoundly for the living standards and well-being of everyone in the economy. But should it matter for monetary policy makers like me? After all it is virtually a law of economics that monetary policy is "neutral" in the long run, and can only affect output in the short and medium term. I think, though, that there are three reasons why the answer to that question is yes.

The first reason is that if monetary policy can be used to pre-empt scarring effects then that is something that policy makers should take into account. That is an argument to be careful with – as

both theory and historical experience show, trying to use monetary policy to boost real activity in the long run can lead to very adverse economic outcomes such as high and unstable inflation. But in the face of an unprecedented economic shock like Covid, it is a valid thing to take into consideration. As I have already said, one motivation for our policy actions throughout this pandemic has been to minimise the potential for longer-term damage or scarring to the economy's potential.

The second reason why scarring effects matter for policy is that monetary policymakers need to assess the potential output of the economy as part of our approach to targeting inflation. At the core of the standard model of the economy is the Phillips curve, an equation that relates price pressure to the "output gap" between actual and potential output, the supply capacity of the economy. If scarring effects have lowered potential then that reduces the rate at which actual output can grow without generating price pressures – the economy's "speed limit". Indeed one widely accepted explanation for the high inflation of the 70s was that policymakers at the time had simply overestimated the economy's potential.

The third reason why scarring effects matter is that economic policy is that they affect broader aspects of policy than just the monetary side. My role at the Bank also covers micro- and macro-prudential policy – the safety and soundness of banks and the stability of the financial system. As part of assessment that we have to make a wide range of judgements about longer-term trends and cycles in the economy and financial markets. Understanding whether potential output has changed is a key input into those judgements.

**4. An initial assessment of the long-term effects of Covid**

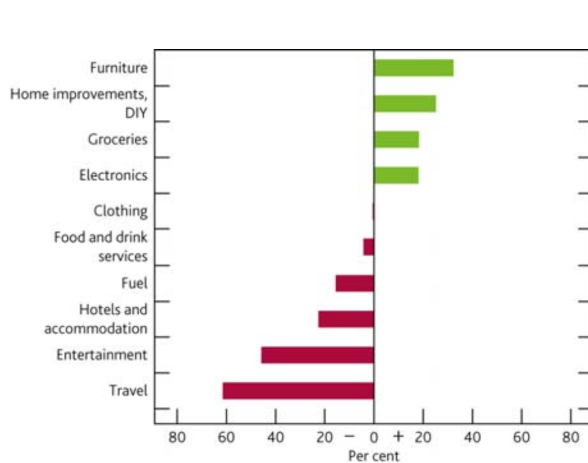
Having explained why we care about long-term effects in general, let me go on to our initial assessment of the long-term effects of Covid in particular, as published in the November Monetary Policy Report at the beginning of November. As I said earlier this is very much a preliminary view based on analysis by Bank staff and we are learning all the time; the final effects will depend fundamentally on how the pandemic progresses. So you should think of this as a summary of what we have learnt so far and how we have translated that into our initial assessment of its impact on the economy. I'll cover three areas of that assessment, relating to: what we buy; what we make; and how we work. One common theme across the three areas we have assessed is just how differentiated the impact has been, unusually compared with previous shocks to our economy, and as much within the different sectors of the economy as between them.

**a. What we buy**

The pandemic has resulted in a material change to consumer spending patterns. Spending on travel, entertainment, hospitality, and fuel has fallen sharply; partly offsetting that, spending on household goods and groceries has increased (**Figure 7**). Broadly speaking we have moved away from

**Figure 7: Spending on services has been lower recently, but spending on some goods has been higher**

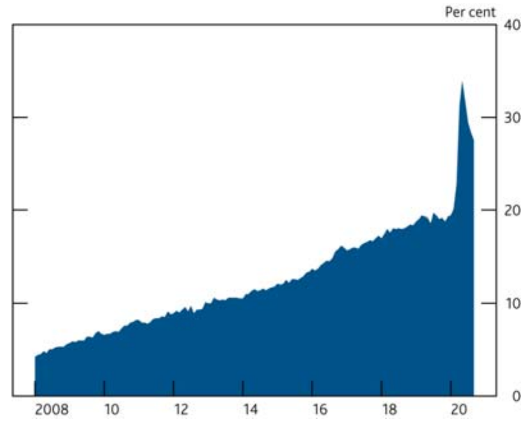
Annual growth in spending in selected categories, 2020 Q3




Sources: Barclays and Bank calculations.

