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Report to the Treasury Select Committee
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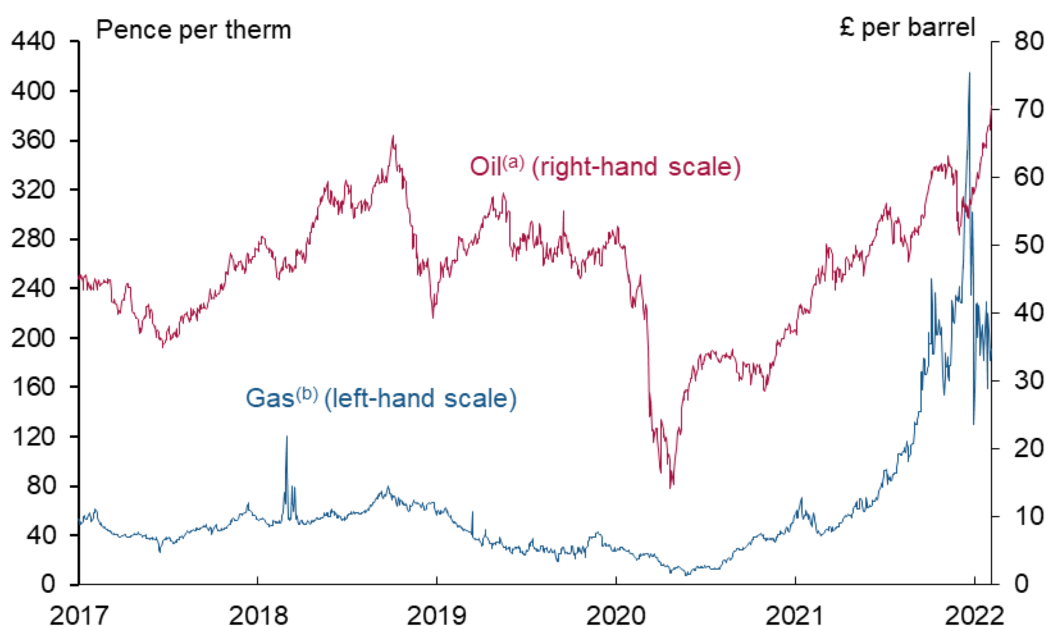
Economy and voting record

The UK economy has staged a recovery from a very low base since my previous annual report in February 2021. Due to the coronavirus pandemic GDP had registered a very sharp decline of -10.2% in the four quarters to 31 March 2021. The economy is now forecast, according to the MPC's February 2022 *Monetary Policy Report* (*MPR*), to record annual growth of 10.8% in the four quarters to 2022 Q1. The past year has also been marked by the UK's new trading relationship with the European Union (EU) that came into effect on 1 January 2021.

Since much of our deliberations have been around energy prices, **Figure 1** sets out key trends to which we refer to below.

Figure 1: Sterling oil and wholesale gas prices



(a) US dollar forward prices for delivery in 10–25 days' time converted into sterling.
(b) One-day forward price of UK natural gas.

At the time of the February 2021 *MPR*, there was a sizeable amount of spare capacity of about -1% in the economy and annual inflation stood at 0.8% in 2021 Q1, below our 2% target. In December 2020, fuel prices and utility prices had each detracted 0.3pp from annual inflation of 0.6%. In the February 2021 *MPR*, inflation was expected to rise quite sharply in the spring, reflecting the 2020 falls in energy prices falling out of the annual comparison ("base effects"), and the recent uptick of oil and gas prices feeding through to fuel and utility prices. Together with the end in April of the VAT cut in the hospitality sector, these factors were expected to account for almost all of the projected one

percentage point increase in inflation between December and April. Inflation was expected to rise to a peak of 1.7% in May and 1.6% in 2021 Q2 as a whole. At the same time, the deterioration of the public-health outlook and stringent lockdown measures in response to the Alpha variant were being offset by the positive news related to the vaccine rollout, such that we were expecting Covid-related restrictions to be lifted from 2021 Q2. We then expected the excess demand that emerged from 2021 Q4 following the assumed easing of the restrictions, and the attendant slight overshoot of inflation at 2.1%, to fade by the end of the forecast.

