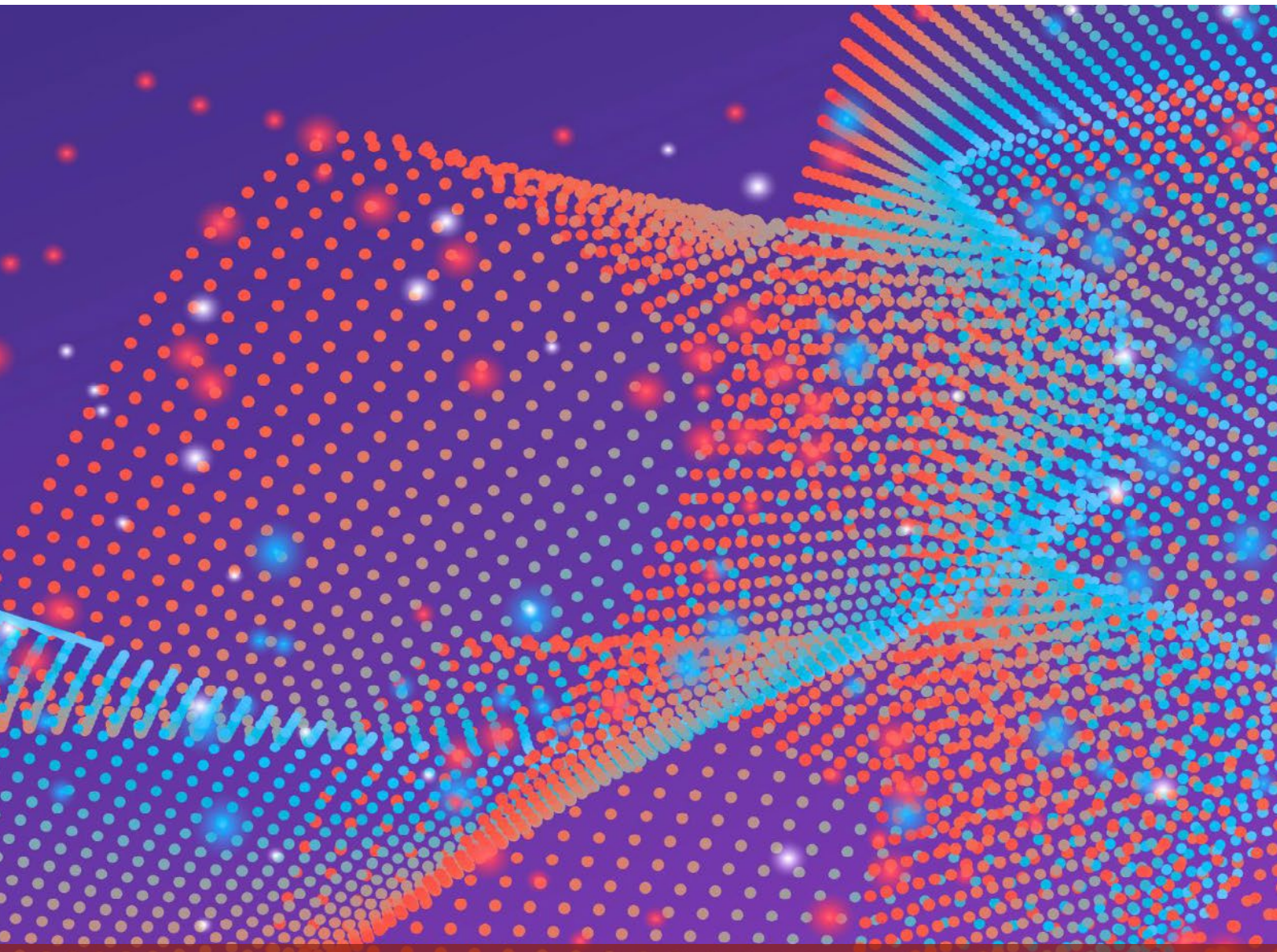
National Institute of Economic and Social Research



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The National Institute of Economic and Social Research is an independent research institute, founded in 1938. The vision of our founders was to carry out research to improve understanding of the economic and social forces that affect people's lives, and the ways in which policy can bring about change. And this remains central to NIESR's ethos. We continue to apply our expertise in both quantitative and qualitative methods and our understanding of economic and social issues to current debates and to influence policy. The Institute is independent of all party political interests.

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Foreword

It seems that the trigger for the next general election has been well and truly pulled. For much of the next year, political decision making will place a heavy weight on the calculus of winning a working majority at that election. The leaders of the main political parties will set out their stalls and in a mature democracy it is quite right that they do so, to allow time to scrutinise their plans and to support clarity in policies that will have to be implemented in the melee of government. Economic growth seems set to disappoint for much of the next Parliament and that is no great backdrop for slow burn economic reform. But we sense that there is an emergence of a consensus on the need to tackle our paltry levels of economic progress. That at least is a promising start.

The problem we face is that rarely has there been more urgent need, arguably never since the late 1970s, to address this country's economic problems. But at the same time rarely have they been so entrenched that it is hard to think of any quick fixes that will materially improve living standards across the income distribution within a single Parliament. The economy seems constrained by its pre-Covid peak in activity and is being held back by a sharp normalisation in policy rates, a sequence of persistent negative shocks to supply capacity and a marked slowing in world growth. Brexit has done a great service by revealing even more clearly the underlying problems in the British economy but has not yet located solutions. In truth, shock therapy has tended not to work in any country and, so far, neither has Brexit.

Public debt is at the worryingly high level of around 100 per cent of GDP and there are clear and present fiscal risks undermining any attempt to prise open the public purse in a substantive manner; there is simply no free lunch available at the Treasury. Indeed, there is not a great deal that fiscal policy can now do to re-focus the state on the big job of re-structuring the economy without also thinking about where revenues can be enhanced, otherwise financial markets are likely to get into another funk about the likely size of funding requirements. Quantitative tightening (QT) also means effectively that the fiscal deficit has to be overfunded, as we are selling more bonds to the non-bank financial sector than the simple deficit would imply. The lifetime losses of the bond purchase and sales programme now look set to be in the region of some £150bn or around 6 per cent of GDP. The losses in 2023, 2024 and 2025 alone look to be in the region of £120bn or around 4 per cent of GDP.

This huge cumulative loss is not fully determined. It depends on several factors:

i. the path of Bank rate – recall the loan of reserves borrowed by the Bank of England's Asset Purchase Facility must be repaid at Bank rate

ii. movements in bond prices, which will reflect market liquidity, credibility, and policy expectations

iii. the speed and timing of QT

iv. the residual levels of bonds held to meet higher steady state reserve demand

And in any case these costs must be laid against the stabilisation of nominal demand since the financial crisis when policy was otherwise constrained at the zero lower bound. Even with these costs a reasonable case could be made in favour of some form of bond purchases but perhaps less so in the quantity and duration of holdings.

One way to reduce these losses would be for the Bank to convince markets that Bank rate will not need to climb to 6 per cent and that it now has done enough to bring inflation down, which it has. In this respect the good news is that inflation looks set to fall gradually to target over the next 18 months or so. And eventually policy rates may settle at somewhere between 3 and 4 per cent. The Bank of England's local difficulties with forecasting and acting on inflation will subside, as long as the Monetary Policy Committee takes back control of money markets with more sure-footed communication and clear analysis of prospects for aggregate demand and supply. We look forward to participating in the review of Bank forecasting and models led by Ben Bernanke.

In the meantime, and until we ignite economic growth, a substantial portion of households will struggle with high housing and food costs, poor transportation, a creaking healthcare service and dwindling savings. It is not a promising inheritance for the next government.