**Figure 8: The share of online retail sales has surged during the pandemic, accelerating a pre-existing trend**

Internet sales as a proportion of all retail sales[(a)]




(a) All retailing excluding automotive fuel. Latest observation is for September 2020.

spending on social and work-related activities and towards things you can do at home. That is likely to reflect a combination of mandated closures and reduced capacity in some sectors and increased consumer caution in response to the virus. Covid has also accelerated the existing trend towards online shopping, which has surged in response to the pandemic (**Figure 8**).

As the effects of the pandemic dissipate, most spending is likely to return to pre-Covid levels. But that process could take a long time, depending on how the healthcare response to Covid progresses. And some of the changes may persist for much longer if consumer tastes are changed: people may prefer to travel for work or tourism less often in the future, and may well continue to buy more online. But to what extent is one of many unknowns. Humans are social animals. Despite the various cost efficiencies of working from my home in London I would have happily traded those for the cost in time and from consuming a train fare to Nottingham and the larger benefits of visiting the East Midlands in person today.

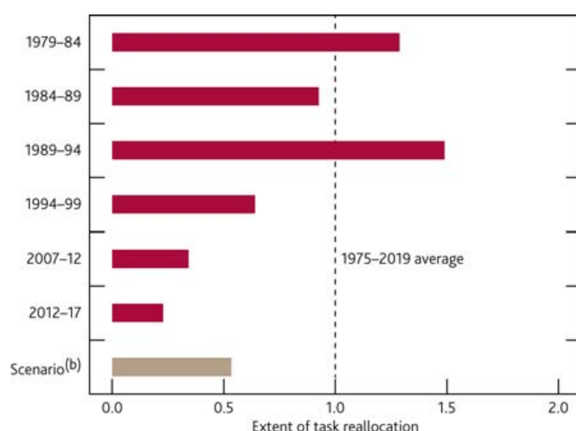
**b. What we make**

If some of those changes to consumer spending habits persist – whether because the effects of Covid itself persist or because tastes and habits change - the pattern of production in the economy is also likely to change. Firms in some sectors will shrink or go out of business while other sectors will expand. But this shift will take time – labour and capital are specialised and retraining or repurposing might be needed. How quickly and flexibly that retraining and repurposing can be achieved will be a key determinant of how persistent the economic effects of Covid turn out to be and how much scarring remains.

In fact the evidence we have on this suggests that there is scope to be somewhat less pessimistic about the outlook. The UK labour market has adjusted relatively quickly to large shocks in the past – while unemployment remained high for several years after the financial crisis of 2008-09, once the labour market recovery did come it came very rapidly, with 2.5 million new jobs created in the five-year period between 2011 and 2016. Bank staff analysis also suggests that, based on estimates of the "task content" of different jobs, the amount of "task reallocation" would be relatively limited even in a stylised and extreme scenario where consumer spending did not return to normal at all from its current Covid- restrictions-related pattern (**Figure 9**). Consistent with that, while unemployment in the MPC's central forecasts peaks at 7¾% in 2021 Q2, double its pre-Covid level, it falls back gradually thereafter. It finishes the forecast at 4.3%, consistent with the extent of skills mismatch and longer term labour market scarring being relatively limited (**Figure 10**).

**Figure 9: Even in a relatively extreme scenario there would be less task reallocation than in the 1980s**

Task reallocation over selected five-year periods and in a scenario based on the pattern of consumer spending in 2020 Q3[(a)]



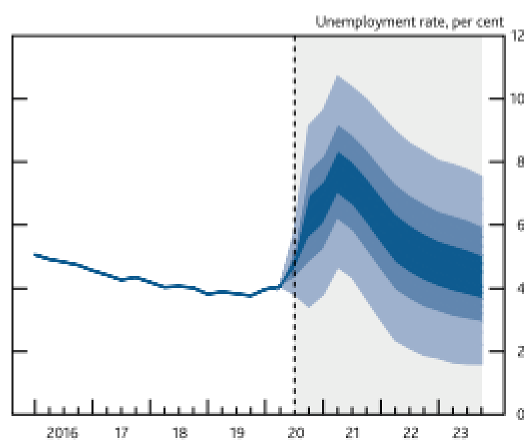

Sources: O*NET, ONS and Bank calculations.