Therefore at the February 2021 meeting, I judged that the existing stance of monetary policy (Bank Rate at 0.1% and the existing programme of £150 billion of UK government bond purchases started in January) remained appropriate and consistent with our guidance set out in the August 2020 MPC Minutes that we "did not intend to tighten monetary policy until there was clear evidence that significant progress was being made in eliminating spare capacity and achieving the 2% inflation target sustainably".

By the March meeting, the economic outlook was improving. The successful vaccine roll-out and effectiveness against the Alpha variant, if followed by falling hospitalisation and death counts, opened up the prospect of a full lifting of government restrictions by the end of June. Receding fears of infection and less voluntary social distancing would allow households to resume more normal spending behaviour and start running down some of their accumulated savings sooner than in the February 2021 *MPR*, with attendant benefits on employment and investment. The extension of the government schemes, including the Coronavirus Job Retention Scheme (CJRS), until the autumn announced in the Spring Budget was also to my mind important. Up until then it was not clear whether fiscal support would be forthcoming during enforced lockdowns, placing more of the burden on monetary policy to continue to be accommodative and removing the downside risks associated with ending the support to business cash-flow and household incomes.

As demand continued to recover, the concept of spare capacity was central to my thinking given its prominent role in the MPC's inflation forecast and policy guidance. Spare capacity, or the balance between demand and supply, arises in the labour market and within firms. Our various metrics have been difficult to interpret but it seemed to me they pointed to some spare capacity, or slack, in the economy, bearing down on inflationary pressure.

The unemployment rate had risen by just under one percentage point since the onset of the pandemic in February 2020. The amount of labour-market slack depends on how unemployment evolves relative to the medium-term equilibrium rate of unemployment, which moves more slowly. Most of the rise in unemployment therefore represented an increase in slack. In fact the rise would have been higher without the furlough scheme, which was masking the spare capacity opening up in average and total hours worked. Therefore, slack in the labour market was greater than suggested by the unemployment rate. For example, LFS data suggested that about 10% of furloughed workers were looking for work and so represented a form of labour-market slack. The substantial rise in the number of people recorded as inactive since the start of the pandemic also represented slack insofar as they affected firms' wage-setting. There were signs of spare capacity amongst those still in work, for example a rise in the proportion of part-time workers that have been unable to find a full-time job.

Slack within firms is harder to gauge but the survey evidence suggested that firms included furloughed workers when thinking about spare capacity, such that their capital and labour would be

ready to be used when restrictions ended. Some of the surveys measure firms' operations relative to 'normal' capacity, and so might be comparing their current output to a period without restrictions on activity, hence reporting plenty of spare capacity.

I also took the view that evidence suggested that the move to working from home since the start of the pandemic introduced a new dimension of spare capacity. The use of people's homes, personal computers and internet connections in production means there is more productive capital in the economy than officially recorded. In joint work with Jan Eberly and Paul Mizen, I have called this "potential capital".

For these reasons it seemed to me there was a fair amount of spare capacity in the UK economy.

Given the importance of spare capacity for our forecast and policy communication, we reviewed our judgements of the supply side of the economy ahead of the publication of the May 2021 *MPR*. We judged there was less "scarring" (permanent damage) to supply than in previous forecasts.

My assessment of the medium-term outlook was even more sanguine. I expected there to be less supply-side damage than embedded in the May *MPR*. Why was this? To the extent that scarring occurs via lower productivity, the resilience of investment in intangible capital, such as software and R&D, in 2020 was cause for optimism. The fall in investment in 2020 had been concentrated in tangible capital and buildings, whereas intangible investment had held up fairly well. I felt this would help to mitigate the extent of any scarring to the productive capacity of the economy, thanks to positive spillover effects on total factor productivity. On this basis, I estimated there had been little or possibly no scarring to supply in the medium-term.