Jagjit S. Chadha, Director, NIESR
August 2023

National Institute UK Economic Outlook – Summer 2023

Summary

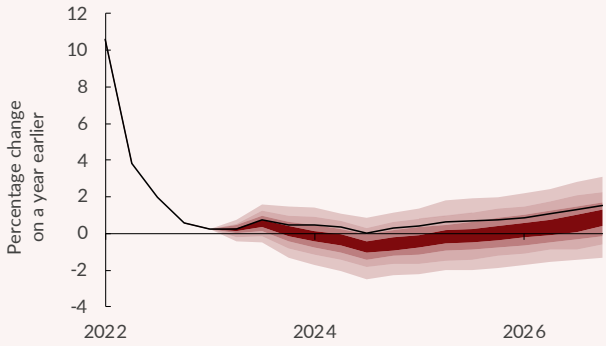
- Twelve-month Consumer Price Index (CPI) inflation fell to 7.9 per cent in June, down from 8.7 per cent in May, and we expect it to fall further in July, driven by the reduction in the OfGEM price cap. The June number marks the lowest rate of headline inflation since March 2022, though it was still higher than we were anticipating back in February. We now expect CPI inflation to fall to 5.2 per cent by the end of 2023 and to 3.9 per cent by the end of 2024, as the effects of the monetary tightening over the past year start to take effect. With Core Inflation at 6.9 per cent, and other underlying inflation measures remaining high, we see upside risks to our inflation forecast.
- Cumulative monetary policy action over the past year – needed to tackle this high and persistent inflation – has tightened financial conditions. Our forecast is conditioned on the Bank Rate peaking at 5.50 per cent. We suggest that the MPC may wish to make clear in its communication that, as monetary policy is forward looking, it has done enough to get in front of inflation, as it sets out its path towards target. Failing to do so risks further adverse market reaction.
- The fall in the economic inactivity rate is an encouraging sign for the labour market, but the number of long-term sick remains high. Overall, the labour market has begun to loosen, with an uptick in unemployment and falls in vacancies, but remains tight. We expect the loosening to continue with the unemployment rate reaching 4.7 per cent in 2024 and peaking at 5.1 per cent, its 'natural rate', by 2026. We expect wage growth to remain above 6 per cent in 2023 and 2024, which may add to wage growth momentum and potentially inflationary pressures.
- Real personal disposable income, consumption and GDP all remain below their pre-Covid peaks and the outlook for GDP growth remains subdued, consistent with the longer-term trend of low economic growth in the United Kingdom. Specifically, we expect GDP growth in this year and next of 0.4 and 0.3 per cent, respectively. With no recession in our forecast, the MPC may achieve a 'soft-landing' based on our forecast outturn. That said, the risks to output are firmly on the downside and there is a greater than 50 per cent chance that annual GDP growth in 2024 will be negative.
- Public sector net debt (PSND) was 100.8 per cent of GDP in June. Surpassing the 100 per cent of GDP mark represents a milestone moment, albeit one that was expected. This figure is 1.5 per cent of GDP below the trajectory outlined in the Office for Budget Responsibility's (OBR's) March forecast, due to lower cash debt and higher GDP outturn. However, higher interest rates and inflation have increased government interest payments to 3.8 per cent of GDP in 2022-23 and raised potential QT-related cumulative net losses.
- The OBR released its Fiscal Risks and Sustainability Report, examining the challenges that inactivity and health, energy, and high debt pose to public finances. NIESR has been arguing for some time now that the United Kingdom needs a new fiscal framework that can provide enough flexibility and competence to respond to economic shocks while ensuring credibility is maintained and fiscal policy works for all (Chadha et al. 2021).

Table 1.1 Summary of the forecast (percentage change unless otherwise stated)

	2019	2020	2021	2022	*2023*	*2024*	*2025*	*2026*	*2027*
GDP	1.6	-11	7.6	4.1	*0.4*	*0.3*	*0.6*	*1.2*	*1.7*
Per capita GDP	1.1	-11.4	7.2	3.4	*-0.1*	*-0.2*	*0.2*	*0.8*	*1.3*
CPI Inflation	1.8	0.8	2.6	9.1	*7.7*	*4.1*	*2.3*	*2.4*	*2.2*
RPIX Inflation	2.5	1.7	4.2	11.5	*8.5*	*4.4*	*2.8*	*3*	*3*
RPDI	2.1	-1.3	1.3	-1.4	*0.1*	*1*	*1*	*1.7*	*2.1*
Unemployment, %	3.8	4.6	4.5	3.7	*4.1*	*4.8*	*5*	*5.1*	*5*
Bank Rate, %	0.8	0.2	0.1	1.5	*4.7*	*5.5*	*4.9*	*4.2*	*3.5*
Long Rates, %	0.9	0.3	0.8	2.4	*4.1*	*4.2*	*3.8*	*3.5*	*3.4*
Effective exchange rate	-0.5	0.5	4.7	-2.2	*2.3*	*2.1*	*-1*	*-1*	*-0.6*
Current account as % of GDP	-2.9	-3.1	-1.5	-3.8	*-4.5*	*-4.9*	*-4.5*	*-3.7*	*-2.9*
Net borrowing as % of GDP	2.5	15.3	5.7	5.3	*5.4*	*3.4*	*1.3*	*0*	*-1.9*
Net debt as % of GDP	82.3	101.6	99.7	99.3	*98.8*	*98*	*93.3*	*89*	*82.9*

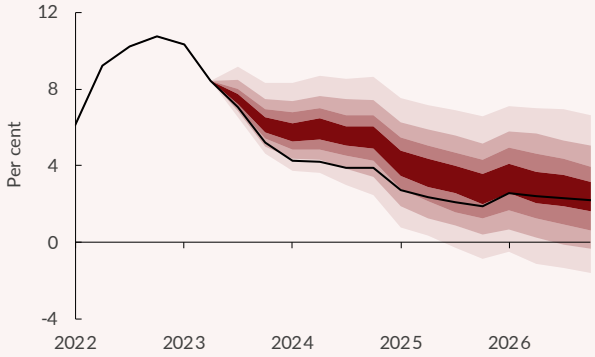
Note: Numbers reported are yearly averages except for net borrowing, which is reported for the full fiscal year, and net debt, which is reported for the end of the fiscal year.

Annual GDP growth



Note: The shades within the fan chart represent a 10 per cent chance that GDP growth will lie within the boundary of that shade. There is a 20 per cent chance that GDP growth will lie outside the shaded area of the fan. The black line represents our central forecast for GDP growth.
Source: NiGEM database, NIESR forecast and NiGEM stochastic simulations.

CPI inflation



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Source: NiGEM database, NIESR forecast and NiGEM stochastic simulations.

1. The Macroeconomic Outlook for the United Kingdom

By Paula Bejarano Carbo, Hailey Low, Leaza McSorley, Stephen Millard and Kemar Whyte[1]

Economic Background and Forecast Summary

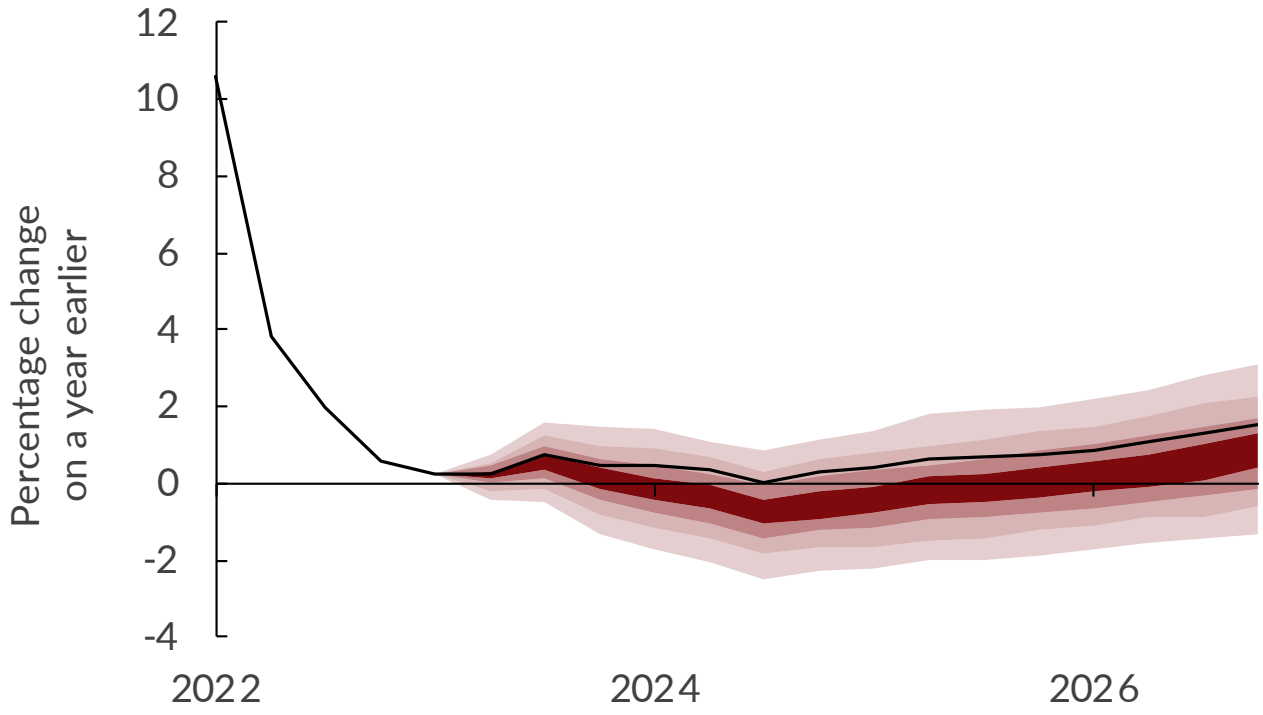
As we publish our Summer Economic Outlook, we continue to expect the United Kingdom to steer clear of a recession in 2023. Nevertheless, the country faces a challenging economic outlook as growth remains sluggish and the Bank of England's Monetary Policy Committee (MPC) struggles to tame high inflation. Economic activity has slowed considerably, relative to 2022, as supply chain disruptions and the war in Ukraine exposed the economy to a deterioration in its productive capacity. Momentum remains weak as labour market participation has also declined, mainly on account of rising long-term illness, and aggressive policy rate hikes – needed to tackle high and persistent inflation – have tightened financial conditions. And real personal disposable income, consumption and GDP all remain below their pre-Covid peaks.