(a) Estimates of the task content of jobs are based on the O*NET Content Model. UK jobs data are based on the ONS Annual Survey of Hours and Earnings. This work was produced using statistical data from ONS. The use of ONS statistical data in this work does not imply the endorsement of the ONS in relation to the interpretation or analysis of the statistical data.
This work uses research data sets which may not exactly reproduce National Statistics aggregates.

(b) Extent of task reallocation between 2019 and a scenario in which the pattern of consumer spending remains unchanged from 2020 Q2.

**Figure 10: Unemployment falls back gradually in the MPC's November MPR forecast**

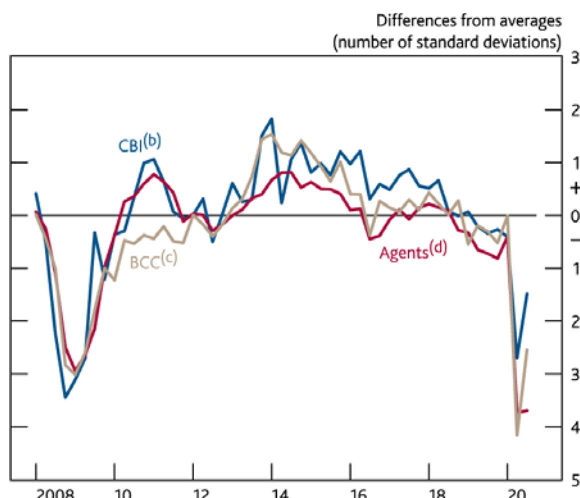
November Monetary Policy Report unemployment fan chart[(a)]




(a) Based on market interest rate expectations, other policy measures as announced.

**Figure 11: Investment intentions remain subdued**

Selected survey indicators of investment intentions[(a)]

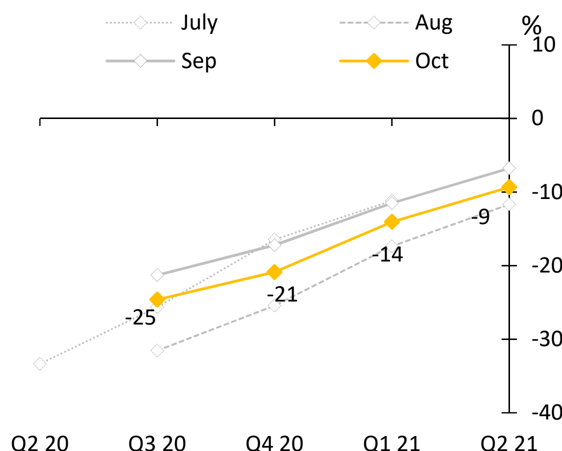



Sources: Bank of England, BCC, CBI and Bank calculations.

(a) Differences from averages since 2000.
(b) Planned investment in plant and machinery over the following year relative to the previous year. Sectors within CBI (manufacturing, distribution, financial services and business/consumer/professional services) are weighted together using shares in real business investment.
(c) Based on reported changes to planned investment in plant and machinery over the past three months. Weighted average of the manufacturing and services sectors based on shares in real business investment.
(d) Planned expenditure on tangible non-financial assets over the following 12 months.

**Figure 12: Businesses in the Decision Makers' Panel expect Covid-19 to have a large impact on investment over the next year**

Expected impact of Covid-19 on investment[(a)]




(a) The results are based on the questions 'Relative to what would have otherwise happened, what is your best estimate for the impact of the spread of coronavirus (Covid-19) on the sales, employment and investment of your business in the following quarters?'. Respondents provided estimates for Q2, Q3, Q4 2020, Q1 2021 and Q2 2021.