In our May 2021 MPR forecast, in addition to upward revisions to consumption and business investment over the previous year, the demand outlook was also revised up, reflecting upside news from the Spring Budget, with most of the near-term boost coming from the capital allowance super-deduction in 2021-2023.

However, given the spare capacity I judged to remain in the economy, and the downside risk posed by the possible emergence of new variants, I felt that significant progress against the conditions set out in our policy guidance had not yet been made to support a change in policy. I also remained concerned by the possible lesser effectiveness of vaccines in the field, compared with their proven efficacy in the lab.

At the June 2021 meeting, I again voted for no change to the policy stance. I saw two prevalent downside risks to the outlook: the sharp increase of Delta cases, now surpassing new Alpha cases, and uncertainty about how the phasing out of the government's furlough scheme by 30 September would affect firm and household behaviour.

May GDP was still estimated to be around 4.5% below its pre-pandemic level of 2019 Q4, the Delta variant had an R number of 1.5 and roughly 5% of private-sector jobs were still furloughed.

The reopening of the hospitality sector on 17 May had translated into a marked improvement in consumer-spending indicators, but that demand rebound was butting up against supply-side constraints. Production and transportation bottlenecks were putting upward pressure on costs and wholesale prices for manufacturing goods and commodities (metals, agriculture, oil), while instantaneously meeting a surge of demand for eating out could be difficult for restaurateurs as they

brought back employees from furlough. Anecdotal evidence suggested that increased hiring, Brexit, pandemic-related uncertainty and the furlough scheme were all weighing on the pool of available candidates.

I saw these lags in the recovery of supply relative to demand as temporary, but they did lead to price rises.

Inflation had jumped to 2.1% in May from 1.5% in April and it now looked likely to exceed the May 2021 *MPR* projection of a rise to 2.5% in 2021 Q4. That largely reflected two mechanical drivers, namely base effects as the sharp decline of prices at the onset of the pandemic arithmetically lifted the calculation of the annual inflation rate a year later, and the recent rise of energy prices that was expected to continue into the autumn with fuel and utility price increases. Ofgem had increased the price cap on energy bills by 9% from 1 April, largely to account for higher wholesale prices. At the time of the May *MPR*, energy prices were expected to contribute about half a percentage point to CPI inflation in 2021 Q2, compared with detracting about 0.3 percentage point in 2021 Q1.

We had not yet seen the rise in wholesale non-energy price inflation feed through into a sharp increase in consumer retail prices. I expected that increase to happen at some point, but it would be difficult to gauge how sustainable it might be. At the same time medium-term inflation expectations remained well anchored. At that point, then, given the lack of evidence of second-round effects on underlying inflation, I saw the rising cost and price pressures as relative-price effects that reflected changes in relative demand as the economy re-opened and I expected them to be transitory.

At the same time I was puzzled by the strength of underlying pay growth (pay growth that has been stripped of furlough[1] and compositional[2] effects), which had been running at 2-3%. That was stronger than a standard wage equation could account for. Yet the signal for underlying wage inflation from the Bank's Agents was more benign, their contacts reporting sporadic rather than general pay pressure. And private-sector pay settlements had been quite modest, in the 1½ to 2½ % range.

As we moved into the summer, it became clear the key judgement was the persistence of inflation beyond its projected peak of about 4% in 2021 Q4-2022 Q1 in the August 2021 *MPR* from 2.5% in June. This was particularly difficult to predict given the need to disentangle "first-round effects" (short-term frictions as the economy re-opens), from "second-round effects" – the response of inflation expectations, and underlying behaviours such as changes to workers' lifetime labour-supply choices.

By the August 2021 *MPR*, the role of the first-round effects on headline inflation was well-established by then, with petrol and utility prices, which had risen by 11% between December 2020 and June 2021, accounting for about half of the 2 percentage point projected peak rise of CPI inflation above target in 2022Q1. Non-oil import prices were also pushing up on inflation.

