BANK OF ENGLAND

Speech

The Second Quarter

Speech given by

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I would like to discuss today the economic outlook in the UK in the light of the Covid crisis and the way monetary policy is responding to this crisis. There is a debate about which letter of the alphabet will best describe the path of the economy, with some scepticism about the V-shaped scenario path in the Bank's May *Monetary Policy Report* (*MPR*). It is early days, but my reading of the evidence is so far, so V.

Covid-19 is, first and foremost, a global public health crisis. The measures put in place to contain the spread of this terrible disease have been necessary, but have had severe economic and financial consequences. As a result, most countries around the world are facing a twin crisis of public and economic health.

The economy in the period ahead will continue to be shaped by the virus and policy responses to it. The economy will also, though, be shaped by the behavioural responses of households and businesses, and the policy responses of Governments and central banks, to these shocks. Understanding those responses is the purpose of my comments today.

I will partition my assessment of the economic impact of the Covid crisis into four phases, or "quarters", covering the past, present and near and distant future. The first "quarter" covers the initial impact of the virus; the second, the immediate recovery following these shocks; the third, the second-round effects on spending and employment; and the fourth, the longer-run impact on households and businesses.

Both the UK and the global economies are already well into the "second quarter" – the recovery phase. The UK's recovery is more than two months old, while the global economy is perhaps three months into its recovery, in both cases from an exceptionally low starting point. Let me say a little about each of the phases, before concluding on the role of policy in supporting the economy during the Covid crisis.

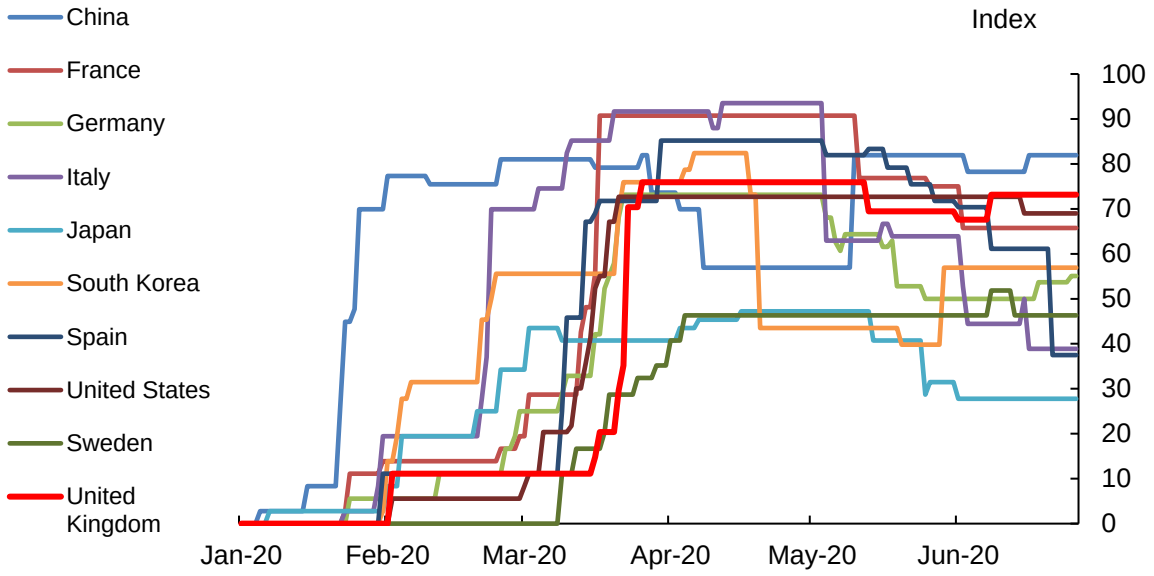
"The First Quarter"

The Covid-19 crisis has dramatically affected public health in every country in the world. There have been over 9 million reported cases of Covid globally and over half a million reported deaths, around 0.01% of the global population.[1] As a point of comparison, the Spanish flu of 1918 recorded 33 million deaths or close to 2% of the global population back then.[2]

During the first few months of the year, and unlike in 1918, most countries put in place social distancing measures to contain the spread of the virus, albeit at different times and with differing degrees of stringency (Chart 1). Predictably – indeed, intentionally – these measures severely curtailed movement of goods, services and peoples, constricting economic activity across a very wide range of sectors and countries.

[1] Data from European Centre for Disease Prevention and Control.
[2] Estimates of the death toll are uncertain. The number quoted here averages the mid-range of estimates in Patterson and Pyle (1991), Johnson and Mueller (2002) and Spreeuwenberg et al (2018).

Chart 1: Stringency of lockdown measures for selected countries



Sources: University of Oxford, Blavatnik School of Government

As official data have come on stream, the speed and severity of that contraction during the early months of the year has become clear. In fact this was apparent in close to real time, courtesy of a range of unofficial "fast indicators" of activity and employment tracked by the Bank and others. The Covid crisis has seen an explosion of interest internationally in developing fast indicators to track the economy in a timely fashion.[3]

The fast indicators used by the Bank have included data on payments and credit card transactions; Google searches of key economic and financial terms; measures of traffic flow, including around ports; measures of footfall on the high street; mobility and transport use metrics; bespoke surveys of households and businesses; and measures of energy demand. In some cases, such as payments data, these indicators can be mapped into the different components of consumption.

For example, Table 1 shows the peak-to-trough fall in a proxy for "social consumption" – spending in pubs, restaurants, cinemas *etc* – based on Google searches across a range of countries. This is one of the categories of spending likely to have been hit hardest by social distancing measures. It suggests peak-to-trough falls of 50-90% in social spending, across a wide range of countries, in the early months of the year.

Fast indicators for the UK point to a similarly precipitous fall over the same period. Table 2 looks at the peak-to-trough falls in household spending using CHAPS payments data.[4] These lie anywhere between

[3] For example, Hacioglu, Känzig and Surico (2020), Carvalho et al (2020), Chetty *et al* (2020) and Aaronson *et al* (2020).
[4] CHAPS is a sterling same-day payment system that is used to settle high-value wholesale payments as well as time-critical, lower-value payments like buying or paying a deposit on a property. Further detail on how these data can be used to track the economy can be found below in Chart 8.

50% and 80% for all spending other than on staples (such as food and rent). Social spending fell as much as 80% while delayable spending, which includes clothing, household goods and cars, fell by around 50%.

Table 1: Google searches related to social consumption

Country	*Peak YoY change, %*
Italy	-67
Spain	-75
France	-73
Germany	-70
US	-58
Japan	-82
China	-73
UK	-69

Sources: Google and Bank calculations.

Table 2: UK "fast indicators" of consumption categories

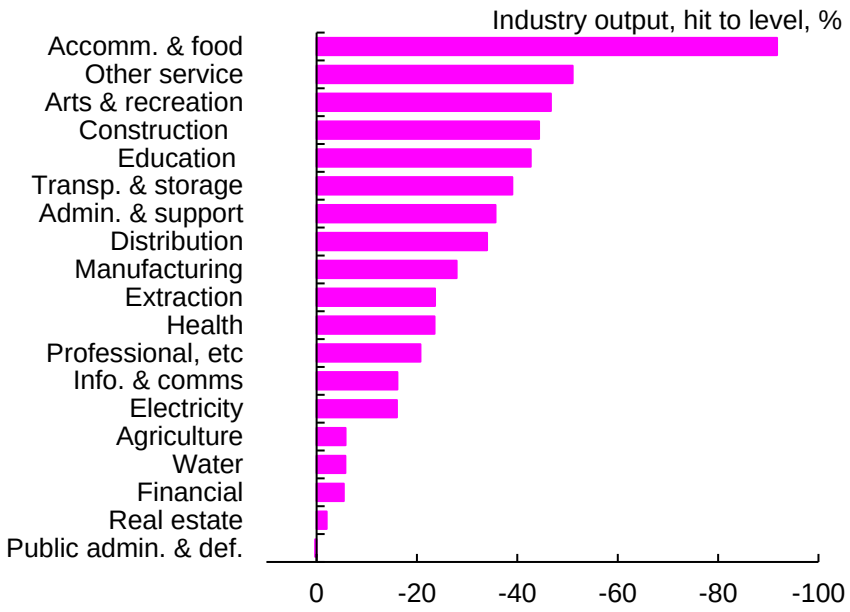
Category	*Peak change, %*
Social	-80
Work-related	-65
Delayable	-50
Staple	-5
Total	-30

Source: Bank of England and Bank calculations.

GDP data so far broadly corroborates the message from these fast indicators. Compared with the fourth quarter of 2019, UK GDP fell by around 25% during the first four months of this year. The fall in UK-weighted world GDP is likely to have been similarly unprecedented. Unsurprisingly, these would be the sharpest four-month falls in GDP on record, in both the UK and globally.

This contraction has affected almost every sector, if to differing degrees (Chart 2). The largest falls have been in the accommodation and dining sectors (over 90%). But sectors such as arts and recreation, construction and education have fallen by more than 40%. Utilities, food production and real estate have been among the least affected. Generally speaking, the greater a sector's reliance on personal contact, the larger its fall.

Chart 2: Falls in output by sector



Sources: ONS and Bank calculations.
Note: Data to April 2020.