I think there are reasons to be cautious about this story though. What this evidence tells us is that there is likely to be less labour market scarring than in the 1980s and 90s. That is because the tasks which will have to change are within sectors like services and retailing, rather than between sectors. That makes sense in a narrow sense but in the future there is likely to be even more of an onus on digital skills. This is particularly the case at the lower end of the income distribution, where jobs and therefore tasks could be disproportionately affected, based on experience to date.[6]

Turning to productivity, here as I said before the effects go in different directions. On the downside some kinds of capital may be too highly specialised to be repurposed if demand for their services does not recover. Aircraft are one such example. Another is commercial property: if widespread working from home continues, or if activity shifts away from big cities, then office buildings, as well as

[6] Even prior to the Covid crisis, as my MPC colleague Andy Haldane has pointed out in his recent speech "Is home working good for you?", an estimated extra 5 million people in the UK were expected to have a digital skills deficit by 2030.

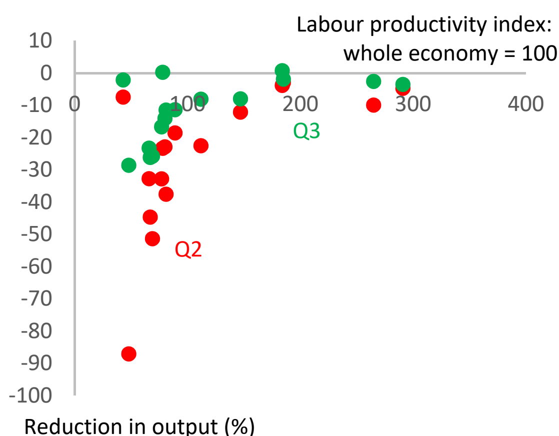
the surrounding restaurants, cafes and so on, may remain underutilised. In time different uses for them may be found – even before Covid we were already seeing examples of commercial premises in city centres being converted for residential use. But that process could be very slow; in the meantime the higher vacancy rate could drag on commercial property prices, with knock-on effects for financial institutions and the ability of businesses to use them as collateral.

As well as repurposing existing capital, businesses could respond to changing patterns of demand by investing in new capital. But here the outlook is less optimistic, with surveys of existing businesses suggesting investment will remain low in the near term (**Figure 11**), possibly because of uncertainty over which changes in demand will prove temporary and which will persist. Evidence from the Decision Makers Panel will be particularly important in helping us to understand the extent and distribution of these effects; even before the most recent restrictions were imposed firms in the DMP were already expecting Covid to have a very large and persistent impact (**Figure 12**).[7]

Offsetting these downside risks to productivity, however, is the possibility that the composition of production shifts towards higher-productivity activity on average. Certainly some of the sectors negatively affected by Covid, such as accommodation and food services, have lower productivity than average (**Figure 13**), and in fact aggregate productivity was boosted in Q2 as a result. It's less clear whether that effect would persist and whether the distribution of productivity across sectors would remain unchanged in the long run. But it could do so if the Covid-19 shock has a more catalytic

**Figure 13: The sectors most affected by Covid-19 tend to have lower labour productivity**

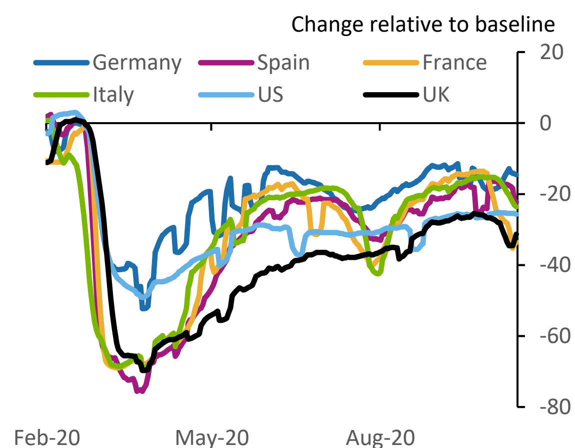
Labour productivity and falls in output, by sector




Sources: ONS and Bank calculations.

**Figure 14: UK workers were slower to return to the office**

Google mobility index, 7-day moving average




Source: Google LLC "Google COVID-19 Community Mobility Reports", accessed: 10/11/20.

[7] Andrew Bailey set out his view of "The future for business investment in the age of Covid and the role of financial services" in a speech at TheCityUK National Conference this morning.

effect on business models across a range of sectors, for example through transforming adoption of e-commerce, as part of a secular move to a more digital economy and finance.

