



BANK OF ENGLAND

Monetary Policy Committee



Monetary Policy Report

January 2020





BANK OF ENGLAND

Monetary Policy Report

January 2020

Monetary policy at the Bank of England

The objectives of monetary policy

The Bank's Monetary Policy Committee (MPC) sets monetary policy to keep inflation low and stable, which supports growth and jobs. Subject to maintaining price stability, the MPC is also required to support the Government's economic policy.

The Government has set the MPC a target for the 12-month increase in the Consumer Prices Index of 2%.

The 2% inflation target is symmetric and applies at all times.

The MPC's remit recognises, however, that the actual inflation rate will depart from its target as a result of shocks and disturbances, and that attempts to keep inflation at target in these circumstances may cause undesirable volatility in output. In exceptional circumstances, the appropriate horizon for returning inflation to target can vary. The MPC will communicate how and when it intends to return inflation to the target.

The instruments of monetary policy

The MPC currently uses two main monetary policy tools. First, we set the interest rate that banks and building societies earn on deposits, or 'reserves', placed with the Bank of England — this is Bank Rate. Second, we can buy government and corporate bonds, financed by the issuance of central bank reserves — this is asset purchases or quantitative easing.

The *Monetary Policy Report*

The MPC is committed to clear, transparent communication. The *Monetary Policy Report (MPR)* is a key part of that. It allows the MPC to share its thinking and explain the reasons for its decisions.

The *Report* is produced quarterly by Bank staff under the guidance of the members of the MPC. Although not every member will agree with every assumption on which our projections are based, the central projections represent the MPC's best collective judgement about the most likely paths for inflation, output and unemployment.

This *Report* has been prepared and published by the Bank of England in accordance with section 18 of the Bank of England Act 1998.

The Monetary Policy Committee

Mark Carney, Chair
Ben Broadbent
Jon Cunliffe
Andrew Haldane
Jonathan Haskel

Dave Ramsden
Michael Saunders
Silvana Tenreyro
Gertjan Vlieghe



PowerPoint™ versions of the *Monetary Policy Report* charts and Excel spreadsheets of the data underlying most of them are available at www.bankofengland.co.uk/monetary-policy-report/2020/january-2020

Contents

Monetary Policy Summary	i
<hr/>	
1 The economic outlook	1
<hr/>	
1.1 Recent developments	1
1.2 The MPC's projections	3
1.3 Key judgements and risks	8
1.4 Constant rate projections	10
Box 1 Monetary policy since the November <i>Report</i>	12
2 Current economic conditions	13
<hr/>	
2.1 Global developments and financial conditions	14
2.2 Demand and output	18
2.3 Costs and prices	22
Box 2 Agents' update on business conditions	27
3 In focus The labour market	29
<hr/>	
3.1 What do surveys of firms tell us about the labour market?	30
3.2 What has happened to employment and flows around the labour market?	31
3.3 What does the recent fall in pay growth signal?	34
3.4 What are the implications for the MPC's forecast?	34
4 In focus Supply and spare capacity	36
<hr/>	
4.1 The amount of spare capacity in the economy	37
4.2 The outlook for potential supply growth	41
Annex Other forecasters' expectations	43
<hr/>	
Glossary and other information	44

Monetary Policy Summary

The Bank of England's Monetary Policy Committee (MPC) sets monetary policy to meet the 2% inflation target, and in a way that helps to sustain growth and employment. At its meeting ending on 29 January 2020, the MPC voted by a majority of 7–2 to maintain Bank Rate at 0.75%. The Committee voted unanimously to maintain the stock of sterling non-financial investment-grade corporate bond purchases, financed by the issuance of central bank reserves, at £10 billion. The Committee also voted unanimously to maintain the stock of UK government bond purchases, financed by the issuance of central bank reserves, at £435 billion.

UK GDP growth slowed last year, reflecting weaker global growth and elevated Brexit uncertainties. Output is expected to have been flat in 2019 Q4. Growth in regular pay has fallen back to around 3½%, though unit labour costs have continued to grow at rates above those consistent with meeting the inflation target in the medium term. CPI inflation fell to 1.3% in December, core CPI inflation declined to 1.4%, and core services inflation is below its target-consistent range. The unemployment rate has remained low and stable, and employment growth has picked up. Following its annual reassessment of supply-side conditions, the Committee judges that there has been a somewhat greater margin of spare capacity in the economy over recent years, which has been exerting downward pressure on domestically generated inflation.

The most recent indicators suggest that global growth has stabilised, reflecting the partial easing of trade tensions and the significant loosening of monetary policy by many central banks over the past year. Global business confidence and other manufacturing indicators have generally picked up. Domestically, near-term uncertainties facing businesses and households have receded. Surveys of business activity have picked up, quite markedly in some cases, and investment intentions appear to have recovered. Housing market indicators have strengthened and consumer confidence has increased slightly. The Committee will monitor closely the extent to which these early indications of an improved outlook are sustained and follow through to the hard data on domestic activity in coming months.

The Committee's updated projections for activity and inflation are set out in the accompanying January *Monetary Policy Report*. They are based on the assumption of an immediate but orderly move, at the beginning of next year, to a deep free trade agreement between the United Kingdom and the European Union.

UK GDP growth is projected to pick up a little in early 2020. Further ahead, and conditioned on a market path for Bank Rate that falls slightly over the forecast period, the recovery in UK growth is supported by a pickup in global activity, a further decline in Brexit uncertainties and the Government's announced spending measures. Support from these factors is sufficient to boost demand growth above weakened potential supply growth. As a result, slack is eroded gradually over the first part of the forecast period and a margin of excess demand builds thereafter. CPI inflation is projected to remain below the MPC's 2% target throughout this year and much of 2021. Further out, and conditioned on market yields, strengthening domestic price pressures, alongside a waning drag from energy prices, mean that inflation reaches the 2% target by the end of next year and rises slightly above it by the end of the forecast period.

Monetary policy will be set to ensure a sustainable return of inflation to the 2% target. Policy may need to reinforce the expected recovery in UK GDP growth should the more positive signals from recent indicators of global and domestic activity not be sustained or should indicators of domestic prices remain relatively weak. Further ahead, if the economy recovers broadly in line with the MPC's latest projections, some modest tightening of policy may be needed to maintain inflation sustainably at the target.

The MPC judges at this meeting that the existing stance of monetary policy is appropriate.

1 The economic outlook

UK GDP growth was modest in 2019 — and is estimated to have been around zero in Q4 — dampened by slower global growth and elevated Brexit-related uncertainties. In its annual reassessment of supply-side conditions, the MPC judged that potential supply growth has also slowed over the past year. On balance, there is judged to be a margin of spare capacity in the economy, which is exerting downward pressure on CPI inflation.

The most recent indicators suggest that global growth has stabilised, reflecting the partial easing of trade tensions and the significant loosening of monetary policy by many central banks over the past year. Global business confidence and other manufacturing indicators have generally picked up. Domestically, near-term uncertainties facing businesses and households have receded. Surveys of business activity have picked up, quite markedly in some cases, and investment intentions appear to have recovered. Housing market indicators have strengthened and consumer confidence has increased slightly.

UK GDP growth is projected to pick up a little in early 2020. Further ahead, and conditioned on a market path for Bank Rate that falls slightly over the forecast period, the recovery in UK growth is supported by a pickup in global activity, a further decline in Brexit uncertainties and the Government's announced spending measures. Support from these factors is sufficient to boost demand growth above weak potential supply growth. As a result, spare capacity is gradually eroded over the first part of the forecast period and a margin of excess demand builds thereafter. While CPI inflation remains below 2% in the first part of the forecast period, strengthening domestic price pressures alongside a waning drag from energy prices mean that inflation rises towards the target over 2021. Inflation is projected to be 2% in 2022 Q1 and slightly above the target in 2023 Q1.

1.1 Recent developments

UK GDP growth slowed materially in 2019 relative to previous years.

UK GDP is expected to have been flat in 2019 Q4. Over 2019, GDP growth has been volatile owing to Brexit-related factors but, on average, it has slowed relative to previous years (Section 2).

That slowing has been driven partly by weakening global growth...

Slower UK GDP growth partly reflects the impact of global growth, which has weakened significantly to below potential rates. Four-quarter PPP-weighted global growth was 2.8% in 2019 Q3, down from close to 4% at the start of 2018. In UK-weighted terms, global growth has fallen to 1.7% from 3% over the same period. The slowdown, both in the UK and abroad, has been particularly apparent in the manufacturing sector. The weakening in global growth has in part reflected the impact of increased trade protectionism and the associated rise in uncertainty, as well as the past tightening in global financial conditions and domestic weakness in some emerging market economies (EMEs).

...although there are signs that global growth has stabilised.

Quarterly global growth rates have been relatively constant over the recent past. And more timely survey data are consistent with the stabilisation in global growth continuing. For example, PMIs have risen a little since November,

including in the manufacturing sector (Chart 1.1). International risky asset prices have also increased. Those developments are likely to have been supported by an easing in trade tensions since November.

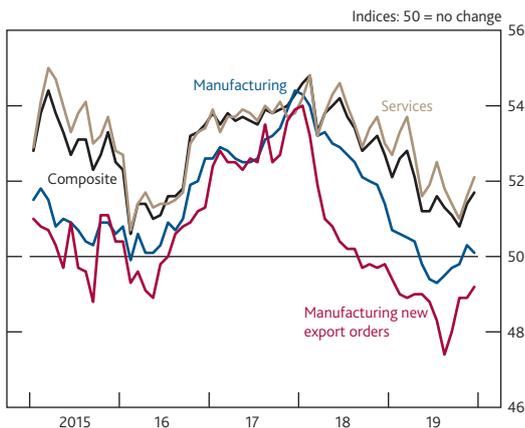
Elevated uncertainties about domestic economic policies have also weighed on UK growth.

Uncertainties about the economic outlook, including those related to Brexit, were elevated during 2019. Those uncertainties had an especially large effect on business investment, leading firms to delay spending until they had more clarity about the future trading environment. Business investment growth has been weak since the referendum, and much lower in the UK than in other advanced economies on average over that period (Section 2). Consumer spending has been more resilient to uncertainty. Consumption growth has slowed over the past year, however, and uncertainty may have contributed to weaker housing market activity and discretionary spending on durables.

Uncertainty has declined since November, although it remains elevated by historical standards. For example, the implied volatility from sterling exchange rate options, a key indicator of uncertainty, decreased markedly following the general election in December. In addition, the proportion of firms citing Brexit as one of their top three sources of uncertainty fell to below 45% in the Bank’s DMP Survey in January from 55% in November. Investment intentions had risen sharply according to respondents to the recent manufacturing CBI and *Deloitte CFO Surveys*, while DMP data pointed to a modest pickup in expected investment growth over the coming year. However, intelligence from the Bank’s Agents suggests that few companies have materially increased their planned investment spending (see Box 2). It is difficult to gauge at this early stage the extent to which companies’ spending intentions have increased as a result of the decline in uncertainty.

Some survey indicators of output have increased recently, which could in part reflect a reduction in uncertainty, as well as potentially signalling a pickup in growth in the near term. The relationship between survey responses and actual GDP growth has tended to be weaker during periods of heightened uncertainty (see Box 3 in the *February 2019 Report*), with surveys underpredicting growth. While a range of output surveys deteriorated in 2019 Q4, the few surveys which have been taken since the general election have generally picked up. For example, both the output and expectations balances in the flash PMIs picked up significantly in January. The steer from the January CIPS output data alone would be consistent with GDP growth of 0.2% in 2020 Q1 and expectations data would suggest that growth could be stronger still (Chart 1.2). Bank staff expect GDP to grow by 0.2% in 2020 Q1.

Chart 1.1 Global PMIs suggest growth is stabilising
Global purchasing managers’ indices^(a)

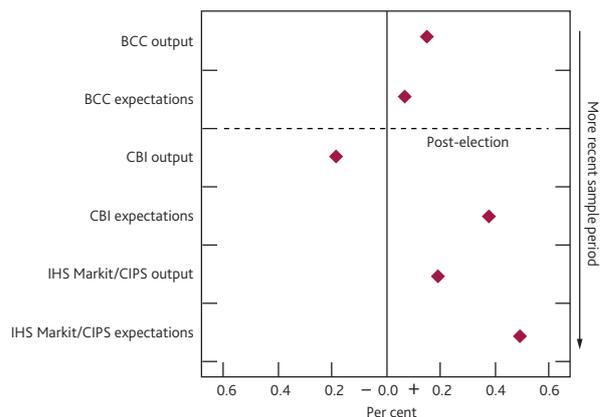


Sources: Eikon from Refinitiv, IHS Markit and JPMorgan.

(a) Measures of current monthly composite (services and manufacturing) output, manufacturing, services business activity and manufacturing new export orders growth based on the results of surveys in 44 countries. Together these countries account for an estimated 89% of global GDP. Latest data are for December 2019.

Chart 1.2 Most recent surveys of output and expectations point to a pickup in GDP growth in 2020 Q1

Model-based forecasts for quarterly GDP growth in 2020 Q1, based on the latest survey data^(a)



Sources: BCC, CBI, IHS Markit/CIPS, ONS and Bank calculations.

(a) Forecasts for GDP growth based on survey indicators of output and expectations. Forecasts use latest values for each survey, assuming those values persist. Q4 surveys for BCC. January surveys for IHS Markit/CIPS. January surveys for CBI used with the prior consent of the CBI.

Wage growth has slowed a little, although labour cost growth has remained robust.

After picking up notably over the past few years, pay growth has fallen back a little in recent months. Private sector regular pay growth was 3.4% in the three months to November, down from a peak of 4.0% earlier in the year. This mainly appears to reflect the effects of some temporary factors unwinding (Section 3). While labour demand might have softened a little, the labour market remains tight, with employment growth robust and the unemployment rate at its lowest for over 40 years. Moreover, productivity growth has fallen over 2019, such that unit labour cost growth has remained robust and above its pre-crisis average rate.

However, CPI inflation has been somewhat subdued.

Consumer price inflation has been subdued, falling below the MPC's 2% target over 2019. It was 1.4% in 2019 Q4. Although recent moves have largely been due to energy prices, core inflation has also slowed and core services inflation has recently been below the rate estimated to be consistent with inflation at target. The latest data conform to the experience of the past couple of years, in which prices have tended to rise more slowly than unit labour costs.

The MPC judged in its annual assessment of supply that the economy has a margin of spare capacity.

Subdued domestic price pressures are consistent with the economy having a margin of spare capacity. As part of its annual assessment of supply, the MPC judged that there had been a slightly greater degree of slack over the past few years than it had previously thought (Section 4). There is estimated to be around ½% of potential GDP of spare capacity in the economy currently (Table 1.A). That spare capacity lies within companies, with little slack apparent in the labour market.

UK potential supply growth is judged to have weakened, owing in part to the impact of Brexit-related preparations and uncertainty.

While the economy is estimated to have a margin of spare capacity at present, it has not widened as much as the weakening in GDP growth alone would suggest, because potential supply growth is also judged to have slowed. The slowing over the past couple of years partly reflects the influence of Brexit. Brexit-related uncertainty has weighed on investment and hence the amount of capital that companies have to produce output. In addition, while businesses have been preparing for Brexit to help ensure a smooth transition, that planning is likely to have diverted time and effort away from other activities, which may also have weighed on productivity growth (Section 4).

Table 1.A Forecast summary^{(a)(b)}

	Projections			
	2020 Q1	2021 Q1	2022 Q1	2023 Q1
GDP ^(c)	0.4 (0.7)	1.4 (1.7)	1.6 (1.9)	2.0
CPI inflation ^(d)	1.8 (1.7)	1.5 (1.7)	2.0 (2.1)	2.1
LFS unemployment rate	3.8 (4.0)	3.9 (3.9)	3.7 (3.7)	3.5
Excess supply/Excess demand ^(e)	-½ (-¾)	0 (+¼)	+½ (+¾)	+¾
Bank Rate ^(f)	0.6 (0.6)	0.5 (0.5)	0.5 (0.5)	0.6

(a) Modal projections for GDP, CPI inflation, LFS unemployment and excess supply/excess demand. Figures in parentheses show the corresponding projections in the November 2019 *Monetary Policy Report*. Projections were only available to 2022 Q4 in November.

(b) Unless otherwise stated, the projections shown in this section are conditioned on: Bank Rate following a path implied by market yields; the Term Funding Scheme; the Recommendations of the Financial Policy Committee and the current regulatory plans of the Prudential Regulation Authority; the Government's tax and spending plans as set out in the Spring Statement 2019, updated for the announcements made in *Spending Round 2019*; commodity prices following market paths for two quarters, then held flat; the sterling exchange rate remaining broadly flat; and the prevailing prices of a broad range of assets, which embody market expectations of the future stocks of purchased gilts and corporate bonds. The main assumptions are set out in the 'Download the chart slides and data' link at www.bankofengland.co.uk/monetary-policy-report/2020/january-2020.

(c) Four-quarter growth in real GDP. The growth rates reported in the table exclude the backcast for GDP. Including the backcast 2020 Q1 growth is 0.4%, 2021 Q1 growth is 1.4%, 2022 Q1 growth is 1.6% and 2023 Q1 growth is 2.0%. This compares to 0.7% in 2020 Q1, 1.7% in 2021 Q1 and 1.9% in 2022 Q1 in the November 2019 *Monetary Policy Report*.

(d) Four-quarter inflation rate.

(e) Per cent of potential GDP. A negative figure implies output is below potential and a positive figure that it is above.

(f) Per cent. The path for Bank Rate implied by forward market interest rates. The curves are based on overnight index swap rates.

1.2 The MPC's projections

The MPC's projections are conditioned on the assumption that there is an immediate but orderly move to a deep free trade agreement with the EU on 1 January 2021.

Reflecting government policy, the MPC's projections are conditioned on the UK moving to a deep free trade agreement (FTA) with the EU. The assumptions underpinning the nature of that FTA and its impact on the economy are set out in Box 1 of the *November Monetary Policy Report*.

On 23 January 2020, the European Union (Withdrawal Agreement) Act 2020 became law. This Act sets out that the Implementation Period ahead of new trading arrangements with the EU taking effect must end on 31 December 2020. Previously, the Government could seek to agree an extension to that period of up to two years. As a result, there was uncertainty about exactly when the UK's new relationship with the EU would come into effect, and the MPC's projections smoothed the impact of it coming into force.

In line with the new Act, the MPC's forecasts now assume that there is an immediate but orderly move to the new trading arrangements on 1 January 2021. As a result, some restrictions on UK-EU trade, particularly customs checks, are assumed to come into place at that point. Those weigh on trade flows to a greater extent over 2021 than was previously expected. Some barriers to trade, such as regulatory divergence, would still emerge only gradually over time. These effects will weigh on productivity growth. Greater trade frictions also add to firms' costs, which puts a little upwards pressure on inflation.

Uncertainty has declined recently, although it remains elevated.

Indicators of uncertainty have declined since the November *Report*, broadly as the MPC had expected. Uncertainty remains elevated by historical standards, though. Intelligence from the Bank's Agents suggests that uncertainty about the near-term outlook has receded. However, uncertainty about the medium term remains heightened. In particular, companies remain unsure about the exact nature of the UK's future relationship with the EU. The MPC's projections still assume that uncertainty fades gradually over the forecast period, as more details about the new trading relationship emerge and companies assess how those affect their business.

Political developments have led to an appreciation of sterling.

Over the past few years, UK asset prices — in particular the sterling exchange rate — have been sensitive to political and Brexit developments. Since the November *Report*, sterling has appreciated by around 1½%. Market contacts suggest that is likely to reflect the reduction in uncertainty about the range of potential outcomes for the Brexit process, especially in the near term. Lower uncertainty over other areas of future government policy may also have played a part. Prices of risky assets have risen too. Over the forecast period, the MPC's projections are conditioned on sterling remaining broadly flat and the prevailing level of asset prices.

Forward interest rates suggest that monetary policy will remain accommodative.

The MPC's projections are also conditioned on the market path for interest rates, which in the run-up to the *Report* averaged close to 0.5% over the forecast period. That accommodative path for monetary policy supports demand.

Announced fiscal policies also provide stimulus to demand.

Demand is also supported by the Government's announced tax and spending measures. *Spending Round 2019* increased planned spending, which was expected to raise GDP by around 0.4% over the forecast period. The Government has announced that *Budget 2020* will take place on 11 March.

Global GDP growth

There are signs that global GDP growth has stabilised and it is expected to pick up over the forecast period, supported by policy stimulus.

There are signs in the recent data that global growth has stabilised, albeit at rates a little below potential. Relatively weak growth in the euro area and some EMEs is judged likely to persist in the near term. But world growth is projected to pick up towards potential rates over 2020. That is partly accounted for by a recovery in growth in some EMEs which have been hit by idiosyncratic shocks. The recovery is supported by policy measures, including significant monetary policy easing over 2019 by many central banks. And while trade protectionism continues to weigh on global activity over the forecast period, its effect on growth gradually wanes.

In the central forecast, PPP-weighted world growth picks up from 2¾% in 2019 to 3¼% in 2020, and 3½% in 2021 and 2022. Weighted by UK export shares, world GDP growth is expected to pick up from 1¾% in 2019 to 2% in 2020, and 2¼% in 2021 and 2022 (**Table 1.B**).

UK GDP growth

In its annual supply stocktake, the MPC judged that UK potential supply growth is likely to remain subdued over the forecast period.

Productivity growth is estimated to have averaged around ½% per year since the financial crisis, relative to around 2¼% beforehand. That has meant that potential supply growth has been very subdued. The MPC judges that productivity growth will pick up a little from current rates over the forecast period. However, it is assumed to remain subdued, given how persistently weak it has been over the past decade.

The evolution of productivity growth is affected by Brexit.

Brexit-related factors are judged to have weighed on productivity growth over the past few years. Over the forecast period, the fall in Brexit-related uncertainty is projected to reduce the drag on investment and therefore productivity growth somewhat. Moreover, the amount of time and effort that companies spend on Brexit planning is no longer expected to act as a drag on growth. However, the rise in trade barriers as the UK leaves the EU is projected to weigh on productivity growth.

Potential supply growth remains subdued over the forecast period (Section 4). Labour supply growth is modest. Productivity growth is weak in the first part of the forecast period. Further out, it picks up somewhat as some of the effects of Brexit-related factors fade. Taken together, potential supply growth averages 1% per year over the forecast period (Table 1.B).

Weak potential supply growth constrains GDP growth.

Weak potential supply growth reduces the pace of GDP growth that is consistent with the MPC meeting its 2% inflation target — it acts as a 'speed limit' on the economy. It is assumed to lead to lower demand growth over the forecast period. In part, that is because weak productivity growth reduces the returns that companies will gain by investing. That causes some projects to become unprofitable. Weaker productivity growth also reduces the extent to which companies can increase output and therefore pay. That dampens growth in household incomes and hence spending.

UK demand growth remains subdued in the near term but is projected to pick up gradually as global growth recovers and as the decline in uncertainty boosts spending.

UK demand growth is expected to pick up a little in the near term, but to remain subdued. Thereafter, it increases gradually, driven by the modest recovery in global growth and the waning effects of uncertainty. Those factors drive a recovery in annual business investment growth, which is projected to pick up from close to zero in 2019 to around 3½% by 2022 (Table 1.C). Annual household consumption growth picks up from 1¼% in 2019 to 1¾% in 2021 and 2% in 2022. Those rates of consumption growth are relatively muted compared with history. That partly reflects the dampening effect of weak productivity growth on real income growth. In addition, consumption grows a little more slowly than real labour income over the forecast period. That is similar to developments over the past year, which could suggest that households have been cautious about spending in the face of Brexit-related uncertainty.

Government spending continues to boost growth. In contrast, net trade weighs on growth over much of the forecast period. The move to new trading arrangements between the UK and EU weighs on both imports and exports growth.