This sharp contraction in economic activity has been accompanied, unsurprisingly, by a sharp fall in working hours. Globally, it is estimated that hours worked in Q2 were almost 11% lower than prior to the crisis, equivalent to over 300 million full-time workers.[5] The IMF forecast that the advanced economy unemployment rate will double this year to over 8%. And the ILO estimate that the crisis could increase unemployment globally by anywhere between 5.3 and 24.7 million people.[6]

In the UK, employment data to April from the Labour Force Survey (LFS) does not point to a sharp contraction so far. But other, more timely, labour market indicators suggest a sharp fall in employment. Claims for Universal Credit have risen by 2½ million since mid-March and administrative data from HMRC point to a large rise in joblessness. Claimant count measures of unemployment have risen by around 1½ million since the start of the year.

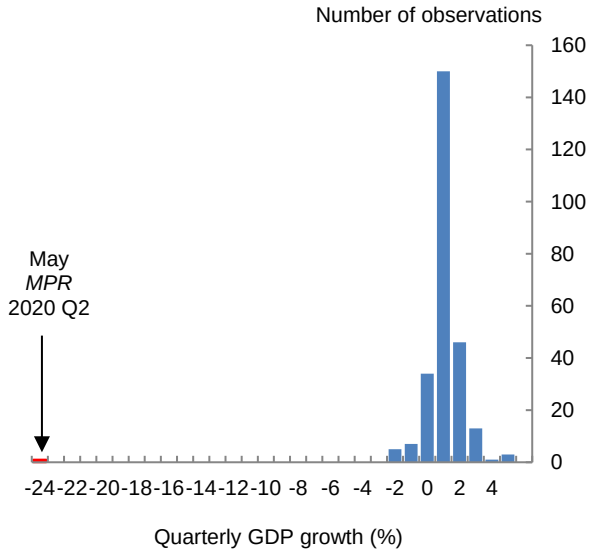
In addition, over 9 million jobs are estimated to have been furloughed as part of the Government's Job Retention Scheme.[7] A further more than 2.5 million self-employed workers are claiming income support. And perhaps as many as 8 million employees are working fewer hours for a variety of reasons.[8] Taken together, this means that perhaps as much as half the UK workforce is currently either unemployed or underemployed. This, too, has no historical precedent.

[5] ILO (2020a).
[6] ILO (2020b).
[7] The total number of jobs furloughed may not equate to the number of employees still under furlough. For example, some workers may have more than one job. And some jobs may only have been furloughed temporarily.
[8] May *MPR*: "Those that remain in work may be working fewer hours than normal. This could be because of reduced demand for their services, in which case they will have spare capacity. But they may also work fewer hours because they fall ill, are required to self-isolate, or have extra non-work responsibilities, such as caring for relatives or home-schooling children." The Ipsos Mori survey in the May *MPR* suggested around 25% of employees are working fewer hours.

In its May *Monetary Policy Report (MPR)*, the MPC produced an illustrative but plausible scenario for the UK and global economies. In this scenario, UK-weighted global GDP was expected to contract by 26% between the fourth quarter of 2019 and the second quarter of 2020 and by 13% over the course of 2020. For the UK, the equivalent numbers were a peak-to-trough contraction of 27% and an annual contraction of 14%.

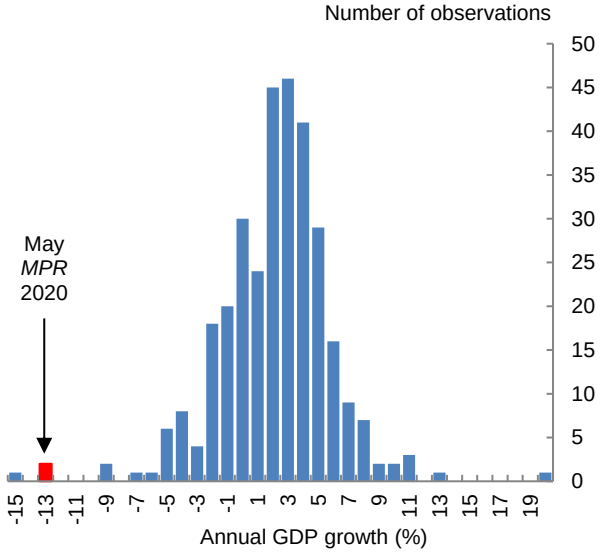
Charts 3 and 4 plot the distribution of quarterly (since 1955) and annual (since 1700) GDP growth rates in the UK, with the Bank's May *MPR* scenario highlighted. By any conceivable metric, the Covid crisis has generated an extraordinary left-tail shock to the economy, with few if any historical precedents.

Chart 3: Distribution of quarterly GDP growth since 1955



Sources: ONS and Bank calculations.

Chart 4: Distribution of annual GDP growth since 1700



Sources: Bank of England Millennium of Data, ONS and Bank calculations.

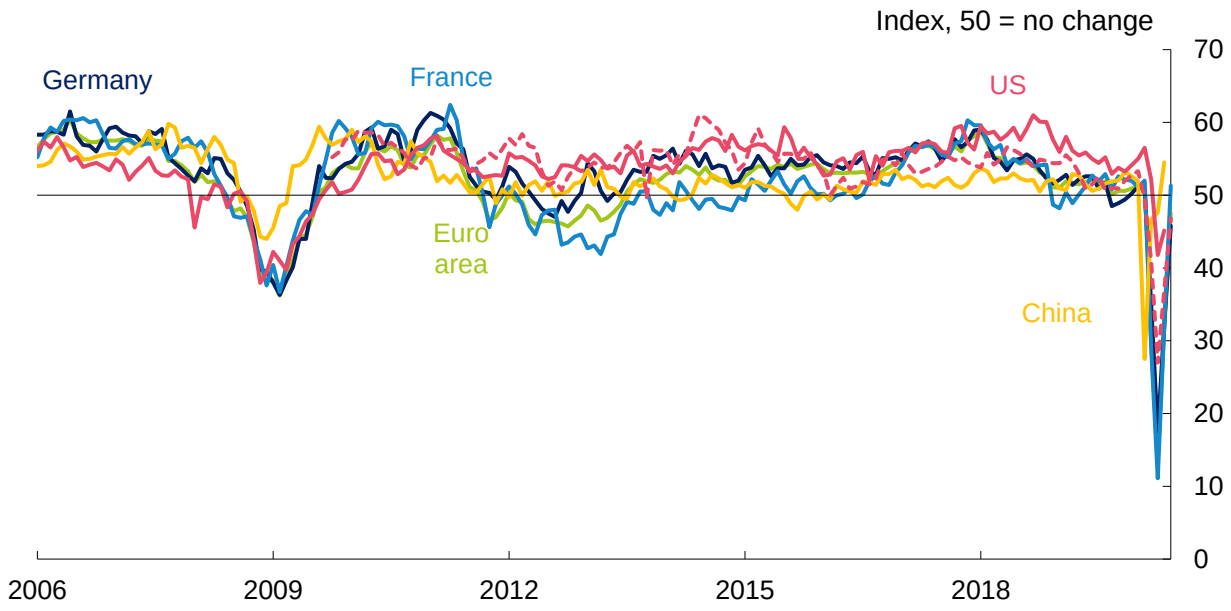
"The Second Quarter"

The same fast indicators used to track the collapse in activity in the first part of this year can also be used to track its recovery. Generally speaking, these indicators suggest the recovery in both the UK and global economies has come somewhat sooner, and has been materially faster, than in the MPC's May *MPR* scenario – indeed, sooner and faster than any other mainstream macroeconomic forecaster.

Globally, fast indicators point towards the trough in activity in the UK's main trading partners having come during, or just after the end of, the first three months of the year: in China in February and in the US and euro area in early April. That means UK-weighted global GDP has perhaps been recovering for around three months. Chart 5 plots PMIs for a range of the UK's major trading partners. Although the PMIs are a less

good guide than usual to GDP outturns, they have bounced back sharply, as have some other business surveys.[9]

Chart 5: PMIs in selected countries

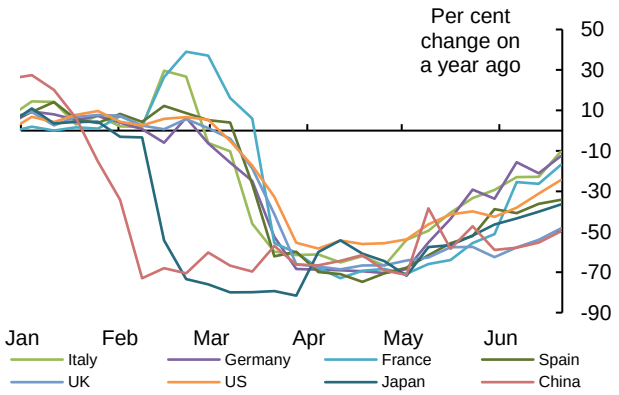


Sources: Thomson Reuters Datastream.
Notes: Composite output PMIs. Solid red line shows ISM PMIs for US, dashed red line shows Markit PMIs.

Chart 6a plots the Google-based proxy for social spending in a range of countries since the start of the year, most likely the slowest of the consumption categories to recover. This measure troughed in Q1 for most countries and has since recovered across the board, albeit to different degrees. For some countries, it is already close to pre-Covid levels. The country divergence is even larger in Chart 6b, showing restaurant bookings across countries, but the extent of the recovery is nonetheless similar.