**c. How we work**

Over the past few months remote working has become much more common and businesses have delivered services in new ways, often using technology to reduce personal contact. That is as true at the Bank of England as elsewhere – in my own area we have run all our critical markets and banking operations from home, with gilt purchases worth billions of pounds and countless other transactions carried out successfully from people's homes.

Looking ahead many people expect working from home to remain more common after the pandemic. That shift may be particularly pronounced in the UK, where the rate at which people were returning to work before restrictions tightened in October was noticeably lower than elsewhere in Europe (**Figure 14**). Of course many jobs cannot be done from home and so we should be clear that these changes are only relevant for a subgroup of the economy. But for those sectors where working from home is possible, this could be the start of a more transformational shift in work pattern. This is one area, though, where the longer-term economic effects are likely to be particularly closely tied to longer-term health developments.

The evidence on the supply side effects of working from home is mixed. Full time remote workers tend to work longer hours, perhaps because they do not spend time commuting. Groups who worked from home more in the past have included those with lower participation rates – women, older workers and people with disabilities – and increased working from home could in principle see the welcome removal of a barrier to participation by those groups. Working from home can increase productivity, meanwhile, in specific settings, but it's less clear how well those results generalise and for some aspects of work productivity may be reduced. My own experience is that home working is effective for completing clear, specified tasks but makes the less linear, more creative aspects of my job more challenging.

Bank staff have not yet attempted to quantify the potential long-term impacts of changes in how we work. The potential long term consequences of changes in what we buy and make are for me consistent with our estimate of long-term scarring of 1¾% of GDP. It is important to reiterate that this estimate is a judgement and what matters, certainly from a monetary policy perspective, is that some allowance has been made for scarring. This is an area where being approximately right, including in the diagnosis of the relevant factors to take into account and their directional impact, matters more than the precise number.

At the time of the November MPR I saw the risks to unemployment being persistently higher than in our projections as being to the upside. But while trends in how we work could potentially interact in an

adverse way with other structural changes, the potential for productivity improvements in what we produce meant that I saw the risks to the long term economic impacts overall as broadly balanced rather than pointing to the potential for either more or less scarring.[8]

## 5. Implications for monetary policy

I want to finish by saying a few words about the outlook for monetary policy and how the Bank's analysis of scarring ties into that.

It bears repeating that there remain huge uncertainties about the outlook for the UK and global economies. The path the economy takes in the short term let alone in the longer term will depend crucially on the path the virus takes and the response of households, business and policy to that. During our latest monetary policy round the MPC was faced with the evidence of how rapidly Covid cases had picked up since the summer and the impact that was already having in slowing the pace of recovery from the rebound following the initial shock of the pandemic.

Against that backdrop the MPC voted for an additional £150bn of asset purchases, to be completed by around the end of 2021. That was based partly on our central forecast, in which, conditional on an assumption that the direct effect of Covid on the economy would wane gradually over time, inflation returned to target in two years' time (**Figure 15**).

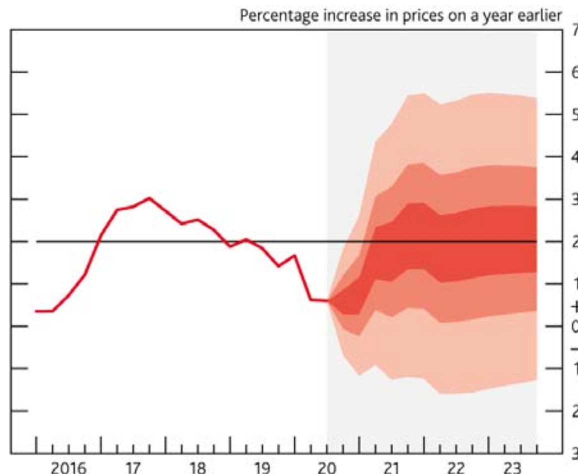
But we were also very clear that it reflected downside risks to the outlook. In particular we have been flagging for some time that while our central forecast is for a gradual decline in unemployment, the risk of a more persistent period of elevated unemployment remains material. Elevated unemployment could lead to weaker wage and price growth, and a slower return of CPI inflation to target. In addition as I argued earlier it could lead to more significant labour market scarring than we have assumed.