In the central forecast, four-quarter UK GDP growth picks up from 0.4% in 2020 Q1 to 1.4% in 2021 Q1, 1.6% in 2022 Q1, and 2.0% in 2023 Q1 (Chart 1.3).

Excess supply/demand

Spare capacity is projected to remain in the first part of the forecast period, but as demand growth recovers, slack is eroded and excess demand builds.

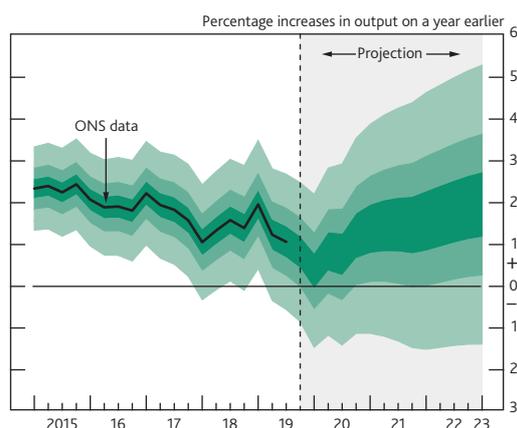
Demand growth begins to exceed potential supply growth in mid-2020. Spare capacity persists over 2020 but is eroded gradually. Thereafter, excess demand emerges and builds to around ¾% of potential GDP by the end of the forecast period (Table 1.A). The unemployment rate is projected to be broadly stable in the near term, and then falls to 3.5% by the end of the forecast period, a little further below its equilibrium rate (Chart 1.4). Spare capacity within firms is eroded.

Table 1.B Potential supply growth has slowed and is expected to remain subduedDecomposition of estimated potential supply growth^(a)

	Quarterly averages			
	1998–2007	2010–18	2019	2020–23 Q1
Annual potential supply growth (per cent)	2.9	1.6	1.1	1.1
of which, potential labour supply growth	0.7	1.1	0.7	0.5
of which, population	0.7	0.7	0.5	0.6
of which, participation	0.1	0.1	0.1	0.0
of which, unemployment ^(b)	0.2	0.2	0.1	0.0
of which, average hours	-0.3	0.2	-0.1	-0.1
of which, potential productivity growth ^(c)	2.2	0.4	0.4	0.5
of which, capital deepening ^(d)	0.7	0.0	0.3	0.4
of which, total factor productivity ^(e)	1.6	0.5	0.0	0.1

Sources: ONS and Bank calculations.

- (a) Average percentage point contributions to annual growth unless otherwise specified. Contributions may not sum to the total due to rounding.
- (b) Positive numbers indicate that a fall in the equilibrium unemployment rate has increased potential labour supply.
- (c) Based on a growth-accounting framework using a constant returns to scale Cobb-Douglas production function, with total output to capital elasticity of $\frac{1}{3}$.
- (d) Capital deepening refers to growth in capital services per person-hour.
- (e) Total factor productivity growth refers to improvements in the efficiency with which both capital and labour are used to produce output. Calculated as a residual.

Chart 1.3 GDP projection based on market interest rate expectations, other policy measures as announced

The fan chart depicts the probability of various outcomes for GDP growth. It has been conditioned on the assumptions in Table 1.A footnote (b). To the left of the vertical dashed line, the distribution reflects uncertainty around revisions to the data over the past. To aid comparability with the official data, it does not include the backcast for expected revisions, which is available from the 'Download the chart slides and data' link at www.bankofengland.co.uk/monetary-policy-report/2020/january-2020. To the right of the vertical line, the distribution reflects uncertainty over the evolution of GDP growth in the future. If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that the mature estimate of GDP growth would lie within the darkest central band on only 30 of those occasions. The fan chart is constructed so that outturns are also expected to lie within each pair of the lighter green areas on 30 occasions. In any particular quarter of the forecast period, GDP growth is therefore expected to lie somewhere within the fan on 90 out of 100 occasions. And on the remaining 10 out of 100 occasions GDP growth can fall anywhere outside the green area of the fan chart. Over the forecast period, this has been depicted by the light grey background. See the box on page 39 of the November 2007 *Inflation Report* for a fuller description of the fan chart and what it represents.

CPI inflation

CPI inflation is projected to remain below 2% throughout 2020, partly reflecting the impact of lower utility bills, as well as the influence of slack.

Over the coming quarters, inflation will be affected by developments in a number of regulated prices. Changes to Ofgem's energy price cap introduce some volatility — with CPI inflation expected to pick up to 1.8% in 2020 Q1, before falling back to around 1¼% in the middle of the year. The expected reduction in water bills as a result of action by the regulator Ofwat is also expected to contribute to the fall in inflation in 2020 Q2. Inflation is expected to remain materially below 2% over the second half of 2020 as those factors, as well as spare capacity, continue to drag.

As the drag from lower utilities prices fades and domestic price pressures strengthen in response to the erosion of spare capacity, CPI inflation returns to the target.

CPI inflation begins to rise towards the 2% target in late 2020 as the temporary negative contributions from energy and utility prices start to unwind. Domestic price pressures also rise as spare capacity is used up and excess demand then emerges. Wage growth is projected to pick up over the second half of the forecast period, supported by low unemployment. While productivity growth increases as well, unit labour cost growth remains firm. Those cost pressures are passed through to CPI inflation. As a result, inflation is projected to be 2.0% in 2022 Q1 and 2.1% in 2023 Q1 (Chart 1.5).

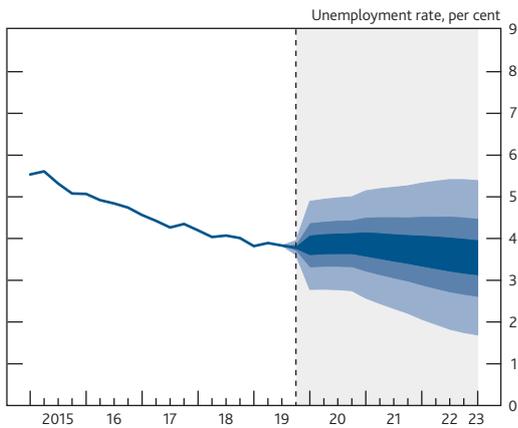
Relative to the November forecast, growth slowed more than expected in 2019 Q4 and there is judged to be more spare capacity in the economy at present.

Following its annual reassessment of the supply side of the economy, the MPC judged that the current degree of spare capacity is somewhat greater than it had previously thought. In part, that is because of weaker-than-expected GDP growth in 2019 Q4. In addition, subdued CPI inflation is judged to signal that the margin of spare capacity in the economy has been slightly greater over the past.

Over the forecast period, both supply and demand growth are projected to be weaker.

The MPC has also revised down its assessment of potential supply growth over the forecast period as part of its annual stocktake. In part, that reflects the weakness of productivity growth over the past year, which extends the pattern seen since the financial crisis. Productivity growth is also dampened by the effect of trade barriers with the EU coming into effect more immediately than in November.

Chart 1.4 Unemployment projection based on market interest rate expectations, other policy measures as announced



The fan chart depicts the probability of various outcomes for LFS unemployment. It has been conditioned on the assumptions in Table 1.A footnote (b). The coloured bands have the same interpretation as in Chart 1.3, and portray 90% of the probability distribution. The calibration of this fan chart takes account of the likely path dependency of the economy, where, for example, it is judged that shocks to unemployment in one quarter will continue to have some effect on unemployment in successive quarters. The fan begins in 2019 Q4, a quarter earlier than the fan for CPI inflation. That is because Q4 is a staff projection for the unemployment rate, based in part on data for October and November. The unemployment rate was 3.8% in the three months to November, and is projected to be 3.8% in Q4 as a whole. A significant proportion of this distribution lies below Bank staff's current estimate of the long-term equilibrium unemployment rate. There is therefore uncertainty about the precise calibration of this fan chart.

Chart 1.5 CPI inflation projection based on market interest rate expectations, other policy measures as announced

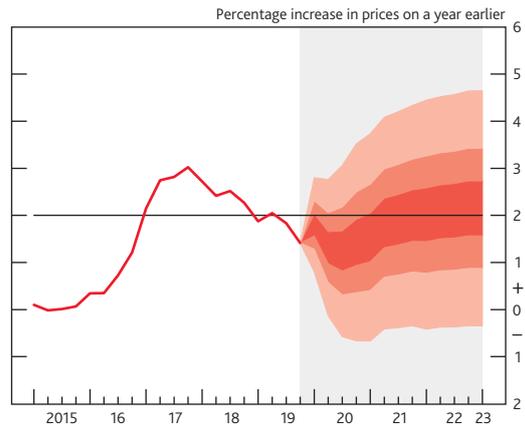


Chart 1.5 depicts the probability of various outcomes for CPI inflation in the future. It has been conditioned on the assumptions in Table 1.A footnote (b). If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that inflation in any particular quarter would lie within the darkest central band on only 30 of those occasions. The fan chart is constructed so that outturns of inflation are also expected to lie within each pair of the lighter red areas on 30 occasions. In any particular quarter of the forecast period, inflation is therefore expected to lie somewhere within the fans on 90 out of 100 occasions. And on the remaining 10 out of 100 occasions inflation can fall anywhere outside the red area of the fan chart. Over the forecast period, this has been depicted by the light grey background. See the box on pages 48–49 of the May 2002 *Inflation Report* for a fuller description of the fan chart and what it represents.

Weaker potential supply growth is assumed to lead to lower demand growth over the forecast period. In addition, demand growth is judged likely to recover a little more gradually in the second part of the forecast period, such that excess demand builds to a somewhat smaller degree. Taken together, GDP is projected to be $\frac{3}{4}\%$ lower over the forecast period than it was in November.

The MPC's projection for CPI inflation over the next three years is slightly lower than in November.

The somewhat greater extent and persistence of spare capacity, and the smaller margin of excess demand that builds over the forecast period relative to November, lowers the projection for CPI inflation slightly. The appreciation of sterling also weighs on inflation a little. Partially offsetting those effects is slightly greater upwards pressure from the more immediate introduction of trade barriers.

Policy decision

At its meeting ending on 29 January 2020, the MPC judged that the existing stance of monetary policy was appropriate. The MPC voted to maintain Bank Rate at 0.75%, to maintain the stock of sterling non-financial investment-grade corporate bond purchases, financed by the issuance of central bank reserves, at £10 billion and to maintain the stock of UK government bond purchases, financed by the issuance of central bank reserves, at £435 billion. The factors behind that decision are set out in the Monetary Policy Summary on page i of this *Report* and in more detail in the *Minutes of the meeting*.

Monetary policy will be set to ensure a sustainable return of inflation to the 2% target. Policy may need to reinforce the expected recovery in UK GDP growth should the more positive signals from recent indicators of global and domestic activity not be sustained or should indicators of domestic prices remain relatively weak. Further ahead, if the economy recovers broadly in line with the MPC's projections, some modest tightening of policy may be needed to maintain inflation sustainably at the target.

1.3 Key judgements and risks

Key Judgement 1: global GDP growth is projected to rise towards potential rates.

The projected pickup in world growth depends in part on growth recovering in EMEs...

The MPC's projections for global growth to rise are driven in part by a pickup in EME growth. In turn, that partly reflects the recovery of some economies from recent downturns. Growth in many EMEs is supported by looser financial conditions — partly reflecting easier domestic monetary policy as well as lower US interest rates, which have boosted some EME risky asset prices. Activity in advanced economies is also buoyed by supportive financial conditions and monetary policy stimulus gaining traction. Policy stimulus could boost growth by more than expected. There is a risk, however, that the interest rate required to boost demand and return inflation sustainably to target rates has declined somewhat, given headwinds to growth from heightened global uncertainty, for example. That could reduce the amount of stimulus that recent policy actions will provide.

...as well as the impact of protectionist trade policies fading.

The projected recovery in global growth also reflects a fading impact from trade protectionism — although it continues to dampen the level of activity overall. The extent to which trade protectionism dampens activity depends on both its direct effects through trade flows, supply chains and production costs, and its indirect effects on uncertainty, business sentiment and investment (see Section 3 of the [November Report](#)). Since November, there has been some positive trade policy news. In particular, the US and China have agreed the first phase of a trade deal which reduces some tariff rates relative to what was previously expected. That reduces the size of the assumed direct effects relative to November, though only marginally, so they continue to subtract around 0.3% from PPP-weighted GDP. The indirect effects are assumed to be unchanged, at around 0.7% of PPP-weighted GDP.

The projections assume that no further trade barriers are announced. If any are, they would weigh on global growth. However, the projections also assume that policy uncertainty remains high. If it declines, growth might recover more sharply. The increase in international risky asset prices over the past few months might suggest that there is somewhat more confidence about the outlook for trade policy. But concerns about other global risks — including the outbreak of a new strain of coronavirus — might have risen.

Taken together, the MPC judges that the risks around the global growth projection are broadly balanced.

Key Judgement 2: supply growth has been weak, partly owing to the impact of Brexit, and remains subdued over the forecast period.

The weakness of productivity growth since the financial crisis is assumed to persist to some extent.

Productivity growth is projected to be subdued relative to pre-crisis rates, although it picks up over the forecast period. The improvement in productivity growth partly reflects an assumed increase in the efficiency with which capital and labour are used to produce output — total factor productivity (TFP). It is possible that research and development expenditure — which has been found to be a key driver of innovation (Section 4) and has been relatively resilient in recent years — could support a stronger rise in TFP growth. However, productivity growth has consistently been lower than expected over the past decade or so, and may fail to pick up again.

The projection for productivity growth will be sensitive to the impact of Brexit-related factors...

Over the forecast period, companies are judged to be unlikely to increase further the time and effort they spend on Brexit planning per year, so that ceases to act as a drag on productivity growth. There are risks around that judgement, however. It is possible, for example, that companies consider it necessary to step up their Brexit planning, particularly around the time of significant changes in trading arrangements. That would drag on productivity growth. It is also possible, especially further out in the forecast, that firms are able to cut back the amount of resources they spend on Brexit planning. That could temporarily boost productivity growth relative to the MPC's projections.

...including the rise in trade barriers as the UK leaves the EU.

The outlook for productivity growth will also be significantly affected by the nature and impact of the UK's new trading relationship with the EU. Until the details of the FTA are finalised, there will be uncertainty about the exact barriers to trade that will arise. It is also difficult to estimate the effect of those barriers on trade flows. While the MPC

has modelled their impact based on past empirical relationships (see Box 1 in the *November Report*), there are very few historical examples of trading relationships becoming less aligned. The impact of increasing barriers to trade has been assumed to be symmetric to reducing them. However, the impact of increasing trade barriers might be smaller than estimates of removing them as the trading relationships between UK and EU companies are already well established. Alternatively, the impact of a large, advanced and open economy like the UK leaving the EU might be bigger than the average estimated impact across a wide range of countries.

The MPC judges that the risks around its projections for potential supply growth are broadly balanced.

Key Judgement 3: the assumed recovery in global growth and reduction in Brexit-related uncertainty boost UK spending, such that demand growth outstrips supply growth.

The strength of the pickup in GDP growth will depend importantly on how uncertainty evolves and on how households, businesses and financial markets respond.

Over the past few months, uncertainty appears to have fallen broadly as the MPC had anticipated. The forecasts are conditioned on the assumption that uncertainty will continue to decline gradually over the forecast period.

It is possible that elevated uncertainty persists for longer than anticipated if it takes time for more clarity about the exact nature of the UK's future relationship with the EU to emerge, or for companies to assess the implications for their business models. That would weigh on consumption and, particularly, investment growth. However, if companies re-start a large number of previously paused projects in response to the recent reduction in short-term uncertainty, investment could rebound more quickly. Similarly, household spending growth could pick up by more than projected if uncertainty has been a material constraint up to now. Some indicators of house prices have picked up sharply over the past few months, which might be consistent with a waning drag from uncertainty. The response of spending to news about the nature of the UK's withdrawal from the EU will also be affected by any associated changes in the sterling exchange rate and asset prices.

The MPC judges that the risks around its projections for demand growth are broadly balanced.

Key Judgement 4: while CPI inflation remains below 2% in the first part of the forecast period, it returns to the target as the drag from energy prices wanes and domestic price pressures build.

Developments in CPI inflation will be sensitive to the degree of spare capacity in the economy, which the MPC judges to currently be modest.

There is uncertainty about the current degree of spare capacity in the economy, with different indicators pointing in different directions. On the one hand, price-based measures of domestically generated inflation have been subdued, perhaps suggesting a material margin of excess supply. On the other hand, the unemployment rate has been below its estimated equilibrium and labour cost growth has been robust, which is more consistent with there being excess demand in the economy.

The outlook will also depend on how firm unit labour cost growth remains...

After remaining broadly stable in the near term, unemployment falls further over the forecast period, putting upward pressure on wage growth. As a result, unit labour cost growth is projected to remain firm, even as productivity growth picks up. There is a risk that the recent softening in wage growth indicates that underlying pay pressures are less strong than in the MPC's projections, which could also be consistent with a lower equilibrium unemployment rate. Alternatively, if pay growth is maintained without a pickup in productivity growth, unit labour cost growth could be stronger.

...and the extent to which those cost pressures eventually feed through to CPI inflation.

Firm labour cost growth is assumed to push up inflation over the forecast period, consistent with the recent squeeze in consumer-facing companies' profit margins coming to an end. There is a risk that consumer-facing companies continue to absorb some of the higher labour cost pressures in their profit margins so domestic price pressures remain subdued. Or that other costs fall and offset the impact of higher labour costs on margins. Alternatively, margins could be rebuilt to a greater extent as excess demand emerges.

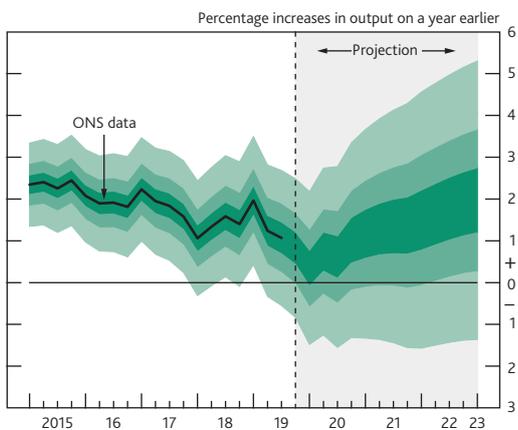
The risks around the MPC’s projection for inflation are judged to be broadly balanced.

In addition to the risks arising from demand, supply and pricing conditions, the outlook for CPI inflation will also be affected by movements in sterling, which is likely to remain sensitive to Brexit developments.

1.4 Constant rate projections

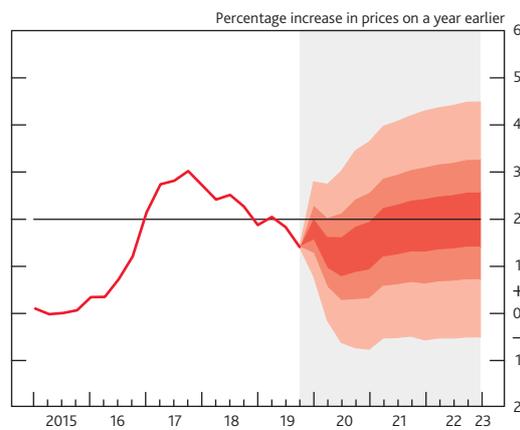
In the MPC’s projections conditioned on the alternative assumption of constant interest rates at 0.75%,⁽¹⁾ GDP growth is slightly weaker (Chart 1.6). It still recovers to outstrip the subdued rate of potential supply growth, however, such that excess demand builds from the end of 2021. CPI inflation rises from the end of this year, and reaches 2.0% at the end of 2022 (Chart 1.7).

Chart 1.6 GDP projection based on constant nominal interest rates at 0.75%, other policy measures as announced



See footnote to Chart 1.3.

Chart 1.7 CPI inflation projection based on constant nominal interest rates at 0.75%, other policy measures as announced



See footnote to Chart 1.5.

(1) The assumption is that Bank Rate remains at 0.75% throughout the three years of the forecast period, before moving towards the market path over the subsequent three years.

Table 1.C Indicative projections consistent with the MPC's forecast^{(a)(b)}

	Averages		Projections			
	1998–2007	2010–18	2019	2020	2021	2022
World GDP (UK-weighted) ^(c)	3	2½	1¾ (1¾)	2 (1¾)	2¼ (2¼)	2¼ (2¼)
World GDP (PPP-weighted) ^(d)	4	3¾	2¾ (3)	3¼ (3)	3½ (3½)	3½ (3½)
Euro-area GDP ^(e)	2¼	1½	1¼ (1¼)	1 (¾)	1½ (1½)	1¾ (1¾)
US GDP ^(f)	3	2¼	2¼ (2¼)	2¼ (2)	2¼ (2)	2 (1¾)
Emerging market GDP (PPP-weighted) ^(g)	5¾	5	3¾ (3¾)	4¼ (4¼)	4½ (4½)	4½ (4½)
of which, China GDP ^(h)	10	7¾	6 (6)	5¾ (5¾)	5¾ (5¾)	5¾ (5½)
UK GDP⁽ⁱ⁾	3	2	1¼ (1¼)	¾ (1¼)	1½ (1¾)	1¾ (2)
Household consumption ^(j)	3¼	2	1¼ (1¼)	1¼ (1½)	1¾ (1¾)	2 (2)
Business investment ^(k)	3	3¾	0 (-1½)	1¼ (¾)	3¼ (4)	3½ (4½)
Housing investment ^(l)	3¼	2¾	¾ (1)	2¼ (1¾)	3¼ (3¼)	3 (3¼)
Exports ^(m)	4¼	3¼	2 (0)	-¼ (1)	-3 (-1)	0 (-1)
Imports ⁽ⁿ⁾	5¾	3¾	3¼ (3¼)	-1¼ (-½)	-1 (½)	1¼ (-½)
Contribution of net trade to GDP ^(o)	-¼	-¼	-¼ (-1)	½ (½)	-½ (-½)	-½ (-¾)
Real post-tax labour income ^(p)	3¼	1½	1¼ (1¾)	1¼ (1¼)	2 (2¼)	2 (2¼)
Household saving ratio ^(q)	8¼	8¾	5¾ (6½)	5¾ (6)	6¼ (6½)	6¼ (6½)
Credit spreads ^(r)	¾	2½	1½ (1½)	1¾ (1¾)	1¾ (1¾)	1¾ (1¾)
Excess demand/Excess supply^(s)	0	-1¾	-¼ (-¼)	-½ (-¼)	+¼ (+½)	+½ (+1)
Hourly labour productivity ^(t)	2¼	½	-¼ (0)	0 (¾)	¾ (¾)	1¼ (1)
Employment ^(u)	1	1¼	1 (½)	½ (¾)	¾ (¾)	¾ (¾)
Average weekly hours worked ^(v)	32¼	32	32 (32)	32¼ (32¼)	32¼ (32¼)	32 (32¼)
Unemployment rate ^(w)	5¼	6¼	3¾ (4)	4 (4)	3¾ (3¾)	3½ (3½)
Participation rate ^(x)	63	63½	64 (63¾)	64 (64)	64 (64)	64 (64)
CPI inflation^(y)	1½	2¼	1½ (1½)	1½ (1½)	2 (2)	2¼ (2¼)
UK import prices ^(z)	0	1½	¼ (-¼)	-¼ (½)	¼ (¼)	¼ (¼)
Energy prices — direct contribution to CPI inflation ^(aa)	¼	¼	0 (-¼)	-¼ (0)	0 (0)	0 (0)
Average weekly earnings ^(ab)	4¼	2	3 (3½)	3¼ (3¼)	3½ (3¾)	3¾ (3¾)
Unit labour costs ^(ac)	3	1¼	3 (3)	2½ (2½)	2¾ (2¾)	2½ (2¾)
Private sector regular pay based unit wage costs ^(ad)	1¾	1½	3¾ (3½)	3¼ (2¾)	3 (2¾)	2½ (2¾)

Sources: Bank of England, Bloomberg Finance L.P., Department for Business, Energy and Industrial Strategy, Eurostat, IMF *World Economic Outlook (WEO)*, National Bureau of Statistics of China, ONS, US Bureau of Economic Analysis and Bank calculations.