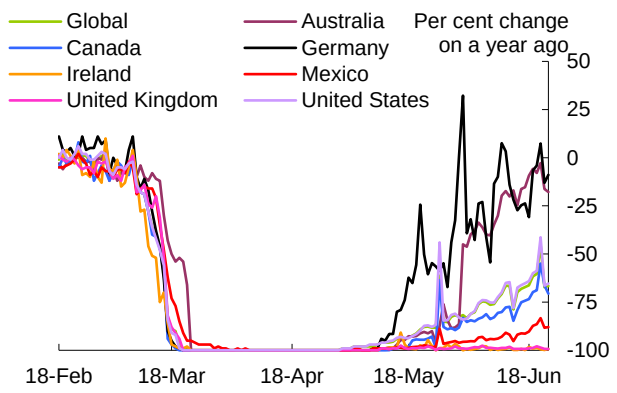
[9] The May *MPR* noted that "These surveys record net balances of respondents, so they provide an indication of how widespread falls in output and expectations are, but are less informative about the magnitude of the falls. So, at a time when the contractions are likely to be very large, it is difficult to use these data to predict the size of the change in output."

Chart 6a: Google searches for social spending



Sources: Google and Bank calculations.

Chart 6b: Restaurant bookings

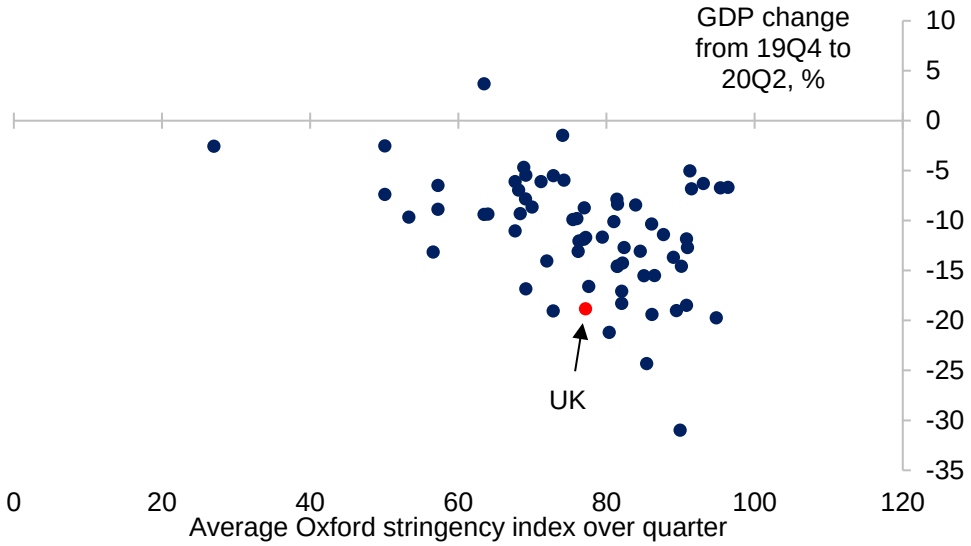


Sources: Open Table and Bank calculations.

In the light of this news, Bank staff's nowcasts for world GDP growth in Q2 have been revised up, by 13 percentage points to around -10%. Even relative to the scale of the fall, this is a large upward revision. One reason is because social distancing measures have been loosened more rapidly than expected (Chart 1), as we would expect the stringency of lockdown to affect GDP.

We can use a model to explain GDP across a range of countries using the stringency of their lockdowns in that quarter, as well as a range of other country-specific factors (Chart 7).[10] That model suggests world GDP will be 15% lower in Q2 than at the turn of the year, compared to 26% in the May *MPR* scenario.

Chart 7: Lockdown stringency against GDP growth over 2020 H1

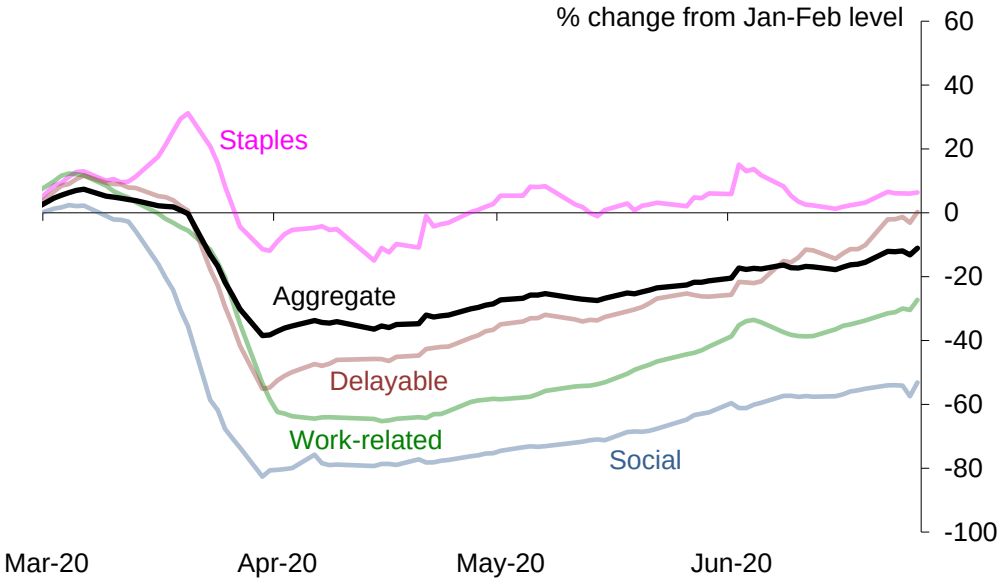


Sources: Apple, University of Oxford and various national data sources.
Notes: See Footnote 10.

[10] For a panel of 55 countries, we employ a forecast combination analysis of around 20 different regression models, each of which uses different sets of explanatory variables and the final forecast is a root mean square error weighted average of forecasts from all our specifications. The variables we use are containment, economic and health policy response indices, which are calculated in-house using the Oxford University Covid monitoring database, Apple mobility trends and country characteristics, e.g. share of exports in GDP, dummies for income level and geographic region and average GDP growth between 2014 and 2018. We also include containment policy characteristics such as the maximum containment policy response and the time spent at this maximum response in a quarter.

For the UK the picture is broadly similar. Fast indicators suggest the trough in activity was reached in the middle of April, with a steady recovery thereafter. Chart 8 plots payments-based fast indicators for the UK mapped into four convenient categories of consumer spending. By late-June, these spending components had recovered at least a third, and in some cases all, of their prior fall. They have risen both sooner and materially faster than in the May *MPR* scenario.

Chart 8: Fast indicators for the UK



Sources: Bank of England and Bank calculations.
Notes: Based on the CHAPS payments that a sample of around 90 UK companies receive from their merchant acquirers on a daily basis. These payments reflect the sales that companies make through debit and credit card purchases, which are summed to estimate rolling seven-day revenues. Definitions of the different consumption groups are discussed in the May *MPR*.

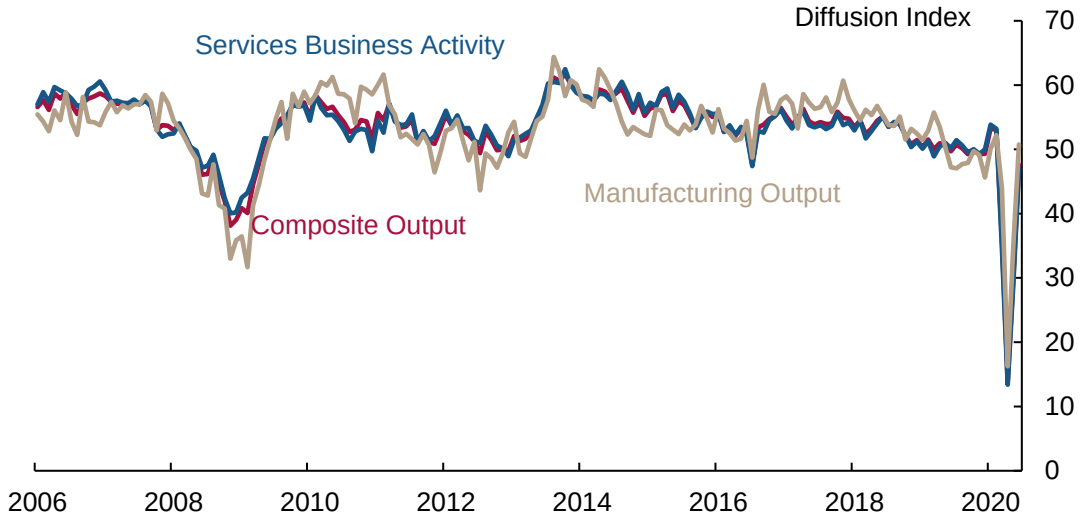
Among the negatively-affected components of spending – social, work-related and delayable – the fastest recovery has been in delayable expenditure such as DIY and household goods.[11] There has also been a sharp up-tick in the car and housing markets, albeit from stagnant levels. Some elements of consumer confidence have bounced back too, in particular consumers' appetite for major purchases.