Against this background, the outlook for growth remains subdued. Our July GDP Tracker (Bejarano Carbo, 2023a) suggests GDP will remain flat in the second quarter of 2023, consistent with our longer-term view of low economic growth in the United Kingdom. Specifically, we expect growth in this year and next of 0.4 and 0.3 per cent, respectively (figure 1.1). Figure 1.1 plots a probabilistic range of values for GDP growth against our central forecast (the black line). Throughout the forecast period, we see the risks to GDP growth being skewed to the downside. In fact, our stochastic simulation suggests a 50 per cent chance that GDP growth will contract by the end of 2023 and a 60 per cent chance of recession by the end of both 2024 and 2025. Yet, our central forecast expects the United Kingdom to avoid a recession in all three years.

The recently published Office for Budget Responsibility's (OBR) Fiscal Risks and Sustainability Report lays bare the growing burden of ill health on the UK economy. The continued rise in economic inactivity due to long-term illness over the last three years is estimated to have contributed to reduced annual tax revenues of £8.9 billion and led to additional welfare costs of £6.8 billion in 2023-24. Careful management of the public finances, especially in the face of inevitable shocks and slow-building pressures, will be more critical than ever going forward.

1 The authors are grateful to Barry Naisbitt and Jagjit Chadha for helpful comments, and to Paula Bejarano Carbo and Joanna Nowinska for preparing the charts and the database underlying the forecast. The forecast was completed on 24 July 2023 and is based on financial markets data up to and including 14 July 2023; more recent data is incorporated in the text. Unless otherwise specified, the source of all data reported in tables and figures is the NiGEM database and NIESR forecast baseline. All questions and comments related to the forecast and its underlying assumptions should be addressed to Kemar Whyte (enquiries@niesr.ac.uk).

Figure 1.1 GDP growth

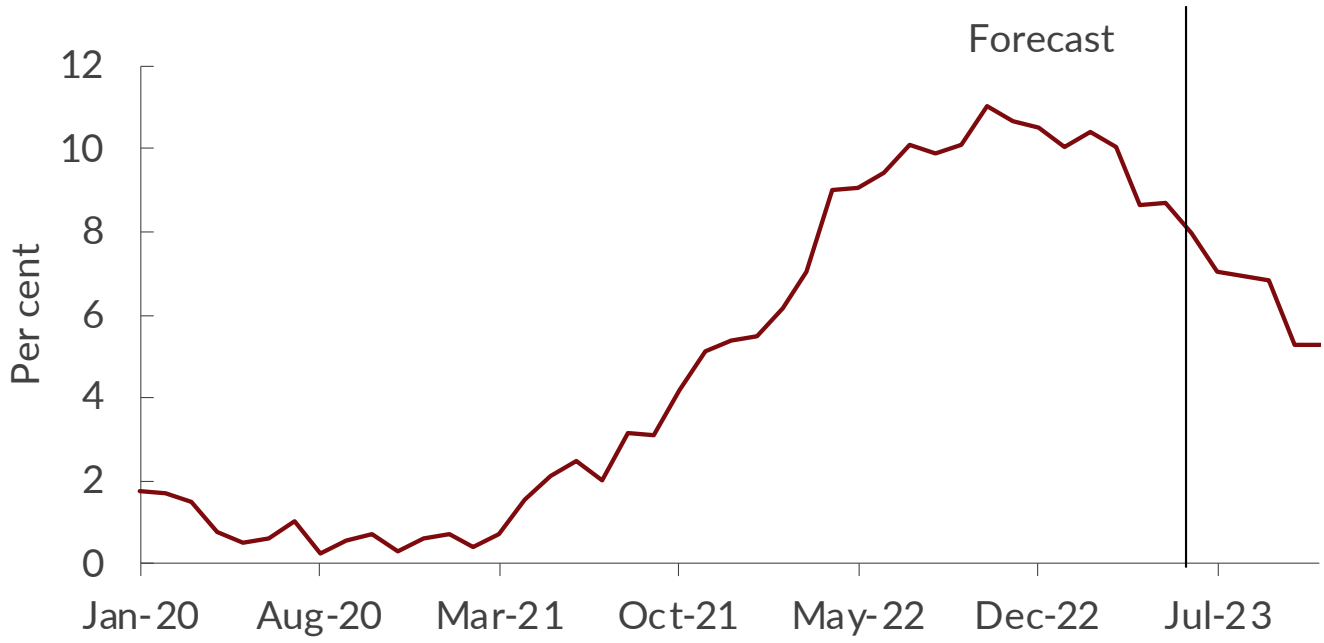


Note: The shades within the fan chart represent a 10 per cent chance that GDP growth will lie within the boundary of that shade. There is a 20 per cent chance that GDP growth will lie outside the shaded area of the fan. The black line represents our central forecast for GDP growth.
Source: NiGEM database, NIESR forecast and NiGEM stochastic simulations.

Twelve-month Consumer Price Index (CPI) inflation fell to 7.9 per cent in June, down from 8.7 per cent in May. The significant fall marks the lowest rate of headline inflation since March 2022. Core inflation fell slightly to 6.9 per cent. The fall in the headline rate was supported by a drop in the cost of motor fuels and is likely to be followed by another fall in July as the Ofgem Energy Price Cap decreased significantly on 1 July. However, monthly inflation is volatile, so the Bank of England will need to see sustained falls in both headline and core inflation after July to be confident that inflation will return to the Bank of England's target of 2 per cent in due course.

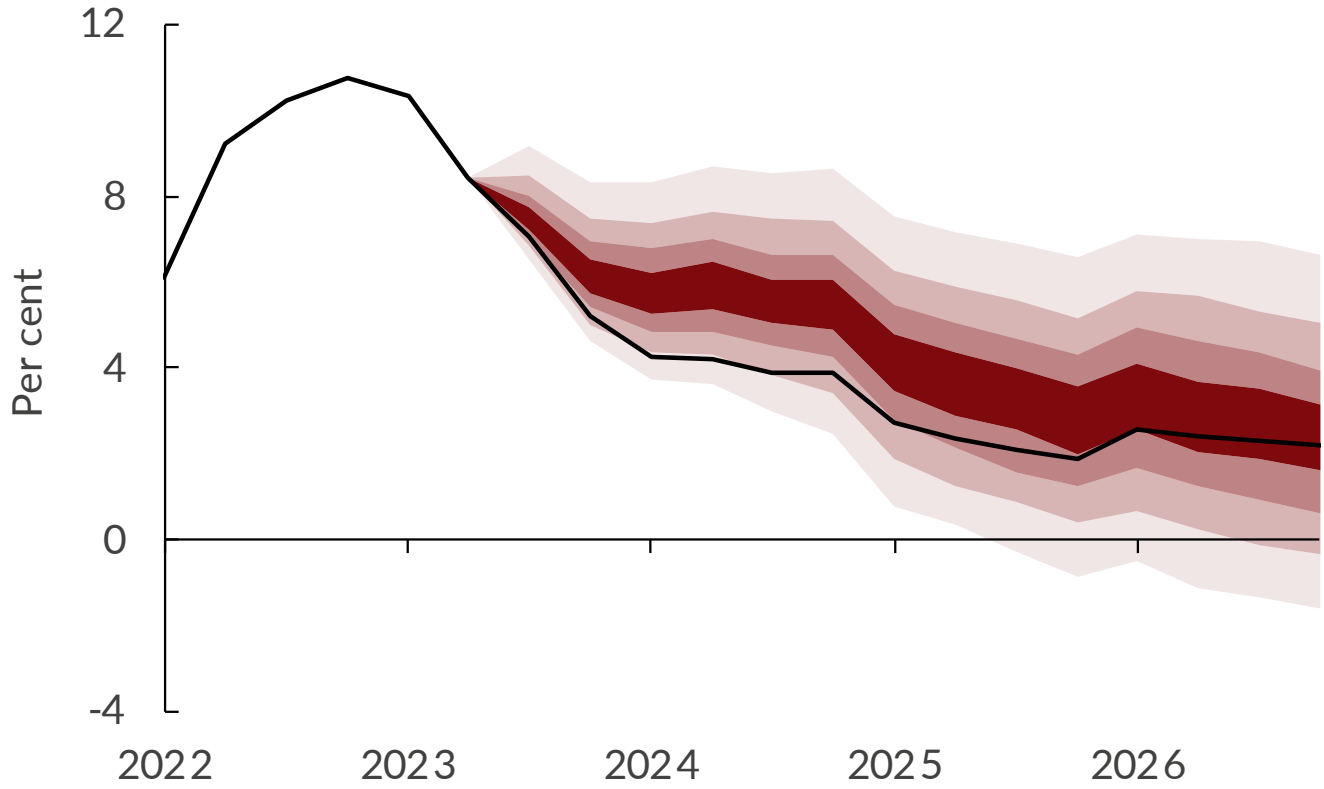
The fall in inflation in June and the likely fall in July mean that by the first quarter of 2025 we can reasonably expect inflation to be in the range of 2 – 4 per cent. Specifically, we now expect CPI inflation to fall to 5.2 per cent by the end of 2023 and to fall to 3.9 per cent by the end of 2024 (figures 1.2 and 1.3). Figure 1.3 plots a probabilistic range of values for inflation against our central forecast (the black line). Throughout the forecast period, we see the risks to inflation tilted to the upside. In fact, our stochastic simulation suggests a 40 per cent chance that the annual rate of CPI inflation will still be above 4 per cent in the fourth quarter of 2025.