However, there seemed to be downward pressure on inflation from the import price deflator for final consumption goods (excluding cars), which is strongly correlated with core goods inflation (excluding Clothing & Footwear) four quarters into the future, which had fallen by 5% in the year to

[1] The furlough scheme has weighed down on average pay as furloughed employees perceive less than their whole pay.
[2] This refers to the changing composition of employment during the pandemic: job losses were concentrated in lower-pay/lower-productivity sectors, mechanically lifting measured wage inflation by 2-3pp.

May. To me that pointed to some downward pressure on core goods price inflation in 2022. However, subsequent analysis revealed that the fall largely reflected base effects from the well above-trend price levels recorded in 2020, and that given our pass-through assumptions, any downside effect on CPI inflation from the fall would likely already be materialising as opposed to reflecting downside risks for 2022.

What about the second-round and behavioural effects of the rise in inflation? I remained puzzled by what signals we could take from wages. Headline wages continued to be inflated by compositional and base effects and underlying pay growth remained strong. But labour-market quantities did not signal persistent inflationary pressure from an imbalance between labour supply and labour demand.

The activity rate had fallen by over 1pp since February 2020, with the over 50s group accounting for about a quarter of the decline and just over a fifth of those on furlough at the end of June. However, historical evidence is that that group's rate of participation in the labour force is quite elastic and I didn't see a reason to depart from that view. So I expected them to be reabsorbed into the labour force, increasing the supply of labour.

I did not see convincing evidence of widespread labour-market mismatch. The juxtaposition of high vacancy rates and relatively high furlough rates in some sectors did point to some mismatch between the demand and supply of labour, and thus limited spare capacity. Mismatch can be high for two reasons: when vacancies and searchers are in different places and/or when unemployment and vacancies are widely dispersed, since matching workers with vacancies is harder in thin markets. The Bank staff's mismatch index, which captures both effects, had tripled at the start of the pandemic, but in the more recent data to May it had fallen back to just above its 2016-2019 average level. This suggested to me that the mismatch at the start of the pandemic was being resolved as workers gradually came off furlough.

So I was of the view that the spare capacity that mattered to policymaking, namely that which would emerge when the furlough scheme ended and participation returned to longer-run levels, was still sizeable enough to suggest our guidance conditions were not yet being met. Thus far I didn't see any evidence of second-round effects in the labour indicators or inflation expectations. For those reasons I did not vote to cease our asset purchases or tighten policy at the August meeting.

By the September 2021 meeting, I was more sympathetic to discounting the Delta variant as a significant downside risk to the economy, with the link to hospitalisations and deaths substantially weakened by the high proportion of double-vaccinations. Since the May reopening of hospitality, UK mobility had remained high relative to previous waves and it was reasonable to expect the economic incidence of a fourth wave to be lower than in winter 2020.

CPI inflation of 2% in July had been broadly as we expected and the pickup to 3.2% in August, although stronger than our August 2021 *MPR* forecast, reflected base effects from the previous year's "Eat Out to Help Out" scheme and the hospitality VAT cut.

I still expected the inflation overshoot to dissipate by the end of 2022 and continued to favour looking through the "first-round effects" of the projected rise in inflation. I therefore voted to make no change to the policy stance at this meeting. But I was closer to considering some policy tightening, though not before the full effects of the end of the furlough scheme were assessed.

At that point there was over one million vacancies and 1¾ million furloughed workers (equivalent to 7% of private-sector jobs), of whom 290,000 had been on long-term furlough, since spring 2020.

What might happen to furloughed workers when the CJRS ended? There was a risk they could become (long-term) unemployed and push up on the medium-term equilibrium rate of unemployment, reducing spare capacity and pushing up on wage inflation. But many furloughed workers might still be attached to the labour force, having taken a job in healthcare or on-line delivery for example, while still on furlough in food services. The further fall in June of the staff's mismatch index and lack of an uptick in redundancy notices were encouraging, as were indications that perhaps 80% of workers who had left the furlough scheme between April 2020 and March 2021 had obtained jobs.