Official data on retail sales have confirmed this recovery in spending, rising 12% in May to leave spending 13% below its pre-Covid level. In part this may reflect the partial opening-up of a larger number of shops. But a larger part appears to have reflected a shift towards online purchases. As a fraction of total retail spending, online sales has risen from around a fifth prior to the Covid crisis to around a third now.

Reflecting these trends, many business surveys have also bounced back from their April lows. UK PMIs for May and June rose back to levels only a little below the 50 (no change) mark (Chart 9), as in our major trading partners, although the precise signal to take from these balances at present is unclear.

[11] The May *MPR* discusses what these different categories of household spending represent.

Chart 9: UK PMIs



Sources: IHS Markit.
Notes: Output balances.

The UK's faster recovery might simply reflect an earlier relaxation of lockdown than was assumed in May, as in other countries. But there is less evidence to support that hypothesis in the UK, with the pace of relaxation broadly in line with the May *MPR* scenario (Chart 10a). On the face of it, this suggests some greater than expected degree of underlying strength in consumer spending in the UK economy.

Chart 10a: Lockdown stringency (actual and *May MPR*-consistent)

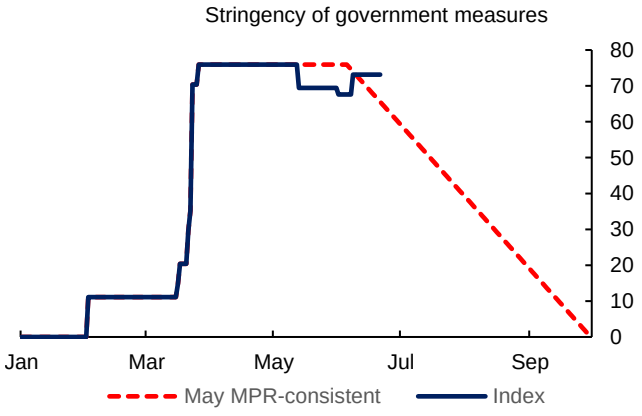
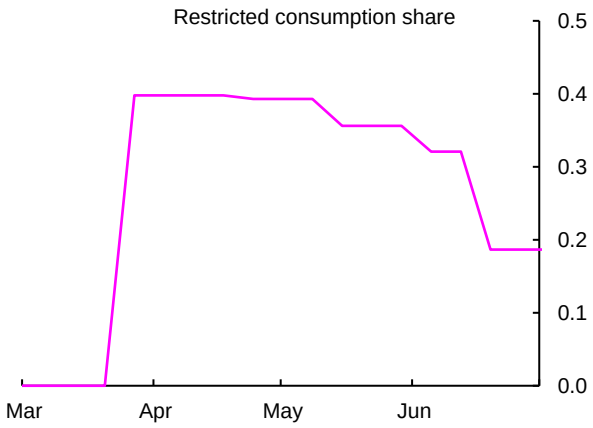


Chart 10b: Share of consumption basket that is unavailable



Sources: University of Oxford, ONS and Bank calculations.
Note: Blue line simply in Chart 10a takes Stringency Index as of early-May, and extrapolates it based on May *MPR* assumption that "The illustrative scenario is conditioned on social distancing measures and government support schemes remaining as they are until early June, before being gradually unwound by the end of Q3."

Taking this evidence together, Bank staff now expect consumer spending to be around 20% lower in Q2, relative to nearly 30% in the *MPR* scenario. By the end of Q2, spending is likely to be around 10% lower

than at the start of the year. Or, put differently, consumer spending in the UK is probably already above the level projected to prevail in Q3 in the May *MPR* scenario.

Some of these data cover the opening-up of non-essential retail stores on 15 June. That opening-up was quantitatively significant, representing around 13% of consumption spending and halving the share of goods and services consumers which were previously unavailable (Chart 10b). Initial indications from payments and footfall figures suggest this opening-up has accelerated, perhaps significantly, consumer spending. In particular, CHAPS data suggests spending on delayable goods has now returned to pre-Covid levels (Chart 8), well ahead of the corresponding May scenario profile.

Looking ahead, the opening of pubs, restaurants, hotels, cinemas and other hospitality outlets on 4 July will provide further impetus to spending. My own market intelligence suggests considerable pent-up demand. Together, these categories represent around another 10% of consumer spending. Initial reports from businesses in these sectors, including from the Bank's Agents, suggest advance bookings are brisk.

There is less evidence on which to base an updated judgement on the other components of GDP. For net trade, the May *MPR* scenario suggested around a 40% peak-to-trough fall in gross export and import volumes. Trade and port traffic data suggest a somewhat smaller contraction. With the world economy recovering sooner than in the UK, this implies a slightly larger boost to UK GDP growth from net trade in Q2.

For housing and business investment, there are even less data on which to make an assessment. The May *MPR* scenario suggested peak-to-trough falls of 60% and 40% respectively, based in part on results from the Bank's Decision Maker Panel (DMP). The latest results from the DMP appear broadly consistent with this.

Updating Staff's nowcasts for these high-frequency data gives an estimated fall in Q2 GDP of around 20% relative to its pre-Covid peak. While this is an exceptionally weak number, that is not in itself news. The news is that it is 7 percentage points less than in the May *MPR* scenario. By comparison, an estimate based on the stringency-based model implies a broadly similar contraction in UK GDP in Q2 of 19% (Chart 7).

It could be argued that, while these are large upward revisions in an absolute sense, they are still relatively modest by comparison with the falls already seen. And of course, some of this rise in spending might simply be the release of pent-up demand, which could dissipate subsequently.

Against that, the evidence so far suggests the recovery is not simply the bringing-forward of spending. Were this higher level of spending maintained, it would put GDP on a different path than in the May *MPR* scenario. The cumulative loss of annual GDP in the May scenario, relative to the January *MPR* forecast, was around

17%. If the higher starting level of GDP were maintained, the cumulative loss of GDP would more than halve to around 8%.[12]

"The Third Quarter"

Looking to the second half of the year, what might we expect? In the May *MPR*, the MPC's scenario foresaw a sharp pick-up in activity, with quarterly growth rates of 12-13% in each of Q3 and Q4. These increases were driven, in large measure, by the assumption of a phased relaxation of lockdown measures, and accompanying policy support, between July and September.

To my mind, two paths are possible in the second half of the year. One involves a *negative* feedback loop from higher unemployment to lower spending, the other a *positive* feedback loop from higher spending to lower unemployment. The first poses a downside risk to the outlook, the second an upside risk. As things stand, it is unclear which of these scenarios, or feedback loops, will prove the more potent.

The negative loop has its roots in the labour market. So far, levels of employment appear to have fallen less rapidly than output. Against that, the number of furloughed workers has exceeded expectations, perhaps by in excess of a million people. This is good news for household incomes in the short run, as the income loss from furlough is far lower than from unemployment. Indeed, this might help explain some of the greater than expected strength in demand in Q2.

As the furlough scheme tapers from August, however, there is a risk this greater number of furloughed workers are not hired back by employers, adding to the unemployment pool. The May *MPR* scenario had unemployment rising to 9%, but assumed the risk of workers not being re-hired was small. Recent survey evidence, from both households and companies, suggests this risk could be larger. For example, survey evidence of companies by the DMP suggests private sector employment could be almost 10% lower by the end of 2020, implying an unemployment path somewhat higher than in the May *MPR* scenario.

If unemployment was to rise more than expected, it increases the risk of a negative feedback loop. Joblessness, or fears of it, have historically been a key driver of household savings. Higher unemployment, as well as lowering incomes, could cause households to increase precautionary savings. That higher saving would lower demand and negatively affect company revenues and employment, in a vicious cycle.

John Maynard Keynes described this dynamic in the 1930s as the "paradox of thrift".[13] A paradox because prudent decisions by households, given the risks they face, have the perverse collective consequence of increasing risks to the economy and those same individuals. These dynamics might be particularly potent at

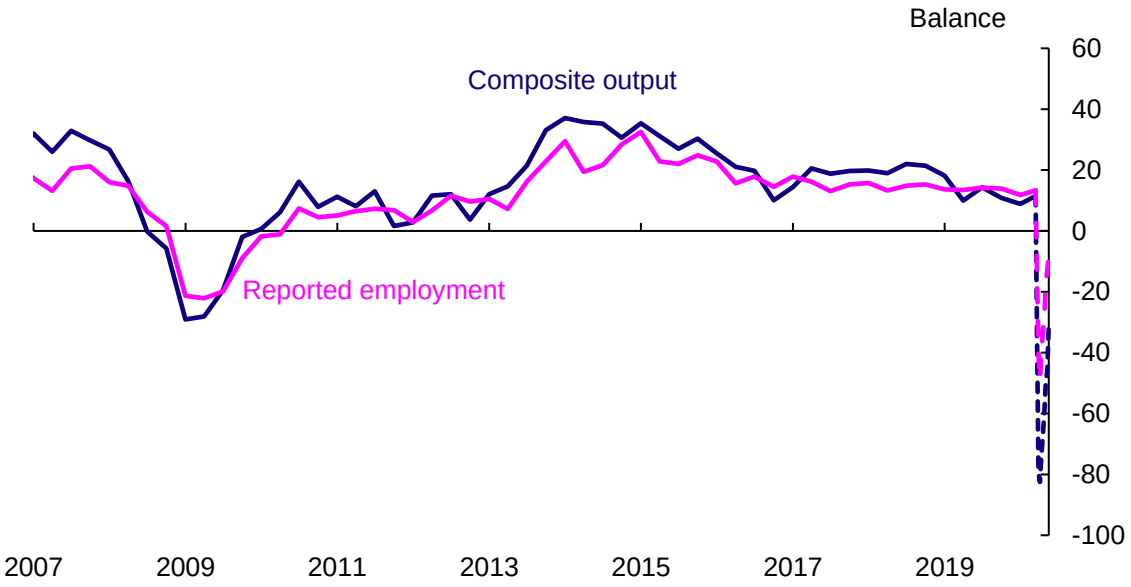
[12] Cumulative loss calculated as the percentage difference in the four-quarter sum of quarterly GDP at the Year 1, 2 and 3 points of the January *MPR*, summed together.
[13] Keynes (1936) described this pattern and Samuelson (1948) used the term 'paradox of thrift'.

present because households face double jeopardy – risks to their lives and their livelihoods. Elsewhere, I have called this dread risk.[14] At present, dread is double-barrelled.