Figure 1.2 Annual consumer price index inflation



Source: ONS, NIESR calculations.

Figure 1.3 CPI inflation fan chart



Note: The shades within the fan chart represent a 10 per cent chance that inflation will lie within the boundary of that shade. There is a 20 per cent chance that inflation will lie outside the shaded area of the fan. The black line represents our central forecast for inflation.
Source: NiGEM database, NIESR forecast and NiGEM stochastic simulations.

Policy

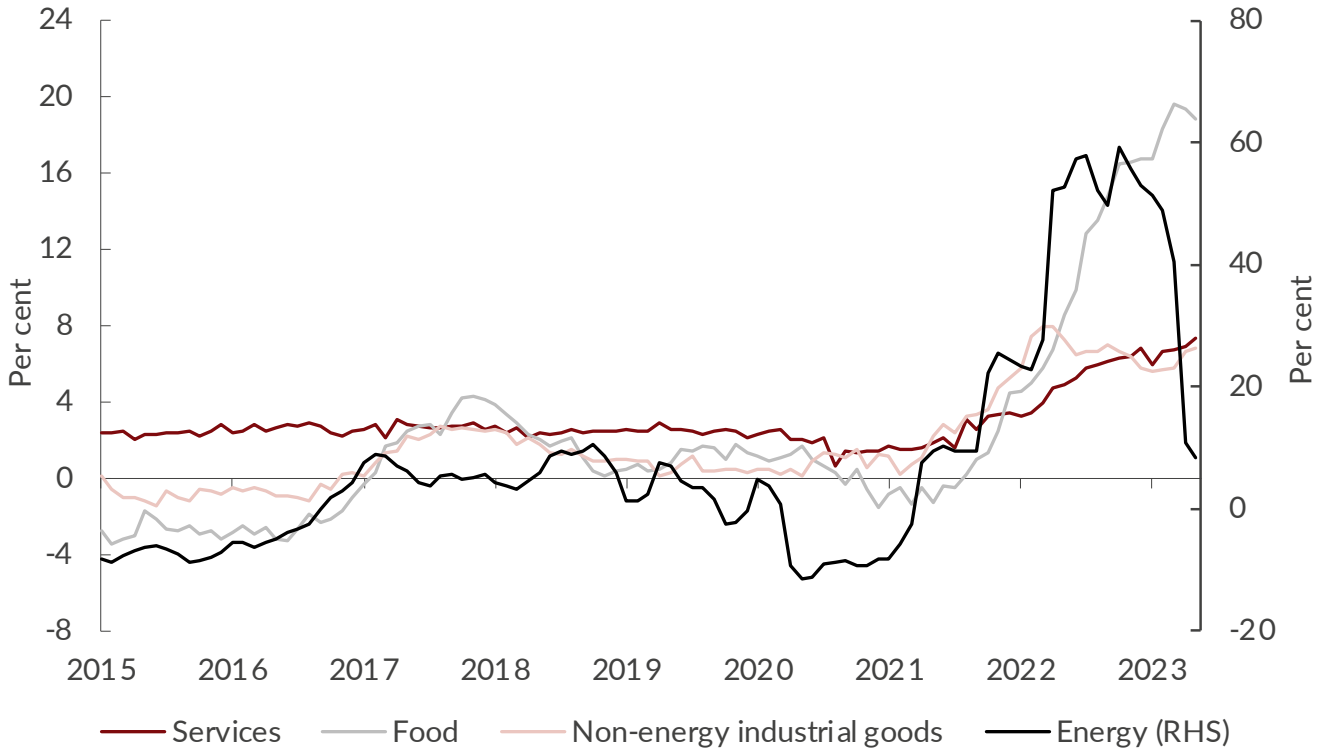
Monetary Policy

CPI inflation remains stubbornly high…

Annual CPI inflation fell to 7.9 per cent in June following two consecutive months at 8.7 per cent. This fall was driven by falling prices for motor fuel which were partially offset by rising prices in food. Despite the welcome decrease, annual CPI inflation remains stubbornly high, now above the Bank of England's 2 per cent target for the twenty-third consecutive month.

The recent falls in the headline CPI inflation rate reflect the slow moderation of the supply shocks caused by the pandemic and Russia's invasion of Ukraine. That said, with inflation approaching its underlying rate, monetary policy will soon be the main force bringing inflation down and back to target.

Figure 1.4 Annual inflation rates for elements of the consumer price index



Source: ONS.

… as the nature of inflationary pressures shifts away from energy price increases to core inflation

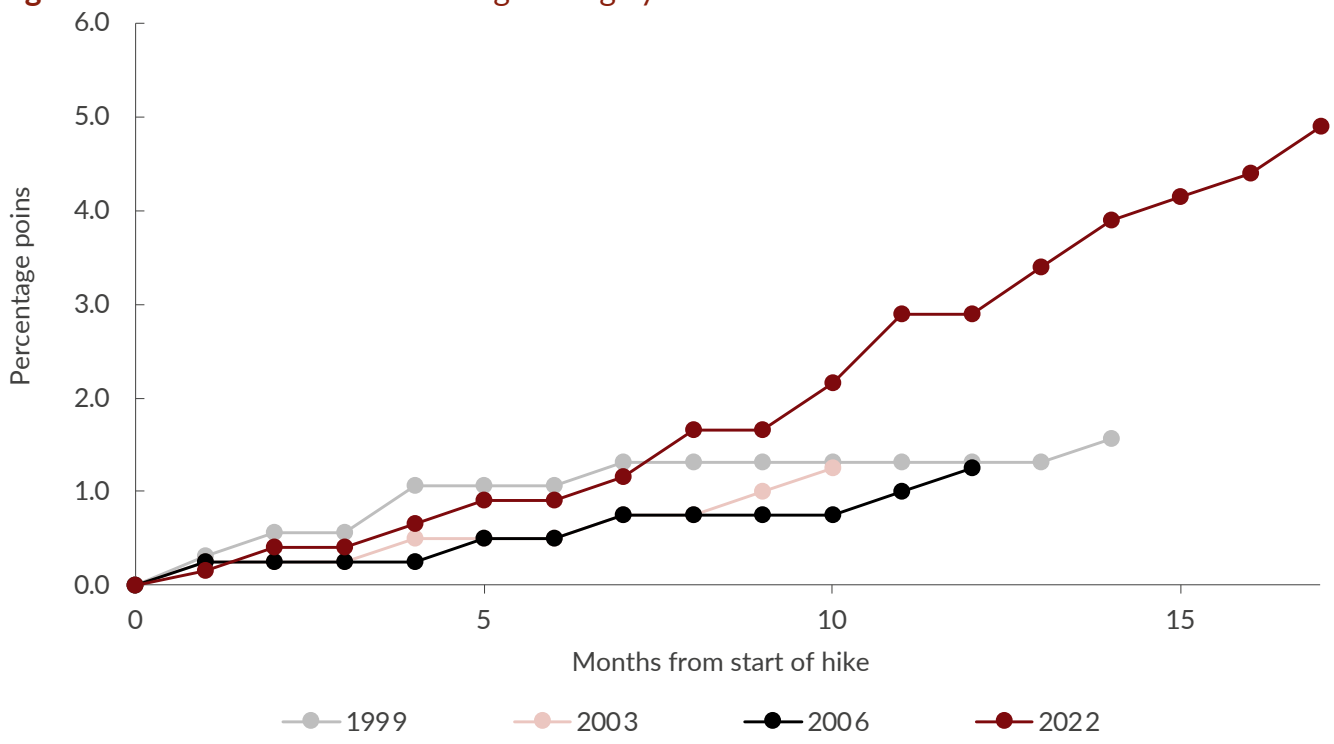
With the large energy price rises 'falling out' of the CPI basket from April 2023 onwards, the drivers of inflationary pressures have shifted towards rising food, non-energy goods, and services prices. The latest data suggest that annual energy price inflation has decreased by 54.2 percentage points between June 2022 and June 2023, while food inflation has risen by 7.5 percentage points in this time. (Food has a weight more than twice that of energy in the CPI calculation.)

At the same time, services and non-energy industrial goods inflation have plateaued around 7 per cent, unsurprisingly close to the latest core CPI figure of 6.9 per cent. Additionally, the GDP deflator, which is a good measure of domestically-generated inflation, was estimated to have risen to 6.5 per cent in the first quarter of 2023. Box A explores what these measures of

underlying inflation tell us about current inflation dynamics and where we can expect inflation to head in further detail. In short, these measures indicate that, as a result of the original inflation shock, inflationary pressures have permeated indirectly to other areas of the economy (sometimes referred to as 'second-round inflation effects'). Broadly speaking, it is useful to think of these measures as picking up the inflation that the MPC wants to, and can, return to the 2 per cent target through use of its conventional monetary instrument. That they are averaging 6 to 7 per cent is a concern in that it implies, at best, a possible need to tighten monetary policy by more than the MPC have already. At worst, as voiced by Huw Pill, Chief Economist at the Bank of England, at a Treasury Committee oral evidence session on 23 May, these figures may suggest that a behavioural change has taken place among households and firms, which is maintaining inflation above target despite monetary tightening.

