



# The economic outlook

Section 1 of the Monetary Policy Report - November 2019

Published on 7 November 2019

Underlying UK GDP growth slowed materially in 2019 as weaker global growth and Brexit-related uncertainties weighed on spending. Weaker world growth has been partly driven by trade protectionism and an associated rise in global uncertainty. The MPC judges that UK growth has slowed to below-potential rates. As a result, the economy now has a modest amount of slack, which persists in the first part of the forecast.

In October, the UK and EU agreed a Withdrawal Agreement and Political Declaration, the UK House of Commons approved the second reading of the Bill that translates the agreement into law, and the UK and EU agreed a flexible extension of Article 50. Sterling has appreciated markedly as the perceived probability of a no-deal Brexit has reduced. These developments are also likely to remove some of the uncertainty that has been facing businesses and households.

Reflecting government policy, the MPC's projections are now conditioned on the assumption that the UK moves to a deep free trade agreement with the EU. They are also conditioned on the current market path for interest rates, which projects that Bank Rate will be below its current level over the forecast period. Under those assumptions, UK demand is projected to recover and to grow faster than the subdued pace of supply growth. This recovery reflects the assumed reduction in the uncertainty facing businesses and households, more supportive fiscal policy and a gradual pickup in global growth. As a result, excess demand and domestic price pressures build gradually. CPI inflation declines further below 2% in the near term because of falls in energy prices and water bills, but rises to the target in the second year, and slightly above it towards the end of the forecast period.

## 1.1 Recent developments

### **Underlying UK GDP growth has slowed materially over the past year.**

While UK GDP growth has been volatile this year because of Brexit-related factors, underlying activity has weakened ([Section 2](#)). Quarterly growth over 2019 as a whole is expected to have averaged only 0.2%, roughly half the average in the previous three years and below the MPC's assessment of the economy's potential rate of growth.

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

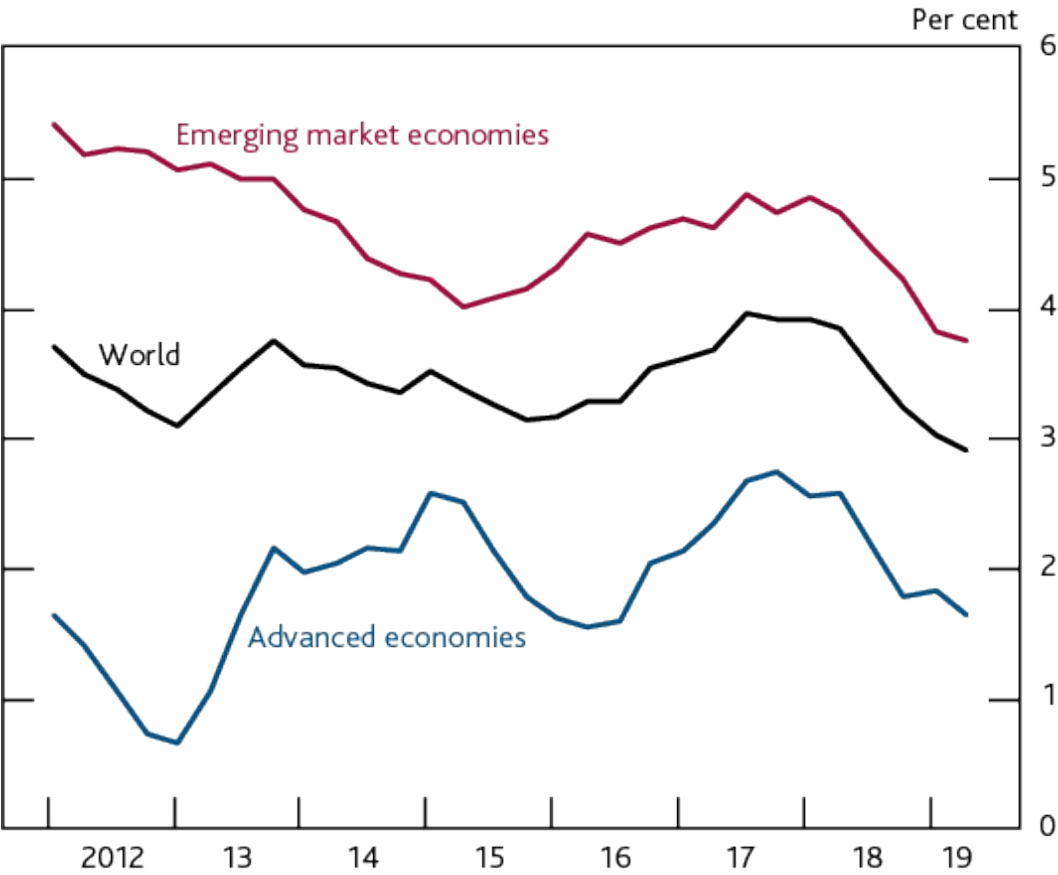
Subdued underlying UK GDP growth partly reflects the impact of weaker global growth. The world economy has experienced a marked, broad-based slowdown (Chart 1.1), and is now expanding at its slowest pace since 2009. The principal drivers of the slowdown are the rise in trade protectionism ([Section 3](#)), the impact of the past tightening in global financial conditions and domestic weakness in some large emerging market economies. Weak world activity has reduced demand for UK exports. Greater protectionism has increased global uncertainty, which is dampening investment spending in many countries, including the UK.

### **...and importantly by increasingly entrenched Brexit-related uncertainties.**

UK spending has been materially dampened by increased uncertainties related to the Brexit process. In particular, the proportion of companies that report high uncertainty about Brexit has been elevated (Chart 1.2), and businesses on average expect Brexit to have a negative effect on their sales ([Section 4](#)). Those factors are likely to have weighed on business investment, which — unusually during an expansion — has fallen in five out of the past six quarters. Consumer spending has been more resilient to the uncertainties around Brexit, although these appear to have weighed on some discretionary spending and housing. While household spending has been underpinned by strong

real income growth, consumption growth has weakened somewhat and the household saving rate has drifted up over the past couple of years, despite the strong labour market.

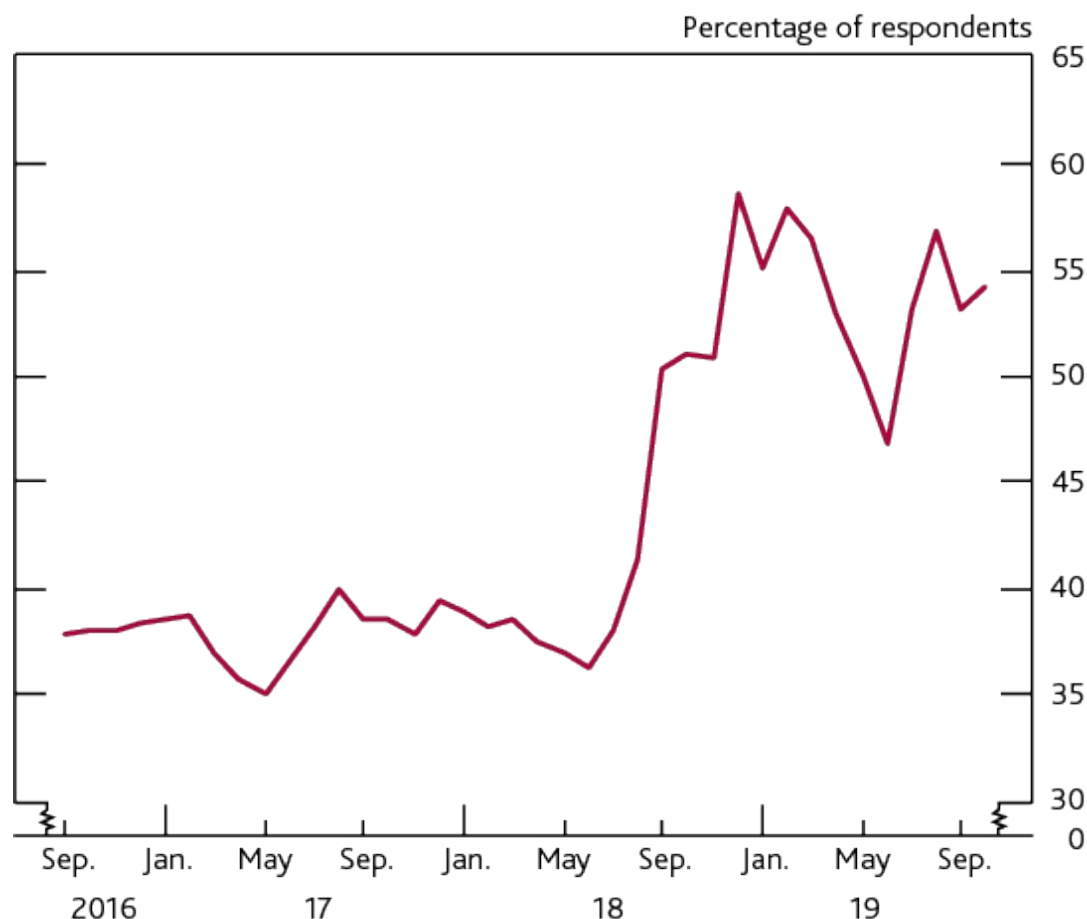
**Chart 1.1 Global growth has slowed sharply**  
**Four-quarter PPP-weighted GDP growth (a)**



Sources: Eikon from Refinitiv, IMF World Economic Outlook (WEO) and Bank calculations.