What about the high level of vacancies? To me it looked consistent with short-term frictions in the labour market: vacancies are forward-looking, rising steeply as demand increases, whereas the unemployment rate takes time to change, as the flows of people in and out of unemployment affect the stock of unemployed people. Thus we see patterns in the data whereby firms post many vacancies in anticipation of a tighter labour market, so vacancies seem to shoot up with unemployment hardly changing, after which unemployment and vacancies fall.

That said as we moved into the autumn, I became increasingly concerned by the evolution of wages and prices and the upside risks they posed to inflation, though I still saw the effects of energy-price rises on inflation as temporary. Therefore, my decision not to tighten policy at the November meeting was very finely balanced.

By the November 2021 *MPR*, energy prices had risen very substantially. Sterling oil prices were around 80% above their 2020 Q4 level, and UK wholesale gas prices were about 400% higher. Higher gas prices had also led to a sharp pickup in wholesale electricity prices, which had risen by around 300%.

In the November *MPR* central projection, energy prices were expected to account for a substantial proportion of the projected pickup of inflation from 3.1% in September 2021 to a peak of about 5% in April 2022. The energy-price contribution to inflation is sensitive to the operation of Ofgem's price cap and to our conditioning assumption that wholesale energy prices follow their futures curves for the first six months of the projection, which at that time meant a decline until April 2022, and then stability until the end of the forecast in late 2024. As laid out in Box A of the November *Report*, allowing energy prices to follow their futures curves throughout the entire forecast would leave inflation at 1.7% in 2023 Q4 and 2024 Q4, below the target and about half a percentage point lower than the *MPR* central projection. I viewed this scenario as a downside risk to our inflation forecast.

However, upside risks from wages and prices continued to concern me.

In the November *MPR* forecast, underlying wage growth (adjusted for furlough and compositional effects) was projected to remain at about 4% over the next few quarters and fall back by the end of the forecast. That would take the share of wages in GDP – called the "labour share", a measure of how much the "product wage" (the nominal wage paid by firms, deflated by the prices they set) aligns with workers' productivity – back down to its average since the 2008 Global financial Crisis (GFC).

Mechanically, wages and prices that are unaligned with productivity, push up on inflation. This process was analysed by Michael Bruno and Jeffery Sachs in 1985. They assumed that prices

followed wages. They examined workers' "real wage resistance" to rising energy prices in the 1970s. The key insight is that a rise in energy prices, at given nominal wages, lowers the "consumption" wage, that is the nominal wage deflated by consumer prices, but it leaves unchanged the product wage. The rise in imported energy prices is akin to a tax imposed by other countries and results in a fall in purchasing power. Thus Bruno and Sachs analysed how far workers, quite understandably, resisted cuts in the consumption wage, reasoning that workers' higher nominal wage demands led to a possible combination of a rise in firms' product wages, encouraging firms to raise prices and/or a fall in returns leading to a cut in investment and employment.

I saw a return to such real-wage resistance as very unlikely over the forecast horizon. For instance, in the immediate aftermath of the GFC, there was a fall in the consumption wage following the surge of energy prices. However, as reported wage increases firmed, I become more concerned about the possibility that wages and profits might not behave as expected, which to my mind posed a material upside risk to inflation.

At the December 2021 meeting, I voted for a 0.15 percentage point rise in Bank Rate, as I became increasingly concerned by second-round effects on prices and costs. It was a very finely balanced decision in light of the spread of Omicron. Omicron posed downside risks to activity through social distancing. The fall in restaurant reservations and mobility since Omicron's announcement pointed to downside risks to the November *MPR* consumption forecast. But Omicron was likely to be inflationary on balance. A full switch back to online consumption and working from home would hold back the normalisation of spending on service, likely weighing on services-price inflation. But at the same time, a rise in the relative global demand for goods – since Omicron was spreading globally – at a time when China's zero-Covid policy likely meant supply restrictions, would push up on UK import prices.