- (a) The profiles in this table should be viewed as broadly consistent with the MPC's projections for GDP growth, CPI inflation and unemployment (as presented in the fan charts).
(b) Figures show annual average growth rates unless otherwise stated. Figures in parentheses show the corresponding projection in the November 2019 *Monetary Policy Report*. Calculations for back data based on ONS data are shown using ONS series identifiers.
(c) Chained-volume measure. Constructed using real GDP growth rates of 188 countries weighted according to their shares in UK exports.
(d) Chained-volume measure. Constructed using real GDP growth rates of 189 countries weighted according to their shares in world GDP using the IMF's purchasing power parity (PPP) weights.
(e) Chained-volume measure.
(f) Chained-volume measure.
(g) Chained-volume measure. Constructed using real GDP growth rates of 155 EME countries, as defined by the IMF *WEO*, weighted according to their relative shares in world GDP using the IMF's PPP weights.
(h) Chained-volume measure.
(i) Excludes the backcast for GDP.
(j) Chained-volume measure. Includes non-profit institutions serving households. Based on ABJR+HAYO.
(k) Chained-volume measure. Based on GAN8.
(l) Chained-volume measure. Whole-economy measure. Includes new dwellings, improvements and spending on services associated with the sale and purchase of property. Based on DFEGL+L635+L637.
(m) Chained-volume measure. The historical data exclude the impact of missing trader intra-community (MTIC) fraud. Since 1998 based on IKBK-OFNN/(BOKH/BQKO). Prior to 1998 based on IKBK.
(n) Chained-volume measure. The historical data exclude the impact of MTIC fraud. Since 1998 based on IKBL-OFNN/(BOKH/BQKO). Prior to 1998 based on IKBL.
(o) Chained-volume measure. Exports less imports. GDP data based on the mode of the MPC's GDP backcast.
(p) Wages and salaries plus mixed income and general government benefits less income taxes and employees' National Insurance contributions, deflated by the consumer expenditure deflator. Based on [ROY]+ROYH-(RPHS+AIIV-CUCT)+GZVX]/[(ABJQ+HAYE)/(ABJR+HAYO)].
(q) Annual average. Percentage of total available household resources. Based on NRJS.
(r) Level in Q4. Percentage point spread over reference rates. Based on a weighted average of household and corporate loan and deposit spreads over appropriate risk-free rates. Indexed to equal zero in 2007 Q3.
(s) Annual average. Per cent of potential GDP. A negative figure implies output is below potential and a positive figure that it is above.
(t) GDP per hour worked. GDP data based on the mode of the MPC's GDP backcast. Hours worked based on YBUS.
(u) Four-quarter growth in LFS employment in Q4. Based on MGRZ.
(v) Level in Q4. Average weekly hours worked, in main job and second job. Based on YBUS/MGRZ.
(w) LFS unemployment rate in Q4. Based on MGSX.
(x) Level in Q4. Percentage of the 16+ population. Based on MGWG.
(y) Four-quarter inflation rate in Q4.
(z) Four-quarter inflation rate in Q4 excluding fuel and the impact of MTIC fraud.
(aa) Contribution of fuels and lubricants and gas and electricity prices to four-quarter CPI inflation in Q4.
(ab) Four-quarter growth in whole-economy total pay in Q4. Growth rate since 2001 based on KAB9. Prior to 2001, growth rates are based on historical estimates of AWE, with ONS series identifier M09M.
(ac) Four-quarter growth in unit labour costs in Q4. Whole-economy total labour costs divided by GDP at constant prices, based on the mode of the MPC's GDP backcast. Total labour costs comprise compensation of employees and the labour share multiplied by mixed income.
(ad) Four-quarter growth in private sector regular pay based unit wage costs in Q4. Private sector wage costs divided by private sector output at constant prices, based on the mode of the MPC's GDP backcast. Private sector wage costs are average weekly earnings (excluding bonuses) multiplied by private sector employment.

Box 1

Monetary policy since the November *Report*

At its meeting ending on 18 December 2019, the MPC judged that the existing stance of monetary policy was appropriate.

Since the MPC's November meeting, economic data had been broadly in line with the November *Report*. Global growth had shown tentative signs of stabilising and global financial conditions remained supportive. The partial de-escalation of the US-China trade war provided some additional support to the outlook relative to the November *Report*, although trade tensions remained elevated.

UK GDP had increased by 0.3% in 2019 Q3 and was expected to rise only marginally in Q4. Household consumption had continued to grow steadily, but business investment and export orders had remained weak.

Financial markets had remained sensitive to domestic policy developments. Since the November *Report*, the sterling exchange rate had appreciated by 2% and UK-focused equities had outperformed their international counterparts. The expected path for Bank Rate in three years' time was around 10 basis points higher than the 15-day average on which the November *Report* projections had been conditioned. These movements probably reflected a perceived reduction in tail risks around the Brexit process as well as an updated judgement among market participants about the likely central outcome. Sterling implied volatilities had fallen back materially, including relative to implied volatilities in other currencies. There was no evidence yet about the extent to which policy uncertainties among companies and households had declined.

There continued to be some signs that the labour market was loosening, although it remained tight. Employment growth had slowed and vacancies had fallen, but the unemployment rate had remained stable and the employment rate was around its record high. Despite the stability of the unemployment rate, a small margin of excess supply had nevertheless appeared to open up in the wider economy. That slack was judged to lie mainly within companies, consistent with weakness in some survey measures of capacity utilisation and reflecting the assumption that there had been little deterioration in potential productivity growth relative to recent years.

Although pay growth had eased somewhat, this appeared to have reflected primarily the unwind of a previous temporary boost. Regular annual AWE growth was around 3½% compared with around 4% during the middle of the year. Unit labour costs had nevertheless continued to grow at rates above those consistent with meeting the inflation target in the medium term.

Headline and core CPI inflation had both been unchanged in November, at 1.5% and 1.7% respectively, broadly as expected in the November *Report*. The headline rate was still expected to fall to around 1¼% by the spring, owing to the temporary effects of falls in regulated energy and water prices. Excluding rents, core services CPI inflation had remained at rates consistent with meeting the inflation target in the medium term, although that measure had fallen back in November. The Committee judged that inflation expectations remained well anchored.

The MPC noted that if global growth failed to stabilise or if Brexit uncertainties remained entrenched, monetary policy may need to reinforce the expected recovery in UK GDP growth and inflation. Further ahead, provided these risks do not materialise and the economy recovers broadly in line with the MPC's latest projections, some modest tightening of policy, at a gradual pace and to a limited extent, may be needed to maintain inflation sustainably at the target.

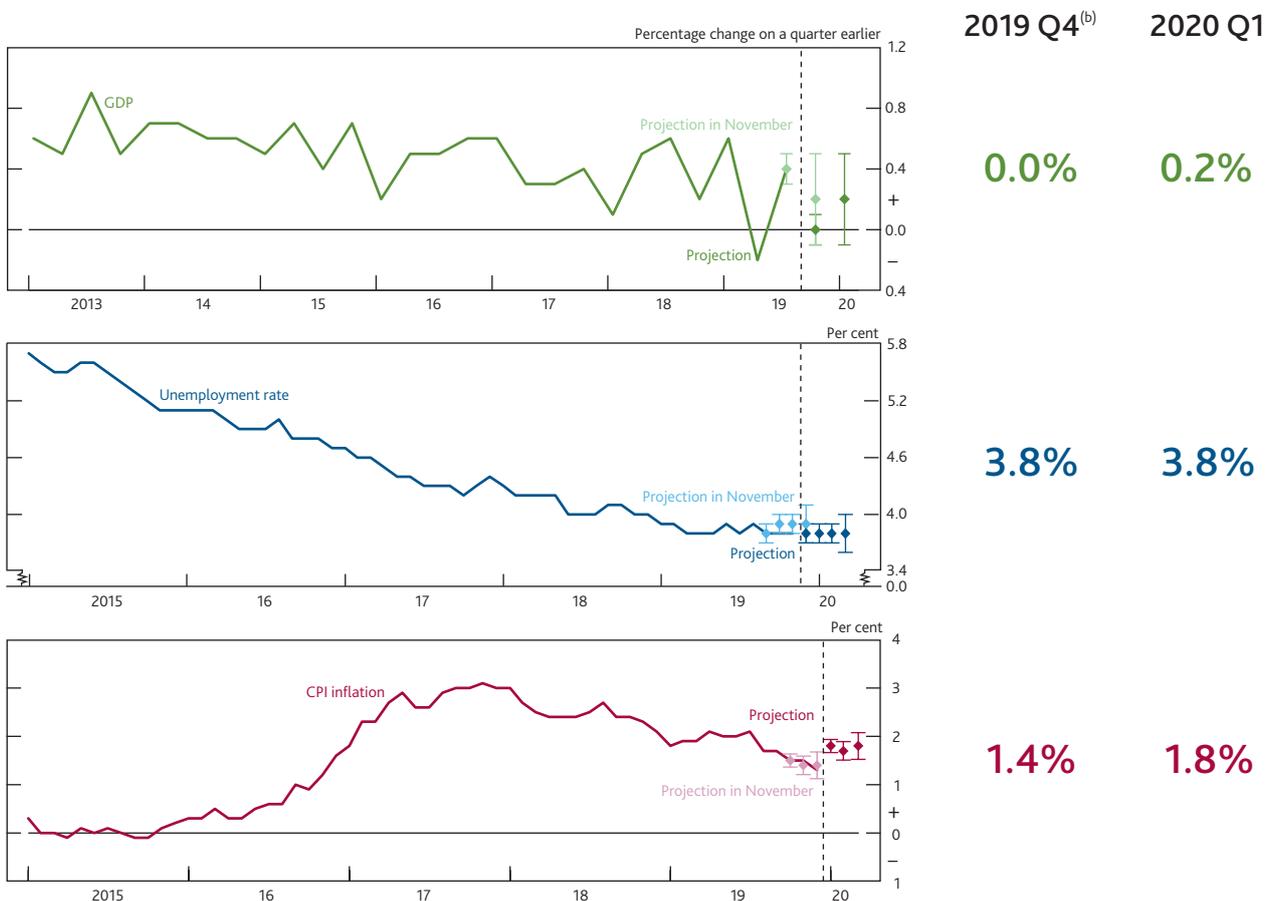
2 Current economic conditions

Following a significant slowdown over the past two years, there are signs that global growth has stabilised, supported by an easing in trade tensions. This has contributed to a rise in global asset prices. The reduction in uncertainty following the general election has also boosted asset prices in the UK.

UK GDP growth slowed materially in 2019 compared to previous years and the MPC judges that there is a margin of spare capacity in the economy. Brexit-related uncertainty, which has weighed on growth, has fallen somewhat since November but remains elevated. In the near term, growth is expected to pick up a little from Q4, but to remain subdued.

CPI inflation has fallen below target in recent months, largely as a result of declining energy prices. In the near term, movements in inflation are expected to be driven by changes in regulated prices. Labour cost growth has been firm, but some of the resulting price pressure appears to have been absorbed in firms' margins. Inflation expectations remain well anchored.

Chart 2.1 UK GDP growth is expected to remain subdued; inflation is expected to pick up temporarily
Near-term projections^(a)



Sources: ONS and Bank calculations.

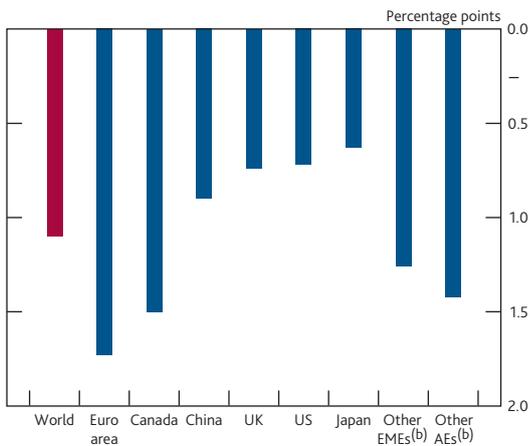
(a) The lighter diamonds show Bank staff's projections at the time of the November 2019 *Monetary Policy Report*. The darker diamonds show current Bank staff's projections. The bands on either side of the diamonds show the uncertainty around those projections based on one root mean squared error of projections since 2004.
(b) GDP and unemployment projections are based on official data to November. CPI inflation figure is an outturn.

2.1 Global developments and financial conditions

Global growth has slowed over the past two years.

Global output growth has slowed markedly since 2017. Four-quarter PPP-weighted global growth was 2.8% in the year to 2019 Q3, down from 3.9% in 2017 Q4. The slowdown in global growth has been broadly based across regions (**Chart 2.2**). It has been particularly apparent in the manufacturing sector — annual growth in industrial production was 0.3% in November, down from around 4% in 2017. This is likely to reflect in part the impact of increased trade protectionism. It also reflects the ongoing slowdown in China, which has also dragged on growth in countries that rely on Chinese demand.

Chart 2.2 The slowdown in global growth has been broadly based across regions
Change in four-quarter GDP growth rates between 2017 Q4 and 2019 Q3^(a)

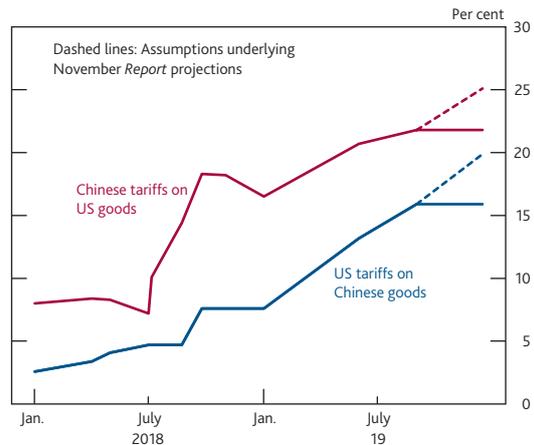


Sources: Eikon from Refinitiv, Eurostat, IMF *World Economic Outlook (WEO)*, Japanese Cabinet Office, National Bureau of Statistics of China, ONS, Statistics Canada, US Bureau of Economic Analysis and Bank calculations.

- (a) Chained-volume measures.
(b) Other EMEs and other advanced economies (AEs) include data for 154 and 11 countries, respectively, as defined by the IMF *WEO*. Both measures are weighted according to their shares in world GDP, using the IMF's purchasing power parity (PPP) weights.

Chart 2.3 US-China tariffs are lower than expected in the November Report

Weighted average tariff rates^(a)



Sources: Ministry of Commerce of the People's Republic of China, Office of the United States Trade Representative and Bank calculations.

- (a) Estimates of tariff rates are shown to December 2019.

Since November, trade tensions have eased...

Global trade tensions have eased somewhat since the November Report. In December, the US and China announced the preliminary details of the first phase of a trade deal, in which tariffs due to be implemented on 15 December 2019 would not go ahead and some existing tariffs would be reduced. This 'Phase One' deal was signed in January, with China also pledging to increase its imports of US goods. These actions have reduced effective bilateral tariff rates between the US and China by around 4–5 percentage points relative to what was assumed in November (**Chart 2.3**). As a result, the direct effects of tariffs on global output are estimated to be marginally less than outlined in Section 3 of the November Report, subtracting around 0.3% from PPP-weighted GDP. Uncertainty around future trade policy is likely to remain elevated, however. The US has suggested that new tariffs might be imposed on goods imported from other countries since November. The estimated size of the indirect effects of trade barriers through uncertainty and business confidence are unchanged relative to November, at around 0.7% of PPP-weighted GDP.

...and there are some signs that global growth has stabilised.

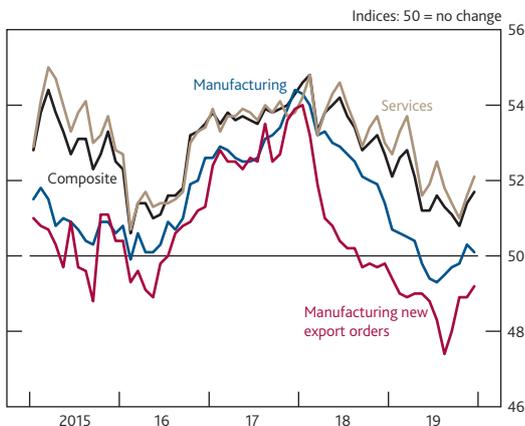
There has been some positive news in the official data since November. Quarterly growth in the euro area was a little stronger than expected in Q3. In the US, stronger-than-expected net trade and residential investment means that GDP is now expected to have increased by 2.4% in the four quarters to Q4, higher than previously projected. Quarterly growth in non-China emerging market economies (EMEs) was slightly stronger than expected in Q3, although downward revisions to previous estimates mean that four-quarter growth is a little weaker than projected in November. In China, four-quarter growth remained at 6.0% in 2019 Q4, in line with expectations in the November Report.

Other indicators of global growth have also shown signs of stabilisation. Three-month on three-month growth in world goods trade was -0.2% in November, similar to August. Growth in advanced-economy capital goods orders has recovered somewhat, although it remained marginally negative in November.

There has been a recovery in timely survey data, such as global purchasing managers' indices (PMIs), since the November *Report*. Having fallen previously, the global composite and services PMIs have risen a little while the manufacturing PMI has returned to expansionary territory (**Chart 2.4**). The manufacturing new export orders index remains below the 50 'no change' mark, but it has recovered slightly in recent months.

Taken together, quarterly growth in PPP-weighted GDP is expected to have picked up slightly in Q4. Four-quarter growth is also expected to have risen a little to 2.9% (**Chart 2.5**), broadly in line with the projection in November. It is expected to increase further in the near term to 3.2% in 2020 Q2, slightly stronger than expected in the November *Report* (**Table 2.D**).

Chart 2.4 Global PMIs suggest growth is stabilising
Global purchasing managers' indices^(a)



Sources: Eikon from Refinitiv, IHS Markit and JPMorgan.

(a) Measures of current monthly composite (services and manufacturing) output, manufacturing, services business activity and manufacturing new export orders growth based on the results of surveys in 44 countries. Together these countries account for an estimated 89% of global GDP. Latest data are for December 2019.

Chart 2.5 Global growth is expected to pick up slightly in 2019 Q4
Four-quarter PPP-weighted GDP growth^(a)



Sources: Eikon from Refinitiv, IMF WEO and Bank calculations.

(a) Constructed using real GDP growth rates of 189 countries according to their shares in world GDP using the IMF's PPP weights. Diamonds show Bank staff's projections for growth in 2019 Q4.

Global inflation remains muted...

In the majority of advanced economies, inflation has been 2% or below in recent years (**Chart 2.6**). Inflation has been particularly weak in the euro area where, despite a rise in unit labour cost growth since 2017, core inflation has averaged around 1% over 2019. Core inflation has picked up a little in recent months, however (**Table 2.A**). In the US, where unit labour cost growth has also been strong, core inflation was 1.6% in November.

Alongside subdued inflation, market-based measures of inflation expectations in the US and euro area fell over 2019. These have recovered somewhat in recent months, however (**Chart 2.28**).

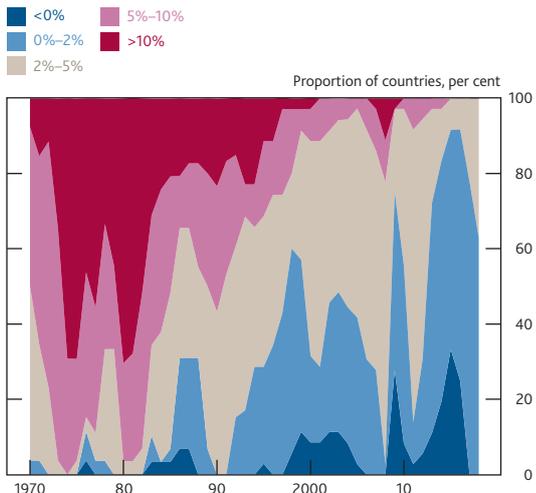
...and policy is expected to remain accommodative.

In 2019, monetary policy was eased by a number of central banks, including the US Federal Reserve and the European Central Bank (**Chart 2.7**), in response to a weakening outlook for growth. A number of central banks in emerging market economies also loosened policy.

Since the November *Report*, market-implied paths for interest rates in some advanced economies have increased marginally (**Chart 2.7**), but monetary policy is expected to remain accommodative. There has been some further policy loosening in China, with the People's Bank of China reducing the reserve requirement ratio for banks in January. These factors, combined with somewhat supportive fiscal policy in China and the euro area, are expected to continue to support growth (Section 1).

Chart 2.6 Inflation is subdued across advanced economies

Annual consumer price inflation across advanced economies^(a)



Sources: World Bank: World Development Indicators and Bank calculations.

(a) Consumer prices for 36 advanced economies. Data are available until 2018. Countries with inflation on the bounds of these ranges are placed within the lower range.

Table 2.A Inflation has been particularly weak in the euro area

Inflation in selected economies

Per cent	Monthly averages			2019					
	1998–2010– 2007	2018 17	2019 H1	July	Aug.	Sep.	Oct.	Nov.	Dec.
Annual headline consumer price inflation									
United Kingdom	1.6	2.3	2.0	2.1	1.7	1.7	1.5	1.5	1.3
Euro area	2.0	1.3	1.4	1.0	1.0	0.8	0.7	1.0	1.3
United States ^(a)	2.1	1.5	2.1	1.4	1.4	1.3	1.4	1.5	n.a.
Annual core consumer price inflation (excluding food and energy)^(b)									
United Kingdom	1.2	2.1	2.1	1.8	1.9	1.5	1.7	1.7	1.4
Euro area	1.6	1.1	1.0	0.9	0.9	1.0	1.1	1.3	1.3
United States ^(a)	1.8	1.6	1.9	1.6	1.6	1.8	1.7	1.6	n.a.

Sources: Eikon from Refinitiv, Eurostat, US Bureau of Economic Analysis and Bank calculations.

(a) Personal consumption expenditure price index inflation.

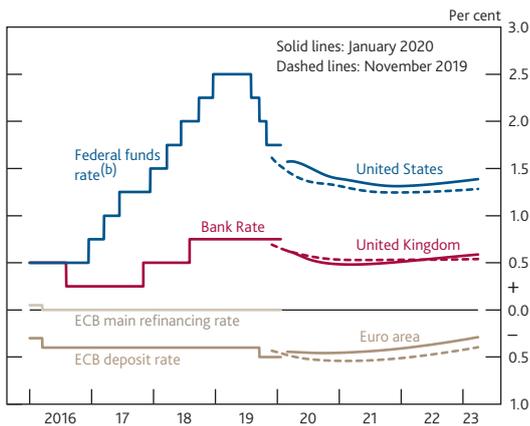
(b) For the euro area and the UK, excludes energy, food, alcoholic beverages and tobacco. For the US, excludes food and energy.

Global asset prices have responded positively to these developments.

Since the November Report, international risky asset prices have rallied. Global equity prices have risen (Chart 2.8), and high-yield corporate bond spreads have narrowed. The moves in risky asset prices have largely been driven by a fall in risk premia, reflecting a perceived reduction in the downside risks to growth. Expectations that monetary policy will remain accommodative may also have played a role. The rise in risky asset prices has occurred despite an apparent rise in geopolitical risks since November: the Federal Reserve’s geopolitical risk index has picked up. Since the MPC’s projections were finalised, global equity prices have fallen somewhat, as concerns over coronavirus have risen.⁽¹⁾

Chart 2.7 Monetary policy is expected to remain accommodative

International forward interest rates^(a)



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

(a) All data as of 22 January 2020. The January 2020 and November 2019 curves are estimated using instantaneous forward overnight index swap rates in the 15 working days to 22 January 2020 and 30 October 2019 respectively.
(b) Upper bound of the target range.

Chart 2.8 Global equity prices have strengthened as perceived downside risks to growth have declined

International equity prices^(a)



Sources: Eikon from Refinitiv, MSCI and Bank calculations.