(a) 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.

**Chart 1.2 Uncertainty about Brexit has been elevated**  
**Brexit in top three current sources of uncertainty (a)**



Sources: Decision Maker Panel (DMP) Survey 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.

### **A small margin of excess supply is judged to have emerged since the turn of the year.**

The slowing in underlying GDP growth to below the MPC's estimate of potential growth has led to a margin of slack opening up in the UK economy. The degree of spare capacity in the economy is judged to be modest, however.

### **CPI inflation has been close to the 2% target.**

Inflation has been close to 2% in recent months, averaging 1.8% during 2019 Q3. Over the past year or so, inflation has fallen, accounted for by weaker goods price inflation, which in turn has been driven partly by the fading impact from sterling's past depreciation. In contrast, core services price inflation has increased. That is consistent with a rise in domestic price pressures, and is likely to reflect the gradual pass-through of the strong pickup in pay growth over the past few years.

## **1.2 The MPC's projections**

### **The House of Commons has for the first time approved the second reading of a Bill to implement the Withdrawal Agreement agreed between the UK and EU.**

On 17 October, a Withdrawal Agreement and Political Declaration on the framework for the future relationship between the UK and the EU was agreed, setting out a broad partnership with a free trade agreement at its core. On 22 October, the UK House of Commons approved the second reading of the Bill which is intended to implement the

agreement in UK law. Reflecting those developments, the MPC's projections are now conditioned on a transition to a deep free trade agreement (FTA) (Box 1). On 28 October, the UK's EU membership was extended by up to a further three months to 31 January 2020.

### **The Withdrawal Agreement is likely to reduce near-term uncertainties...**

The Brexit uncertainties that have been facing households, businesses and financial markets are assumed to decline gradually over the forecast period, leading to a pickup in household and especially business spending. The progress of the Withdrawal Agreement and the extension of the UK's EU membership are likely to remove some uncertainty and support confidence in the near term, partly driven by a reduction in the risk of a no-deal Brexit. Some uncertainty is likely to persist, however, as the details of the UK and EU's eventual relationship are assumed to emerge only gradually over time and the smoothness of the transition to it remains to be determined.

### **...and sterling has appreciated.**

The fall in the perceived likelihood of a no-deal Brexit has also been associated with an appreciation of the sterling exchange rate, which has risen by around 4% over the past three months. As a result, the level of sterling is now more consistent with the MPC's Brexit conditioning assumption. As the MPC set out in more detail in the [August Report](#), UK asset prices reflect the probability market participants attach to the full range of possible Brexit outcomes, including a no-deal Brexit. That can lead to inconsistencies in the MPC's forecasts, which do not include elsewhere the possibility that the UK leaves the EU without a deal. As a result, the possibility of a no-deal Brexit had weighed on sterling, pushing up the MPC's earlier projections for GDP and inflation.

### **The projections are conditioned on the Government's recent fiscal measures, which provide stimulus to demand.**

The MPC's projections are conditioned on the Government's tax and spending plans, which include a large increase in planned spending, as announced in September as part of Spending Round 2019. All else equal, the increase in spending is expected to raise GDP by around 0.4% over the MPC's forecast period. The projections are also conditioned on the market path for interest rates, which declines a little in the near term and ends the forecast period at around 0.5%. That accommodative path for monetary policy also supports the recovery in GDP growth.

## **Global GDP growth**

### **Global GDP growth is expected to remain slow, as protectionism weighs on trade flows, business sentiment and investment, but picks up a little over the forecast period.**

The MPC judges that some of the factors that have weighed on global activity over the recent past continue, such that global GDP growth is projected to remain at below-potential rates over coming quarters. Weakness in the euro area and some emerging market economies (EMEs) is expected to continue to restrain growth in the near term, with trade protectionism also acting as a drag. Protectionism weighs on trade flows directly and also indirectly through global uncertainty, business confidence and investment. Nonetheless, global growth is projected to pick up gradually over the forecast period, partly accounted for by a recovery in growth in some emerging economies. Growth is also supported by the loosening of monetary policy. In the central forecast, PPP-weighted world GDP growth gradually picks up from 3% in 2019 to 3½% in 2021 and 2022 (Chart 1.3). Weighted by UK export shares, world GDP growth is expected to pick up from 1¾% in 2019 to 2¼% in 2021 and 2022.

### **Weak global growth continues to weigh on UK export growth and investment.**

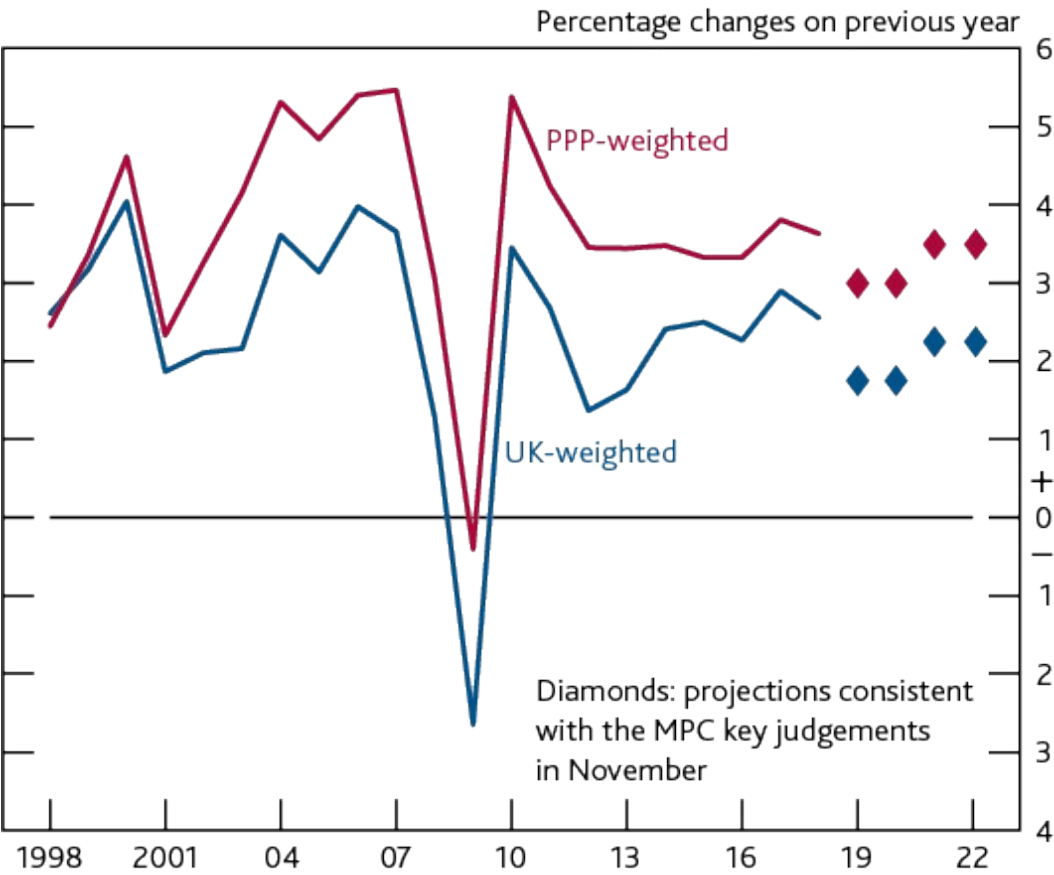
Slow global growth is assumed to affect UK growth through trade channels, as well as via an effect on business spending. The higher uncertainty and lower sentiment associated with trade tensions weighs on UK business investment as well as that in other countries.