So, while headline inflation eased by more than expected in June, it remains the case that we have yet to see a significant movement in underlying inflationary pressures in the economy. Whether or not this is indicative of an economy-wide behavioural change will become clearer over the coming months.

Figure 1.5 Bank Rate historical tightening cycles



Source: Datastream.

The Bank of England continues its (unprecedented) aggressive tightening cycle…

Against a backdrop of 8.7 per cent inflation, the MPC opted to raise rates by 50 basis points at its June meeting and by 25 basis points at its August meeting, bringing the Bank Rate to 5.25 per cent. As shown in Figure 1.5, since the Bank of England gained independence in 1997, the current tightening cycle is the most aggressive in terms of pace and magnitude of rate hikes.

Box A: Underlying Inflation in the United Kingdom

By Paula Bejarano Carbo and Paul Mortimer-Lee

Inflation is a sustained rise in the general price level. It matters because a high rate of inflation can reduce the real purchasing power of money and fixed incomes and can make relative price movements difficult to spot. It can distort resource allocation and intrude into wage and price setting behaviour, as well as having an important influence on interest rates. Knowing the 'true' underlying trend rate of inflation is important for decisions by the Bank of England in setting interest rates because monetary policy shouldn't respond to volatile or transitory changes.

This concept of inflation is different from what people in the United Kingdom generally mean by 'inflation,' where they are most often referring to the twelve-month percentage change in the consumer price index (CPI) published by the Office for National Statistics (ONS). However, the price level can change due to one-off factors, such as an indirect tax rise on alcohol and tobacco, for example. This would not be inflation on the definition adopted here, because it would be neither general nor persistent. That is not to deny that the change in the price level would be important in affecting living standards. But its effects would not be on goods and services generally, and it would drop out of the twelve-month change in prices after a year. It would not require a monetary policy response. Effectively, it would be 'noise' that would obscure the 'signal' of where inflation - the persistent process of price increase – stands.

This box reviews a number of measures that economists and policy makers have used to measure the signal in the price data and to reduce the noise. There may be no single 'best' measure that works in all sub-periods, so that analysing a variety of measures is advisable because of shifts in the drivers of movements in the general price level. Thus, there is no unanimous definition nor methodology for a singular measure of 'core' or underlying inflation; rather, each measure provides a different insight into the 'inflation story' (Mankikar and Paisley, 2002). We believe that incorporating some of these measures that try to extract the signal from the noise could help improve public understanding of the causes of inflation.

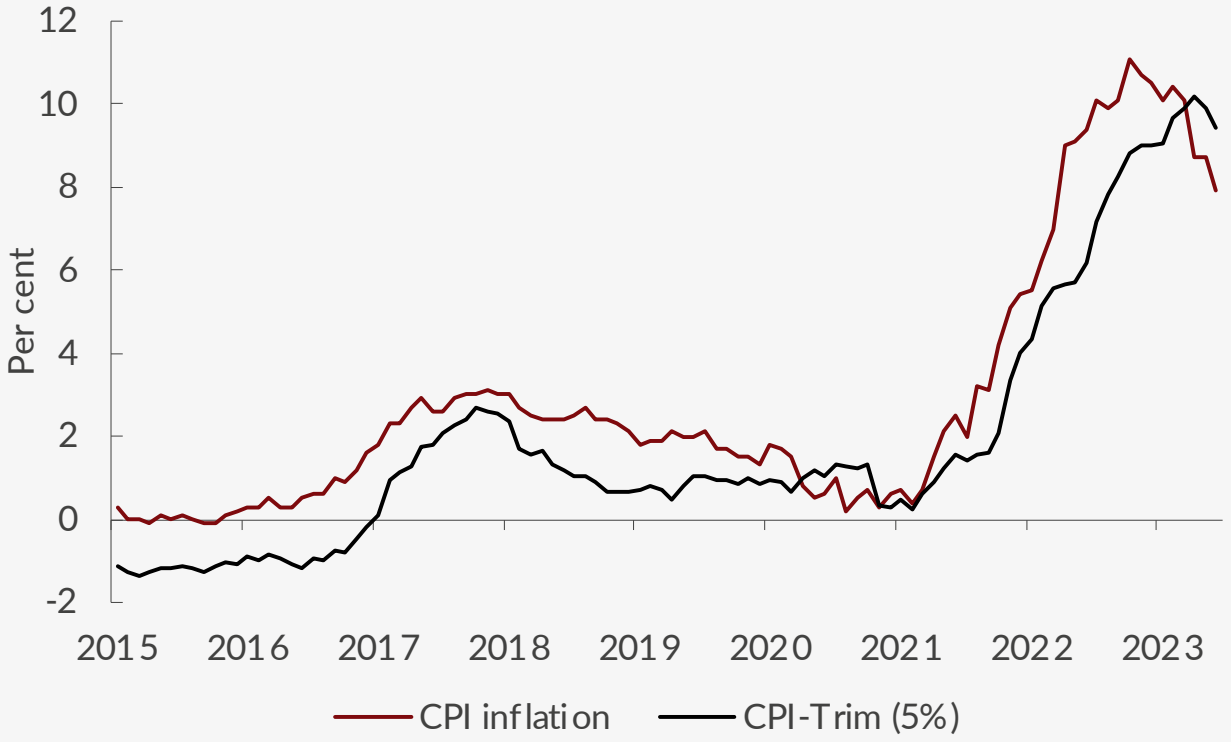
Measures of 'core' or underlying inflation

It is useful to look at measures of 'core' or underlying inflation to understand current inflation dynamics. These measures aim to indicate where inflation 'really' is, once transient shocks, like volatile energy price rises, pass.

Two common statistical approaches for measuring underlying inflation are exclusion-based and trimming-based measures. Exclusion-based measures eliminate certain components from the price index. For instance, CPI excluding energy, food, alcoholic drink and tobacco – commonly referred to as core CPI - excludes components that commonly see volatile and transient price movements, often providing more noise than signal. Equally, a measure of services inflation may be useful if there is reason to believe that excluding goods inflation will provide a clearer picture of underlying inflation. On the other hand, trimming-

based measures exclude a certain percentage of goods and services on both ends of the distribution of price changes. The logic here is that, by 'throwing out' information at the tails of the distribution that could represent highly volatile price movements, or outliers, one can get rid of some of the noise. NIESR's measure of trimmed-mean inflation excludes the 5 per cent largest price changes on either end of the CPI distribution in order to eliminate extreme volatility without throwing out too much information. In this box, we also consider the ONS measure - which trims the CPI distribution by 15 per cent on either end – as well as median inflation – which trims the CPI distribution at all points except the middle value.

Figure A1 Annual consumer price index headline and trimmed-mean (5 per cent) inflation



Source: ONS, NIESR Calculations.

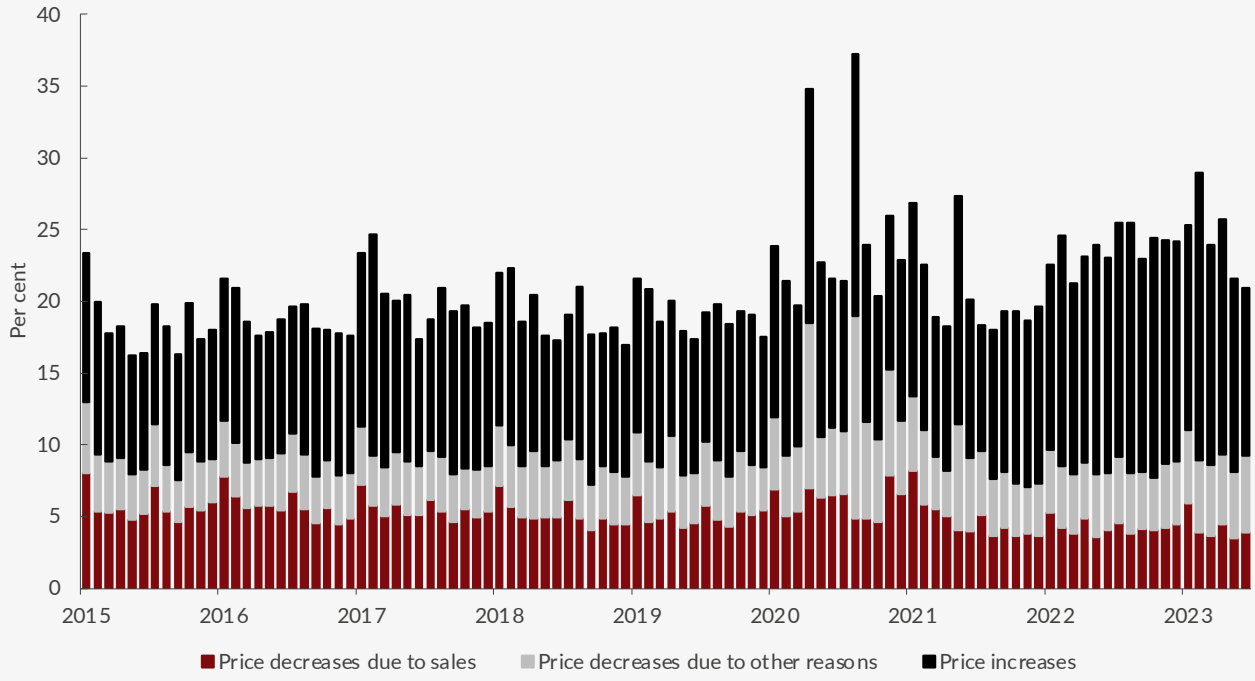
Figure A1 compares headline CPI inflation with NIESR's measure of trimmed-mean CPI inflation. Clearly, both measures of inflation are extraordinarily elevated compared to recent years.