Greater inflationary pressure would come on the heels of stronger-than-expected inflation in October and November. Mostly because of energy prices in October (reflecting the increase in the Ofgem utility price cap) and a combination of base effects and higher fuel, food and car prices in November, inflation had risen sharply to 4.2% in October and to 5.1% in November. The staff were now expecting inflation to peak at about 6% in April, above the path in the November *Report*.

We also had further confirmation the labour market was tight. One helpful way to gauge tightness in the labour market is to look at the relationship between vacancies (V) and unemployment (U), captured by the UV or Beveridge curve. The relationship is negative because for a given technology matching workers and vacancies, more vacancies mean fewer unemployed people and vice versa. In a recession, unemployment rises and vacancies fall and so one moves down the curve; in a recovery back upwards. But if the unemployed are a poor match for the vacancies – there is mismatch – the curve moves out.

At the time of the December meeting the economy stood at the very top of the curve, with a historically very high VU ratio (see **Figure 2**). The unemployment rate had fallen to 4.3% in the three months to September, lower than in the November *MPR*, and ONS vacancies reached a new record high of about 1.2m in the three months to October. To my mind, this position was consistent with an imbalance between labour demand and labour supply that most likely reflected short-term frictions as the economy emerged from the pandemic. I did not see a temporary overshoot in vacancies as surprising and expected the imbalance to resolve itself as firms hard-hit by the pandemic, for example in consumer-facing industries, started to hire again as demand for consumer services

picked up. Such a transition back to the pre-pandemic equilibrium would be helped by a reabsorption of some of the people who had become inactive during the pandemic into the labour force. Such a normalisation of the labour market would be consistent with a path of rising Bank Rate as embedded in the November *MPR*.

Figure 2: The Beveridge (VU) curve

Source: ONS, Bank of England and author calculations. See Chart 10 in "Inflation now and then", speech given at the Adam Smith Business School, University of Glasgow, on 23 November 2021

Note: The 2020-2021 period has been adjusted by assuming that 10 percent of furloughed workers were in effect unemployed. This was calibrated using the Labour Force Survey microdata and is based on an estimate of the proportion of workers who report to be on furlough and state that they are searching for an additional or different job. The estimate comes from the LFS microdata. 21Q4 is a forecast based on the Bank of England MPR and extrapolation of the latest Adzuna vacancy data made available through ONS. Rates are expressed relative to the active labour force.

At the February 2022 meeting I voted for a 0.5 percentage point rise in Bank Rate as I remained concerned about medium-term inflationary pressures.

In the February 2022 *MPR* central projection, underlying pay growth is expected to strengthen over the coming year to about 4¾% from its current level of 4%. That is consistent with the Bank's Agents' annual pay survey results, where respondents expected average pay settlements to pick up to 4.8% in 2022, and the tight labour market described above. It is also consistent with the recently high rates of inflation pushing up on wage settlements. Underlying wage growth is then expected to fall back to about 2.5% by 2025 Q1, as labour-market slack increases, reflecting a rise in the unemployment rate to 5% at the end of the forecast, and inflation declines from a peak of about 7% in 2022 Q2 to end the forecast at 1.6%.

In the central projection, real pay falls by about 2% in 2022 and barely grows in 2023, as nominal pay growth of about 4.5% in 2022 and almost 4% in 2023 is not sufficient to offset annual inflation of almost 6.5% in 2022 and a bit more than 3.5% in 2023.

To my mind there is a risk that the high levels of inflation might lead to more sustained upward pressure on nominal wages than embedded in the central projection. Higher costs, if not matched by greater productivity, and if passed through by firms, would put further upward pressure on inflation.