## **UK GDP growth**

### **Growth of the UK's supply capacity is subdued.**

Potential productivity is projected to grow at around  $\frac{3}{4}\%$  on average over the forecast period, although it picks up a little in the final year of the forecast period to around 1%. Productivity growth is very low relative to pre-crisis rates of around  $2\frac{1}{4}\%$ , reflecting a continuation of the post-crisis trend, weak business investment and reduced openness as the UK transitions to its new trading relationship with the EU. Labour supply is assumed to grow by around  $\frac{1}{2}\%$  per year. As a result, total potential supply growth is subdued relative to historical rates, averaging around  $1\frac{1}{4}\%$  over the forecast period, reaching  $1\frac{1}{2}\%$  by the end. Lower supply growth reduces the pace of GDP growth that is consistent with the MPC meeting its 2% inflation target.

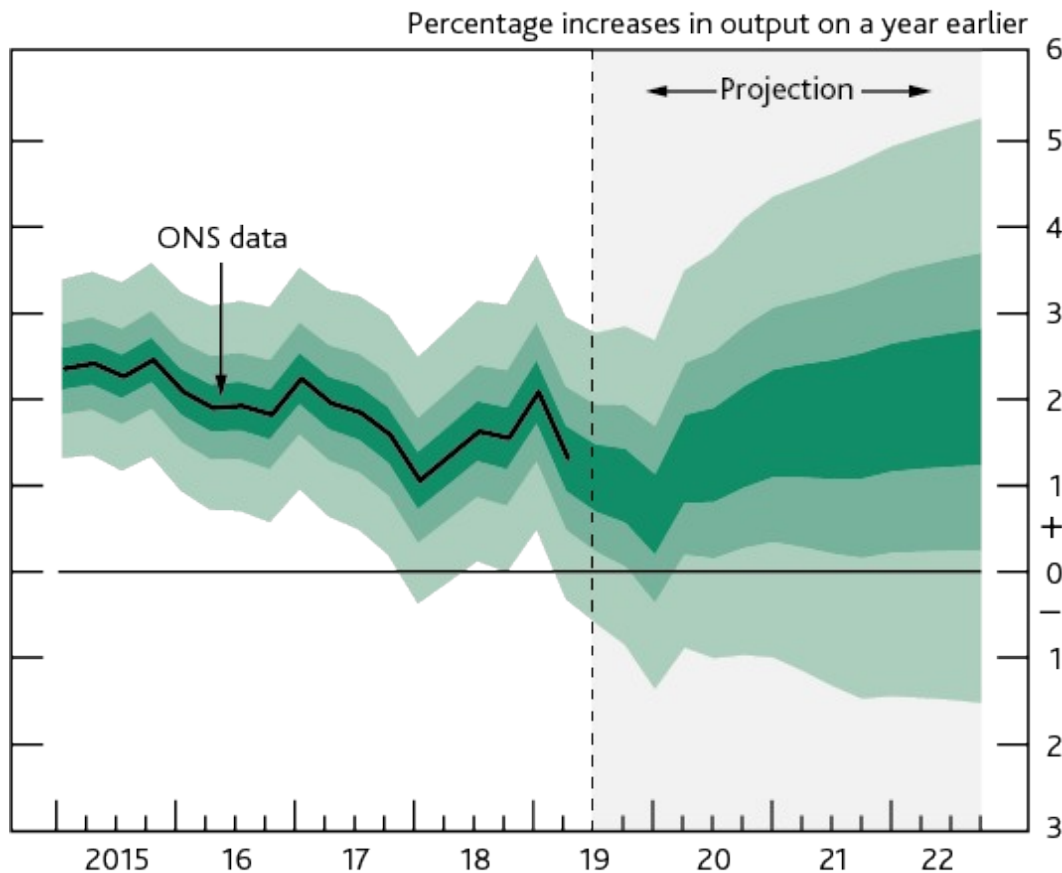
**Chart 1.3 Global growth is expected to recover somewhat over the forecast period**  
**World GDP (a)**



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

(a) Annual average growth rates. Chained-volume measures. PPP-weighted world GDP constructed using real GDP growth rates of 189 countries weighted according to their shares in world GDP using the IMF's PPP weights. UK-weighted world GDP constructed using real GDP growth rates of 188 countries weighted according to their shares in UK exports.

**Chart 1.4 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 on the [Monetary Policy Report](#). 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.

### UK demand growth is projected to recover over 2020.

Underlying UK demand growth remains a little below potential in the near term, but picks up during 2020 as the dampening effects from Brexit-related uncertainties begin to dissipate (Chart 1.4). That boosts business investment growth in particular. The pickup in GDP growth is also supported by easier fiscal policy and the gradual recovery in global growth. In the central forecast, UK GDP growth picks up from 1.0% in 2019 Q4 to 1.6% in 2020 Q4, 1.8% in 2021 Q4 and 2.1% in 2022 Q4 (Table 1.A).

**Table 1.A Forecast summary (a)(b)**

	Projections			
	2019 Q4	2020 Q4	2021 Q4	2022 Q4
GDP <sup>(c)</sup>	1.0	1.6	1.8	2.1
CPI inflation <sup>(d)</sup>	1.4	1.5	2.0	2.2
LFS unemployment rate	3.9	4.0	3.8	3.5
Excess supply/Excess demand <sup>(e)</sup>	-¼	0	+¾	+1¼
Bank Rate <sup>(f)</sup>	0.7	0.5	0.5	0.5

(a) Modal projections for GDP, CPI inflation, LFS unemployment and excess supply/excess demand.

(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 on the [Monetary Policy Report](#).

(c) Four-quarter growth in real GDP. The growth rates reported in the table exclude the backcast for GDP. Including the backcast 2019 Q4 growth is 1.0%, 2020 Q4 growth is 1.6%, 2021 Q4 growth is 1.8% and 2022 Q4 growth is 2.1%.

(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.

Four-quarter business investment growth picks up materially, from negative rates to around 4½% by 2022 (Chart 1.5). It is supported by the reduction in uncertainty, although slower global growth dampens investment spending. Household consumption rises broadly in line with real income growth over the forecast period as a whole. Consumption growth picks up from about 1% currently to 1½% in 2020, and 2% by 2022. On average over the forecast period, consumption grows somewhat more slowly than its historical pace, as real income growth is dampened by weak productivity growth. Both exports and imports growth fall as companies transition to the UK and EU's new trading arrangements. On average over the forecast period, net trade weighs a little on growth.

### Direct comparisons between the August and November projections are misleading because of inconsistencies in the August projections.

As explained in the [August Report](#), the economic projections for growth and inflation at that time were mechanically boosted by the inconsistencies between asset prices and the Brexit conditioning assumption. Given that, comparisons between them and the MPC's latest projections could be difficult to interpret. Specifically, asset prices had at that time factored in a significant probability of a no-deal no-transition Brexit, whereas the MPC's economic projections did not include that possibility but rather were conditioned on the assumption of a smooth transition to the average of a range of possible outcomes for the UK's eventual trading relationship with the EU.

The sharp fall in the perceived likelihood of a no-deal no-transition Brexit over the past three months, and the response of asset prices to that, means the inconsistencies within the August projections have been substantially reduced in the latest projections described in this Report. Consequently, direct comparisons of the two sets of projections could provide a misleading representation of how recent developments have affected the economic outlook over the past three months.

The outlook for global demand has weakened since the time of the August Report, for the reasons described above. Those developments will also have affected both UK and global asset prices over the past three months.