NIESR's measure of trimmed-mean inflation has risen steadily over the past year, reaching a series high of 10.2 per cent in April. In June, NIESR's trimmed-mean estimate remained elevated at 9.4 per cent, having fallen from 9.9 per cent in May. This measure suggests that, even though the original inflationary impulse at the start of 2022 could be seen as a product of volatile price movements, by 2023 the headline rate broadly reflected the annual price change among most items in the CPI basket.

It is notable that, historically, this trimmed-mean measure was always below the headline level. This is because the distribution of price changes is skewed: there are far more volatile price rises than volatile price decreases (see figure A2). As such, you tend to eliminate more information when you trim the top end of the distribution. That trimmed-mean inflation is

higher than headline at the moment suggests that there are currently a lot more extreme price decreases driving the fall in headline CPI. As discussed in the main text of this Outlook, this is largely due to last year's energy shocks 'dropping out' of the annual calculation.

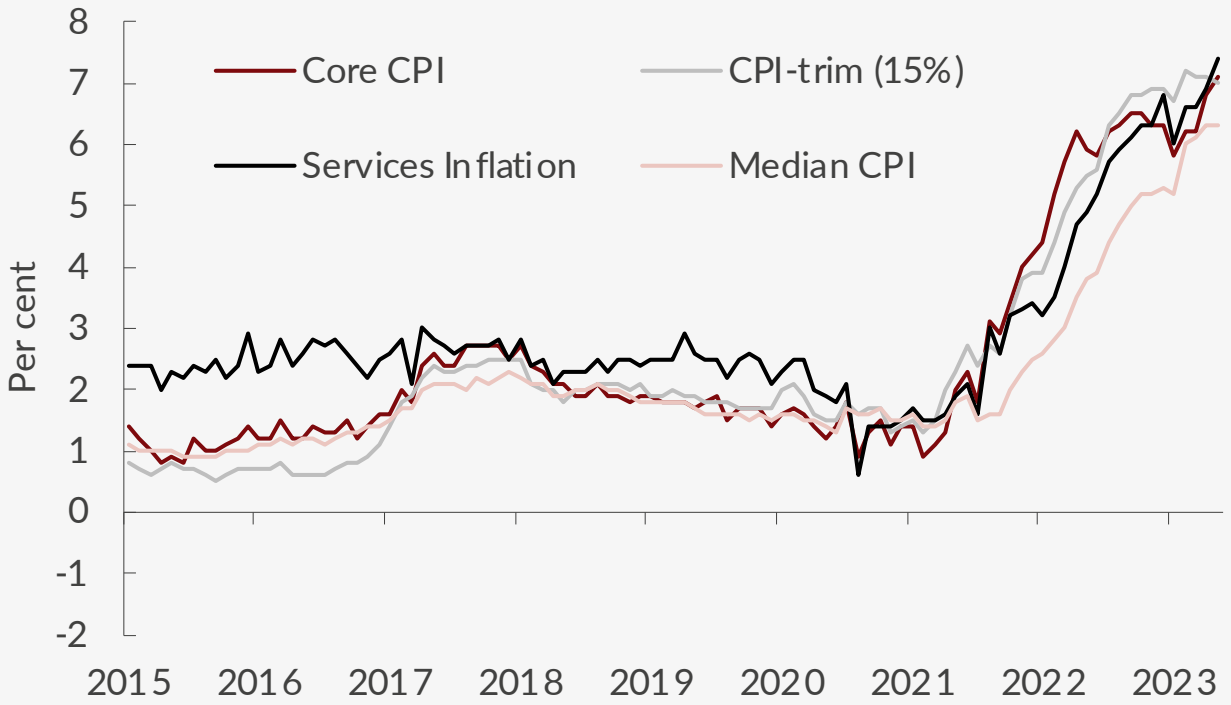
Figure A2 Decomposing price changes: Decreases due to sale, decreases due to other reasons and increases



Source: NIESR calculations.

Figure A3 illustrates the ONS core CPI inflation and trimmed-mean measures, median inflation and services inflation. Concerningly, all four measures seem to have flatlined at an average rate of 6.5 per cent over the last year. These measures indicate that, as a result of the original inflation shock, inflationary pressures have permeated indirectly to other areas of the economy (sometimes referred to as 'second-round inflation effects'). Broadly speaking, it is useful to think of these measures as picking up the inflation that the MPC wants to, and can, return to the 2 per cent target through using its conventional monetary instrument. Overall, these trends indicate that, despite interest rates being at 5 per cent already, we are likely to see inflation remain persistently elevated throughout 2023 and into 2024.

Figure A3 Annual core, ONS trimmed-mean, median and services inflation

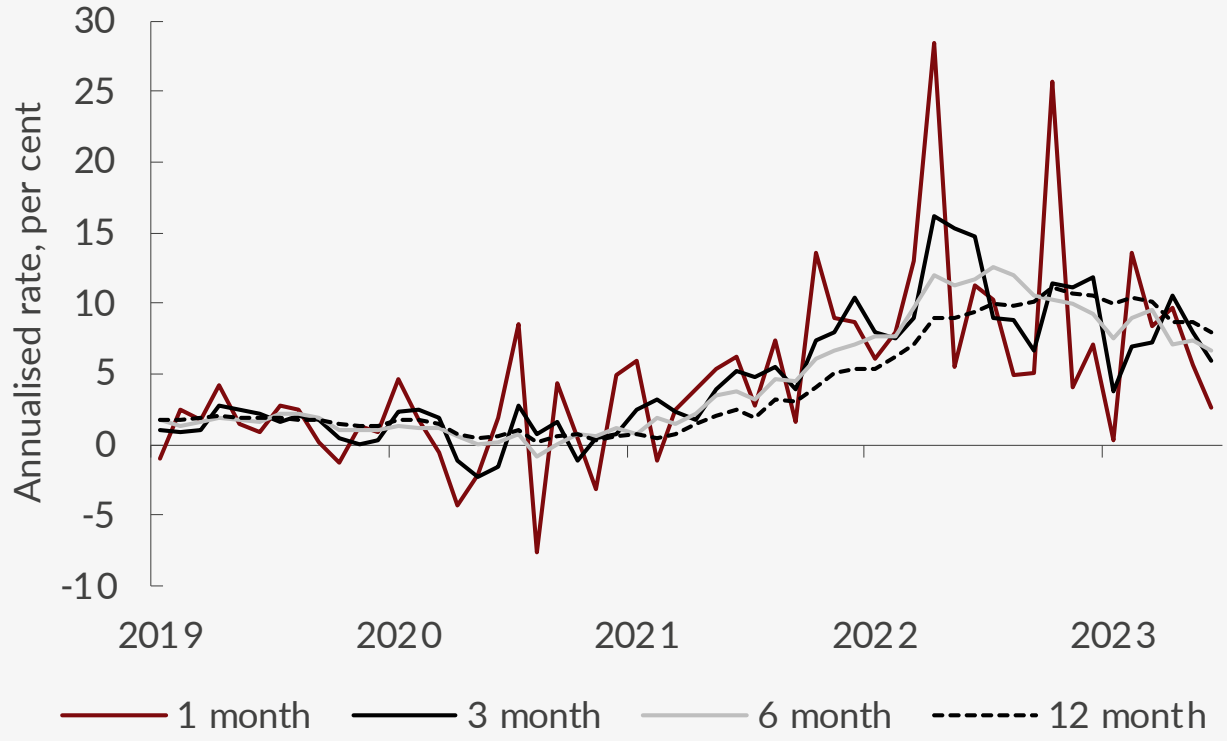


Source: ONS.