Finally, I supported ceasing the re-investment of the Bank's gilt redemptions starting in March, such that our holdings of government bonds are reduced in a gradual and predictable manner. As explained in the August 2021 *Report*, we would consider beginning actively selling our stock of gilts only once Bank Rate had risen to at least 1%, and depending on the economic circumstances. I also supported ceasing the re-investment of maturing corporate bonds, and the initiation of a programme of corporate bond sales to be completed no earlier than at the end of 2023.

Economic outlook

In the February 2022 *MPR*, the MPC's central forecast is for UK GDP to stagnate in 2022 Q1, as the negative economic impact of Omicron is expected to be contained and short-lived. Omicron is projected to have weighed on activity in December and January, reflecting social distancing, but GDP is then expected to recover in February and March, leaving its level in Q1 similar to that in 2021 Q4. UK GDP grew by 1.1% in the three months to November, stronger than in the November *MPR* and reaching its pre-Covid level of 2019 Q4. Absent Omicron it is likely GDP would have surpassed its 2019 Q4 level in 2021 Q4 - 2022 Q1.

Against the backdrop of gradually waning support from fiscal and monetary policy, four-quarter GDP growth is expected to slow from 6.4% in 2021 Q4 to about 1% in 2023 and 2024, as the energy and terms-of-trade shocks that have hit the UK economy lower demand growth. The MPC’s central projection assumes no material restrictions or widespread social distancing over the forecast. Consumption growth is expected to slow because the sharp increases in global energy prices and tradeable good prices, alongside the planned increase in national insurance contributions in April 2022, weigh on household real incomes. Four-quarter growth in real labour income is thus expected to have slowed sharply at the end of 2021 and be negative in 2022 and 2023, as mentioned above.

Supply growth is also expected to slow over the forecast, settling at about 1½% in 2023-2024, similar to pre-pandemic rates. The slowing of supply growth in 2022 reflects temporary disruptions, while further out, labour supply growth is modest and productivity growth settles at about 1%.

There is much uncertainty about the extent of spare capacity in the economy but we judge there is a small margin of slack at present, both in the labour market and within firms. As mentioned above, the labour market is tight and unemployment, which has been falling faster than expected in previous *Reports*, is judged to be below its medium-term equilibrium rate, despite the end of the CJRS last September. Within firms, high levels of vacancies and reports of recruitment difficulties corroborate some survey responses of above-average levels of capacity utilisation.

Over the forecast, that excess demand dissipates within a few quarters as demand growth slows below supply growth, such that a margin of excess supply emerges at the end of 2022 and reaches

about 1% by the end of the forecast. Slack in the labour market opens up as unemployment is expected to start rising in 2022 Q2 after declining to 3.8% in Q1, finishing the forecast at about 5%.

In the *MPR* central projection, inflation is expected to peak at 7¼% in April 2022 from 5.4% in December, mainly reflecting increases in energy and global goods prices, which account for about ¾ of the rise in inflation. As such the direct contribution from energy prices to CPI inflation is expected to peak at about 2¼ percentage points in 2022 Q2. As described above in some detail, domestic wage pressures also contribute to the rise in inflation in 2022, with the tight labour market and higher inflation pushing up on underlying private-sector wage growth. The projections for underlying wage growth in 2022 and inflation in 2022 and 2023 are materially stronger than in the November *MPR*, although inflation is slightly lower in 2024. The sharp rise in wholesale gas prices since November, which means Ofgem's utility tariff caps will be reset at a much higher level in April 2022 when they are next updated, and more upward pressure on global goods prices from the global supply bottlenecks, account for much of the upward revision to inflation in 2022. Inflation is then projected to decline to slightly above 2% by early 2024 and fall to 1.6%, below the target, in early 2025, as the contribution from energy prices wanes, global bottlenecks recede, and domestic cost pressures ease with the rise of unemployment and decline of inflation.

These projections are conditioned on a path for Bank Rate implied by financial markets, which rises to nearly 1½% by mid-2023, as well as energy prices remaining constant beyond six months, as mentioned above.