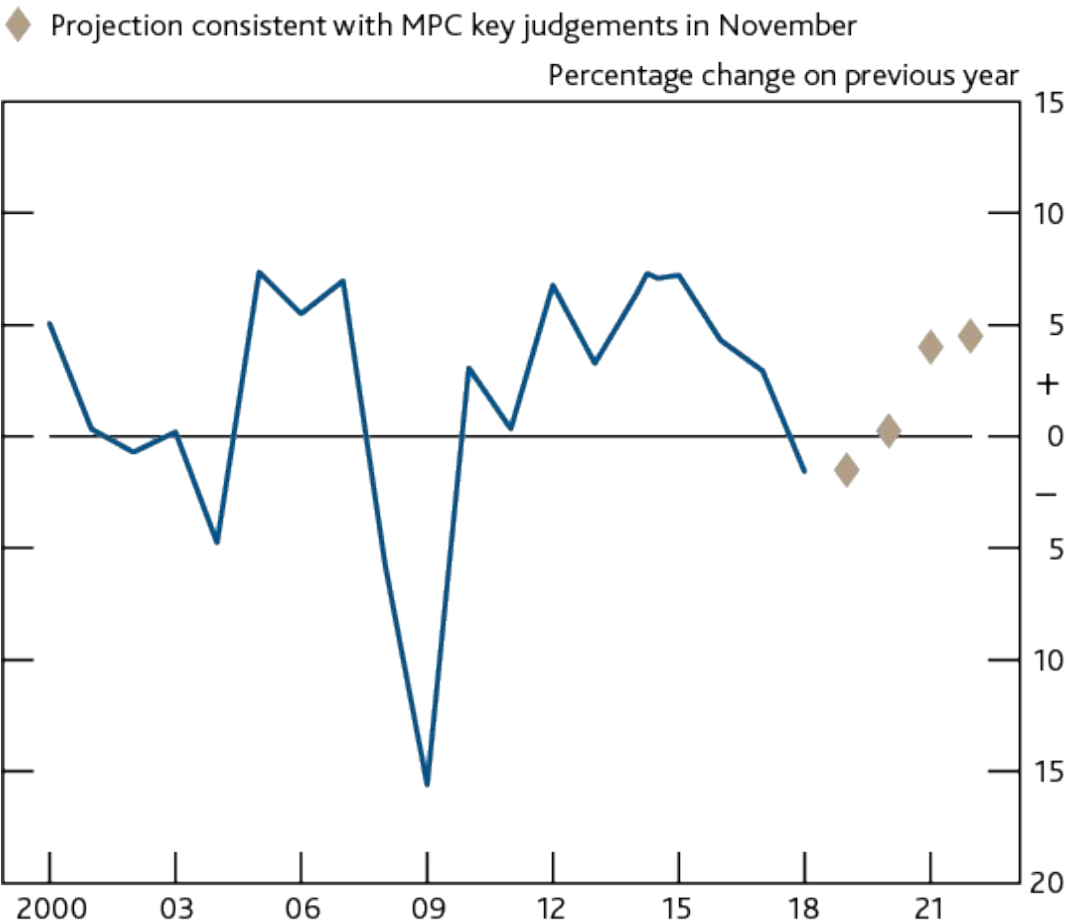
Since the August 2016 Report, the MPC's projections have been conditioned on the assumption of a smooth transition to an average of possible end-states, with the adjustment taking place gradually over many years. Consistent with the provisions of the Withdrawal Agreement, the MPC's latest projections are now conditioned on the assumption that a greater proportion of the adjustment to the UK's new trading arrangements with the EU takes



place within the three-year forecast period.

In the MPC’s latest projection, the level of GDP ends the forecast period around 1% lower than in August. Three quarters of that difference is accounted for by the moves in asset prices and the weaker global environment. The remaining quarter can be accounted for by the net impact of the changes to the MPC’s Brexit conditioning assumption described in Box 1 and the fiscal measures announced in Spending Round 2019. Table 1.B shows August projections adjusted for the impact of changes in asset prices and the world outlook since then.

**Chart 1.5 Business investment growth is projected to pick up materially**  
**Business investment (a)**



Sources: ONS and Bank calculations.

(a) Annual average growth rates. Chained-volume measure. Business investment data based on GAN8.

**Table 1.B Adjusted August 2019 projections (a)**

	Projections			
	2019 Q4	2020 Q4	2021 Q4	2022 Q4
GDP <sup>(b)</sup>	0.7	1.5	2.2	2.3
CPI inflation <sup>(c)</sup>	1.5	1.8	1.9	2.1

(a) Projections have been adjusted to reflect the changes in asset prices and the world outlook since the August Report.

(b) Four-quarter growth in real GDP.

(c) Four-quarter inflation rate.

## Excess supply/demand

**Slack is projected to remain in the first part of the forecast period, but, as GDP growth recovers, spare capacity is eroded and excess demand builds.**

Some slack persists over coming quarters, but it is eroded as GDP growth picks up to above the subdued rate of potential supply growth around the middle of 2020. Excess demand emerges in 2021 and builds over the remainder of the forecast period, reaching 1¼% of potential GDP by the end (Table 1.A). The unemployment rate falls to around 3½% by the end of the forecast period (Chart 1.6).

## CPI inflation

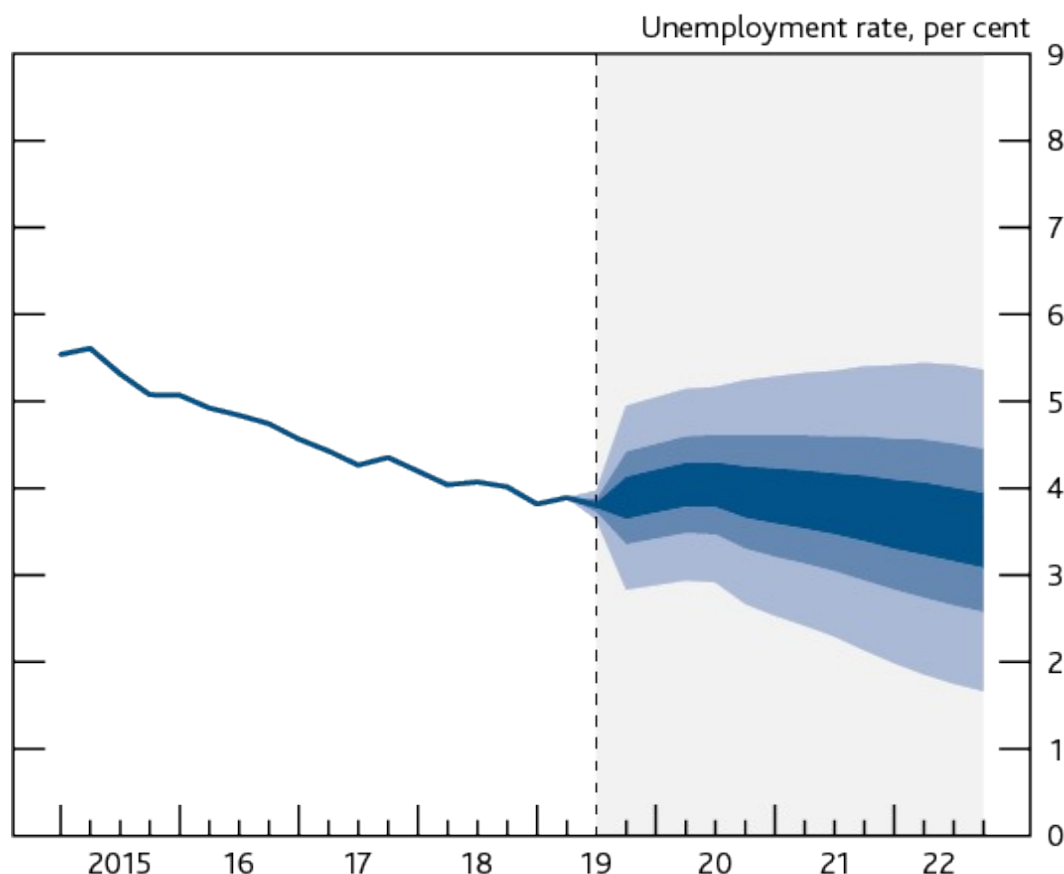
**CPI inflation is projected to decline notably in the near term reflecting the impact of lower regulated energy and utilities prices...**

Over the coming quarters, inflation will be affected by developments in a number of regulated prices. The price cap affecting household gas and electricity bills has fallen, which will reduce the contribution of energy prices to inflation, as will the fall in sterling oil prices over the past year. In addition, water bills are projected to fall in April 2020 in line with the draft determination of the regulator, Ofwat ([Section 2](#)). CPI inflation is expected to fall to an average of 1.2% in 2020 Q2 as a result.

**...but further out inflation rises, supported by building excess demand.**

Inflation picks up as those temporary effects begin to fade towards the end of 2020. It is supported by rising excess demand, which leads to stronger domestic inflationary pressures. Wage growth is projected to be around 3¾% over the second half of the forecast period, supported by low unemployment. Taken together with weak productivity growth, that means unit labour cost growth is robust. CPI inflation is projected to rise to 2.0% in the second year of the MPC's forecast, and 2.2% in the third year (Chart 1.7).