Yet this is not the only path possible for the economy. The willingness of companies to take back furloughed workers will depend importantly on their expectations about future demand for their goods and services. The stronger those expectations, the lower the likelihood of job losses. Firms will not make workers redundant if they need to rehire them, at a cost, soon afterwards. This lowers unemployment risk, raises household incomes, confidence and spending and thereby boosts firm revenues and employment, in a virtuous cycle.

Back in the 1950s John Hicks called this dynamic a "super-multiplier" – "super" because the cumulative effects are amplified when emerging from recession.[15] There is survey evidence to support this dynamic. The British Chambers of Commerce's (BCC) weekly survey suggests firms' demand and employment intentions have moved upwards in lockstep since April (Chart 11). Indeed, employment was close to balance by mid-May. Surveys of employment intentions and vacancies have also recently recovered from low levels.

Chart 11: BCC survey



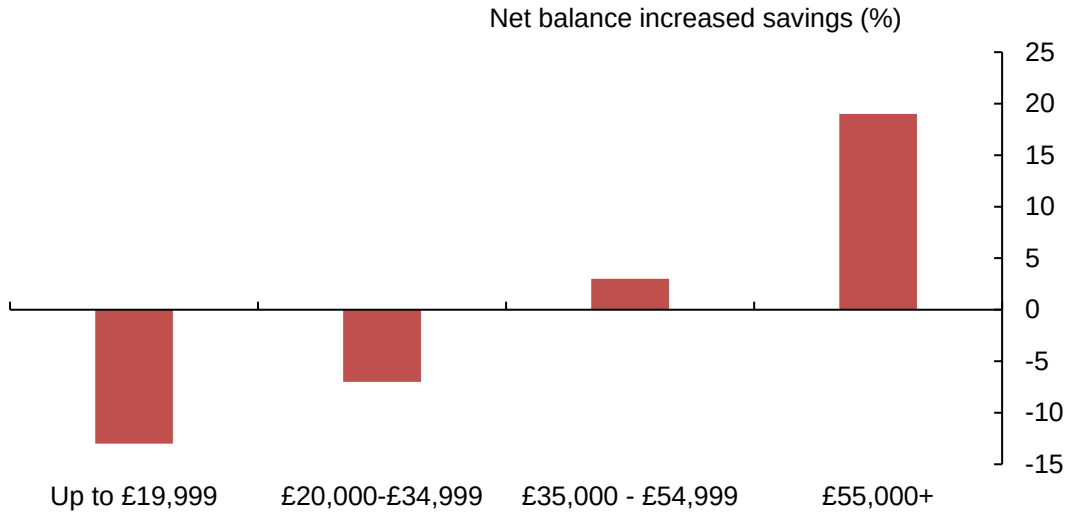
Sources: BCC and Bank calculations.
Notes: Chart shows BCC Quarterly Survey and dashed lines show more recent weekly survey after Covid-19 crisis began.

A further mitigating factor is that household savings rates appear to have risen, involuntarily and significantly, due to social distancing policies. A Bank of England survey in conjunction with Ipsos Mori suggests the aggregate saving ratio is broadly unchanged, although with considerable heterogeneity across income cohorts (Chart 12). But it is possible these survey respondents did not capture the *involuntary* increase in households' cash balances when they answered questions about their savings behaviour.

[14] Haldane (2020).
[15] Hicks (1950).

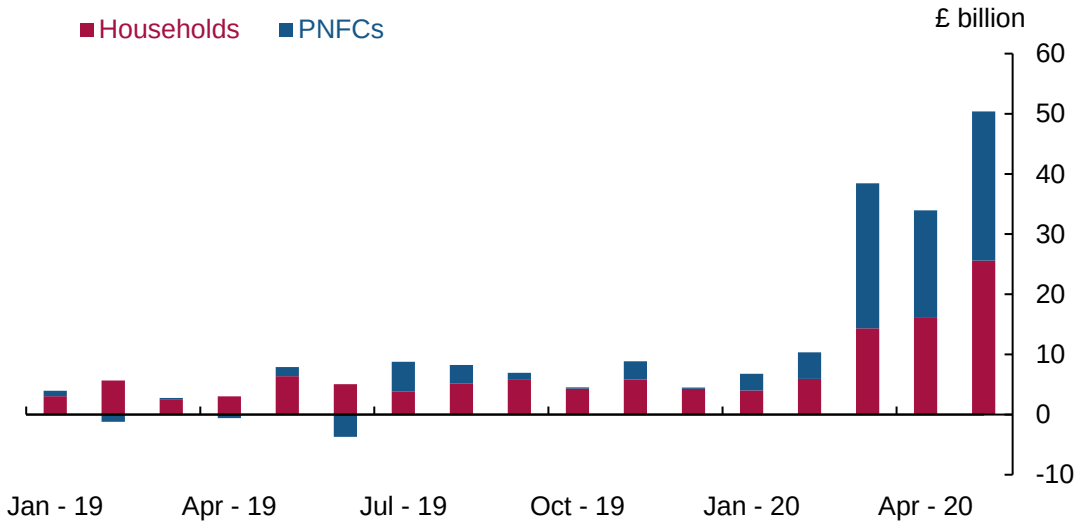
For example, sterling deposits held by households and companies in banks have increased sharply over the past few months, by around £120 billion (Chart 13). That is consistent with a significant rise in the saving ratio. These higher involuntary savings could be drawn down to finance future spending, at least by some households. In aggregate, they potentially dwarf any *voluntary* rise in savings for precautionary purposes.

Chart 12: Saving rates by income (net balance)



Sources: Ipsos Mori and Bank calculations.
Notes: Research was carried out by Ipsos MORI on behalf of The Bank of England. It surveyed a nationally representative quota sample of 2,243 adults in the United Kingdom aged 16-75 using its online i:omnibus on 29 May to 3 June. Data has been weighted to the known offline population proportions for age, gender, government office region, working status and social grade. Respondents were asked, "as a result of the coronavirus pandemic, would you say that your household savings have increased, decreased, or stayed the same?"

Chart 13: Sterling deposits held by households and PNFCs (monthly flows into M4^{ex})



Sources: Bank of England and Bank calculations.
Note: Chart does not include flows into non-intermediate OFCs' M4.

Which of these two paths will play out in practice? Back in May, the MPC observed that the balance of risks to the outlook was skewed to the downside. Subsequent positive news on demand has, in my opinion, more than counterbalanced the rise in downside risks to employment. To my mind, this leaves risks to the outlook slightly more evenly balanced than in May, if still with a downside skew.

"The Fourth Quarter"

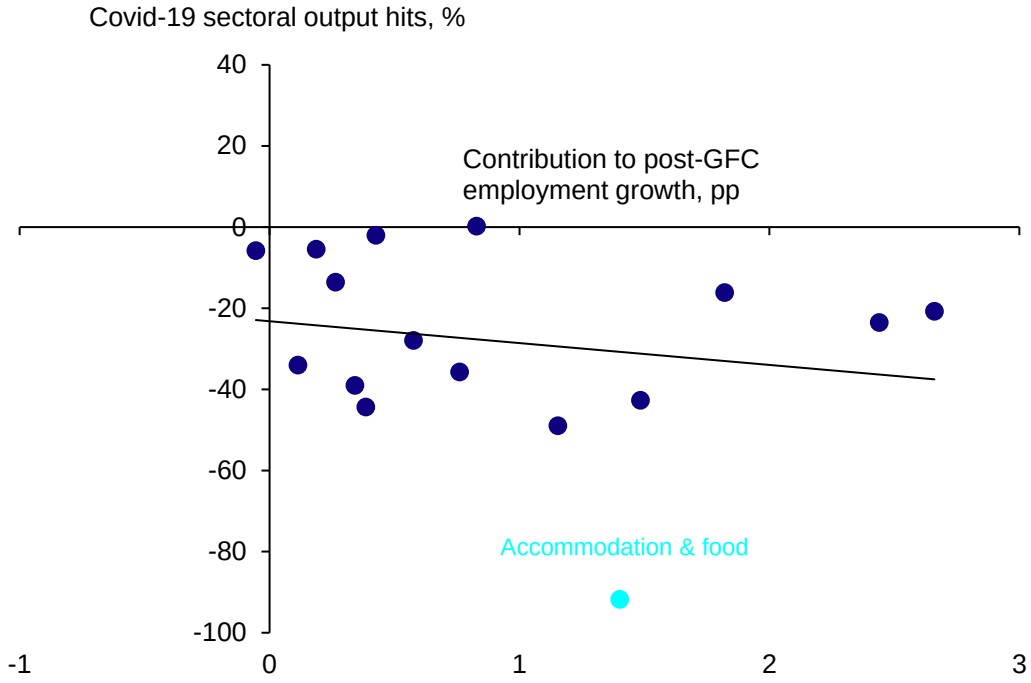
Looking beyond 2020, there is plainly a high degree of uncertainty about the economy. That in part reflects uncertainty about the virus and the policy responses to it. But it also reflects uncertainties about the path of the economy itself. Given the depth of the recession, there is likely to be a greater than usual degree of history-dependence, or hysteresis, in this path. The deeper and longer the recession, the greater the scarring effects on physical and human capital and hence the economy's productive potential.