Seasonally adjusted one, three and six-month CPI inflation rates

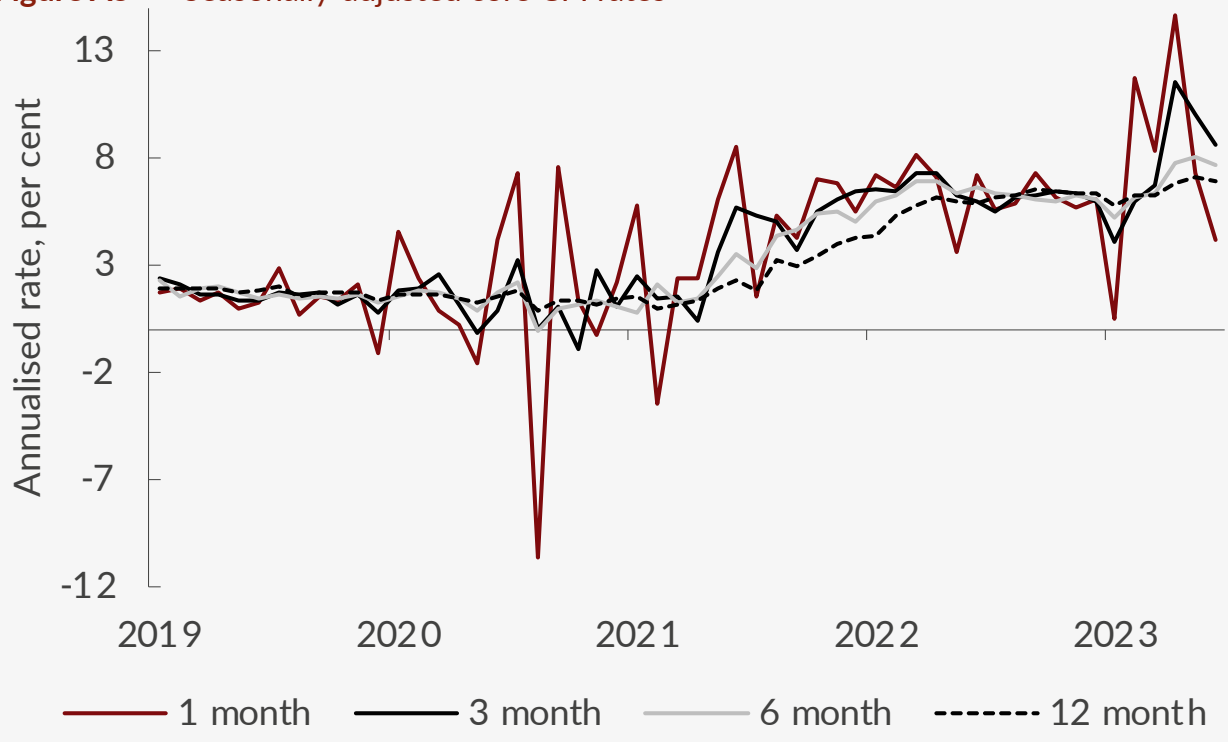
When examining how inflation is changing, we really want to know how new information changes our assessment of inflation. The twelve-month change in the price level (ie, the annual rate of inflation) is the sum of twelve month-on-month changes. When the data roll forward by one month, the month-on-month change 13 months ago drops out of the twelve-month sum and a new month-on-month change 'drops in'. This forms the basis for the various projections presented in the monthly blog Huw Dixon writes for NIESR. (See, eg, Dixon, 2023). But comparing how the twelve-month change in prices is shifting is too backward-looking if you want to understand current inflationary pressure. In some countries, notably the United States, more weight is given to shorter comparisons, such as the change over one, three and six months expressed at an annualised rate. (See Federal Reserve Bank of Cleveland, 2023). Unfortunately, the ONS does not publish a seasonally-adjusted CPI series (though it does produce a seasonally-adjusted real wage series that employs the CPI as its denominator).

Figure A4 Seasonally-adjusted CPI inflation rates



Source: ONS, authors' calculations.

Figure A5 Seasonally-adjusted core CPI rates



Source: ONS, authors' calculations.

We seasonally adjusted the CPI and the core CPI; the one, three and six-month annualised changes along with the 12-month change, are shown in figures A4 and A5. The one-month change is the most volatile and the 12-month change the least. It is apparent that the headline inflation rate is very volatile on all frequencies except the 12-month.

Turning points in the 12-month change come after the three and six-month changes. If policymakers were to concentrate on the 12-month change, it would be akin to driving the car looking out of the rear-view mirror. Preferably, they should determine policy on the three and six-month annualised rates, after correcting for any known one-off factors. Of course, this only makes sense if seasonally-adjusted data are used. Our strong recommendation is that the ONS should publish seasonally-adjusted CPI data, as the Bureau of Labor Statistics (BLS) does in the United States.

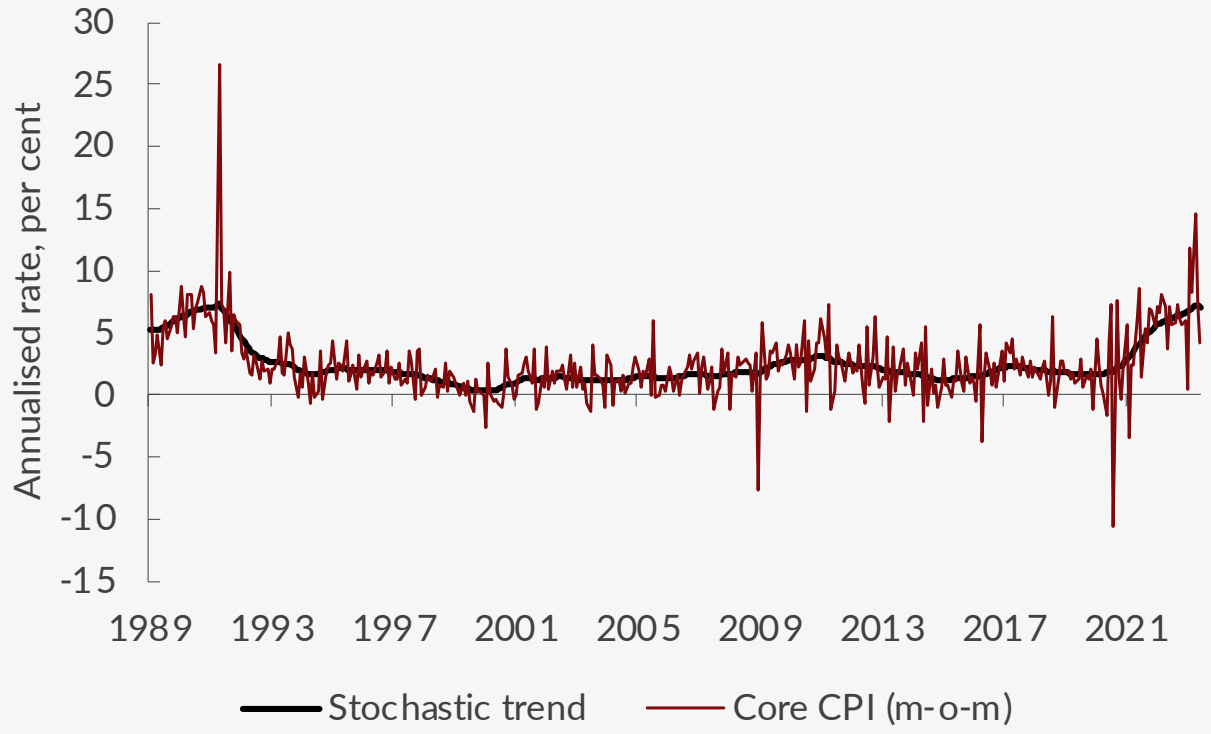
Most of the three-month annualised measures of inflation started to turn down in the spring of this year, two years after they started to rise. The slow policy response to this is one of the main reasons that inflation remains so high. The turning point in the six-month annualised rate came a little later, and twelve-month rates have recently started to edge down.

Local level model of core inflation

A problem with taking moving averages is that new data are afforded a full weight in the calculation no matter how much of an outlier they appear to be. A way of avoiding this pitfall is to compute a smoothed trend that gives diminished weight to data when the data are volatile. One such method is the 'local level' model that is based on the Kalman filter. Figure A6 shows the smoothed series for the month-on-month annualised rate of increase in the core CPI. Despite the most recent news of a subdued rate of increase in the core CPI in June, the filter indicates that the trend level of month-on-month core inflation is still 7 per cent at an annual rate.