(a) In local currency terms, except for MSCI Emerging Markets which is in US dollar terms.
(b) The MSCI Inc. disclaimer of liability, which applies to the data provided, is available from the 'Download the chart slides and data' link.

Sentiment in UK financial markets has been boosted further by political developments...

While UK asset prices have probably been influenced by these global factors, domestic political developments appear to have been the main driver of recent moves. Ahead of the general election on 12 December, market prices reflected uncertainty about the range of potential options for Brexit, as well as future government policy. The election result has

(1) All financial market data shown in charts within this section are to 22 January 2020.

reduced some of those uncertainties, especially in the near term. Implied volatilities from sterling options — which capture perceived uncertainty around the exchange rate — have fallen by more than 30% at the three-month horizon since the November Report (Chart 2.9), and are now much closer to other currency pairs.

Chart 2.9 Near-term sterling implied volatility has fallen considerably

Three-month implied volatilities^(a)



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

(a) Measures of volatility based on option contracts.

Chart 2.10 Sterling has appreciated by around 1½% since the November Report

Sterling ERI



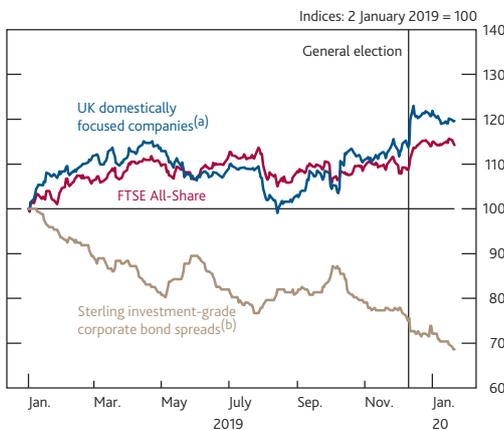
The fall in longer-term implied volatility has been less pronounced, however, and volatilities at all maturities remain higher relative to the US dollar-euro currency pair. This may reflect ongoing uncertainty about the nature of the eventual trading relationship between the UK and the EU.

...boosting asset prices and lowering bond spreads.

The decline in uncertainty has been reflected in asset prices and bond spreads. Sterling was volatile in the days immediately following the election, but was around 1½% higher in the run-up to the January Report compared to the November Report (Chart 2.10). UK equity prices have also strengthened — particularly for UK-focused companies whose equity prices have risen 8% on average — and borrowing spreads have fallen (Chart 2.11). For overall monetary and financial conditions, the rise in equity prices and the decline in borrowing spreads have broadly offset the tightening effect from sterling’s appreciation since the November Report (Chart 2.12).

Chart 2.11 Reduced uncertainty has supported equity prices and lowered bond spreads

UK equity prices and corporate bond spreads

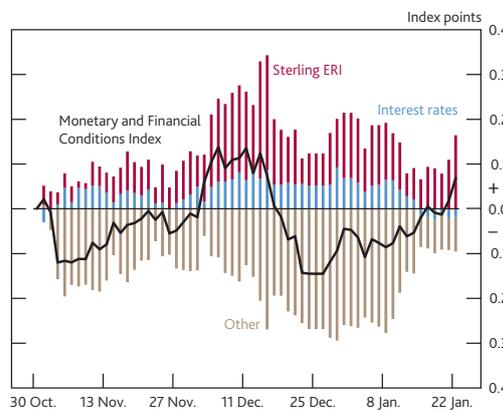


Sources: Bloomberg Finance L.P., Eikon from Refinitiv, ICE/BoAML Global Research and Bank calculations.

(a) UK domestically focused companies are defined as those generating at least 70% of their revenues in the United Kingdom.
 (b) Based on option-adjusted spreads between government bond yields and non-financial corporate bonds.

Chart 2.12 Overall monetary and financial conditions in the UK are broadly unchanged

Contributions to changes in the UK Monetary and Financial Conditions Index since the November 2019 Report^(a)



Sources: Bloomberg Finance L.P., Eikon from Refinitiv, ICE/BoAML Global Research and Bank calculations.

(a) The UK Monetary and Financial Conditions Index (MFCI) summarises information from the following series: short-term and long-term interest rates, the sterling ERI, corporate bond spreads, equity prices, and household and corporate bank lending spreads. The series weights are based on the marginal impact of each variable on the UK GDP forecast. The chart shows changes in the MFCI from the average level over the 15 working days to 30 October 2019. An increase in the MFCI signals tighter financial conditions and a decrease signals looser conditions. For more information, see the Bank Overground post ‘How can we measure UK financial conditions?’.

2.2 Demand and output

UK GDP growth has slowed materially...

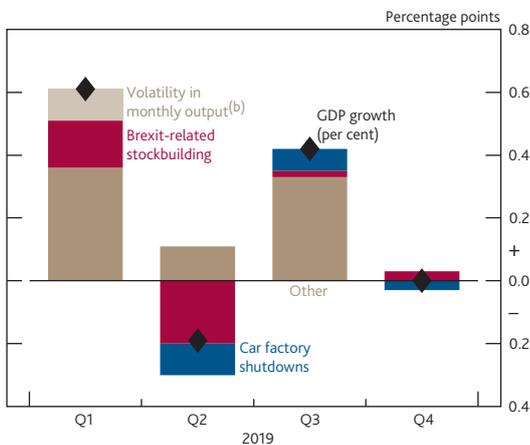
Quarterly UK GDP growth rates throughout 2019 have been affected by temporary, mainly Brexit-related, factors including stockbuilding and car factory shutdowns (**Chart 2.13**). UK GDP grew by 0.4% in Q3, in line with the *November Report* estimate (**Chart 2.1**).

Growth in Q4 is then expected to have slowed to zero, based on official data to November, weaker than the 0.2% projection in the *November Report*. An important factor behind the slowing has been a further weakening in service sector output, which grew by just 0.1% in the three months to November. Manufacturing output declined by 0.8% over the same period, and fell by almost 2% on an annual basis.

Abstracting from quarterly volatility, GDP is expected to have grown by around 0.2% a quarter on average in 2019, slower than the average of around 0.4% over the previous three years (**Chart 2.14**).

Chart 2.13 Quarterly GDP growth has been volatile

Estimated contributions of various factors to quarterly GDP growth^(a)



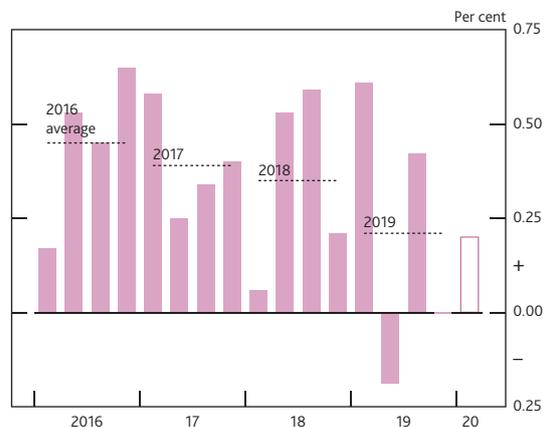
Sources: ONS and Bank calculations.

(a) Chained-volume measures. 2019 Q4 is Bank staff's projection. The contributions of idiosyncratic factors are estimated by Bank staff.

(b) GDP fell by 0.4% in December 2018 before rising by 0.6% in January 2019.

Chart 2.14 Growth has slowed on average compared to previous years

Quarterly GDP growth^(a)



Sources: ONS and Bank calculations.

(a) Chained-volume measure. The hollow bars in 2019 Q4 and 2020 Q1 are Bank staff's projections.

...dampened by the global slowdown and Brexit-related uncertainty...

Some of the weakening in growth — particularly in the manufacturing sector — reflects the slowdown in global growth (**Chart 2.2**). A simple model using the average relationship between UK growth and growth in other advanced economies would be consistent with a slowing in UK GDP growth over the past few years. But, on average, quarterly UK growth since 2016 has been around 0.2 percentage points lower than would be suggested by this model. Brexit-related uncertainty is an important potential explanation for this (see Section 4 of the *November Report*).

...resulting in a margin of spare capacity in the economy.

As Section 4 describes, the MPC judges that weak GDP growth has resulted in a margin of spare capacity in the economy, despite some of the slowdown reflecting a reduction in potential supply growth. Spare capacity is judged to lie within firms, as the labour market remains tight (Section 3).

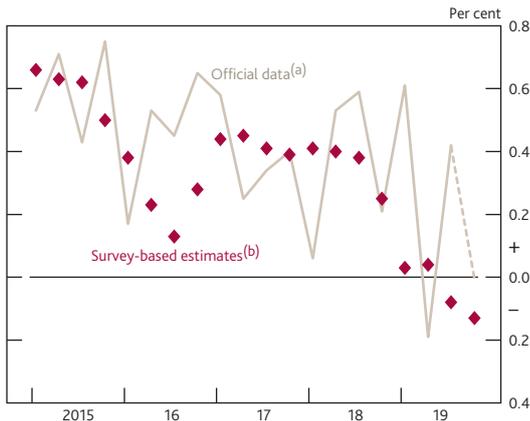
Growth in 2020 Q1 is expected to remain around its 2019 average.

Evidence from all the available survey data would be consistent with broadly flat GDP in 2020 Q1, based on their historical relationship. A range of output surveys deteriorated further throughout 2019 Q4. But many of these surveys were taken before the general election, when uncertainty was elevated. Survey-based estimates of GDP growth have been below official data for much of the past year (**Chart 2.15**), consistent with a weaker relationship with GDP growth during times of heightened uncertainty (see Box 3 in the *February 2019 Inflation Report*).

The few surveys which have been taken since the general election have picked up. The latest CBI *Industrial Trends Survey* did not suggest a marked pickup in manufacturing output, but business confidence increased sharply. The output and expectations balances in the flash IHS Markit/CIPS survey picked up significantly in January (**Chart 2.16**). The January IHS Markit/CIPS output data alone would be broadly consistent with GDP growth of around 0.2% in Q1, and expectations data suggests growth could be stronger still.

Overall, Bank staff expect GDP to grow by 0.2% in 2020 Q1, close to its 2019 average.

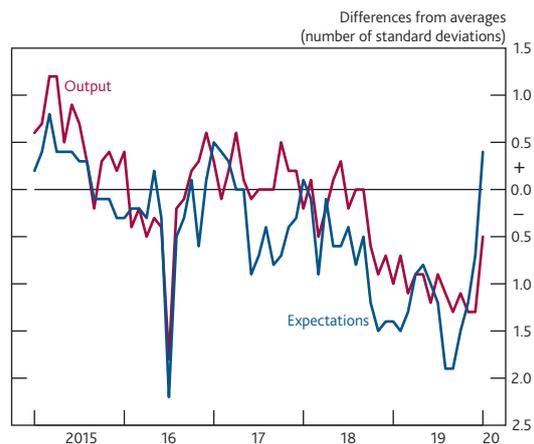
Chart 2.15 Survey data have suggested a weaker picture for GDP growth in 2019 than official data, similar to 2016
Quarterly GDP growth and estimates using survey data



Sources: BCC, CBI, IHS Markit/CIPS, Lloyds Banking Group, ONS and Bank calculations.

- (a) Dashed lines for GDP growth in 2019 Q4 are Bank staff's projection.
 (b) Survey-based estimates are Bank staff's projections for GDP growth using only survey indicators of output and expectations covering the period until the end of the projection quarter.

Chart 2.16 The IHS Markit/CIPS survey output and expectations indices have been weak but picked up markedly in January
Survey indicators of current and expected output growth^(a)



Sources: IHS Markit/CIPS and Bank calculations.

- (a) Differences from averages since January 2000. UK composite output and expectations indices. Data for January 2020 are flash estimates with sample period from 13 to 22 January.

Growth is likely to pick up if there is a sustained fall in uncertainty...

The result of December's general election has reduced the uncertainty about future government policy and early evidence suggests measures of uncertainty have fallen since the November *Report*. Alongside falls in sterling implied volatility (**Chart 2.9**), the proportion of firms citing Brexit as one of their top three sources of uncertainty fell to below 45% in the Bank's January Decision Maker Panel (DMP) Survey, compared to 55% in November (**Chart 2.17**). The fall in uncertainty was also apparent in the *Deloitte CFO Survey*, where the number of firms reporting high or very high uncertainty almost halved. Despite the recent fall, levels of Brexit-related uncertainty remain higher than those seen two years ago.

The reduction in uncertainty is likely to support growth, but the effect will depend on how quickly spending by firms and households responds.

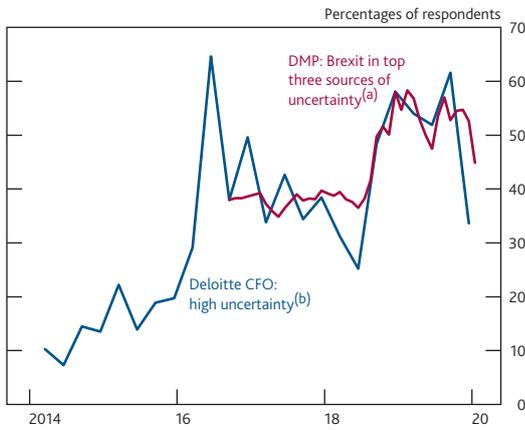
...as it has been weighing heavily on business investment...

As discussed in Section 4 of the November *Report*, higher uncertainty has weighed on business investment as it has provided an incentive for firms to delay spending. Business investment growth has continued to be weak over 2019, although recent revisions suggest that growth has picked up a little. It is currently estimated to have grown by 0.5% in the 12 months to 2019 Q3, the first positive annual growth rate for over a year (**Chart 2.18**). Investment in transport warehousing, which may have been needed for Brexit contingency planning, has been notably strong over the past two years. Overall though, business investment has grown by only 1.5% since 2016 Q2, compared to 12% on average for other countries in the G7.

There is so far limited evidence about the extent to which the recent decline in uncertainty will boost investment. Intelligence from the Bank's Agents and aggregate CBI survey data suggests that few companies have materially increased their planned investment spending as yet, but these data include responses from before the election. Respondents to the recent *Deloitte CFO* and CBI manufacturing surveys, which were conducted after the election, reported that their investment intentions had risen (**Chart 2.19**). Recent DMP data also pointed to a modest pickup in expected investment growth over the coming year.

Chart 2.17 Brexit-related uncertainty has fallen back a little but remains elevated

Brexit in top three current sources of uncertainty and CFOs reporting high uncertainty

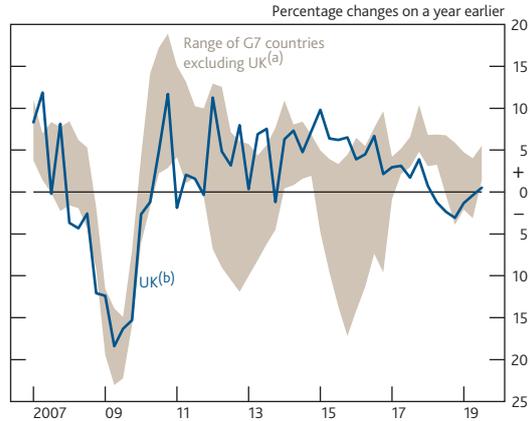


Sources: Decision Maker Panel (DMP) Survey, Deloitte and Bank calculations.

- (a) Question: 'How much has the result of the EU referendum affected the level of uncertainty affecting your business?'. Respondents can select: 'Not important'; 'One of many sources'; 'Two or three top sources'; or 'Top source of uncertainty'. Before August 2018, data are interpolated between waves and shown as three-month rolling averages. The DMP currently consists of around 8,000 businesses with around 3,000 responses a month being received. The sample period for the January DMP was 3 to 17 January.
- (b) Question: 'How would you rate the general level of external financial and economic uncertainty facing your business?'. Series shows the proportion of respondents which selected 'high' or 'very high'. Not seasonally adjusted. 119 CFOs responded to the 2019 Q4 survey and the sample period was 16 December to 6 January.

Chart 2.18 Business investment growth remains weak, despite a slight pickup in the latest data

G7 business investment



Sources: Eikon from Refinitiv, Japanese Cabinet Office, OECD, ONS, Oxford Economics, Statistics Canada, US Bureau of Economic Analysis and Bank calculations.

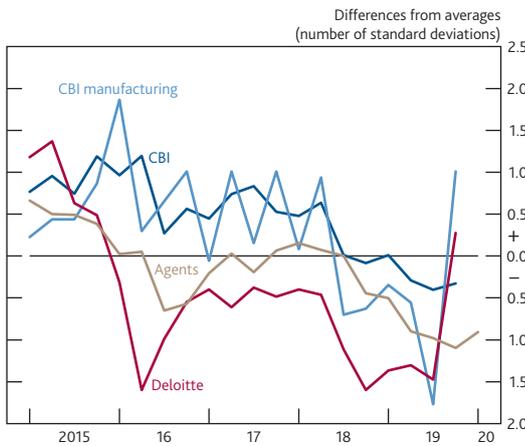
- (a) Business investment is not an internationally recognised concept. This swathe is based on similar series derived from other countries' National Accounts. Private sector business investment for Italy. Business investment minus residential structures for Canada. Non-residential private investment for Japan and the US. Non-government investment minus dwellings investment for France and Germany.
- (b) Chained-volume measure.

...and may have dampened household spending.

Consumption growth has slowed over the past year. It has been lower than real wage growth (Chart 2.20). This may reflect a delay before changes in income affect spending, but the widening of the gap between the two could also suggest households have been more cautious about spending in the face of Brexit-related uncertainty. Nonetheless, household consumption growth has been more resilient to uncertainty than investment and continued to grow at 0.3% in 2019 Q3. It has been supported by low unemployment (Chart 2.1) and, more generally, by a strong labour market (Section 3).

Chart 2.19 Investment intentions have been subdued, but some surveys suggest they have picked up in the latest data

Selected survey indicators of investment intentions^(a)

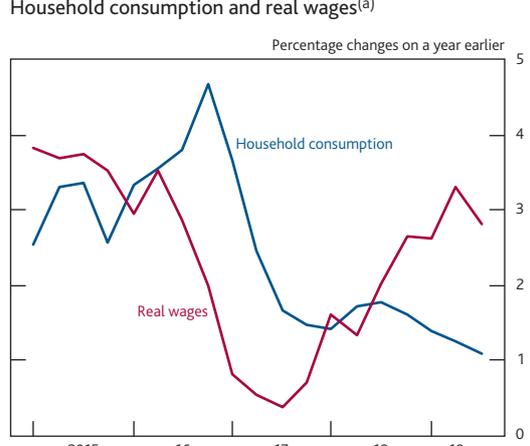


Sources: Bank of England, CBI, CBI/PwC, Deloitte and Bank calculations.

- (a) Differences from averages since 2000 or earliest available data. The Agents' scores for 2020 Q1 are January scores and were collected in the six weeks to 8 January. The sectors within CBI (manufacturing, distribution, financial services and business/consumer/professional services) are weighted together using shares in real business investment and show planned investment in plant and machinery. The survey periods for 2019 Q4 CBI data were 16 December to 13 January for manufacturing and before the general election for other sectors. Deloitte data (expected changes in capital expenditure) are available from 2010 Q3. The sample period for the 2019 Q4 Deloitte data was 16 December to 6 January.

Chart 2.20 Consumption growth has been weaker than real wage growth, suggesting households may have been cautious about spending

Household consumption and real wages^(a)



Sources: ONS and Bank calculations.

- (a) Real wages are whole-economy real average weekly earnings (excluding bonuses) multiplied by whole-economy employment.

More timely indicators have provided mixed signals for how consumption has evolved in 2019 Q4. Retail sales fell by 1%, the joint weakest quarterly growth rate since 2010, but these data tend to provide a less accurate read on consumption, on average, than other indicators such as consumer confidence and house prices.

Consumer confidence has improved a little since the November *Report*. Household confidence in their personal financial situation and expectations for unemployment were back to their long-run averages in the December GfK/EC survey (Chart 2.21). While expectations for the general economic situation still remain some way below their long-run average, they have improved materially since November.

House price growth has also strengthened in the latest data. Annual house price growth picked up to 1.7% in the three months to November, up from 1.1% in August. Expectations for house price growth also rose sharply in the December RICS survey to well above historical averages.

Taken together, these indicators for 2019 Q4 suggest consumption growth will remain at 0.3%.

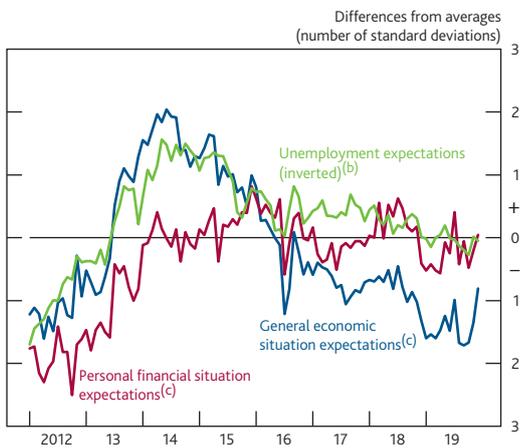
A stabilisation in global growth will support UK trade and business investment.

Stockbuilding by UK and EU companies ahead of the March and October Brexit deadlines has heavily influenced UK trade flows. Goods exports to and imports from the EU picked up in the run-up to the March deadline, before rapidly falling in Q2 (Chart 2.22). Stockbuilding ahead of the October deadline produced a similar pattern but on a smaller scale.

Abstracting from the effects of stockbuilding, the slowdown in global growth has weighed on UK growth by dampening business investment and demand for UK exports. UK goods exports to countries outside the EU rose sharply in the second half of 2019 (Chart 2.22), pushing up export growth and contributing to the recent trade surplus. This growth has fallen back in the most recent data however. Global growth has shown signs of stabilisation (Section 2.1) and is projected to recover (Section 1), which should support UK trade and business investment.

Chart 2.21 Household confidence has picked up a little since the November Report

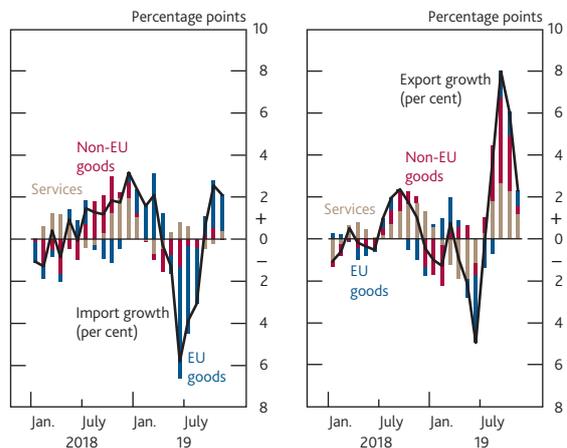
Indicators of consumer confidence^(a)



Sources: GfK (research carried out on behalf of the European Commission) and Bank calculations.
 (a) Differences from averages since 1997. The December 2019 sample period was 2–11 December.
 (b) Net balance of respondents expecting that the number of people unemployed will rise over the next 12 months.
 (c) Net balances of respondents expecting an improvement over the next 12 months.

Chart 2.22 Trade data have been volatile

Contributions to three-month on three-month growth in imports and exports, by type^(a)



Sources: ONS and Bank calculations.
 (a) Chained-volume measures. Goods exports and imports are measured excluding trade in unspecified goods.

Growth should be supported by broadly accommodative credit conditions...

Household credit conditions remain accommodative. Mortgage rates have been broadly flat since the November *Report* and remain low (Table 2.B). Credit card quoted rates have risen but the effective rate paid by the average borrower has remained flat. The quoted rate on overdrafts has also increased but this has been accompanied by lower fees, reflecting lenders' responses to Financial Conduct Authority regulations requiring simpler pricing structures.