**Chart 1.6 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 1.4, 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 Q3, a quarter earlier than the fan for CPI inflation. That is because Q3 is a staff projection for the unemployment rate, based in part on data for July and August. The unemployment rate was 3.9% in the three months to August, and is projected to be 3.8% in Q3 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 1.7 CPI inflation projection based on market interest rate expectations, other policy measures as announced**

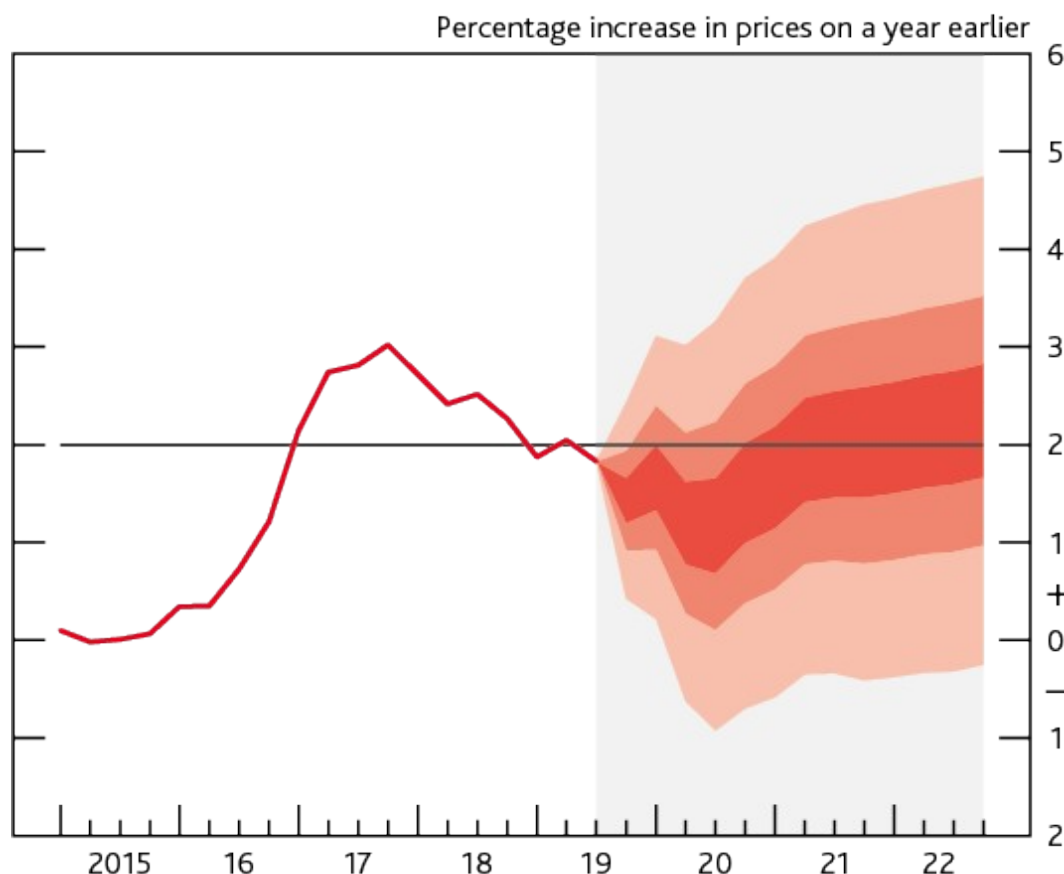


Chart 1.7 depicts the probability of various outcomes for CPI inflation in the future. It has been conditioned on the assumptions in Table 1.A footnote (b). If economic circumstances identical to today's were to prevail on 100 occasions, the MPC's best collective judgement is that inflation in any particular 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.

## Policy decision

At its meeting ending on 6 November 2019, 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 could respond in either direction to changes in the economic outlook in order to ensure a sustainable return of inflation to the 2% target. The Committee would, among other factors, monitor closely the responses of companies and households to Brexit developments as well as the prospects for a recovery in global growth. If global growth failed to stabilise or if Brexit uncertainties remained entrenched, monetary policy might need to reinforce the expected recovery in UK GDP growth and inflation. Further ahead, provided these risks did not materialise and the economy recovered broadly in line with the MPC's latest projections, some modest tightening of policy, at a gradual pace and to a limited extent, might be needed to maintain inflation sustainably at the target.

## 1.3 Key judgements and risks

## **Key Judgement 1: global GDP growth is projected to remain slow in the first part of the forecast period, partly reflecting the impact of trade protectionism, before rising gradually towards potential rates.**

**GDP growth is projected to continue to be slow in the near term, particularly in the euro area and some EMEs, in part reflecting the impact of trade tensions.**

The MPC judges that protectionism is likely to continue to weigh on GDP growth both directly through its effects on trade flows, and through its indirect effects on uncertainty, business sentiment and investment ([Section 3](#)). The risks around the MPC's judgement about the impact of protectionism are two-sided. Some of those risks relate to the extent of trade barriers — for example, the projections assume that no further trade barriers are announced, but they also assume that no existing tariff increases are rolled back. In addition, the estimates of their effects on economic activity are uncertain. There is a chance that the indirect effects could be bigger, consistent with some investors' views that a trade war is the top risk to the global outlook ([Section 3](#)). Nonetheless, the projections include relatively sizable indirect effects, including in the euro area, where growth is judged likely to be dampened by concerns that further tariffs could be introduced, as well as through spillover effects from the impact of tariffs on Chinese demand.

**The MPC projects that global growth will recover a little, with the risks around the outlook broadly balanced.**

While trade protectionism continues to weigh on activity, global growth begins to pick up a little during 2020. That pickup is partly accounted for by a recovery in growth in some emerging economies, which have been hit by idiosyncratic shocks, for example in Turkey and Argentina. It is also supported by the loosening of monetary policy. There is a risk that the interest rate required to boost demand and return inflation sustainably to target rates has declined somewhat, however, due to higher levels of uncertainty.

The MPC judges that the risks around the global growth projection are broadly balanced.

## **Key Judgement 2: supply growth is subdued.**

**Supply growth has been further restrained by the impact of uncertainty.**

The MPC judges that potential supply growth is likely to have been restrained somewhat recently by Brexit weighing on potential productivity growth. That might have occurred through lower business investment reducing capital deepening. In addition, preparations for Brexit are likely to have diverted resources away from productive output or making improvements. The resources devoted to Brexit preparations have increased in 2019.

As a result, the degree of slack that has opened up over the past year might be a little less than would have been implied by the weakening in demand growth alone. That is consistent with the fact that unemployment has remained low, and below the MPC's estimate of its equilibrium rate. Slack is assumed to lie within companies, consistent with some survey measures of capacity utilisation.

**Productivity growth remains very low.**

The MPC judges that productivity growth will pick up a little over the forecast period, but will remain well below its pre-crisis pace. That limits the rate at which the economy can grow without putting upward pressure on inflation. The MPC's projection of subdued productivity growth reflects a continuation of the post-crisis trend, recent weakness in business investment and the reduction in openness that occurs as the UK economy adjusts to its new trading arrangements with the EU.

These judgements are subject to risks in both directions. While the empirical relationships between openness, trade and productivity are well founded (Box 1), the size of the effects are naturally uncertain. In addition, until the details of the FTA are finalised, there will be uncertainty about the barriers to trade that will arise and when exactly they will take effect.

Moreover, there are very few recent historical examples of trading relationships becoming less aligned. As such, the

estimated impact on trade flows of joining trading arrangements is assumed to be a proxy for the size of the impact of leaving them. It is possible that the size of these effects could be different, however. On the one hand, the impact of trade barriers going up might be smaller than when they go down as the trading relationships are already well established. On the other hand, estimates of the average impact across a wide number of countries might understate the impact of a large, advanced and heavily integrated country leaving an existing trading arrangement.

There are also substantial uncertainties around the timing of the effects. The pace at which increased barriers impact trade flows is likely to depend on the types of barriers that take effect. While some barriers are likely to affect trade quite quickly — for example, customs declarations that take additional time and cost to complete — the effect of others is likely to occur more slowly — for example regulations and product standards between the EU and UK are expected to diverge only gradually over time.