Turning to risks to the February 2022 *MPR* central forecast, I see a number.

First, as I flagged over the past year, the downside risk that concerned me the most was the emergence of highly transmissible variants of the virus, the kind that necessitated a re-imposition of lockdowns here and abroad in late 2020/early 2021. I highlighted that the time needed to redesign vaccines that can deal with novel resistant strains would likely mean renewed restrictions and voluntary social distancing as health risks worsened, weighing on growth in the UK and globally. Indeed, with the emergence of Omicron in 2021 Q4, we saw something of this ilk, which weighed on UK activity albeit to a lesser extent than initially feared.

Second, the main risk I would like to emphasise in this *Report* is to the upside – the path for underlying cost growth. As I have mentioned, high inflation and a tight labour market, in part reflected by strength in the pay of new hires and high rates of job churn, are expected to push up on underlying wage growth to about 4¾% over the next year. Underlying wage growth is then projected to decline gradually to about 2.5% in early 2025 because the factors behind its rise, such as high inflation, are expected to fall over the MPC's forecast horizon. As set out above if underlying wage growth does not fall back as forecast, and if cost growth is passed through to prices by firms, this is likely to put significant upward pressure on inflation over the medium-term. It the joint behaviour of prices and wages that is key here.

Third, an upside risk to the inflation forecast could arise from geopolitical events. Commodity markets typically respond to geopolitical risk in a variety of ways (e.g. oil prices rise). However, if certain geopolitical events specifically affect the commodity supply chain, it could create substantial price volatility. At the time of writing, there seems a material risk of further increases in global gas prices which would only add to the already considerable rises in CPI inflation we have seen so far.

There are downside risks to the *MPR* inflation forecast, which I currently judge more minor. Chief among them is that demand growth in the UK slows by more than expected over the forecast period, reflecting the impact of higher global energy and goods prices on UK real aggregate income and waning support from fiscal and monetary policy.

Another downside risk to the inflation forecast stems from how we incorporate gas and oil price futures into our forecast in the medium-term. As described above, the MPC's central projection for inflation is to assume that wholesale energy prices follow their respective futures curves for the first six months of the projections and remain constant beyond that, in contrast to the futures curves, which are downward sloping over coming years. If gas prices decline along the futures curve expected, or even steeper, then inflation will moderate faster.

Explaining monetary policy

Since my previous report in February 2021, I have undertaken a number of activities:

- Submitted my Treasury Select Committee reappointment questionnaire (July 2021)
- Given two talks to schools and two on-the-record speeches at universities - "Inflation now and then" (23 November 2021) at the Adam Smith Business School, University of Glasgow, and "Will the pandemic scar the economy" (19 July 2021) at the University of Liverpool Management School Webinar
- Given on-the-record remarks on "Challenges to the Economic outlook" (5 March 2021) at the Centre for Economic Policy Research and the University of Chicago Booth School of Business Webinar
- Made two regional visits to meet with businesses and schools in:
    - Central southern (24 November 2021)
    - West Midlands (29 March 2021)
- Given talks on the economic outlook to business economists and think-tanks
- Continued with duties and responsibilities as a non-Executive Director at the UK Statistics Authority
- Continued pursuing academic research on productivity, investment and innovation with a view to better understanding how it affects the economy, monetary policy and the transmission mechanism. To that effect, I attended several workshops and conferences set out below.
    - Workshop on productivity and structural change (NIESR, MMF , TPI and BoE) (25 November 2021)
    - Special IARIW-ESCoe Conference on Measuring Intangible Assets and their Contributions to Growth (11-12 November 2021)
    - Presentation at the OECD Working Party on Measurement and Analysis of the Digital Economy (9 November 2021)
    - BBL - Intangible investment conceptual framework, state of art, measurement methodologies, moving forward and policy implications (30 June 2021)
    - Special Session on Missing Capitals at the RES 2020 conference (14 April 21)