Since the November *Report*, there have been some further signs of tightening in corporate credit conditions. Reported corporate credit availability fell in the Q4 *Credit Conditions Survey* and banks expect further tightening in Q1 across all firm sizes (**Chart 2.23**). Firms in the construction, property and retail sectors still appear to be most affected, but intelligence from the Bank's Agents suggests that lenders have also modestly tightened criteria for other sectors. Net finance raised by private non-financial corporations (PNFCs) was weak in October and November but this follows particularly strong volumes in September. Looking at annual growth rates, the reported tightening in credit availability does not yet appear to have materially affected lending volumes.

Table 2.B Mortgage rates remain low

Selected household lending and deposit quoted rates^(a)

	Jan. 2020 ^(b) (per cent)	Changes since (basis points)		
		Oct. 2019	July 2019	Jan. 2017 ^(c)
Mortgages				
Two-year fixed rate, 75% LTV	1.45	-9	-16	0
Five-year fixed rate, 75% LTV	1.70	-3	-23	-52
Two-year fixed rate, 90% LTV	2.06	-2	-9	-44
Consumer credit				
£10,000 personal loan	3.61	-4	0	-8
Credit card	20.77	115	76	281
Overdrafts	20.70	208	212	99
Deposits				
Instant access	0.41	-2	-3	26
Three-year fixed bond	1.35	-3	-15	20

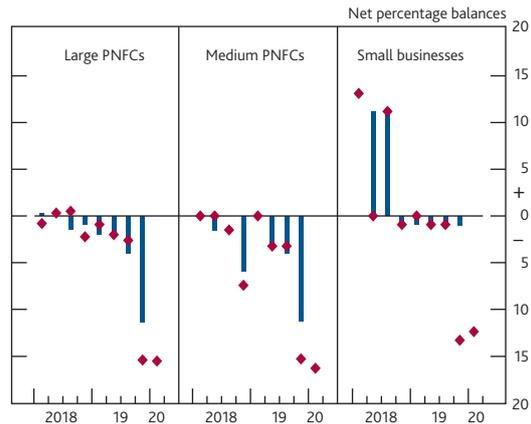
(a) The Bank's quoted rate series are weighted monthly average rates advertised by all UK banks and building societies with products meeting the specific criteria. Not seasonally adjusted.

(b) January 2020 data are flash estimates using data to 22 January and are subject to change until they are published on 7 February.

(c) In February 2019 the method used to calculate these data was changed. See 'Introduction of new Quoted Rates data' for more information.

Chart 2.23 Corporate credit conditions tightened in Q4

Availability of credit to corporates reported by lenders in the *Credit Conditions Survey*^(a)



(a) Weighted by market shares. A positive balance indicates that more credit is available. Diamonds show net percentage balances for the expected change over the next three months; these have been moved forward by one quarter so that they can be compared with the actual outcomes in the following quarter.

...as well as higher government spending.

Government spending has provided support for growth in 2019. Central government spending in cash terms was 3.3% higher between April and December 2019 compared to the same period a year earlier. The latest government spending plans were announced in September, as part of *Spending Round 2019*. All else equal, the increase in spending announced then is expected to raise GDP by around 0.4% over the MPC's three-year forecast period. The Government has announced that the 2020 *Budget* will take place on 11 March.

2.3 Costs and prices

CPI inflation has slowed over the past year, driven by falls in energy prices.

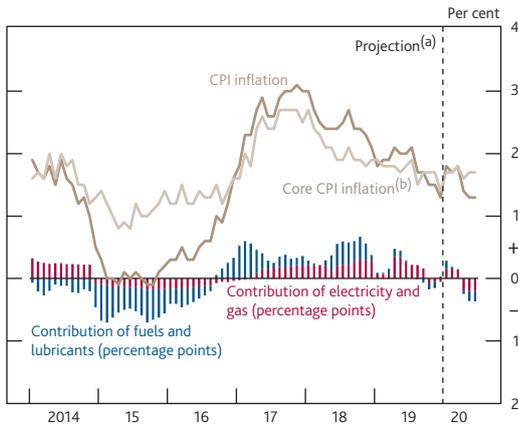
CPI inflation fell to 1.4% on average in 2019 Q4, down from 2.3% in 2018 Q4. This fall has been driven largely by a decline in the contribution from energy prices (**Chart 2.24**). This partly reflects a decline in fuel prices: sterling oil prices were around 8% lower in 2019 Q4 compared to 2018 Q4 (**Chart 2.25**). The decline in the contribution from energy prices also reflects cuts to Ofgem's energy price caps, which came into effect in October, reducing electricity and gas prices by 3% and 9% respectively for the typical default tariff customer. Core inflation, which excludes the effects of energy prices and some other volatile components, has also slowed a little over the year, and was 1.6% on average in Q4.

CPI inflation is expected to pick up in 2020 Q1, but fall to 1.3% in 2020 Q2, driven by changes in regulated prices.

CPI inflation is expected to pick up a little in 2020 Q1 to 1.8%, before falling back to 1.3% in 2020 Q2 (**Chart 2.24**). Much of this volatility is driven by changes to Ofgem's energy price cap. CPI inflation will be boosted in Q1 as the January 2019 price cap cut drops out of the annual comparison. Similarly, the April 2019 rise will drop out of the annual calculation in 2020 Q2 and pull down inflation. The fall in the wholesale gas futures curve since the November *Report* (**Chart 2.25**) means that the energy price cap is now expected to decrease by more in April 2020, providing a further drag on inflation in 2020 Q2.

Chart 2.24 The fall in inflation over 2019 has been driven largely by energy prices

CPI inflation, core CPI inflation and the contribution of energy



Sources: Bloomberg Finance L.P., Department for Business, Energy and Industrial Strategy, ONS and Bank calculations.

- (a) Bank staff's projection. Fuels and lubricants estimates use Department for Business, Energy and Industrial Strategy petrol price data for January 2020 and are then based on the sterling oil futures curve.
 (b) CPI inflation excluding food, energy, alcohol, tobacco and non-alcoholic beverages.

Chart 2.25 Oil prices have increased since the November Report

Sterling oil and wholesale gas prices



Sources: Bank of England, Bloomberg Finance L.P. and Bank calculations.

- (a) Fifteen working day averages to 22 January 2020 and 30 October 2019 respectively.
 (b) US dollar forward prices for delivery in 10–25 days' time converted into sterling.
 (c) One-day forward price of UK natural gas.

Lower water bills are also expected to contribute to the fall in inflation in Q2 as a result of action by the regulator Ofwat. But the reduction in water bills is somewhat less than expected in the November Report, reflecting updated information from Ofwat.

Fuel prices have pushed up the near-term projection, and will add to volatility.

Sterling oil prices have risen by around 7% since the November Report (Chart 2.25). The rise largely reflects reductions in oil production agreed by OPEC and improved demand prospects as global growth has stabilised. The increase in oil prices should feed through to fuel prices such that the near-term projection for CPI inflation is a little higher than in November. Fuel prices are expected to contribute positively to inflation in Q1, before dragging in Q2 (Chart 2.24). The near-term projection for inflation is also boosted by recent upside news in import prices, although sterling's appreciation weighs on them further out.

Looking beyond the near term, labour cost growth is expected to push up inflation...

Wage growth has slowed over the past few months (Section 3), although the decline is small relative to the steady increases seen in recent years. Growth in private sector average weekly earnings (AWE) excluding bonuses was 3.4% in the three months to November, down from a peak of 4% earlier in the year.

The extent to which wages affect companies' production costs depends on how they are growing relative to productivity. Productivity growth has been very weak and growth is expected to have slowed to below 0% in the four quarters to 2019 Q4 (Chart 4.6). Unit wage cost growth has therefore remained strong, even as wage growth has declined (Chart 2.26), at above its pre-crisis average rate (Chart 2.27).

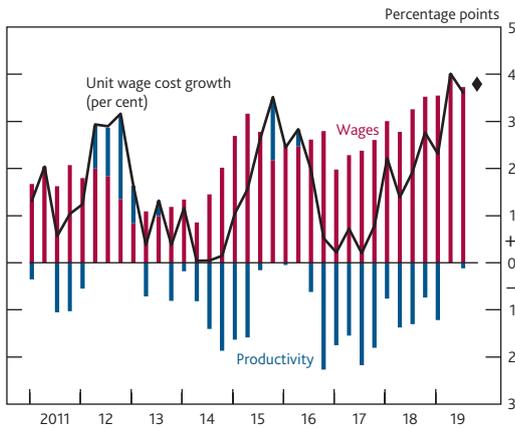
Unit wage cost growth is expected to remain robust over the forecast period. While productivity growth is expected to recover somewhat over the forecast period, pushing down on unit wage cost growth, wage growth is expected to remain firm, reflecting the tight labour market (Section 1).

...but so far CPI-based measures of domestic price pressures have remained relatively low, suggesting that firms have absorbed higher labour costs in their margins.

CPI-based measures of domestic price pressures, such as core services inflation, have been weaker than expected in recent months, and remain below their pre-crisis averages (Chart 2.27). These measures were also below the rates consistent with CPI inflation at target in December. Those data, alongside the strength of labour cost growth, could suggest that the profit margins of consumer-facing companies have been squeezed.

The margins of those companies are difficult to measure directly, but whole-economy proxies such as the share of profits in GDP have fallen in recent quarters. And reports from the Bank's Agents also suggest pressure on margins,

Chart 2.26 Unit wage cost growth has risen over 2019

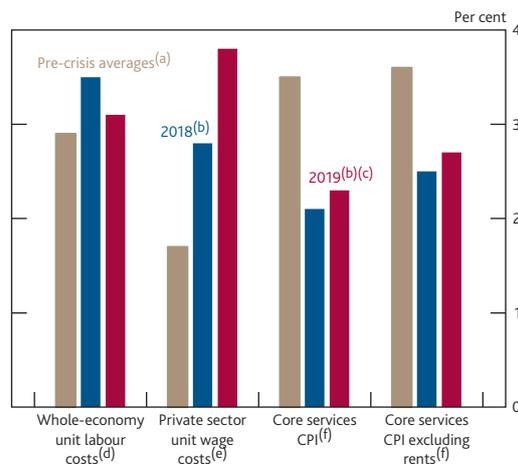
 Contributions to four-quarter private sector unit wage cost growth^(a)


Sources: ONS and Bank calculations.

(a) Private sector AWE regular pay divided by private sector productivity per head, based on the backcast for the final estimate of private sector output. See Table 4.C in the [November 2018 Inflation Report](#) for more details on measures of unit labour costs. Diamond shows Bank staff's projection for 2019 Q4 based on data to November.

Chart 2.27 Labour cost-based measures of domestic price pressures remain stronger than CPI-based measures

Four-quarter growth in measures of domestically generated inflation



Sources: ONS and Bank calculations.

- (a) Pre-crisis averages are the average of four-quarter growth rates over 1998–2007. Data for private sector regular pay growth is only available from 2000, so the pre-crisis average growth rate is calculated over 2001–07.
- (b) Figures for 2018 and 2019 are the four-quarter growth rates in 2018 Q4 and 2019 Q4 respectively.
- (c) 2019 figures for whole-economy unit labour costs and private sector unit wage costs are Bank staff's estimates based on data to November.
- (d) Whole-economy total labour costs divided by real GDP, based on the mode of the MPC's backcast. Total labour costs comprise compensation of employees and the labour share multiplied by mixed income.
- (e) See footnote (a) of [Chart 2.26](#).
- (f) Core services CPI inflation excludes airfares, package holidays, education and an estimate of the impact of changes in VAT.

with some contacts reporting being unable to pass on higher costs to their selling prices in full due to the weaker economy. It is also possible that the rise in labour cost growth has been partly offset by other costs growing more slowly. For example, commercial rent inflation has slowed since 2016, perhaps reflecting the effect of spare capacity in the economy.

Some of the weakness in domestic price pressures could reflect persistent trends in the retail sector...

There have been structural changes in the retail sector that might help to explain subdued price pressures. For example, a rise in e-commerce may have increased competitiveness, constraining the ability of retailers to raise prices. That trend has been common across advanced economies, so may help to explain muted inflation in the US and the euro area as well.

...but some could reflect cyclical weakness in demand as the economy has slowed.

Subdued domestic price pressures could reflect weak demand growth, which would encourage firms to slow the pace of price rises. As part of its annual assessment of supply, the MPC judged that there had been a slightly greater degree of spare capacity over the past few years than it had previously thought (Section 4), and this has exerted downward pressure on inflation. As demand growth recovers and spare capacity is eroded, inflation is expected to rise towards the target in 2021 (Section 1).

Short-term inflation expectations fell back in Q4...

Measures of households' expectations for inflation in one and two years' time fell back in 2019 Q4 ([Table 2.C](#)). These measures rose in 2019 Q3, with the *Inflation Attitudes Survey* suggesting this had been related to Brexit. The dip in Q4 could reflect the unwinding of this effect. Brexit-related effects, such as the reduced probability of a no-deal Brexit leading to an appreciation of sterling, may also explain part of the recent fall in short-term measures of inflation compensation derived from financial market prices.

...while longer-term expectations have been stable on average.

Further out, movements in measures of households' expectations have been mixed. Expectations five years ahead in the Bank/TNS survey picked up to above their historical average in Q4, but other surveys of households' longer-run expectations fell slightly.

Financial market measures, such as five-year inflation swap rates, five years forward, have been broadly unchanged in the UK over the past year. That is in contrast to the equivalent measures in the US and euro area, which have fallen significantly (Chart 2.28). Measures of UK inflation compensation beyond 10 years have fallen substantially, however. This, combined with a slight pickup at medium-term horizons over the past year, has led the UK inflation swap curve to become inverted (Chart 2.29). That shape is unusual both historically and when compared to other countries. The fall in long-term inflation expectations may partly reflect an expected change in the method of calculating RPI inflation. Market intelligence suggests it may also reflect a decline in pension funds' demand for inflation protection at longer horizons. Since long-term measures of inflation compensation have fallen internationally, it could also reflect concerns about the outlook for global inflation more generally.

Taken together, the Committee judges that inflation expectations remain well anchored.

Stepping back from recent movements, most measures of inflation expectations in Table 2.C are not markedly different from their historical averages. Taking the evidence from all these measures, the MPC judges that inflation expectations remain well anchored.

Table 2.C Inflation expectations remain well anchored

Measures of inflation expectations^(a)

Per cent

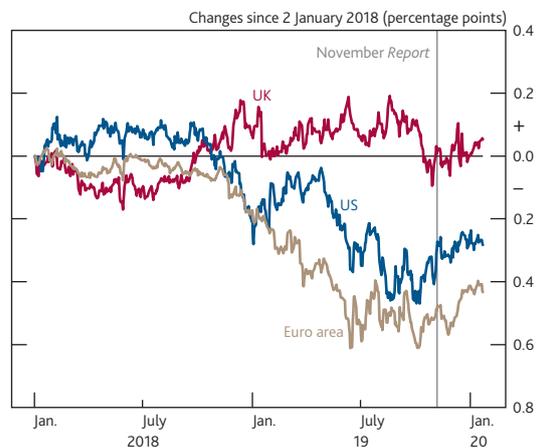
	2000–07 ^(b)	2010–18	2019			
			Q1	Q2	Q3	Q4
One year ahead inflation expectations						
Households^(c)						
Bank/TNS	2.4	3.0	3.2	3.1	3.3	3.1
Barclays Basix	2.8	2.6	2.6	2.5	2.8	2.4
YouGov/Citigroup	2.5	2.4	2.7	2.6	3.0	2.5
Companies^(d)						
Financial markets ^(e)	2.6	2.9	3.4	3.4	3.7	3.3
Two to three year ahead expectations						
Households^(c)						
Bank/TNS	n.a.	2.8	2.9	3.0	3.0	2.9
Barclays Basix	3.2	3.0	3.0	3.0	3.3	3.0
Companies^(d)						
External forecasters ^(f)	2.0	2.1	2.0	1.8	2.0	2.0
Financial markets ^(e)	2.8	3.1	3.5	3.6	3.8	3.6
Five to ten year ahead expectations						
Households^(c)						
Bank/TNS	n.a.	3.3	3.4	3.8	3.1	3.6
Barclays Basix	n.a.	3.7	4.0	4.1	4.1	3.8
YouGov/Citigroup	3.5	3.2	3.1	3.2	3.2	3.0
Financial markets^(e)						
Memo: CPI inflation	1.6	2.3	1.9	2.0	1.8	1.4

Sources: Bank of England, Barclays Capital, Bloomberg Finance L.P., CBI, Citigroup, ONS, TNS, YouGov and Bank calculations.

- (a) Data are not seasonally adjusted.
 (b) Averages from 2000, or start of series, to 2007. Financial market data start in October 2004, YouGov/Citigroup data start in November 2005 and professional forecasters data start in 2006 Q2.
 (c) The household surveys ask about expected changes in prices but do not reference a specific price index. The measures are based on the median estimated price change.
 (d) CBI data for the distributive trades sector. Companies are asked about the expected percentage price change over the coming 12 months and the following 12 months in the markets in which they compete.
 (e) Instantaneous RPI inflation one and three years ahead and five-year RPI inflation five years ahead, implied from swaps.
 (f) Bank's survey of external forecasters, CPI inflation rate three years ahead.

Chart 2.28 Implied inflation expectations in the US and euro area have fallen over the past year

Changes in five-year, five-year forward inflation compensation^(a)

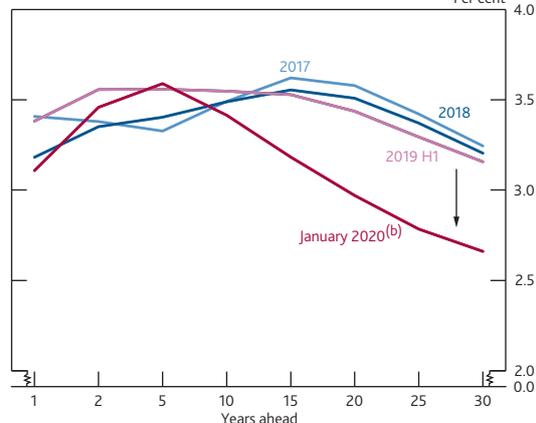


Sources: Bloomberg Finance L.P. and Bank calculations.

(a) Derived from swaps. The instruments are linked to the UK RPI, US CPI and euro-area HICP measures of inflation respectively.

Chart 2.29 The UK inflation swap curve has inverted

Implied expectations of RPI inflation from swaps^(a)



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

- (a) Instantaneous RPI inflation expectations implied by swaps.
 (b) January 2020 is an average to 22 January 2020.

Table 2.D Monitoring the near-term outlook^(a)

	2019 Q4		2020 Q1–2020 Q3	
	Latest ^(b)	November projection	Latest	Changes since November
World GDP (UK-weighted)	0.5	0.4	To average ½%	Revised up slightly
World GDP (PPP-weighted)	0.8	0.7	To average ¾%	Revised up slightly
Euro-area GDP	0.2	0.2	To average ¼%	Revised up slightly
US GDP	0.6	0.4	To average ½%	Revised up slightly
Emerging market GDP (PPP-weighted)	1.0	1.0	To average 1%	Broadly unchanged
UK GDP ^(c)	0.0	0.2	To average ¼%	Revised down slightly
Household consumption	0.3	0.3	To average ¼%	Broadly unchanged
Business investment	-0.3	-0.7	To average ½%	Broadly unchanged
Housing investment	0.0	0.5	To average ¾%	Revised up slightly
Contribution of net trade to GDP	0.1	-0.4	To average -½%	Revised down
Real post-tax labour income	0.5	0.1	To average ¼%	Revised down slightly
Household saving ratio	5.8	6.3	To average 5½%	Revised down
Credit spreads ^{(d)(e)}	1.6	1.6	To average 1.7	Broadly unchanged
Excess supply/excess demand	-½	-¼	To average -½%	Revised down slightly
Hourly labour productivity ^(c)	-0.3	0.1	To be broadly flat	Revised down slightly
Employment ^(c)	0.5	0.1	To be broadly flat	Broadly unchanged
Average weekly hours worked ^{(c)(e)}	32	32	To average 32%	Broadly unchanged
Unemployment rate ^{(c)(e)}	3.8	3.9	To average 3¾%	Revised down slightly
Participation rate ^{(c)(e)}	64	64	To average 64%	Broadly unchanged
CPI inflation ^(d)	1.4	1.4	To fall to 1¼% in Q3	Broadly unchanged
UK import prices	0.2	-0.4	To fall to -1¾% in Q3	Revised down
Energy prices — direct contribution to CPI inflation ^(d)	-0.1	-0.2	To average -¼%	Revised up slightly
Average weekly earnings regular pay ^{(c)(f)}	3.3	3.7	To average 3¼%	Revised down slightly
Unit labour costs	3.1	3.1	To average 3¼%	Revised up slightly
Private sector regular pay based unit wage costs	3.8	3.6	To average 3¾%	Revised up

Sources: Bank of England, Bloomberg Finance L.P., Department for Business, Energy and Industrial Strategy, Eurostat, IMF *World Economic Outlook (WEO)*, ONS, US Bureau of Economic Analysis and Bank calculations.

(a) Definitions of underlying series are as given in footnotes of **Table 1.C** in Section 1, unless otherwise stated. Figures show quarterly growth rates unless otherwise stated. All price and wage measures are four-quarter growth rates.

(b) Data are projections unless otherwise stated.

(c) Projections based on official data to November 2019.

(d) 2019 Q4 data are outturns.

(e) Quarterly level.

(f) Whole-economy regular pay. Growth rates based on KAI7.

Box 2

Agents' update on business conditions

The key information from Agents' contacts considered by the Monetary Policy Committee at its January meeting is highlighted in this box.⁽¹⁾

Overall economic activity remained subdued in the past three months compared with a year ago. Growth in consumer spending was subdued, but there were some early indications of a pickup in big-ticket purchases in the post-Christmas period.

Manufacturing output and exports continued to fall, reflecting weak investment growth, the slowdown in the global economy and ongoing Brexit uncertainties. There was a little evidence of trade diversion as a result of Brexit. A few UK-based contacts said they were substituting EU suppliers for UK ones, and there were some reports of EU customers switching away from UK suppliers.

Contacts said that while the outcome of the general election had removed short-term political uncertainty and the risk of a no-deal Brexit, uncertainty about the nature of the eventual trading relationship between the UK and the EU remained.

Investment and hiring intentions remained slightly negative and some companies said they wanted to see how trade negotiations with the EU progressed before reassessing their plans. In particular, contacts were concerned about tariffs, border disruption, labour mobility and a potential cliff-edge at the end of 2020. However, some contacts thought they might benefit from an expected increase in public infrastructure spending over the next year.

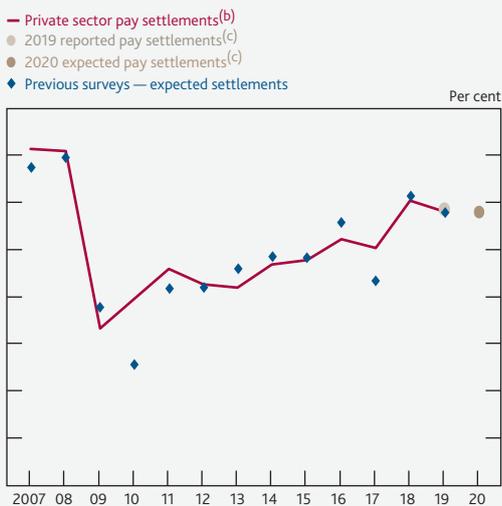
Agents' survey on pay

The Agents surveyed over 300 contacts on their expectations for pay and labour costs this year compared with 2019.⁽²⁾

Companies generally expected pay settlements to be flat. The survey showed that the average pay settlement in 2019 was 2.9% (Chart A). This matched expectations in the previous year's survey. For 2020, respondents expected their pay settlement rate to stay at 2.9%. Expectations were similar across sectors (Chart B).