The MPC judges that the risks around its projections for potential supply growth — and therefore GDP growth — are skewed to the downside in the second and third years of the forecast, reflecting the uncertainty around the exact nature of the FTA with the EU and the transition to it.

### **Key Judgement 3: uncertainty is reduced by the Withdrawal Agreement — providing some support to UK demand growth.**

**The strength of the pickup in growth will depend importantly on how households and businesses respond to the Withdrawal Agreement.**

The Withdrawal Agreement and extension of the UK's membership of the EU appears to have reduced Brexit-related uncertainty. In part that reflects some decline in the likelihood of a no-deal Brexit. There is substantial evidence that perceptions of the risk of a no-deal Brexit have declined. Sterling has appreciated, betting odds on a no-deal Brexit in 2019 have fallen and responses to the DMP Survey suggest that the average likelihood that firms attach to that outcome fell after the second reading of the Withdrawal Agreement Bill was passed. The expected fall in uncertainty is projected to boost investment and, to a lesser extent, consumption. Four-quarter business investment growth is projected to pick up from -1½% in 2019 Q2 to 4% in 2021, which drives a recovery in GDP growth over that period. Nonetheless, it is restrained by weak productivity growth and slow global growth.

There are two-sided risks to the outlook for business investment. A greater drag from Brexit uncertainty could persist in the near term if businesses judge that they continue to need greater clarity about the specific details of the UK's future trading relationship and the speed of the adjustment to it. Alternatively, there could be a bigger rebound in investment if companies bring back a larger number of previously paused projects.

Spending growth will also be sensitive to how households respond to uncertainty. The saving ratio and household financial balance have drifted up a little over the past couple of years, which might suggest that households have undertaken some precautionary savings in response to higher uncertainty. Historically, households' savings have increased mainly in response to higher concerns about their job prospects.

Over the forecast period as a whole, household consumption is projected to grow broadly in line with real income growth. Households' confidence and spending should be supported by unemployment remaining low. Nonetheless, there are risks around those judgements.

**The risks around the UK growth forecast are judged to be skewed to the downside, reflecting the downside risks to supply growth.**

The outlook for GDP growth will also be sensitive to developments in the UK's supply capacity. Productivity growth in the economy impacts demand by affecting the income that households have to spend and the incentive for companies to invest. Reflecting the risks around the forecast for potential supply growth, the MPC judges that the risks to UK GDP growth are skewed to the downside in the second and third years of the forecast, reflecting the uncertainty around the exact nature of the FTA with the EU and the transition to it.

## **Key Judgement 4: CPI inflation declines further below 2% in the near term given lower utilities prices, before rising slightly above the target by the end of the forecast owing to building domestic price pressures.**

**The projected decline in CPI inflation in the near term is expected to be temporary.**

While CPI inflation is projected to decline in the near term, that fall is expected to be temporary, given it reflects the impact of changes in some regulated prices ([Section 2](#)). Inflation is projected to fall to 1.2% on average in 2020 Q2 — and the chance that it falls below 1% is judged to be a little less than a half at that point. However, as the effects of past changes in utilities prices drop out of the annual calculation, inflation is projected to return towards the 2% target.

**As excess demand builds, domestic price pressures rise.**

The pickup in inflation is supported by the move from excess supply into excess demand. Throughout the forecast period, unemployment is projected to be low and wage growth is projected to be relatively strong. With weak productivity growth, domestic cost growth remains solid and those higher costs are assumed to be passed through to CPI inflation. It is possible that consumer-facing companies continue to absorb some of the higher cost pressures in their profit margins so domestic price pressures remain subdued. Alternatively, margins could be maintained or rebuilt as excess demand rises, leading to domestic price pressures increasing more rapidly.

**CPI inflation ends the forecast period a little above the target.**

Domestically generated inflation is projected to exert upward pressure on CPI inflation over the second half of the forecast period, such that CPI inflation is at 2% in 2021 Q4 and ends the forecast a little above the MPC's target.

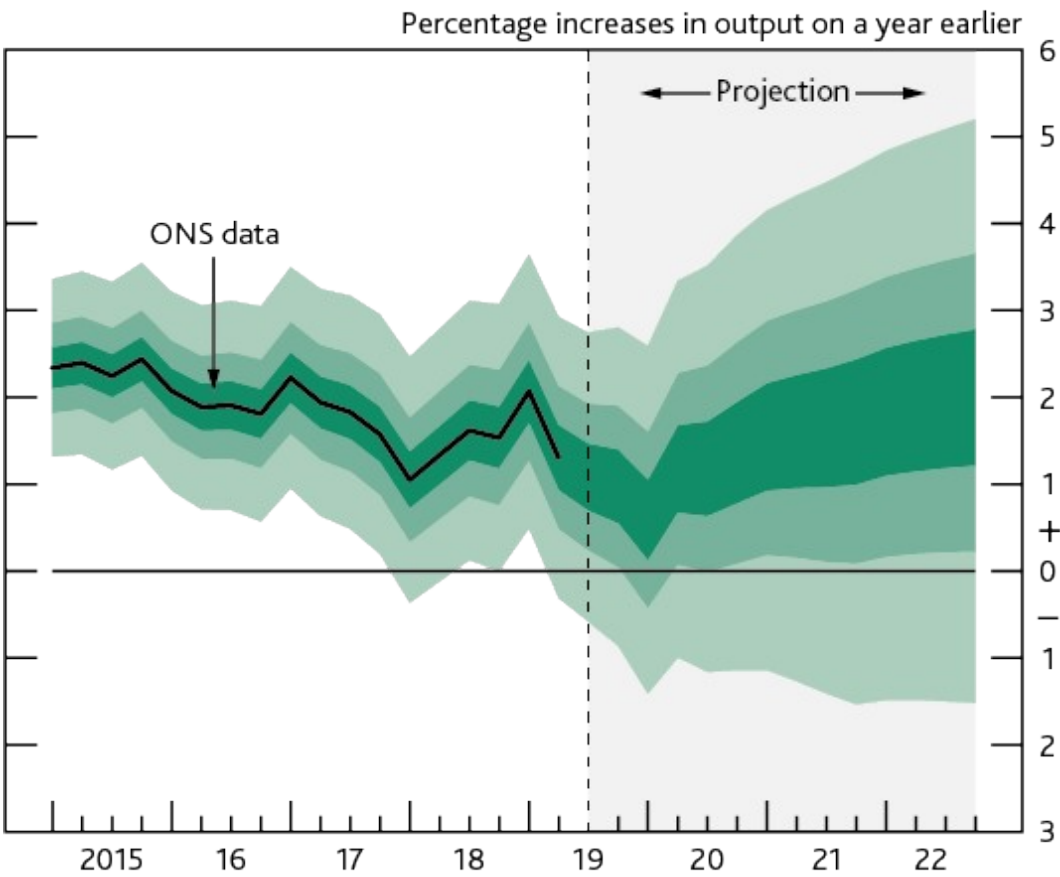
**The risks around the MPC's projection for inflation are judged to be broadly balanced.**

The risks to the MPC's inflation forecast 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%, GDP growth is slightly weaker, but still recovers to outstrip the subdued rate of supply growth (Chart 1.8). As a result, excess demand builds over 2021 and 2022. CPI inflation ends the forecast period slightly above the target at 2.1% (Chart 1.9).