Our view, as we spelt out in our Minutes, was that risk management considerations implied that policy should lean strongly against downside risks to the outlook. As well as announcing an additional £150bn of purchases, we also gave guidance that we do not intend to tighten monetary policy at least until there is clear evidence that significant progress is being made in eliminating spare capacity and achieving the 2% inflation target sustainably. For me both these actions should help to bridge through the continuing period of heightened uncertainty. In the near term the asset purchases will continue to support activity and employment. As time passes and the economy recovers the forward guidance will become more salient, providing reassurance that there is a high bar to any future tightening.

[8] Some other organisations have published larger estimates of scarring, at least in the medium term, perhaps because they put more weight for example on the UK's after the global financial crisis, although the financial sector's lack of resilience was a key driver of the subsequent s
low recovery. The Concluding Statement of the IMF's 2020 Article IV Mission projected that UK GDP would remain 3-6% below its pre-pandemic trend in the medium term. The central scenario in the OBR's July 2020 Fiscal Sustainability Report was for scarring to reduce output in the medium term by 3%, while in their downside scenario it reduces output by 6%.

**Figure 15: Inflation returns to target in 2 years' time in the MPC's November MPR forecast…**

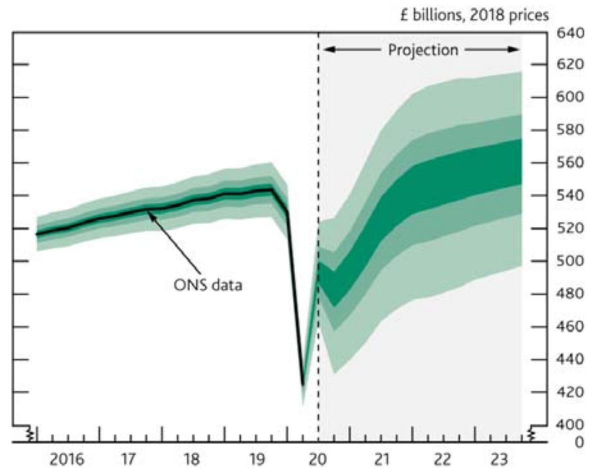
November Monetary Policy Report inflation fan chart[(a)]




(a) Based on market interest rate expectations, other policy measures as announced.

**Figure 16: … and the recovery in GDP resumes in 2021Q1**

November Monetary Policy Report GDP fan chart[(a)]




(a) Based on market interest rate expectations, other policy measures as announced.

The main piece of news we have had since that policy meeting has been the positive progress in the development of a Covid vaccine. That news is clearly encouraging – even if there is still some way to go before the increased and welcome likelihood of having effective vaccines translates into delivery of vaccinations. Since our central forecast of recovery in GDP resuming in 2021Q1 (**Figure 16**) was already based on an assumption that the direct effect of Covid would wane, it is not immediately clear at least to me that this development warrants an upwards revision to that forecast. It probably does remove some of the historically very high uncertainty around our forecast. Assuming the recent positive developments do translate into delivery of vaccinations, then they could temper some of the trends I've discussed today, bolster resilience and mitigate some of the risks of long-term scarring.

As I have set out, while there is a role for monetary policy in limiting scarring, there are limits to what monetary policy alone can achieve in the face of structural change; it can help to smooth the adjustment, but wider policy will have an important part to play as well. But whatever happens, the MPC will continue to monitor the situation closely and we will keep under review the range of actions that could be taken to deliver our objectives. And we stand ready to take whatever additional action is necessary to achieve our remit of meeting the 2% inflation target in a way that helps to sustain growth and employment.

These are unprecedented times for the UK and other countries, times which are seeing all of us being challenged to differing degrees in our personal and professional lives. The differential impact of Covid on different parts of the economy is one of its most striking features This is particularly true of the majority of people taking part in this event today, who are in the Higher Education sector: many of you have been impacted very significantly by Covid, in terms of the education services you consume as

students and produce as faculty, as well as in terms of how you all work and contribute to this sector of vital importance for the UK economy and society. I will end by encouraging you to apply your skills and learning to the issues I've highlighted today, including through the work of the Institute of Policy and Engagement here at the University of Nottingham.