Chart A Pay settlements are expected to be the same in 2020 as in 2019

Pay settlements^(a)

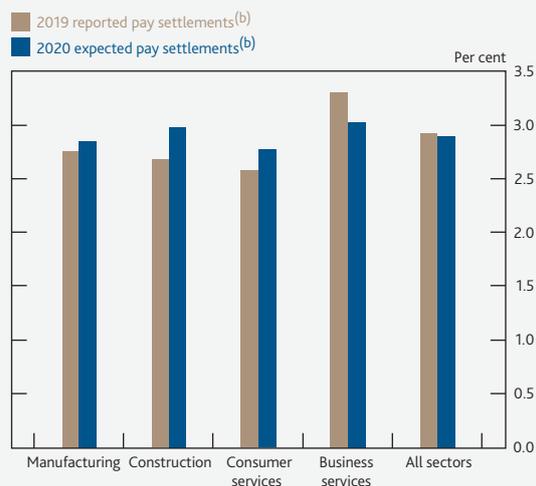


Sources: Bank of England, including the wage settlements database (which draws on information from the Bank's Agents, Incomes Data Research, Incomes Data Services, Industrial Relations Services and the Labour Research Department) and Bank calculations.

- (a) Companies were asked to state their average UK pay settlement for 2019 and their expected average UK pay settlement for 2020.
 (b) Average over the past 12 months, based on monthly data.
 (c) Data gathered from the 2020 Agents' Pay Survey.

Chart B Pay settlements in 2020 are expected to be similar across sectors

Pay settlements by sector^(a)



- (a) Companies were asked to state their average UK pay settlement for 2019 and their expected average UK pay settlement for 2020.
 (b) Data gathered from the 2020 Agents' Pay Survey.

(1) A comprehensive quarterly report on business conditions from the Agents is published alongside the MPC decision in non-*Monetary Policy Report* months. The next report will be published on 26 March 2020.

(2) The survey was conducted between 6 December 2019 and 9 January 2020. There were 304 responses from companies employing over 308,000 employees. Responses were weighted by employment and then reweighted by sector employment.

The survey also asked companies about the expected change in the growth rate of total labour costs (TLC) per employee⁽³⁾ compared with the previous year. On balance, companies expected TLC growth to be higher in 2020 than in 2019.

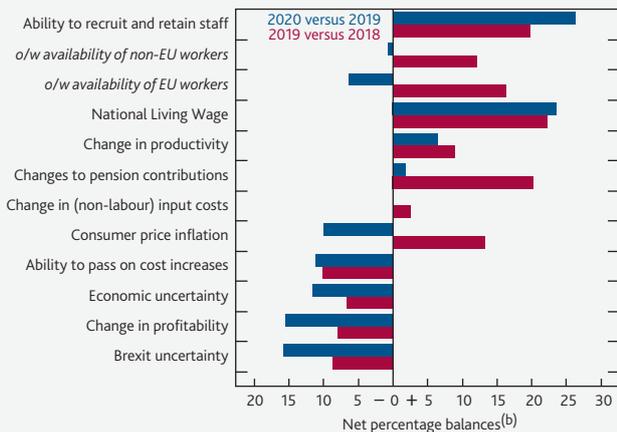
The main factors driving changes in TLC growth in 2020 were broadly similar to 2019 (**Chart C**). Greater difficulties in recruiting and retaining workers and the increase in the National Living Wage were expected to be the main factors pushing up expected TLC growth in 2020 relative to 2019. Brexit uncertainty and a change in profitability were the main factors pushing down the pace of expected TLC growth. The latter is likely to reflect companies seeking to reduce costs in the face of downward pressure on their profit margins.

A couple of factors were expected to have a different impact in 2020 compared with 2019. Respondents expected consumer price inflation to have a downward effect on TLC growth this year relative to last. This probably reflects the fall in CPI inflation over the past year.

The availability of EU and non-EU workers was expected to have little impact on TLC growth this year. In the 2019 survey, that had been expected to push up TLC growth relative to the previous year.

Chart C The factors driving changes in total labour cost growth in 2020 are broadly similar to 2019

Factors driving the change in the rate of expected TLC growth^(a)



(a) Companies were asked: 'How do you expect the following factors to affect the rate of growth in total labour costs per employee in 2020 compared with the rate of growth in 2019?'.
 (b) Respondents were asked to choose between 'Much slower', 'A little slower', 'The same', 'A little faster' and 'Much faster'. To calculate these net balances, the following estimates were assumed for each response bucket: -1 for the 'Much slower' response category; -0.5 for the 'A little slower' response category; 0 for 'The same' response category; +0.5 for 'A little faster'; and +1 for 'Much faster'.

(3) TLC includes regular pay, overtime payments, shift premia, performance-related pay, bonuses, employer pension contributions and employee benefits.

3 In focus The labour market

Some indicators of labour demand have softened over the past year. Surveys of firms suggest they plan to hire fewer people, the number of vacancies has fallen and labour market churn has dipped. Nonetheless, the unemployment rate has remained low and the labour market appears tight. The MPC's central projection is for unemployment to stay low in the coming years, consistent with a projected recovery in GDP growth.

The UK labour market has steadily improved over the past few years. The proportion of people in work has risen and reached a record level in 2019; the unemployment rate has fallen to its lowest level in over 40 years. As the labour market has tightened, pay growth has picked up.

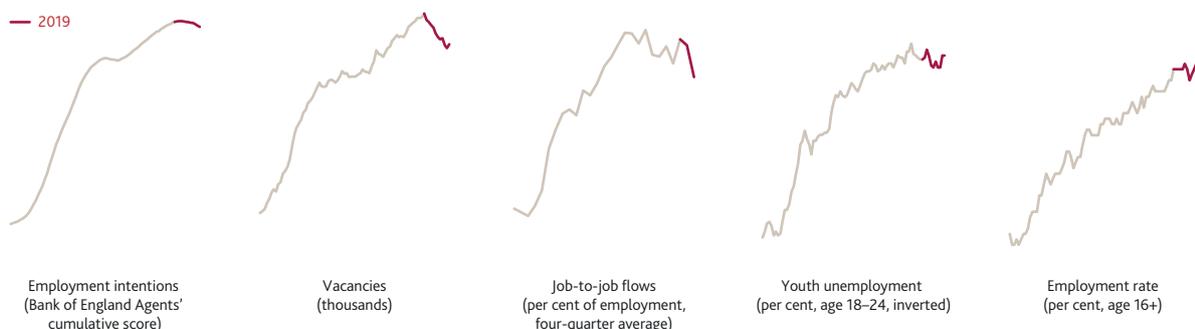
But over the past year some indicators of labour demand have softened. Surveys of hiring intentions have weakened. The number of job vacancies has declined. Labour market churn has dipped as fewer people have changed jobs. More recently, pay growth has moderated. Nevertheless, employment growth slowed only slightly in 2019, and was strong towards the end of the year. Unemployment has remained low, and measures of labour market tightness have remained high.

Understanding the labour market is crucial for the MPC. It has implications for price stability — the MPC's primary objective — via pay growth. Subject to that primary objective, the MPC aims to support the Government's economic policy goals, which include maintaining high employment. More generally, the labour market can help us understand developments in the wider economy. For example, households' sense of job security and income expectations affect spending and saving decisions. So interpreting developments in the various labour market indicators has been a key challenge for the MPC recently. The slowdown in some indicators could just reflect a natural cooling as the labour market runs up against capacity constraints, covered in Section 4. Or it could reflect a weakening in demand for labour that might persist.

This *In focus* takes a closer look at the labour market. Section 3.1 asks what we should take from surveys of firms and the vacancy numbers. These generally lead the employment data as they tell us about firms' hiring intentions. Section 3.2 takes a detailed look at the official employment data. Section 3.3 assesses recent developments in pay. Finally, Section 3.4 summarises the implications for the MPC's forecasts.

Chart 3.1 Some labour market indicators softened in 2019, but employment has remained close to its record high

Selected labour market indicators, 2013–19^(a)



Sources: Bank of England, ONS and Bank calculations.

(a) See [Chart 3.2](#) for more on employment intentions, [Chart 3.4](#) for more on vacancies, [Chart 3.7](#) for more on job-to-job flows and [Chart 3.10](#) for more on youth unemployment.

3.1 What do surveys of firms tell us about the labour market?

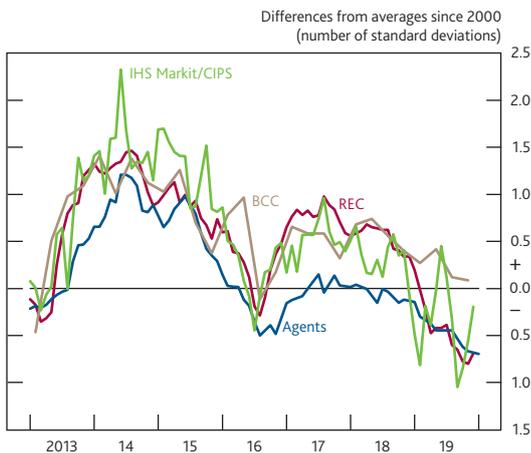
Surveys suggest businesses are increasingly reluctant to increase headcount...

A number of surveys suggest firms' appetite to expand employment has fallen since mid-2018 (Chart 3.2). The decline has been particularly sharp in the REC survey. This may overstate the fall in demand for labour as it only captures demand for new recruits. The Bank's Agents' score measures a different concept: firms' expected change in headcount, which takes into account the number of employees leaving. That score has declined to a lesser extent, but has still weakened. It is now consistent with roughly no change in headcount over the coming year. The BCC survey suggests stronger demand for labour, but is still consistent with a softening.

The REC survey suggests the demand for new permanent staff has been weaker than that for temporary staff recently (Chart 3.3). This could reflect a reluctance to commit to permanent hires because of uncertainty about the economic outlook. Uncertainty stemming from the Brexit process has caused firms to delay or cancel capital investment (see Section 4 in the *November 2019 Report*). There could have been a similar effect for hiring, with firms increasingly valuing the ability to reverse the hiring decision (Broadbent (2019)). Despite this, the share of employees on temporary contracts has fallen slightly this year.

Chart 3.2 Surveys of employment intentions have weakened

Surveys of employment intentions^(a)

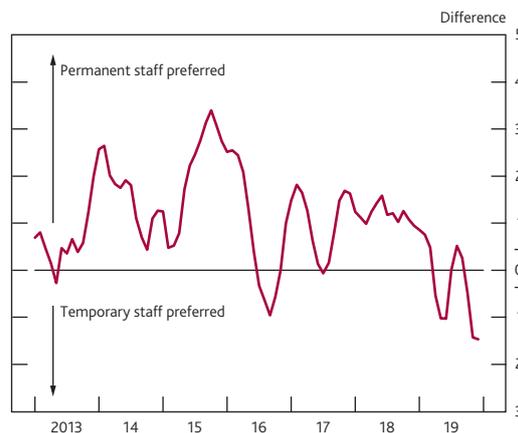


Sources: Bank of England, BCC, IHS Markit/CIPS, KPMG/REC *Report on Jobs* and Bank calculations.

(a) Surveys from the Bank's Agents (employment intentions over the next 12 months), BCC (employment expectations over the next three months), IHS Markit/CIPS (PMI composite employment index) and KPMG/REC (index of demand for new staff). Agents' scores are monthly until August 2016 and six weekly thereafter. BCC data are quarterly.

Chart 3.3 Demand for permanent staff has been weaker than for temporary staff

Difference between permanent and temporary staff demand indices^(a)



Source: KPMG/REC *Report on Jobs*.

(a) Three-month moving average.

...and the number of job vacancies has fallen sharply.

The decline in demand for new employees is also apparent in the official vacancy figures from the ONS. Although the number of vacancies remains high, it has fallen by 7% over 2019, the biggest fall for a decade (red line in Chart 3.4).

The decline in vacancies has been widespread across the private sector, although the manufacturing and transport, storage and communication sectors have accounted for a disproportionate share (Chart 3.5). Together, these sectors account for just over half of the decline since January. The decline in the manufacturing sector is consistent with the sector's falling output over the past year, which is in part the result of a slowdown in global growth (Section 2).

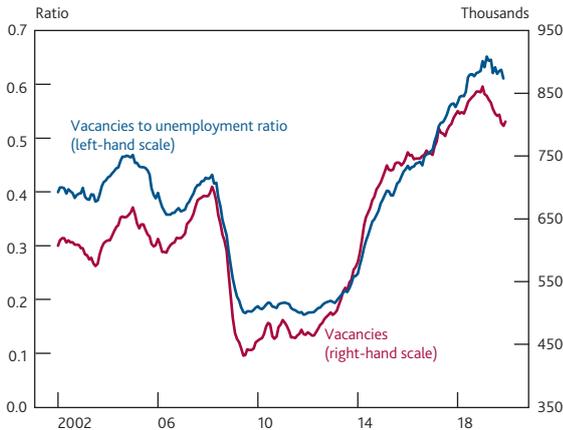
The number of vacancies per unemployed worker remains high though.

Although the decline in vacancies is a signal that demand for labour has fallen, it is less clear if the labour market has loosened. The ratio of vacancies to unemployed workers (the 'V/U ratio') is often used as a measure of labour market tightness as it shows how many jobs are available for each unemployed person. Although the number of vacancies has fallen, the pool of unemployed workers has also shrunk. As a result, the V/U ratio remains close to a record high (blue line in Chart 3.4).⁽¹⁾ Survey measures of recruitment difficulties also remain elevated, consistent with a tight labour market.

(1) In part this reflects a decline in the efficiency with which workers are matched with jobs (Pizzinelli and Speigner (2017)).

Chart 3.4 Vacancies have fallen, but the ratio of vacancies to unemployed people remains high

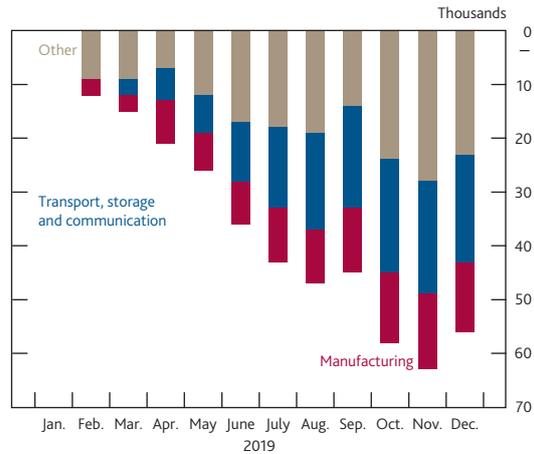
Vacancies and unemployment



Sources: ONS and Bank calculations.

Chart 3.5 Two sectors account for over half of the decline in vacancies

Change in the number of vacancies since January 2019 by sector



Sources: ONS and Bank calculations.

3.2 What has happened to employment and flows around the labour market?

Employment growth has slowed slightly, which could reflect both demand and supply drivers.

Employment growth has been volatile this year. Quarterly growth was briefly negative in September, although it has since recovered to 0.6% in the three months to November. Looking through the volatility, quarterly growth has averaged 0.2% in 2019. That is a little lower than recent years, and the lowest since 2011.

Lower employment growth could reflect weaker demand for labour as a result of weaker demand for goods and services. Slower global growth and domestic Brexit-related uncertainties weighed on UK GDP growth in 2019 (Section 2). Historically, employment growth has tended to be highly correlated with GDP growth, albeit with a short lag. Lower demand would be consistent with the evidence from surveys and vacancies.

However, lower employment growth could also reflect limits to labour supply. Employment growth might be expected to slow as spare capacity in the economy is eroded. As the pool of unemployed workers shrinks, there are fewer people left to move into employment. Unemployment is currently below the MPC's estimate of its equilibrium rate (Section 4).

Labour market flows can help us identify turning points and the nature of shocks hitting the economy.

Labour market flow statistics offer an alternative perspective (Chart 3.6). On average, every quarter around 6% of working-age people move between the three labour market states: employment, unemployment and inactivity. A further 2% move between jobs. The size and direction of these flows can reveal the first signs of turning points in the labour market. They may also shed light on the nature of the shocks hitting the UK economy.

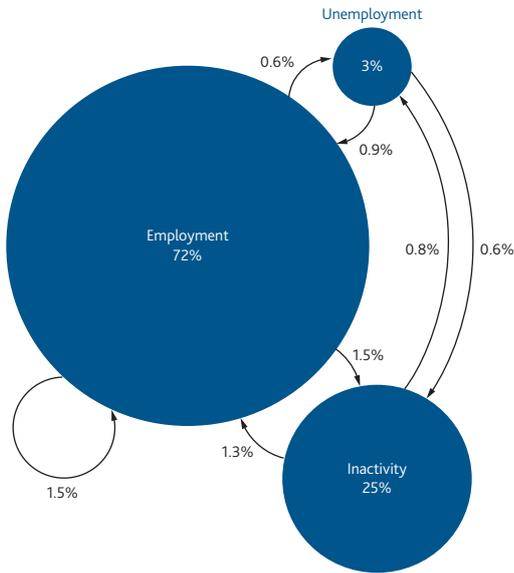
The number of people switching jobs has fallen.

In 2019 Q3, the proportion of people moving between jobs fell to its lowest level since 2014 (top panel, Chart 3.7). These figures are quite volatile, and the latest move might just reflect sampling. Nevertheless, the size of these job-to-job flows tends to be negatively correlated with unemployment (Gomes (2012)) as a tight labour market encourages growing firms to poach workers from other firms (Haldane (2019)). So the UK's recent experience of low and stable unemployment with subdued job-to-job flows is somewhat unusual.

The job-finding rate is also low given the tightness of the labour market...

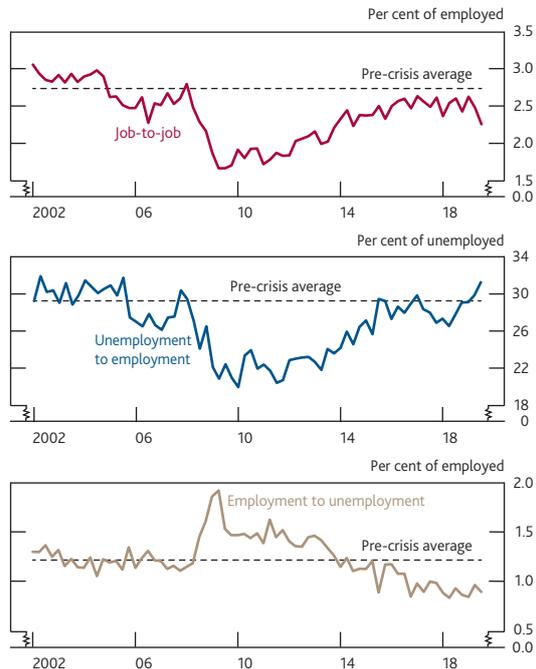
The proportion of unemployed people moving into employment — the job-finding rate — has recently picked up (middle panel, Chart 3.7). But it has been unusually low over the past two years given the tightness of the labour market (Chart 3.8).

Chart 3.6 The flows between labour market states offer an alternative perspective
 Employment, unemployment and inactivity as a proportion of the working-age population in 2019 Q2–Q3^(a)



Sources: Labour Force Survey and Bank calculations.
 (a) Bank staff estimates using the Labour Force Survey. Stocks and flows are expressed as proportions of the 16–69 year old population. All figures are seasonally adjusted by Bank staff.

Chart 3.7 Job-to-job flows have fallen recently; the flow out of employment into unemployment has remained low
 Job-to-job flows and flows between unemployment and employment^(a)

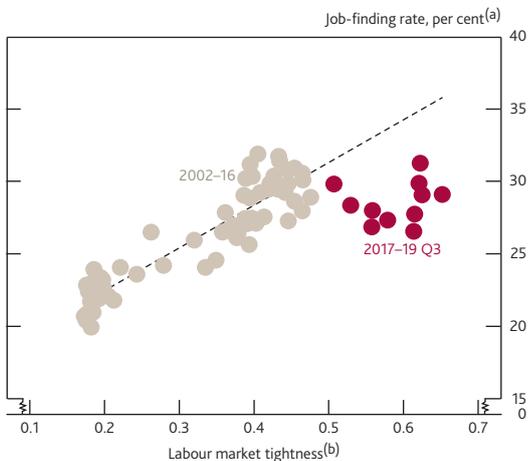


Sources: ONS and Bank calculations.
 (a) Two-quarter flows. Job-to-job flows are based on total employment of people aged 16–69. Flows between employment and unemployment are based on total employment and unemployment of people aged 16–64. Dashed lines are averages from 2002 to 2007.

...but unemployment has remained low because few people have been leaving employment.

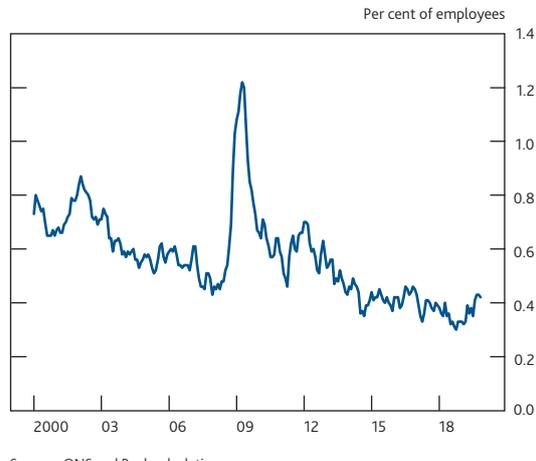
The low rate of unemployment over the past two years has been sustained by relatively few people leaving jobs, rather than large numbers starting jobs. The quarterly flow of workers moving from employment to unemployment — the job destruction rate — is close to a record low (bottom panel, **Chart 3.7**). This is partly the result of relatively few workers being made redundant. The redundancy rate hit a record low at the end of 2018, although it has picked up a little in recent months (**Chart 3.9**). The low redundancy rate is consistent with the labour market remaining tight, despite the recent softening in demand for new workers.

Chart 3.8 The job-finding rate has been low given the tightness of the labour market
 Job-finding rate and labour market tightness



Sources: ONS and Bank calculations.
 (a) The job-finding rate is the percentage of unemployed people that move into employment, as shown in **Chart 3.7**. It is a two-quarter flow based on total employment and unemployment of people aged 16–64.
 (b) Measured using the vacancies to unemployment ratio, as shown in **Chart 3.4**.

Chart 3.9 The redundancy rate has picked up in recent months, but remains close to its record low
 Redundancy rate



Sources: ONS and Bank calculations.

Overall, the flows suggest unemployment will remain low...

Although job switching and job finding are lower than we might expect, low job destruction suggests that a pickup in unemployment is not imminent. If the flows were to remain at their current levels, unemployment would also remain around its current rate.

...but they do show that churn has fallen, which could reflect caution on the part of firms and workers.

However, the flows do suggest some softening in the demand for new workers, corroborating the employment surveys and vacancy numbers. Lower labour market churn could reflect economic uncertainty discouraging firms from engaging in costly, hard-to-reverse recruitment. Uncertainty may also have encouraged labour hoarding, contributing to the low rate of job destruction (Section 4). Low churn could also reflect low confidence on behalf of workers, who might be reluctant to take risks when the outlook is weak. The proportion of households expecting unemployment to go up over the coming year has increased over the past two years (Chart 2.21), although measures of personal job security have been relatively resilient. Other factors may also have contributed to the fall in job-to-job flows, however. For example, the workforce has been ageing in recent years, and older workers tend to move jobs less frequently (Saunders (2018)).

Although the flows data do not point to an imminent increase in unemployment, there may be other implications of lower churn. Some studies have found job-to-job flows to be a useful predictor of pay growth (Moscarini and Postel-Vinay (2017)), in which case the recent fall may suggest pay growth will weaken. But Bank staff work suggests the unemployment rate — the traditional determinant of pay growth in macroeconomic models — is at least equally important for pay growth in the UK, and that has remained low.

Unemployment has remained low among groups that are most sensitive to a downturn...

The unemployment rate remained at 3.8% in the three months to November (Chart 2.1). Bank staff's estimate of the claimant count rate⁽²⁾ — a timelier indicator of unemployment — fell to a record low of 0.7% in December.