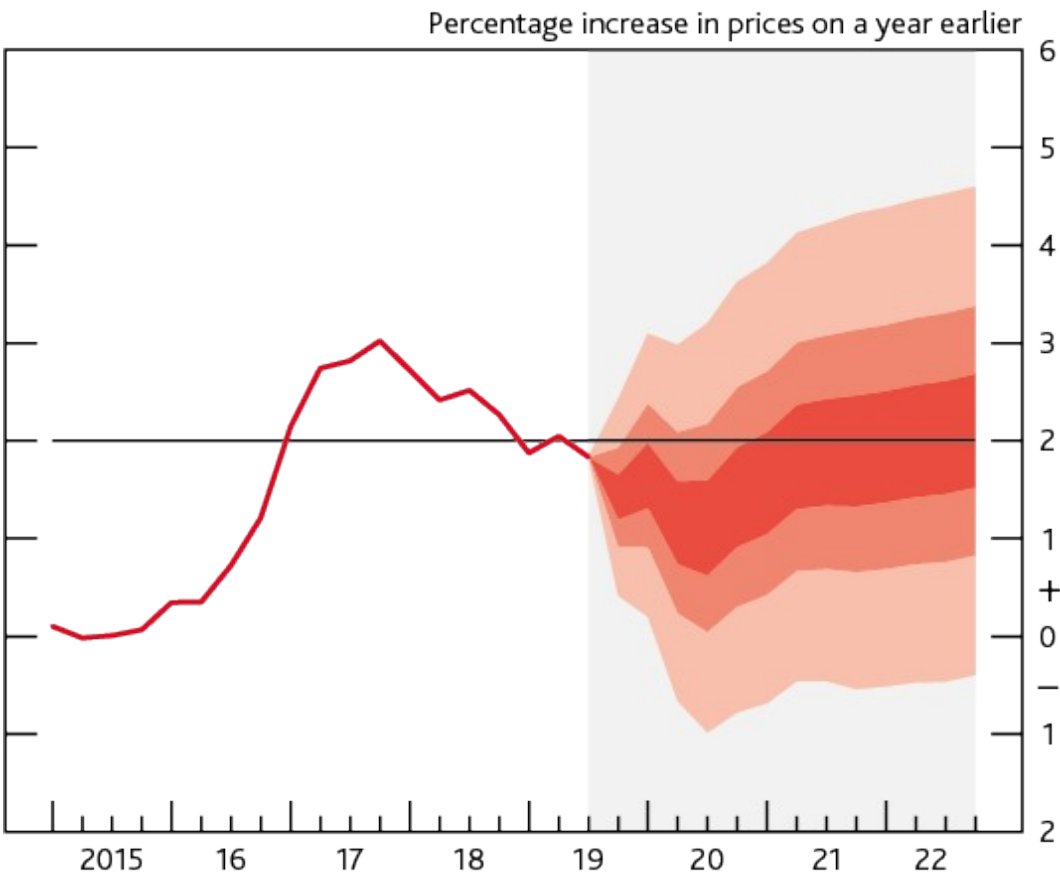
**Chart 1.8 GDP projection based on constant nominal interest rates at 0.75%, other policy measures as announced**



See footnote to Chart 1.4.

**Chart 1.9 CPI inflation projection based on constant nominal interest rates at 0.75%,<sup>[1]</sup> other policy measures as announced**





See footnote to Chart 1.7.

**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) <sup>(c)</sup>	3	2½	1¾	1¾	2¼	2¼
World GDP (PPP-weighted) <sup>(d)</sup>	4	3¾	3	3	3½	3½
Euro-area GDP <sup>(e)</sup>	2¼	1½	1¾	¾	1½	1¾
US GDP <sup>(f)</sup>	3	2¼	2¼	2	2	1¾
Emerging market GDP (PPP-weighted) <sup>(g)</sup>	5¾	5¾	3¾	4¼	4½	4½
of which, China GDP <sup>(h)</sup>	10	7¾	6	5¾	5¾	5½
UK GDP <sup>(i)</sup>	3	2	1¾	1¾	1¾	2
Household consumption <sup>(j)</sup>	3¾	2	1¾	1½	1¾	2
Business investment <sup>(k)</sup>	3	3¾	-1½	¾	4	4½
Housing investment <sup>(l)</sup>	3¾	2¾	1	1¾	3¾	3¾
Exports <sup>(m)</sup>	4¼	3	0	1	-1	-1
Imports <sup>(n)</sup>	5¾	3¾	3¾	-½	½	-½
Contribution of net trade to GDP <sup>(o)</sup>	-¼	-¼	-1	½	-½	-¼
Real post-tax labour income <sup>(p)</sup>	3¼	1½	1¾	1¾	2¼	2¼
Household saving ratio <sup>(q)</sup>	8¼	8¾	6½	6	6½	6½
Credit spreads <sup>(r)</sup>	¾	2½	1½	1¾	1¾	1¾
Excess demand/Excess supply <sup>(s)</sup>	0	-1¾	-¼	-¼	+½	+1
Hourly labour productivity <sup>(t)</sup>	2¼	½	0	¾	¾	1
Employment <sup>(u)</sup>	1	1¾	½	¾	¾	¾
Average weekly hours worked <sup>(v)</sup>	32¼	32	32	32¼	32¼	32¼
Unemployment rate <sup>(w)</sup>	5¼	6¾	4	4	3¾	3½
Participation rate <sup>(x)</sup>	63	63½	63¾	64	64	64
CPI inflation <sup>(y)</sup>	1½	2¼	1½	1½	2	2¼
UK import prices <sup>(z)</sup>	0	1½	-¼	½	¼	¼
Energy prices — direct contribution to CPI inflation <sup>(aa)</sup>	¼	¼	-¼	0	0	0
Average weekly earnings <sup>(ab)</sup>	4¼	2	3½	3¼	3¾	3¾
Unit labour costs <sup>(ac)</sup>	3	1½	3	2½	2¾	2¾
Private sector regular pay based unit wage costs <sup>(ad)</sup>	1¾	1½	3½	2¾	2¾	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. 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) Annual average. Excludes the backcast for GDP.

(j) Chained-volume measure. Includes non-profit institutions serving households. Based on ABR+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 DFEG+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  $[(ROYJ+ROYH)-(RPHS+AIIV-CUCT)+GZVX]/[(ABJQ+HAYE)/(ABJR+HAYO)]$ .

(q) 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) Based on MGRZ.

(v) Level in Q4. Average weekly hours worked, in main job and second job. Based on YBUS/MGRZ.

(w) Level in Q4. LFS unemployment rate in Q4.

(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 Q4. Whole-economy total pay. 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 The MPC's conditioning assumption about the UK's eventual trading relationship with the EU

**The MPC's projections are now conditioned on a transition to a new trading relationship between the UK and EU.**

On 17 October, a Withdrawal Agreement and Political Declaration on the framework for the future relationship between the UK and the EU was agreed. On 22 October, the UK House of Commons approved the second reading of the European Union (Withdrawal Agreement) Bill. Consistent with those documents, the MPC's projections are now conditioned on a deep free trade agreement (FTA) with the EU. On 28 October, the UK's EU membership was extended by up to a further three months to 31 January 2020.

FTAs can take a wide range of forms depending on the details of the agreement, for example relating to the extent of barriers to trade across different sectors. Reflecting the aim of the Political Declaration to establish 'an ambitious, broad, deep and flexible partnership across trade and economic cooperation with a comprehensive and balanced Free Trade Agreement at its core', the MPC's projections are conditioned on an FTA which is of similar scale and depth to the Comprehensive Economic and Trade Agreement (CETA) in place between Canada and the EU.

This box sets out the MPC's assumptions about the nature of the future trading relationship between the UK and EU and how the impact of those assumptions on the economy has been modelled using empirical relationships that have held in the past.

Assumptions underpinning the central projection

Trade

Goods trade is tariff free, but customs checks are introduced.

Consistent with the Political Declaration, the forecast assumes that no tariffs, fees, charges or quantitative restrictions are introduced. However, the move to a CETA-like FTA would mean that customs, rules of origin and some regulatory checks between the UK and EU are introduced. Those would raise administrative costs for firms engaging in cross-border trade with the EU and would particularly affect those industries whose business model relies on the free flow of goods. As a result, trade flows are likely to fall and some companies might exit the market.

Some services trade would be subject to greater barriers.

Some cross-border provision of services is likely to be prevented by regulations once the FTA comes into effect. These are expected to affect UK financial services in particular: UK financial firms currently have the ability to ‘passport’ financial services into EU Member States and those cross-border access rights are set to be lost. However, it is assumed that the UK’s regulatory and supervisory regimes are deemed to be equivalent under the EU’s frameworks, which would mitigate some of the impact. Trade barriers also have a direct effect on some other sectors such as legal services. For example, UK-based lawyers would lose the right to bring cases before the European Court of Justice.

Regulatory trade barriers with the EU are likely to increase gradually.

At the moment, regulations — such as product standards — are the same in the UK and EU. Over time, some of those regulations may diverge. That would gradually raise barriers to trade between the UK and EU. For example, companies producing goods for both UK domestic and EU export markets might have to meet two sets of standards in future, increasing the complexity of their business and their costs. Some companies might choose instead to focus on one market.

The UK replicates a substantial proportion of EU trade arrangements with non-EU countries.