The May *MPR* scenario captured some of these scarring effects. In particular, it assumed that lower investment as a result of the Covid crisis was not recovered, leaving the capital stock 4% lower. Combined with some drag on total factor productivity (TFP) growth, the level of output ended 1½% lower. That scenario assumed no scarring effect on human capital, however, with unemployment returning to pre-Covid levels and the long-run rate of unemployment unchanged at around 4¼%.

At the same time, it was recognised that this was just one of many possible paths for the economy. Other paths would give rise to differing degrees of scarring to physical and human capital and losses to the long-run productive potential of the economy. On 14 July, the Office of Budget Responsibility (OBR) will publish three possible scenarios for the economy involving different degrees of depth and length of the downturn.

Perhaps the key uncertainty, from a scarring perspective, concerns the labour market. As Chart 2 illustrates, the Covid crisis has had markedly different effects on different sectors and, most likely, will continue to do so. Chart 14 compares different sectors' contribution to the pre-Covid employment boom and its subsequent output contraction. There is a negative correlation, suggesting it might be difficult for the sectors which absorbed most workers pre-Covid to repeat this feat post-Covid.

Chart 14: Falls in output by sector against post-GFC employment growth



Sources: ONS and Bank calculations.
Notes: Sectoral output hits on y-axis are from Chart 2. Numbers on x-axis are the percentage point contribution of each sector to total growth in UK employment from its post-global financial crisis trough to end-2019.

Other, structural, factors may further complicate the labour market picture. The Covid crisis has shifted relative prices in ways which could encourage companies to invest in machines rather than people during the recovery. The price of capital goods has fallen while the price of labour has increased because of the need for Covid-secure premises and practices. This shift in the relative price of capital versus labour will provide a headwind to the re-absorption of workers.

A second structural headwind concerns the skills mix of those losing their jobs. Research suggests this is likely to be skewed towards those with fewest skills and least experience, especially the young. The *Resolution Foundation* estimates that high unemployment will result in a 13% lower probability of a new graduate being in employment three years after completing education. For those without a university qualification, the probability of being in work three years from now might be 27-37% lower.[16]

During jobs recessions, many workers choose to move down the skills spectrum to regain a foothold on the jobs ladder.[17] But if many displaced workers have low levels of skill and experience, the option of moving down the skills spectrum may not be available or may at least have lower value. Skilling or re-skilling will then be needed. This adds to the time it takes workers to re-enter the jobs market, prolonging high unemployment.

[16] Henahan (2020).
[17] Haldane (2019), Moscarini and Postel-Vinay (2016) and Moscarini and Postel-Vinay (2018).

The possibility of labour market mismatches, whether by sector or skill, increases the chances of high unemployment proving persistent, with scarring effects on the economy's supply potential. Put differently, labour market mismatches raise the economy's NAIRU – the level of unemployment at which supply bottlenecks and wage pressures re-emerge. The higher the NAIRU, the smaller the degree of slack in the economy.

Historically, pandemics have not tended to have a persistent upward impact on prices.[18] But a higher NAIRU would be one reason to be cautious before jumping to that conclusion. A second is that the policy response to the Covid crisis, both monetary and fiscal, has been significantly more expansionary than any previous pandemic. A third factor is that the fracturing of supply chains during the Covid crisis, national and international, would tend to increase the cost of goods and services, if it proves durable.

Against these inflationary forces of course needs to be weighed the disinflationary effects of much higher degrees of (double jeopardy) uncertainty, weaker demand and potentially higher saving rates in the economy. With heavy weights on either end of the inflationary see-saw, it is unclear at this stage which will tip the balance.

Those uncertainties are, to some extent, reflected in the differing responses of agents' inflation expectations. Since the crisis, households' expectations have tended to drift up, companies' expectations have drifted down and financial markets' expectations are relatively unchanged. Given the strong forces acting on inflation in either direction, the MPC is being especially vigilant in monitoring trends in inflation expectations.

Perhaps the long-range forecast about which I have greatest confidence concerns the data and statistics used, by the Bank and others, to monitor the economy. The emergence of a new suite of fast indicators, including from the UK Office for National Statistics, has significantly shifted the technological frontier when monitoring the economy. That shift is likely to be permanent, improving the granularity and the timeliness of both our statistics and our understanding of economic trends.

The Policy Response

Let me conclude by discussing the policy response to these searing developments in the global economy. Like the crisis itself, these responses have been unprecedented in speed and scale. As importantly, they have typically involved fiscal and monetary policies acting in tandem to cushion the effects of the crisis on jobs and incomes.

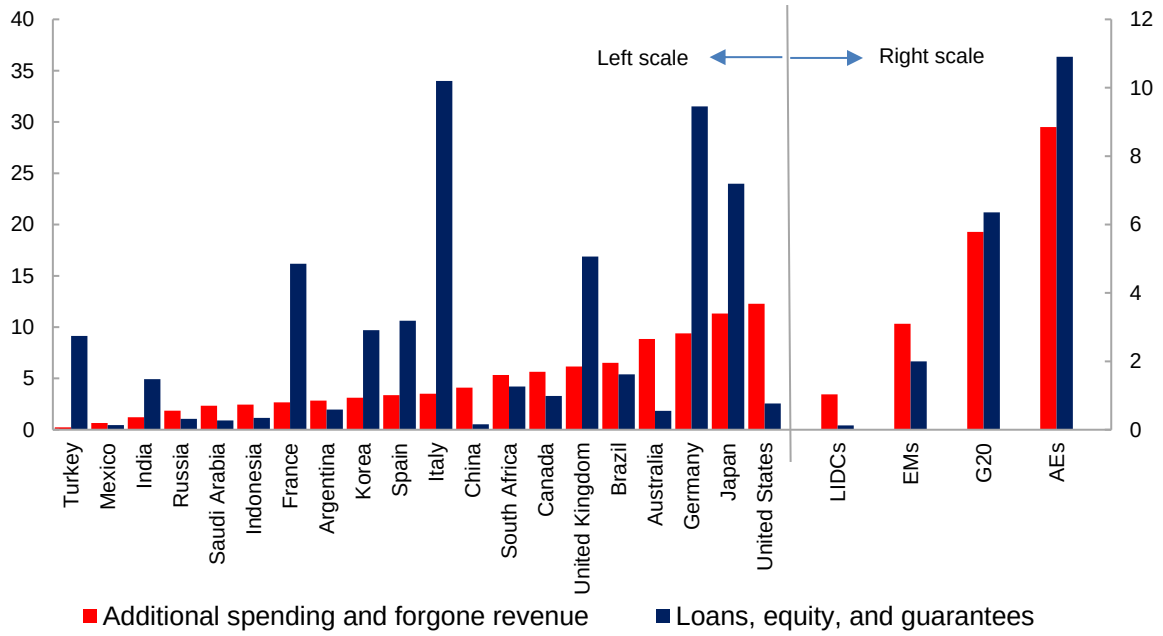
The first line of defence against the crisis has come from fiscal policy. Fiscal tools act directly on the source of the problems caused by the Covid crisis – cash-flow shortfalls for companies and jobs risks for workers.

[18] For example, Barro, Ursúa and Weng (2020).

To those ends, a wide variety of fiscal measures have been put in place over recent months, including job support schemes, tax rebates and holidays, grants to certain sectors and loan guarantee programmes.[19]

For the major economies, these programmes has been as large as any since the Great Depression, often double-digit percentages of GDP (Chart 15). Additional support will come from the automatic stabilisers built into tax and spending rules. All in, the IMF estimate that announced fiscal stimulus measures from the Covid crisis are near $11 trillion globally, equivalent to around 8% of world GDP in 2019.

Chart 15: Fiscal measures to counter Covid-19 (% of each country's GDP)



Sources: IMF WEO, June 2020.