Youth unemployment tends to be more procyclical than total unemployment. This is because young people are often entering the labour market for the first time and are therefore dependent on firms' willingness to hire. Younger people in employment may also have more informal, less secure working arrangements. Although unemployment among 18–24 year olds drifted up slightly over 2019, it fell back in October and remains below the average over the past two years (Chart 3.10).

...and among groups that tend to lead total unemployment.

Certain types of unemployment tend to lead the total. The rate of short-term unemployment leads overall unemployment by around six months as it contains newly unemployed people. Short-term unemployment has picked up very slightly over the past few months, but remains well below average at 2.4% (Chart 3.11).

Chart 3.10 Youth unemployment is more procyclical, but has not picked up materially

Unemployment rates by age group

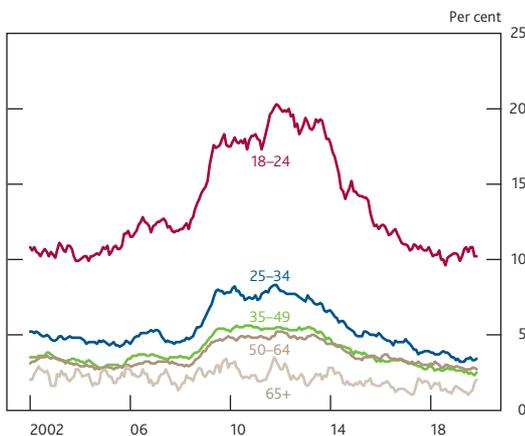
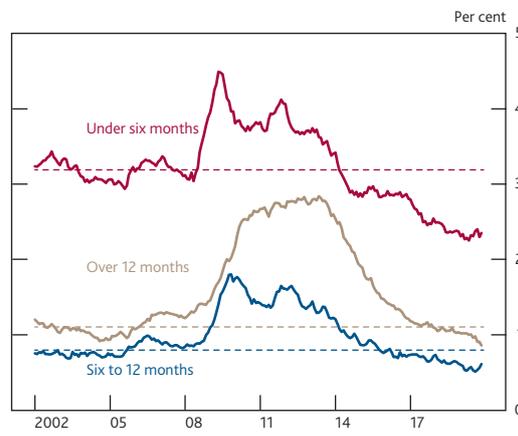


Chart 3.11 Short-term unemployment has picked up slightly over the past year, but remains low

Unemployment rates by duration^(a)



Sources: ONS and Bank calculations.

(a) The number of people unemployed in each category, divided by the economically active population. Dashed lines are averages from 2002 to 2007.

(2) Bank staff adjust the official claimant count figures to correct for statistical issues related to the rollout of Universal Credit.

3.3 What does the recent fall in pay growth signal?

Pay growth has fallen back slightly in recent months.

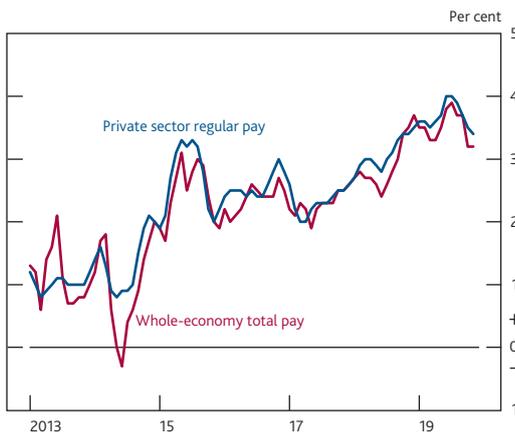
Pay growth has slowed in recent months. Private sector regular pay growth was 3.4% in the three months to November, down from a peak of 4.0% earlier in the year (Chart 3.12). Whole-economy total pay growth — a broader but more volatile measure of pay growth — was 3.2%, down from a peak of 3.9%. New experimental statistics from the ONS and HMRC using payroll data suggest the slowdown has been felt across almost all parts of the UK and across most of the pay distribution.

Slower pay growth might reflect weaker demand, but the decline is relatively small...

Pay pressures reflect the balance of supply and demand in the labour market. The decline in pay growth may therefore corroborate a fall in labour demand. However, the tick down in pay growth is small relative to the steady increases seen in recent years. Growth has averaged over 3½% on both measures over 2019, the highest annual averages since 2008. That strength reflects stronger pay growth for both workers moving jobs and workers staying in jobs: 2019 was the first year in which 'stayers' received an average pay increase of 4% since 2007 (Chart 3.13). That is consistent with the Agents' latest pay survey in which the ability to recruit and retain staff was cited as the largest upward pressure on settlements (Box 2).

Chart 3.12 Pay growth has slowed over the past few months, but is still higher than recent years

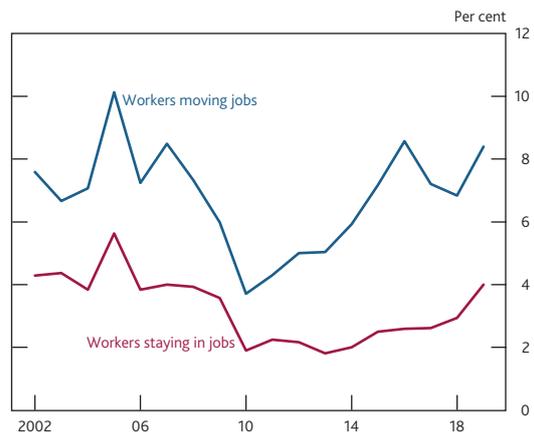
Measures of pay growth^(a)



(a) Three-month average growth on the same period a year earlier.

Chart 3.13 Pay growth picked up in the year to April 2019 for those staying in jobs as well as those moving jobs

Median annual growth rates of pay^(a)



Sources: Annual Survey of Hours and Earnings and Bank calculations.

(a) Median annual growth rate in April. Based on hourly gross earnings obtained by dividing gross pay in the reference week by total hours worked. Workers moving jobs are defined as workers in employment in consecutive years but in a different job.

...and pay growth was probably boosted in mid-2019 by temporary factors.

The slight slowdown in pay growth also reflects the impact of temporary factors unwinding. The official pay growth figures can be temporarily affected by the changing composition of the workforce. Employment has increased in higher paying occupations and industries over the past year. This boosted average pay growth in the first half of 2019 (Chart 3.14), but only does so as long as the compositional shift continues. Such effects have tended not to persist in the past, and the total positive impact had already begun to reduce in size in 2019 Q3. That has brought pay growth back into line with the prediction of a simple model using productivity, inflation expectations and a measure of slack in the economy, having been above the prediction in mid-2019.

3.4 What are the implications for the MPC's forecast?

The softening in labour demand is consistent with developments elsewhere in the economy.

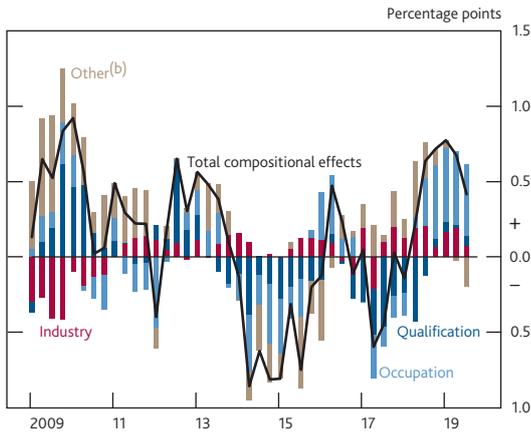
The softening in labour demand appears to be consistent with the wider slowdown in the UK economy over the past year. The slowing in employment growth over 2019 is about the right size to bring the levels of output and employment into line with their usual long-run relationship, given assumptions about trend productivity. That, along with the rest of the analysis in this section, suggests developments in the labour market are not signalling that a prolonged slowdown is imminent.

The unemployment rate is projected to fall a little further.

In the MPC’s central projection, GDP growth recovers over the forecast period and unemployment falls a little further (Chart 3.15) (Section 1). Pay growth falls slightly over the coming year, partly reflecting the continuing unwind of temporary factors. However, it picks up over the latter part of the forecast period as unemployment falls a little further below its equilibrium rate and productivity growth rises. Section 1 sets out the risks around these projections.

Chart 3.14 Compositional effects have pushed up pay growth

Estimates of the contribution of employment characteristics to four-quarter pay growth^(a)

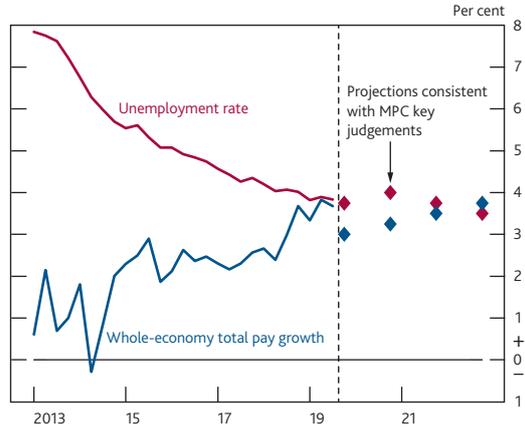


Sources: Labour Force Survey and Bank calculations.

- (a) Estimates are shown relative to their averages over 1995–2010. The effect of individual and job characteristics are derived from a regression of these characteristics on levels of pay. The total compositional effect is obtained by combining these estimates with changes in the composition of the labour force.
- (b) Other includes age, tenure, gender, region of residence, whether full-time or part-time, in permanent or temporary employment, and in public or private sector employment.

Chart 3.15 Unemployment falls a little further in the MPC’s central projection

Unemployment rate and four-quarter pay growth^(a)



Sources: ONS and Bank calculations.

- (a) See Table 1.C for more information about the indicative projections consistent with the MPC’s forecast.

4 In focus Supply and spare capacity

Against a backdrop of subdued CPI inflation, the MPC judges that there is a margin of excess supply in the economy. Potential supply growth has been weak since the financial crisis and is judged to have fallen over the past year, partly reflecting Brexit-related factors. It is projected to remain subdued, such that spare capacity is eroded as demand growth recovers and excess demand builds in the latter part of the forecast period.

Growth in the economy's potential supply capacity determines the pace at which output can rise without generating excess inflationary pressure. Supply capacity is largely unaffected by monetary policy and is determined by structural factors such as technological progress, the size and skills of the labour force, the quantity and quality of capital and the degree of openness of the economy.

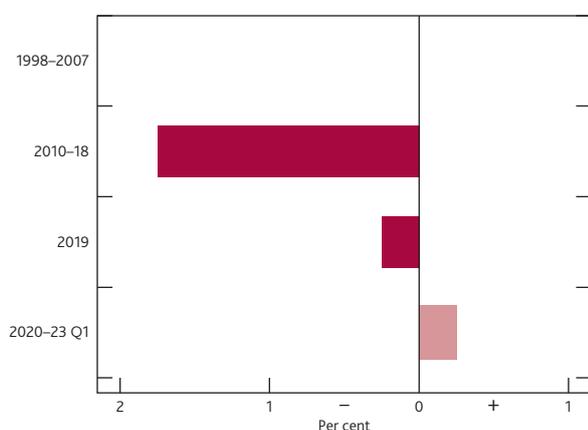
The difference between actual GDP and potential supply is the degree of spare capacity. This matters for monetary policy because it affects inflationary pressure. Spare capacity can be within the labour market, if people are out of work for example, or within companies. If GDP exceeds potential supply, there is excess demand in the economy and that puts upward pressure on inflation relative to the 2% target. If GDP is below potential supply, there is excess supply and firms might want to boost demand for their goods and services by slowing the pace of price rises.

To evaluate potential supply growth and the amount of spare capacity, the MPC conducts an annual assessment of supply-side conditions, set out in this *In focus*. Since the previous assessment, quarterly GDP growth has slowed. It is estimated to have averaged just 0.2% in 2019, slightly lower than the MPC's projections one year ago. Productivity growth has also weakened, and some measures of domestic price pressures have been subdued.

Against that backdrop, the MPC judged that there had been a slightly greater degree of spare capacity over the past few years than it had previously thought. There was a margin of excess supply in 2019 (Chart 4.1) which is currently judged to be around ½% of potential GDP (Section 4.1). While the economy is judged to have a margin of spare capacity at present, it is not thought to have widened as much as the slowing in GDP growth alone would have suggested, as potential supply growth is judged to have slowed as well. Potential supply is expected to continue to grow at a subdued pace over the forecast period (Table 4.A and Section 4.2) and by less than expected one year ago. Demand growth is projected to recover, so that spare capacity is eroded and excess demand builds (Section 1).

Chart 4.1 Output was estimated to be below potential supply in 2019

Difference between output and estimated potential supply^(a)



(a) Average per cent of potential GDP. A negative figure implies output is below potential — ie there is excess supply — and a positive figure that it is above — ie there is excess demand. Shaded bar is the MPC's forecast. For further information on MPC projections, see Table 1.A.

Table 4.A Potential supply growth has slowed and is expected to remain subdued

Decomposition of estimated potential supply growth^(a)

	Quarterly averages			
	1998–2007	2010–18	2019	2020–23 Q1
Annual potential supply growth (per cent)	2.9	1.6	1.1	1.1
of which, potential labour supply growth	0.7	1.1	0.7	0.5
of which, population	0.7	0.7	0.5	0.6
of which, participation	0.1	0.1	0.1	0.0
of which, unemployment ^(b)	0.2	0.2	0.1	0.0
of which, average hours	-0.3	0.2	-0.1	-0.1
of which, potential productivity growth ^(c)	2.2	0.4	0.4	0.5
of which, capital deepening ^(d)	0.7	0.0	0.3	0.4
of which, total factor productivity ^(e)	1.6	0.5	0.0	0.1

Sources: ONS and Bank calculations.

(a) Average percentage point contributions to annual growth unless otherwise specified. Contributions may not sum to the total due to rounding.

(b) Positive numbers indicate that a fall in the equilibrium unemployment rate has increased potential labour supply.

(c) Based on a growth-accounting framework using a constant returns to scale Cobb-Douglas production function, with total output to capital elasticity of ⅓.

(d) Capital deepening refers to growth in capital services per person-hour.

(e) Total factor productivity growth refers to improvements in the efficiency with which both capital and labour are used to produce output. Calculated as a residual.

4.1 The amount of spare capacity in the economy

The MPC judges that there is a margin of spare capacity in the economy...

The MPC uses a range of approaches to estimate potential supply and spare capacity. ‘Top-down’ approaches look at the evolution of output as well as indicators of the balance between demand and supply, such as what is happening to prices.

One specific top-down approach is to use statistical filtering techniques. These estimate spare capacity using past observations of output, taking into account indicators of labour market and price developments, for example. Those statistical filters separate actual output into a trend component and a cyclical component. The trend is often interpreted as the measure of the economy’s potential supply capacity and the difference between that and actual output is the margin of slack (see [Kuttner \(1994\)](#) for an example of this type of model).

One important input to the MPC’s potential supply assessment is a statistical filter that uses well-established macroeconomic relationships between GDP, unemployment and domestic inflation ([Melolinna and Tóth \(2016\)](#)). For example, if output growth was weak and there was high unemployment and low inflation, the filter would be likely to signal that there is spare capacity in the economy. This model suggests that there is a degree of spare capacity in the economy — currently around ½% of GDP.

Bank staff have also developed other filters, such as one that uses a broader range of labour market variables including the participation rate and hours worked (see [Fleischman and Roberts \(2011\)](#) for a similar model). This model also suggests that there is spare capacity, although the amount is a little smaller.

An important feature of these models is that potential supply growth is assumed to be less volatile than output growth, consistent with a view that structural changes to the economy tend to happen slowly. That means that when GDP growth slows quickly, the models tend to interpret that as being driven mainly by demand rather than potential supply. Some shocks could affect potential supply growth relatively rapidly, however, and a filter might struggle to pick those changes up. At present, for example, the UK’s potential supply capacity might have been affected by Brexit-related factors.

...and that margin has been wider over the past few years than previously thought.

More generally, over the past year, CPI inflation has fallen and price-based measures of domestically generated inflation have been subdued (Section 2). Core inflation has recently been somewhat weaker than the MPC expected. That has occurred despite the firm growth of wages and labour costs. While some of the relative weakness in inflation could reflect weakness in non-labour costs or developments in the retail sector (Section 2), the MPC judges that it also signals that spare capacity in the economy has been a little greater over the past few years than previously thought. Actual output is currently judged to be ½% lower than potential GDP.

The MPC also uses a ‘bottom-up’ approach to determine where spare capacity is located, separately considering the amount of spare capacity in the labour market and the amount within firms. As set out below, the evidence suggests that, given the tightness of the labour market, spare capacity is located within companies.

Spare capacity in the labour market

There are few signs of spare capacity in the labour market.

There are various places in which spare capacity within the labour market can be located. People active in the labour market but currently without jobs — summarised by the unemployment rate — could find work. People not active in the labour market currently could enter it, raising the participation rate. Or people already in work could increase their hours — indicated by movements in average hours worked. The MPC judges that across all of these components, there are few signs of spare capacity.

Unemployment remains below the MPC’s estimate of its equilibrium rate...

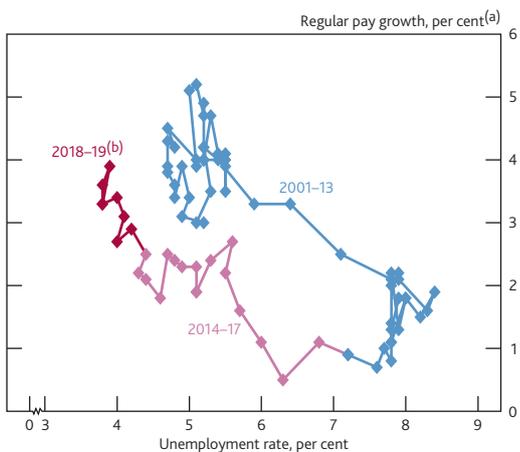
In February 2019, the MPC judged that the long-term equilibrium rate of unemployment was around 4¼%, similar to its assessment in 2018. That equilibrium rate is determined by the structural characteristics of the labour market such as the tax and benefit system, and the efficiency with which the skills of workers can be matched with the skills that companies are seeking.

One indication that the equilibrium unemployment rate has remained around 4¼% since then is the increased pace of wage growth as the unemployment rate has fallen (Chart 4.2). When unemployment falls below equilibrium it is likely to exert increased upward pressure on pay growth as companies need to pay more to recruit and retain staff with suitable skills. Private sector regular pay growth increased from around 3% over 2018 to a high of 4% in July 2019, although it has fallen back slightly in recent months (Section 3). A statistical filtering technique which assumes a linear relationship between unemployment and wage growth, as in a standard wage Phillips curve,⁽¹⁾ suggests that unemployment is below its equilibrium rate.

Another indicator of the equilibrium rate is the flows into and out of unemployment. Those flows are partly determined by the structural features of the economy. For example, the flow out of unemployment into employment — the job-finding rate — reflects in part the efficiency with which people are matched to new jobs, and could increase due to technological progress, increased educational attainment or improved skills in the workforce (Elsby, Michaels and Ratner (2015)). The job destruction rate — the flow of people out of employment into unemployment — can be affected by factors such as the flexibility of employment contracts. If the job-finding rate improves or the job destruction rate falls due to such structural factors, then the equilibrium unemployment rate would be expected to fall.

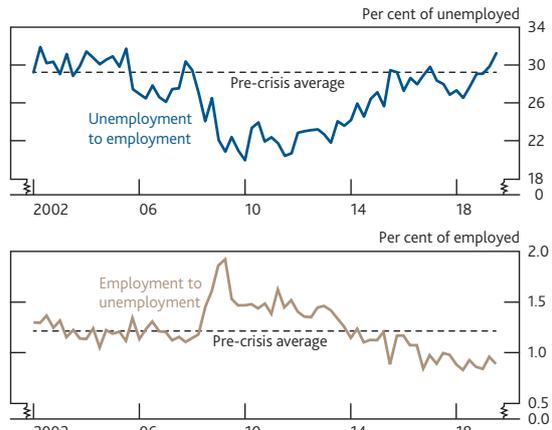
Over the past year, the job-finding rate has risen and the job destruction rate has remained low (Chart 4.3). If those rates were to persist, unemployment would settle at a rate lower than 4¼%. But those rates are likely to reflect in part strong labour demand rather than structural factors. Despite the slowing in GDP growth and some signs of softening demand for labour, the labour market remains very tight (Section 3).

Chart 4.2 Wage growth has picked up as the unemployment rate has fallen
Wage Phillips curve: wage growth and unemployment



(a) Whole-economy regular pay. Three-month average growth on the same period a year earlier.
(b) Diamond for 2019 Q4 shows Bank staff’s projections, based on data to November.

Chart 4.3 The job-finding rate has risen while the job destruction rate has remained low
Flows between employment and unemployment^(a)



Sources: ONS and Bank calculations.

(a) Two-quarter flows. Flows between employment and unemployment are based on total employment and unemployment of people aged 16–64. Dashed lines are averages from 2002 to 2007.

The MPC judges that the long-term equilibrium unemployment rate has remained at around 4¼%. Unemployment is projected to remain below its equilibrium rate over the forecast period, which is expected to exert continued upward pressure on wage growth. But the extent of upward pressure may be reduced by the composition of unemployment. Recently, the number of people who have been unemployed for more than six months has fallen (Chart 3.11). Those people in longer-term unemployment tend to put less upward pressure on wages and inflation, as they tend to be less likely to find a job than those who have been out of work for shorter periods of time (Gordon (2013)). So wage growth is likely to be boosted less by a reduction in unemployment driven by lower long-term unemployment than short-term unemployment.

...and spare capacity appears to have been largely absorbed elsewhere in the labour market.

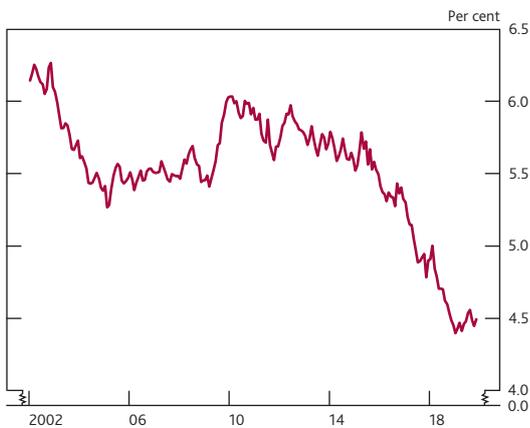
Other indicators of labour market slack also suggest little spare capacity. The participation rate remains high, at 64.1%, as the proportion of people who want to work has increased within certain demographic groups in recent

(1) For more details, see Berry, S, Corder, M, Duffy, C, Hackworth, C and Speigner, B (2015), 'Trends in UK labour supply', *Bank of England Quarterly Bulletin*, 2015 Q4.

years. For example, rises in the state pension age, as well as improved health and longevity, have raised the participation rates of older workers (Saunders (2018)). Female participation rates have also risen in recent years. The 'marginal attachment ratio' — the proportion of the working-age population who are not currently in work or seeking employment but report that they would like a job — has stabilised during 2019 at a historically low level (Chart 4.4). That suggests that the scope for more people to enter the labour market is limited.

The average number of hours worked per person has been stable over the past year, according to official data. The number of hours that people say they would like to work, over and above those they are currently working, has also been close to zero in recent quarters (Chart 4.5). That suggests that average hours are around their 'desired' or equilibrium level.

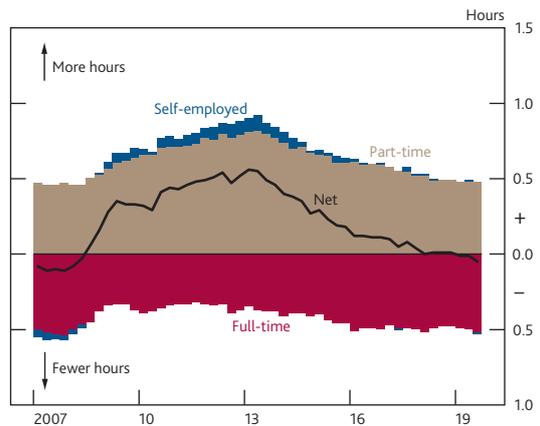
Chart 4.4 The proportion of people not currently looking for work, but who would like a job, has been stable over 2019 at a low level
Marginal attachment ratio^(a)



Sources: ONS and Bank calculations.