The UK Government has either negotiated to roll over, or is aiming to roll over, agreements with non-EU countries that cover 11% of UK trade. In the MPC’s projections it is assumed that these agreements are implemented. It is also assumed that no further trade deals with non-EU countries are implemented before the end of the forecast period, reflecting the fact that it typically takes several years for new trade deals to be negotiated and implemented.

Preparedness

Authorities and businesses are assumed to be ready for the change in trading arrangements.

Authorities and businesses are assumed to use the time ahead of the FTA coming into effect to put in place the necessary physical and regulatory arrangements for a smooth transition to the new trading arrangements. Consequently, the projections assume that there is no additional reduction in trade from disruption owing to a lack of preparedness. As such, the projections assume that the physical infrastructure and capabilities required for new checks on both sides of the UK-EU border are in place ahead of the FTA taking effect, and that firms complete the process of obtaining EU certification for their products.

Table 1 Summary of assumptions

#### Trading arrangements

Tariffs	No tariffs on UK-EU trade.
Customs barriers	Customs checks on UK-EU trade introduced.
Services barriers	Some regulatory barriers to trade emerge. Financial services lose passporting rights, but the granting of equivalence mitigates some of the impact. Some other sectors, such as legal services, lose some access to the EU market.
Other barriers	Product standards diverge gradually.
Trade deals	UK retains access to trade arrangements between the EU and non-EU countries worth 11% of total UK trade. No further trade deals with non-EU countries implemented before the end of the forecast period.
Preparedness for new trading arrangements	Authorities and businesses use the time ahead of the FTA coming into effect to put in place the necessary measures to avoid the additional reduction in trade that would arise from a lack of preparedness for new border and regulatory arrangements.

## Modelling the effects of these assumptions on the economy

The effects of these assumptions on the economy are modelled using empirical relationships based on past data. The relationships summarised here are outlined in detail in Chapter 2 of [EU withdrawal scenarios and monetary and financial stability](#).

### A range of evidence suggests that greater openness to trade increases productivity.

A range of theoretical work and empirical evidence suggests that greater openness supports productivity, raising economic output and improving living standards. This occurs through both increases in trade and foreign direct investment (FDI) flows.

Greater openness to trade is thought to increase productivity through a number of channels including: increased innovation and the adoption of new ideas and practices (see, eg Grossman and Helpman (1991)[2] and [Eaton and Kortum \(2002\)](#)); greater specialisation, exploiting cross-country returns to scale and scope (see, eg [Krugman \(1979\)](#) and [Mayer, Melitz and Ottaviano \(2016\)](#)); and better matching of capital and labour within an economy, improving the allocation of resources.

Increased flows of FDI also increase productivity. FDI has been associated with productivity spillovers to domestically owned firms through knowledge and technology transfers, for example (see, eg [Haskel, Pereira and Slaughter \(2007\)](#)). Those firms engaged in FDI are estimated to be more productive than those that are not (see [ONS \(2017\)](#)).

### The economic effects of the free trade agreement are estimated using gravity models.

The scale of the longer-term falls in trade and FDI flows that underlie the MPC's central projection are estimated using gravity models (see eg [Anderson and van Wincoop \(2003\)](#) and [Brenton, Di Mauro and Lücke \(1999\)](#)). Gravity models have been used extensively in the international trade literature for analysing the determinants of bilateral trade. The gravity models developed by Bank staff are based on a substantial data set: the model for goods trade is estimated on more than 600,000 observations, while the one for services trade uses 51,000 observations. The models can be used to isolate the effect of different trading arrangements between economies, separating them from other key determinants such as size and distance. This allows for the development of well-founded estimates on the eventual volume of UK trade with the EU and other countries. Nevertheless, as trade openness has generally risen over time, there is a large degree of uncertainty around the estimated effects of the UK becoming less open to trade with the EU. The MPC's estimates assume that the estimated impact on trade flows of joining trading arrangements is a proxy for the size of the impact of leaving them.

The reduction in trade flows embodied within the MPC's central projection is estimated separately for goods and services. These models allow for trade diversion. While Brexit will decrease trade between the UK and the EU, the UK's trade with other countries is likely to increase slightly.

Estimates of the elasticities between openness and productivity are used to convert the estimated falls in trade flows and FDI into effects on GDP. The MPC assumes that a 1% fall in trade flows leads to a 0.25% fall in productivity. This lies within the range of estimates from the economic literature (see, eg [Feyrer \(2009\)](#)). The MPC assumes that a 1% fall in FDI leads to a 0.04% fall in productivity, again in line with

estimates from economic research (see, eg [de Mello \(1999\)](#)).

**Trade barriers rise over the forecast period, but the adjustment is assumed to be orderly.**

The Withdrawal Agreement includes a transition period to bridge the time between the date of the UK's exit from the EU and the entry into force of the new UK-EU partnership arrangements. At present, the transition period is set to end on 31 December 2020. Some barriers to trade — such as customs checks — would take effect immediately when the transition period ends. As a result, much of the impact of those trade barriers is likely to be felt over the forecast period. The MPC's forecasts assume that the impact of these barriers on the economy is orderly, though. Companies could take action in anticipation of these barriers coming into force, for example by reorienting their supply chains away from the EU. Consequently, some of their effect could start to come through before the transition period ends. In addition, the Withdrawal Agreement allows for the transition period to be extended for up to two years, so some barriers might come into effect after 1 January 2021. Moreover, some regulatory barriers to trade are likely to emerge only gradually, for example as goods standards diverge over time.

As a result, the MPC's projections are conditioned on the assumption that the economic impact of the transition to the FTA emerges gradually and relatively smoothly from late 2020.

## Box 2 Monetary policy since the August Report

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

Since the MPC's August meeting, the trade war between the United States and China had intensified, and the outlook for global growth had weakened. Monetary policy had been loosened in many major economies. Shifting expectations about the potential timing and nature of Brexit had continued to generate heightened volatility in UK asset prices, in particular the sterling exchange rate had risen by over 3½%.

Brexit-related developments had made UK economic data more volatile. Having fallen by 0.2% in 2019 Q2, GDP growth was expected to rise by 0.2% in Q3. The Committee judged that underlying growth had slowed, but remained slightly positive, and that a degree of excess supply had appeared to have opened up within companies. Brexit uncertainties had continued to weigh on business investment, although consumption growth had remained resilient, supported by continued growth in real household income. The weaker global backdrop was weighing on exports. The Government had announced a significant increase in departmental spending for 2020–21, which could raise GDP by around 0.4% over the MPC's forecast period, all else equal.

CPI inflation fell to 1.7% in August, from 2.1% in July, and was expected to remain slightly below the 2% target in the near term. The labour market appeared to remain tight, with the unemployment rate having been just under 4% since the beginning of the year. Annual pay growth had strengthened further to the highest rate in over a decade. Unit wage cost growth had also risen, to a level above that consistent with meeting the inflation target in the medium term. The labour market did not appear to be tightening further, however, with official and survey measures of employment growth having softened.

For most of the period following the EU referendum, the degree of slack in the UK economy has been falling and global growth has been relatively strong. Recently, however, entrenched Brexit uncertainties and slower global growth had led to the re-emergence of a margin of excess supply. Increased uncertainty about the nature of EU withdrawal meant that the economy could follow a range of paths over the coming years. The MPC judged that the appropriate response of monetary policy would depend on the balance of the effects of Brexit on demand, supply and the sterling exchange rate.

It was possible that political events could lead to a further period of entrenched uncertainty about the nature of, and the transition to, the United Kingdom's eventual trading relationship with the European Union. The longer those uncertainties persisted, particularly in an environment of weaker global growth, the more likely it would be that demand growth would remain below potential, increasing excess supply. In such an eventuality, it was expected that domestically generated inflationary pressures would be reduced.

In the event of a no-deal Brexit, the exchange rate would probably fall, CPI inflation rise and GDP growth slow. The Committee's interest rate decisions would need to balance the upward pressure on inflation, from the likely fall in sterling and any reduction in supply capacity, with the downward pressure from any reduction in demand. In this eventuality, the monetary policy response would not be automatic and could be in either direction.

In the event of greater clarity that the economy is on a path to a smooth Brexit, and assuming some recovery in global growth, a significant margin of excess demand was likely to build in the medium term. Were that to occur, the Committee judged that increases in interest rates, at a gradual pace and to a limited extent would be appropriate to return inflation sustainably to the 2% target.



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.
2. Innovation and growth in the global economy, MIT Press Books, The MIT Press, Edition 1, Vol. 1, number 0262570971, January.



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