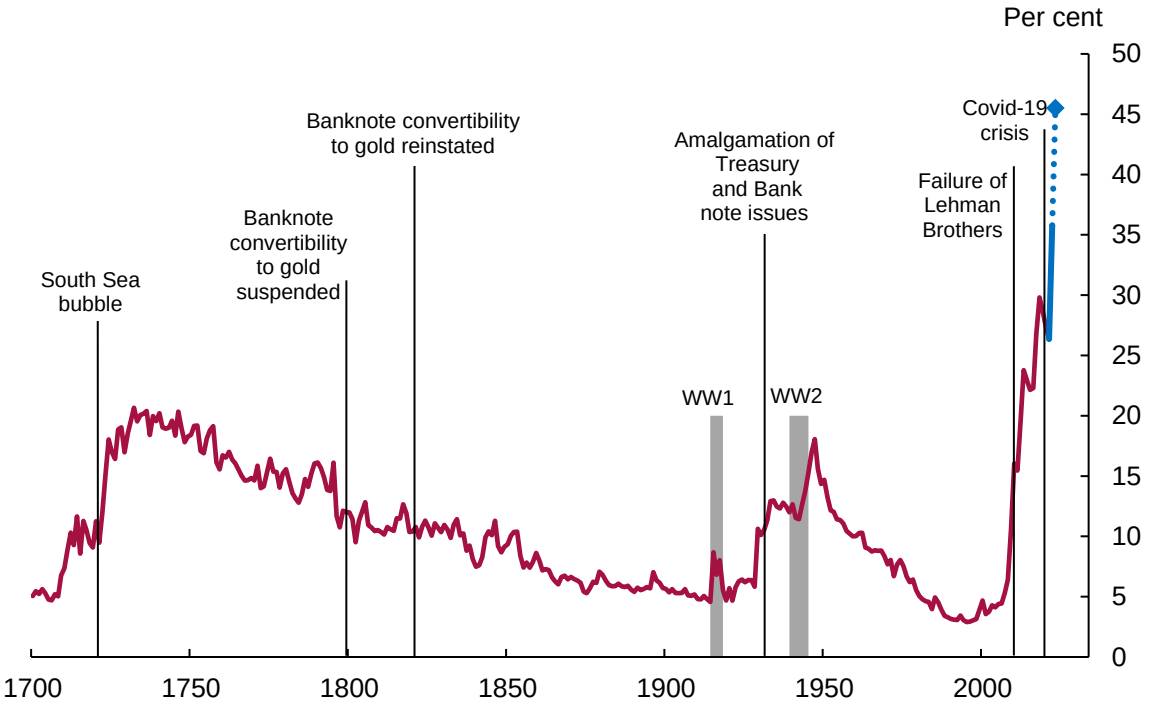
Accompanying these fiscal measures have been equally extensive measures by central banks, including lower interest rates, large-scale liquidity provision and purchases of assets across the risk spectrum. Among the world's major central banks, there has so far been an expansion of asset purchases to end-May of around $2.8 trillion, with a further $2.2 trillion planned by the end of this year. Taken together, the growth in major central bank asset purchases since the crisis already amounts to around 5% of (pre-Covid) global GDP.

In the UK, the pattern has been similar. The MPC increased the stock of asset purchases by £200 billion in March, alongside a cut in Bank Rate by 65 basis points and the introduction of a new Term Funding scheme for Small and Medium-sized Enterprises (TFSME). At its meeting in June, the MPC voted to increase the stock of asset purchases by a further £100 billion, to £745 billion, with the programme expected to be completed around the turn of the year.

[19] IMF (2020).

Through these policies, the Bank of England's balance sheet has so far expanded by close to £200 billion, with a further £200 billion expected during the remainder of this year due to additional asset purchases and TFSME drawings.[20] This would take the Bank's balance sheet to around 45% of (2019) UK GDP by the year-end, more than double its previous high-water mark (Chart 16). It would take the Bank's balance sheet to almost double its highest-ever previous level relative to the Government's net debt stock (Chart 17).

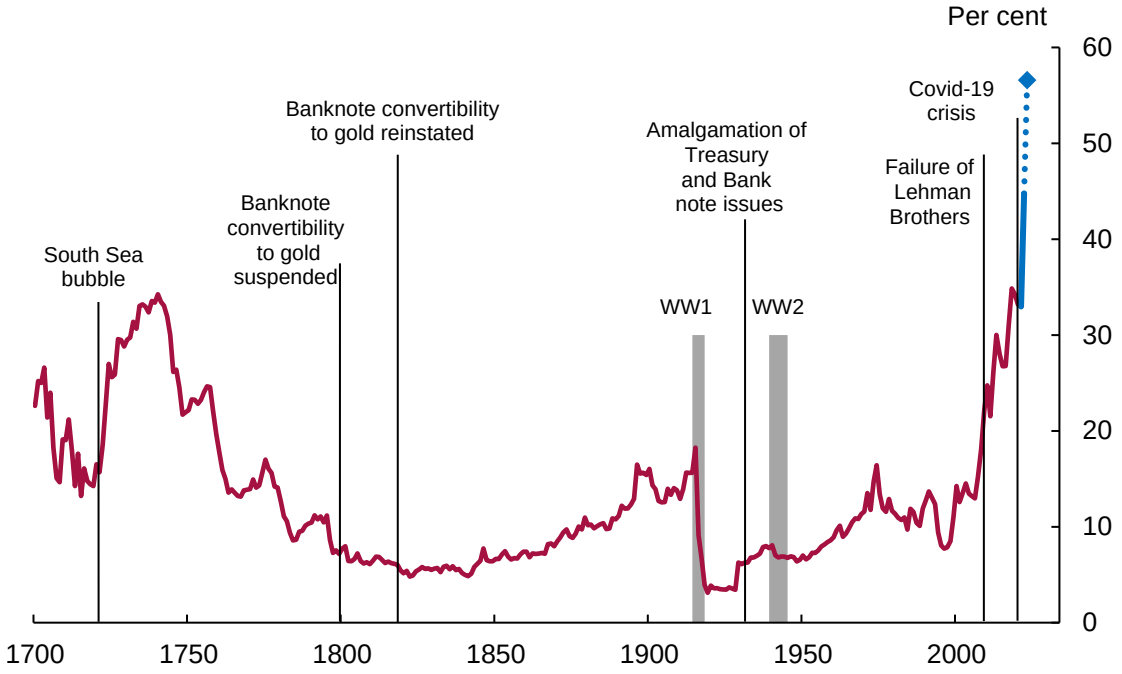
Chart 16: Bank of England balance sheet relative to GDP



Sources: Bank of England (available here), ONS and Bank calculations.
Notes: Chart from Hauser (2020) but updated to reflect most recent MPC announcement of further asset purchases and TFSME. GDP over 2020 held fixed at end-2019 level to prevent fall in output leading to denominator effect. Dotted line extends series to mid-2020, assuming completion of current asset purchase programme and further TFSME drawings.

[20] These figures reflect the June MPC minutes, which noted that lending under TFSME "was likely to exceed £100 billion over the coming year." For simplicity we assume the TFSME reaches £100bn at end-2020.

Chart 17: Bank of England balance sheet relative to government net debt

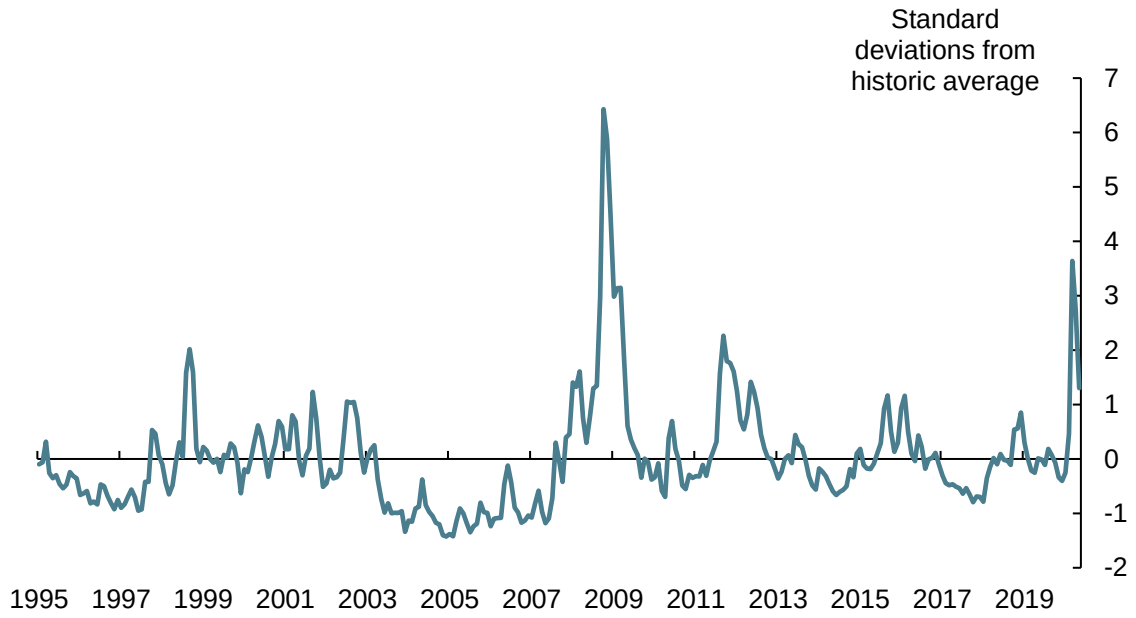


Sources: Bank of England (available here), OBR, ONS and Bank calculations.
Note: Debt figures calculated on a fiscal year end basis. Red diamond shows end-2020 Bank of England balance sheet (consistent with Chart 14), relative to OBR projection for government net debt (excluding public sector banks) for FY 2020/21.