(a) Number of those aged 16–64 who say they are not in work or not actively looking for work but would like a job, as a percentage of the 16–64 population.

Chart 4.5 People no longer wish to work longer hours, on average
Net additional desired hours^(a)



Sources: Labour Force Survey and Bank calculations.

(a) Number of net additional hours that the currently employed report they would like to work, on average, per week.

Spare capacity within companies

Productivity growth has been weak since the crisis and has slowed further in recent years.

Within companies, spare capacity reflects the extent to which output produced by each employee is below its potential level. In other words, the extent to which companies' capital equipment, such as vehicles or computers, is being underutilised. Spare capacity within companies will mean that labour productivity is below its potential level.

Labour productivity growth has been persistently weak since the financial crisis, and has been generally lower than the MPC's forecasts. Over the past couple of years, it has slowed further. It is expected to have been below zero on both an output per-head and per-hour basis in the year to 2019 Q4 (Chart 4.6), weaker than expected a year ago.

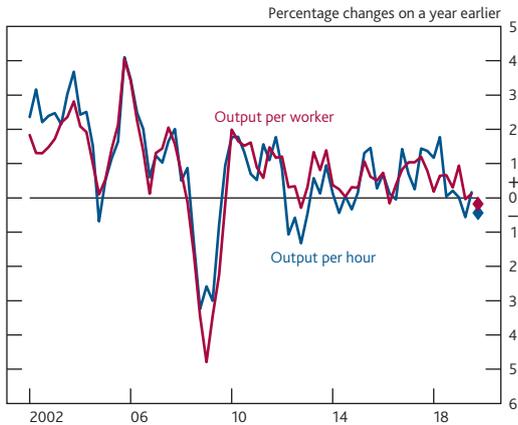
Some of the weakness is likely to reflect spare capacity...

The MPC judges that some of the recent weakness in productivity growth is likely to be cyclical, reflecting the emergence of spare capacity within companies. That is consistent with results from survey measures of capacity utilisation, some of which have fallen sharply over 2019 to below average (Chart 4.7). In addition, reports from the Bank's Agents suggest some firms have hoarded labour in case the slowdown in output growth is temporary.

As well as slowing domestic demand growth (Section 2), the cyclical slowing in productivity growth might reflect global factors. Increased trade protectionism and the associated rise in uncertainty have contributed to a weakening in global demand growth. That is likely to have weighed on productivity growth, particularly in the highly traded manufacturing sector. Productivity growth in manufacturing has slowed in all G7 countries (Chart 4.8), especially in some euro-area countries with which the UK has close supply-chain links.

Chart 4.6 Productivity growth is expected to be below zero in the year to 2019 Q4

Measures of labour productivity^(a)

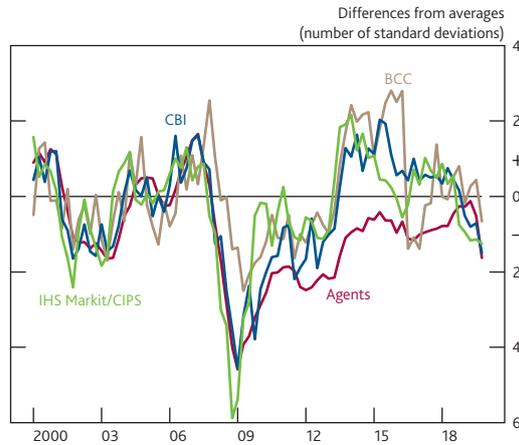


Sources: ONS and Bank calculations.

(a) Output is based on the backcast for the final estimate of GDP. Diamonds show Bank staff's projections for 2019 Q4, based on data to November.

Chart 4.7 Survey measures of capacity utilisation have fallen over 2019

Survey indicators of capacity utilisation^(a)



Sources: Bank of England, BCC, CBI, CBI/PwC, IHS Markit/CIPS, ONS and Bank calculations.

(a) Differences from averages between 2000 and 2007. Measures are from the Bank's Agents, the BCC (non-services and services), the CBI (manufacturing — capacity; financial services, business/consumer/professional services and distributive trade — business relative to normal) and IHS Markit/CIPS (manufacturing — backlogs; services — outstanding business). Sectors are weighted using shares in gross value added. The BCC data are not seasonally adjusted.

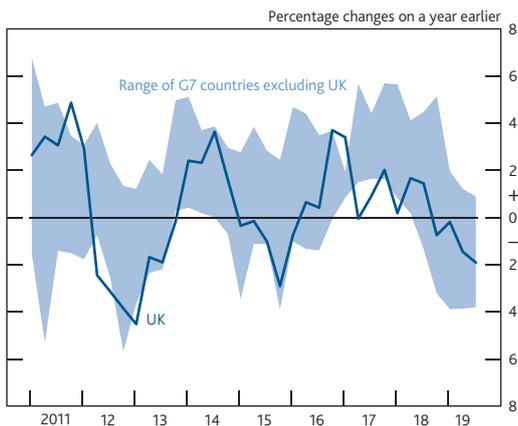
...but some of the weakness is likely to reflect structural factors.

Some of the recent weakness in productivity growth is likely to reflect structural factors, rather than weaker demand. In other words, underlying productivity growth has slowed.

While changes in the pace of underlying productivity growth tend to emerge slowly, one factor that may have affected it more rapidly is Brexit. Evidence from the Decision Maker Panel (DMP) Survey suggests that Brexit may have reduced the level of actual UK productivity by as much as 2% since mid-2016.⁽²⁾

Chart 4.8 Productivity growth in the manufacturing sector has fallen in the G7 economies

Manufacturing sector hourly labour productivity in the G7 countries^(a)

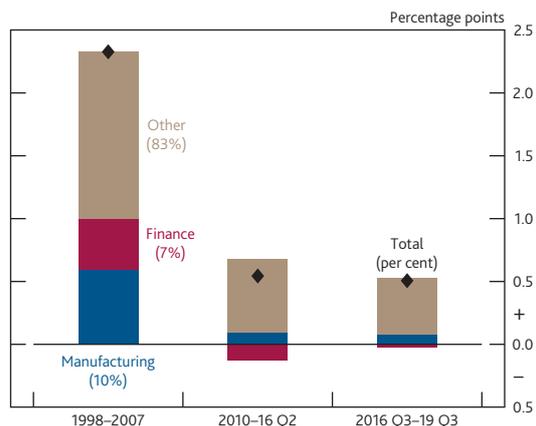


Sources: Eikon from Refinitiv, Eurostat, OECD, ONS and Bank calculations.

(a) Manufacturing productivity is calculated as gross value added divided by hours worked.

Chart 4.9 Productivity growth has been weak in manufacturing and finance

Contributions to hourly labour productivity growth^(a)



Sources: ONS and Bank calculations.

(a) Sectoral output per hour is calculated as gross value added (GVA) divided by hours worked. Figures in parentheses are weights in GVA. Other is calculated as a residual and includes other sectors and allocation effects.

One way Brexit is likely to have weighed on productivity growth is through heightened uncertainty. Heightened uncertainty has weighed heavily on business investment, as it has incentivised firms to delay spending until they have more clarity around the future trading relationship between the UK and the EU (Section 4, *November Report*). That has caused capital per worker to grow more slowly, lowering labour productivity growth.

(2) The research gives a range of 2%–5%. The estimate of 2% is calculated by weighting the results for each firm by its size, whereas 5% gives all firms equal weight. For this reason, the aggregate effect on UK productivity is likely to be closer to 2%. For more details, see Bloom *et al* (2019).

Another way Brexit is likely to have weighed on productivity growth is through the time and effort spent preparing for Brexit to help ensure a smooth transition. Companies in the DMP have reported spending money — a little above 1% of gross value added, on average — on Brexit planning, which might otherwise have been invested in other activities. Companies also reported that they were spending senior management time on Brexit planning. That could have diverted time away from other productive activities.

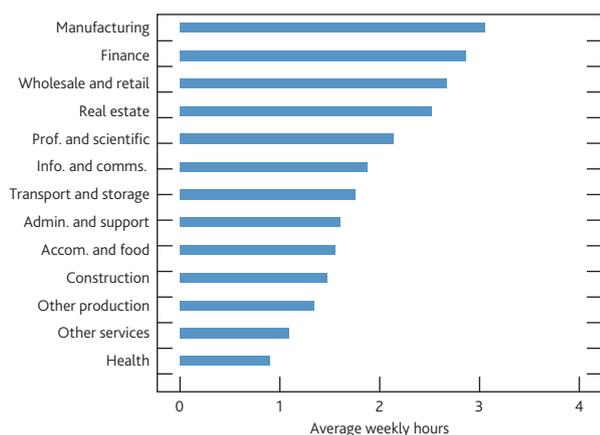
Looking across sectors, the time and money spent on planning for Brexit has been correlated with weaker productivity growth. Since the referendum, productivity growth in the manufacturing and finance sectors has remained weak (Chart 4.9), and these sectors have also spent the most time on Brexit planning (Chart 4.10).

Based on data from the DMP, Bank staff estimate that the time and resources spent on Brexit planning have reduced productivity growth since the referendum, with the largest impact in 2019 (Chart 4.11). Consistent with that, a decomposition of productivity growth derived from a structural economic model suggests that negative supply shocks have dragged on productivity growth over the past few years.

Four-quarter underlying productivity growth is judged to have slowed to around $\frac{1}{3}\%$ at the end of 2019, from around 1% two years ago, reflecting in part the impact of Brexit-related factors.

Chart 4.10 The manufacturing and finance sectors have spent the most time planning for Brexit

CFO time spent on Brexit planning by sector^(a)

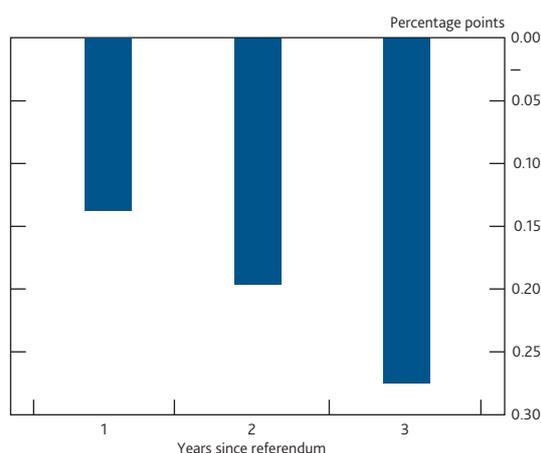


Sources: DMP Survey and Bank calculations.

(a) Question: 'On average, how many hours a week is the CFO of your business spending on preparing for Brexit at the moment?'. Respondents are asked to choose between 'None', 'Up to 1 hour', '1 to 5 hours', '6 to 10 hours', 'More than 10 hours' and 'Don't know'. Responses collected between August and October 2019. Point estimates are constructed by using values of 0, 0.5, 3, 8 and 15 for the respective categories.

Chart 4.11 Brexit planning has increasingly weighed on productivity growth since the referendum

Impact of Brexit planning on labour productivity growth^(a)



Sources: Bureau van Dijk, DMP Survey and Bank calculations.

(a) Bank staff estimates based on DMP Survey responses and company accounts data. Brexit planning comprises time (CFO and CEO hours) and resources spent planning for Brexit. Unweighted regression based estimates are scaled to be consistent with aggregate effects estimated by Bloom *et al.* (2019).

4.2 The outlook for potential supply growth

The supply capacity of the economy depends on the amount of available labour — potential labour supply — and how productively that can be put to use.

Underlying productivity growth is expected to remain weak...

Productivity growth is estimated to have averaged around $\frac{1}{2}\%$ per year since the financial crisis, compared with $2\frac{1}{4}\%$ in the previous decade. The MPC judges that it is unlikely to recover substantially over the forecast period, given how persistently weak it has been in the past.

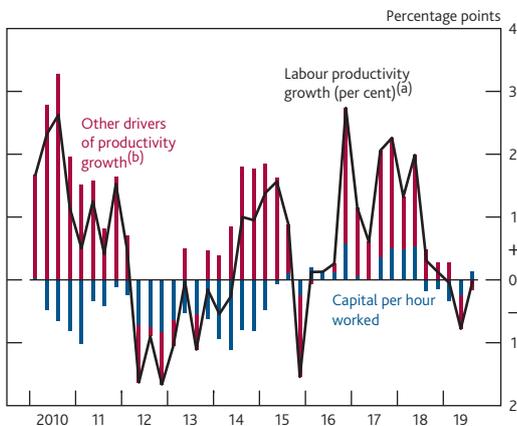
Brexit will continue to weigh on productivity growth over the forecast period. The MPC's forecasts assume that there is an immediate but orderly move to new trading arrangements with the EU on 1 January 2021. That is expected to increase trade barriers which weigh on productivity growth, given its well-established relationship with openness (see Box 1, *November Report*). There are risks around the extent of the drag that higher trade barriers exert on productivity growth, however.

Nonetheless, productivity growth is expected to recover somewhat. The impact of Brexit planning on growth fades, as companies are expected to spend a similar amount of time and money as they have recently. Business investment growth is expected to pick up as Brexit-related uncertainty falls back. That supports a slight pickup in capital deepening — the amount of capital available per hour worked — which has weighed on productivity growth over the past year (Chart 4.12).

The recovery is supported by a pickup in the growth of total factor productivity — the efficiency with which capital and labour are used to produce output. Investment in intangibles — assets which are not physical in nature such as software — has been found to be a key driver of innovation and productivity growth. This is particularly the case for research and development (R&D) expenditure, which has been steadily rising for many years (Chart 4.13), with evidence suggesting it provides a boost to productivity growth after two to six years, on average.⁽³⁾ More generally, improved capital stock estimates from the ONS implemented in *Blue Book 2019* show that the share of intangibles in total capital is higher than previously thought, and has been rising in recent years.

Chart 4.12 Capital deepening has weighed on productivity growth since the crisis, on average

Contributions to four-quarter growth in hourly labour productivity

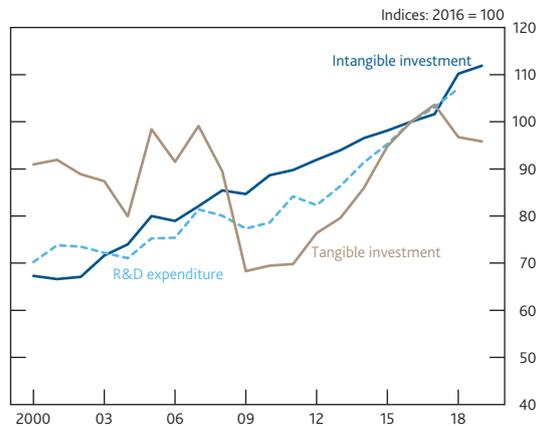


Sources: ONS and Bank calculations.

- (a) Market sector output per hour.
- (b) Calculated as a residual.

Chart 4.13 Research and development expenditure has increased

Expenditure on tangible and intangible investment and research and development^(a)



Sources: ONS and Bank calculations.

- (a) Annual averages. Data for R&D expenditure are to 2018. Data for tangible and intangible investment are to 2019 Q3. 2019 Q4 is assumed to be equal to an average of Q1–Q3.

...while potential labour supply growth is modest.

Potential labour supply growth is modest over the forecast period, and is driven by population growth (Table 4.A). The MPC’s forecast is conditioned on the ONS’s principal population projection, published in October 2019. That implies that the working-age population will continue to grow at a similar pace to recent years.

Potential labour supply grows at a somewhat slower pace compared to recent years. That is in part because the equilibrium unemployment rate is not projected to decline as it is estimated to have done in the 2015–19 period. It also reflects the trend participation rate flattening off at around 64%, having been rising in recent years. That is the net result of two offsetting factors: the ageing of the population, which will tend to pull down on participation rates; and increases in participation within older age groups. Desired average hours continue to fall, as they have done recently.

Taken together, potential supply growth is projected to remain subdued, and weaker than expected a year ago.

The MPC judges that potential supply growth will remain subdued over the forecast period, at around 1% on average. It initially falls a little from its current rate of around 1%, before rising to around 1½% in 2023 Q1.

The projection for potential supply growth is weaker than the MPC expected one year ago. In part, that reflects the weakness of productivity growth over the past year, which extends the pattern seen since the financial crisis. Brexit-related factors are also expected to have a larger effect over the forecast period (Section 1).

Weaker potential supply growth reduces the pace of GDP growth that is consistent with the MPC meeting its 2% inflation target — it acts as a ‘speed limit’ on the economy.

(3) For further details, see Hall, B, Mairesse, J and Mohnen, P (2010), ‘Measuring the returns to R&D’, *Handbook of the Economics of Innovation*.

Annex

Other forecasters' expectations

This annex reports the results of the Bank's most recent survey of external forecasters. The results of this survey are summarised in **Table 1**.⁽¹⁾

On average, respondents expected four-quarter GDP growth to be broadly constant at between 1½% and 1¾% over the next three years (**Chart A**). External forecasters' projections are higher on average than the MPC's central projection at the one-year horizon, but lower three years ahead.

Table 1 Averages of other forecasters' central projections

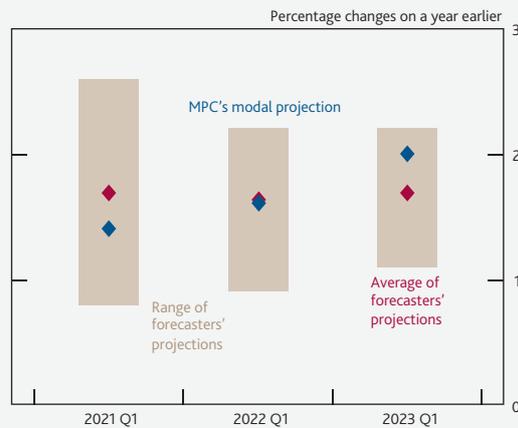
	2021 Q1	2022 Q1	2023 Q1
GDP growth ^(a)	1.7	1.6	1.7
CPI inflation ^(b)	1.8	1.9	2.0
LFS unemployment rate (per cent)	4.0	4.1	4.1
Bank Rate (per cent)	0.8	0.9	1.3
Stock of purchased gilts (£ billions) ^(c)	435	435	435
Stock of purchased corporate bonds (£ billions) ^(c)	10	10	10
Sterling ERI ^(d)	81.6	82.3	82.1

Source: Projections of outside forecasters as of 17 January 2020.

- (a) Four-quarter percentage change.
 (b) Twelve-month rate.
 (c) Original purchase value. Purchased via the creation of central bank reserves.
 (d) Index: January 2005 = 100.

Chart A On average, forecasters' central projections for GDP growth are a little below the MPC's in the medium term

Projections for GDP



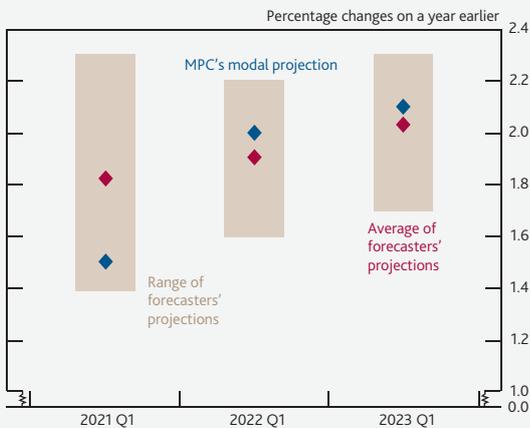
Source: Projections of outside forecasters as of 17 January 2020.

On average, external forecasters expect inflation to return gradually towards the target over the forecast period, reaching 2% at the three-year horizon (**Chart B**).

External forecasters' projections for Bank Rate were higher on average than the market-implied path upon which the MPC's projections are conditioned. Those external projections two and three years ahead have fallen slightly since November, such that the difference between them and the market-implied path has narrowed somewhat (**Chart C**).

Chart B Forecasters project inflation to return gradually to the MPC's target

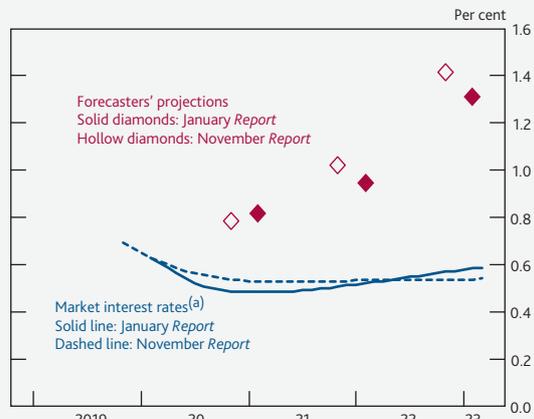
Projections for CPI inflation



Source: Projections of outside forecasters as of 17 January 2020.

Chart C Forecasters' average central projection for Bank Rate remains well above market interest rates

Market interest rates and averages of forecasters' central projections for Bank Rate



Sources: Bloomberg Finance L.P. and projections of outside forecasters as of 17 January 2020 and 25 October 2019.

- (a) Estimated using instantaneous forward overnight index swap rates in the 15 working days to 22 January 2020 and 30 October 2019 respectively.

(1) For detailed distributions, see 'Other forecasters' expectations'.

Glossary and other information

Glossary of selected data and instruments

AWE – average weekly earnings.
CPI – consumer prices index.
CPI inflation – inflation measured by the consumer prices index.
DMP – Decision Maker Panel.
ERI – exchange rate index.
GDP – gross domestic product.
HICP – harmonised index of consumer prices.
LFS – Labour Force Survey.
PMI – purchasing managers' index.
RPI – retail prices index.
RPI inflation – inflation measured by the retail prices index.

Abbreviations

BCC – British Chambers of Commerce.
CBI – Confederation of British Industry.
CEO – chief executive officer.
CFO – chief financial officer.
CIPS – Chartered Institute of Purchasing and Supply.
EC – European Commission.
ECB – European Central Bank.
EME – emerging market economy.
EU – European Union.
FTA – free trade agreement.
FTSE – Financial Times Stock Exchange.
G7 – Canada, France, Germany, Italy, Japan, the United Kingdom and the United States.
GfK – Gesellschaft für Konsumforschung, Great Britain Ltd.
GVA – gross value added.
HMRC – Her Majesty's Revenue and Customs.
ICE/BoAML – Intercontinental Exchange/Bank of America Merrill Lynch.
IMF – International Monetary Fund.
LTV – loan to value.
MPC – Monetary Policy Committee.

MSCI – Morgan Stanley Capital International Inc.
MTIC – missing trader intra-community.
OECD – Organisation for Economic Co-operation and Development.
Ofgem – Office of Gas and Electricity Markets.
Ofwat – Water Services Regulation Authority.
ONS – Office for National Statistics.
OPEC – Organization of the Petroleum Exporting Countries.
PNFC – private non-financial corporation.
PPP – purchasing power parity.
PwC – PricewaterhouseCoopers.
R&D – research and development.
REC – Recruitment and Employment Confederation.
RICS – Royal Institution of Chartered Surveyors.
S&P – Standard and Poor's.
TFP – total factor productivity.
TLC – total labour cost.
VAT – Value Added Tax.
WEO – IMF *World Economic Outlook*.

Symbols and conventions

Except where otherwise stated, the source of the data used in charts and tables is the Bank of England or the Office for National Statistics (ONS) and all data, apart from financial markets data and results from the Decision Maker Panel (DMP) Survey, are seasonally adjusted.

n.a. = not available.

Because of rounding, the sum of the separate items may sometimes differ from the total shown.

On the horizontal axes of graphs, larger ticks denote the first observation within the relevant period, eg data for the first quarter of the year.