These balance sheet actions by central banks globally have had their intended effect, improving financial and credit conditions to support households and businesses (Chart 18). Despite being tighter than at the start of the year, financial conditions have loosened significantly since mid-March. Yields on government securities are at their lowest-ever levels (Chart 19), as are yields on investment-grade corporate bonds.

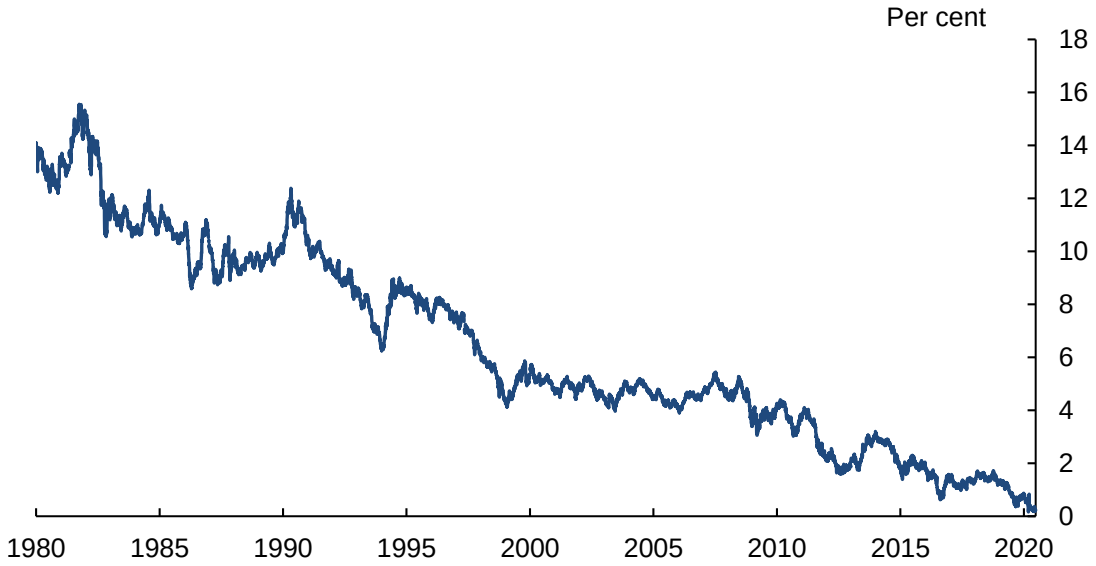
Borrowing costs for households and smaller businesses have not fallen as far as for governments or larger companies. That explains why, despite monetary easing, overall credit conditions are somewhat tighter than at the start of the year. Nonetheless, the overall monetary stance, in the UK and globally, remains highly accommodative by any historical metric. For example, real interest rates in the UK have fallen into even more deeply negative territory since the Covid crisis (Chart 20).

Chart 18: Global financial conditions index



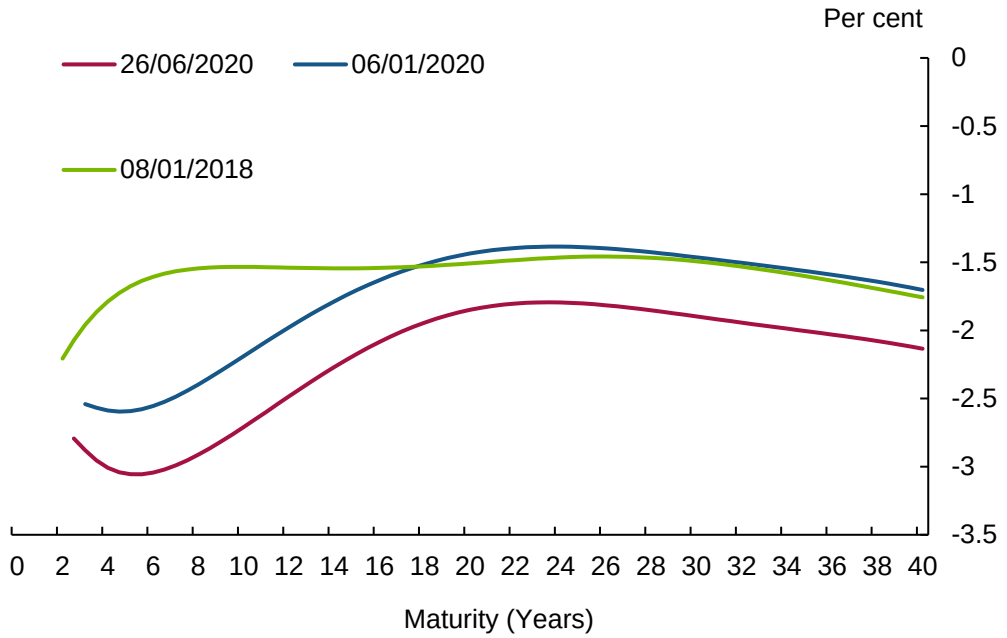
Sources: Bloomberg Finance L.P., Eikon by Refinitiv and Bank calculations.
Notes: Financial conditions indices (FCIs) estimated for 43 economies using principal component analysis. The FCIs summarise information from the following financial series: term spreads, interbank spreads, corporate spreads, sovereign spreads, long-term interest rates, equity price returns, equity return volatility and relative financial market capitalisation. An increase in the index indicates a tightening in conditions. Series shows the average of all country FCIs, weighted according to their shares in world GDP using the IMF's purchasing power parity (PPP) weights.

Chart 19: UK government bond yields (10-year gilt yield)



Sources: Bloomberg Finance L.P, TradeWeb and Bank calculations.

Chart 20: UK real rates



Sources: Bloomberg Finance L.P., TradeWeb and Bank calculations.
Notes: Chart shows UK instantaneous implied real forward curve.

At its June meeting, the MPC weighed the upside news on demand against the downside news from employment when deciding to expand asset purchases by a further £100 billion. My judgement on the balance of these risks led me to vote to maintain the monetary stance rather than loosen it further. I judged the upside news in demand since our previous meeting in May to have outweighed the negative news to the UK's economic outlook. Let me illustrate my thinking with a simple thought-experiment.

In the May *MPR* scenario, inflation and output fell sharply in the first year before recovering, with the output gap closed by year 2 and inflation back to target by year 3. Since then, positive demand news has lifted the starting level of UK output. If this level was maintained along the same growth trajectory, the average output gap over the next three years would be 3 percentage points smaller than in May. With a Phillips curve slope of a third, inflation at years 2 and 3 would be around 1 percentage point higher than expected in May.

Another significant piece of news since May has been in asset prices. Since then, shorter-term interest rates have fallen by around 25 basis points, risky asset prices such as equities have risen by almost 7% and the sterling exchange rate has fallen by around 2¼%. Taken together, these asset prices movements represent a material loosening in UK monetary conditions. On standard ready-reckoners, they would boost output by around ½%, and inflation by around 0.2 percentage points, at the policy horizon relative to the May scenario.

Finally, imagine we plugged this news about the expected output gap and inflation into a standard Taylor Rule, in which interest rates are mechanically set in line with these two factors. Assuming weights on the

two terms of 0.5 and 1.5 respectively, the Taylor Rule implied path of interest rates would, on average, be around 1 percentage point higher over the policy horizon as a result of the news about asset prices and demand, relative to the May-implied scenario path.

This is of course not the only news about the UK economy since May. And nor am I inviting too literal an interpretation of my thought-experiment. I offer it simply as a means of sizing the upside news to the economy since May, illustrating its presumptive implications for monetary policy and providing a baseline against which downside risks to the economy can be judged, including from higher unemployment. It was this judgement that lay behind my decision to leave the monetary stance unchanged at the June meeting.

Looking ahead, risks to the economy remain considerable and two-sided. Although these risks are in my view slightly more evenly balanced than in May, they remain skewed to the downside. Of these risks, the most important to avoid is a repeat of the high and long-duration unemployment rates of the 1980s, especially among young people. Like the rest of the MPC, I stand ready to adjust monetary policy, at speed, if needed to support the economy and return inflation to its target on a sustainable basis.

At the same time, it is important to recognise the limits to what monetary policy can achieve. Monetary policy can help to deliver the monetary and financial conditions necessary to support households and businesses – and is doing so. But monetary policy can do relatively little to avoid problems caused by structural or sectoral shifts in the economy, such as structurally high rates of unemployment. With interest rates along the yield curve close to zero, there is also simply less room for monetary manoeuvre than in the past.

Before the Covid crisis, I expressed concerns about the growing “dependency culture” around monetary policy.[21] Recent events have done nothing to allay those concerns. Price stability is an anchor on which all societies and economies depend for their stability and success. At this time of momentous uncertainty about the health of our societies and economies, it is more important than ever that central banks are not over-burdened and that the anchor of price stability is not disturbed.

Thank you.

[21] Haldane (2019).

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