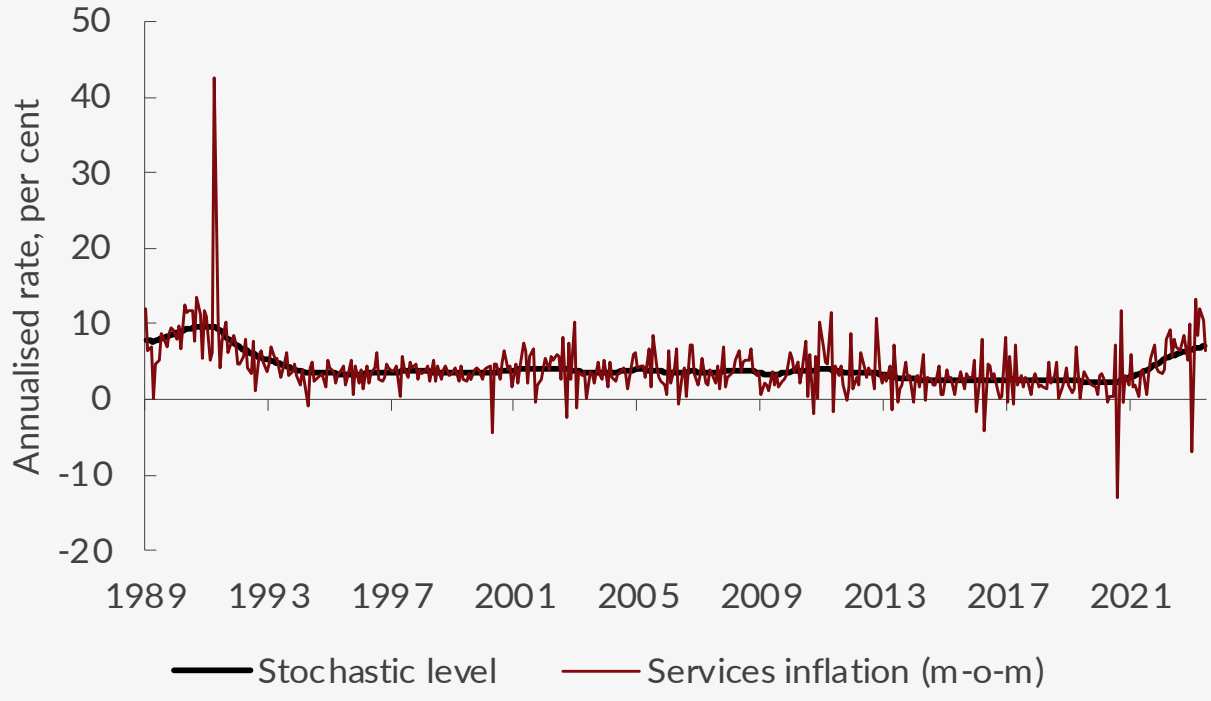
While the shortages associated with Covid and its aftermath have reduced, a worrying aspect of recent inflation data has been the acceleration in services inflation. Services comprise about half the CPI, and as our smoothed month-on month series shows (seasonally adjusted with X-12), the trend monthly annualised rate is now 7 per cent and has yet to show signs of slowing.

Figure A6 Smoothed core monthly inflation



Source: ONS, authors' calculations.

Figure A7 Smoothed services inflation



Source: ONS, authors' calculations.

Conclusion

It is important for helping manage inflation expectations down that policymakers and the ONS reduce the attention given to the 12-month change in prices. This box has argued that incorporating seasonally-adjusted one, three and six-month measures of CPI inflation as well as distinct measures of underlying inflation would be useful to help economists, policymakers and the general public have a better understanding of current inflation dynamics and where inflation is heading. We have also noted that it is important to study the evolution of different measures of underlying inflation, as each gives us a different insight that can help inform our understanding of overall inflation dynamics.

Studies have found that the British public generally have a fairly good understanding of what inflation is, while simultaneously having a poor understanding of the causes of inflation or the Bank of England's target for the inflation rate (Runge and Hudson-Sharp, 2020). While esoteric measures may not currently be well understood or trusted by the public, incorporating some of these measures in public debate and statistical communication could help improve overall understanding of inflation dynamics. For instance, while core inflation has its shortcomings, the public appreciate that energy, food, alcoholic drinks and tobacco prices are volatile (Runge and Hudson-Sharp, 2020), thus more emphasis on this measure could be useful, especially under the present circumstances of inflationary shocks to food and energy prices. Further research into public understanding of measures of underlying inflation would be essential for gauging how these measures may best be incorporated into public discourse.

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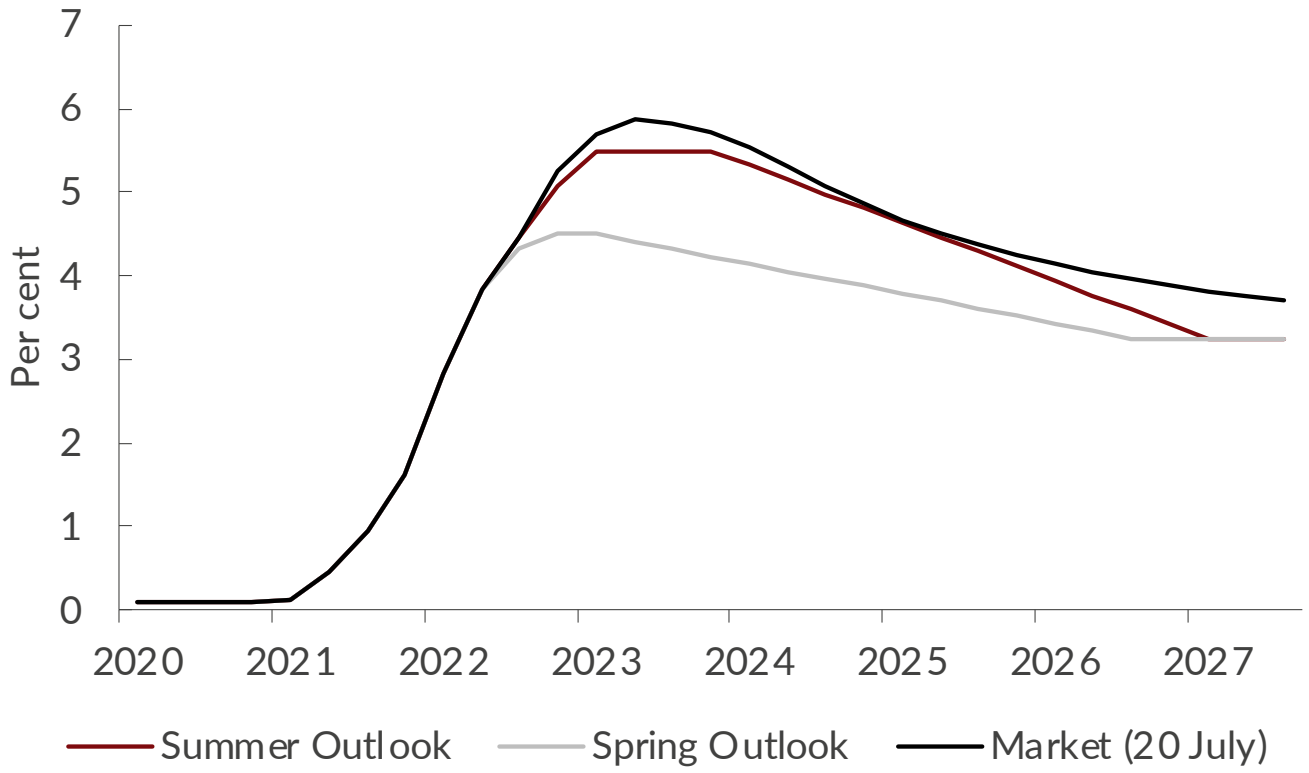
Figure 1.6 Bank Rate forecast comparison



Source: Bank of England, NiGEM.
Note: Market (20 July) plots the market curve as implied by the Overnight Index Swaps forward yield curve.

Figure 1.6 plots the Bank Rate path used in this forecast compared to our Spring Outlook forecast and the Market Curve as of 20 July. While we usually condition our forecast on the latest market-implied paths for the Bank Rate, in this Outlook we have taken a different approach. Specifically, we have conditioned our forecast on a path with the Bank Rate peaking at 5.50 per cent, indicating what we think the Bank of England should do (rather than what we necessarily think it might do) given the latest data. But, regardless of where the Bank Rate peaks, the MPC needs to communicate more clearly and let markets as well as the public know when it thinks that it's done enough to bring inflation back to target. For instance, if the MPC opts for a Bank Rate path that is less aggressive than markets expect because of the output-inflation trade-off, it ought to be clear in communicating that; failing to do so risks incurring further criticism as well as further adverse market reaction (Chadha 2023).

... as concerns over the Bank's forecasting ability are raised publicly...

The positive surprise in the May inflation figure of 8.7 per cent prompted Harriet Baldwin MP, Chair of the Treasury Committee, to write a letter to David Roberts, Chair of the Bank of England's Court, requesting the Bank's Independent Evaluation Office (IEO) undertake a review of the effectiveness of the Bank's forecasting platform. This request followed on from Huw Pill acknowledging that the Bank's inflation forecasts have been too low at a Treasury Committee oral evidence session on 23 May.

In response to the Treasury Committee Chair's request, the Bank's Court decided to commission such a review. The announcement that Ben Bernanke, former chairman of the Federal Reserve, will lead this review is a timely decision that underscores the extent to which the Bank is

determined to adapt and strengthen its forecasting and monetary policymaking in a world of increasing uncertainty. This will be not only be useful internally, but also externally, potentially providing additional confidence in both the Bank's transparency and capabilities.

However, as Huw Pill mentioned in his reply to the Treasury Committee Chair, dated 26 June, we ought to remember George E.P. Box's famous saying that "all (economic) models are wrong, but some are useful". Central bank inflation forecasts serve multiple purposes, from forming a basis for internal decision-making to acting as a vehicle for communicating monetary policy to the public and are used in concert with other tools and judgement to inform monetary policy decision-making. Whether the Bank's modelling suite is fit for purpose during times of (radical) uncertainty is a different question to 'why have the Bank's forecasts been wrong?' And both questions are entirely separate from whether the MPC could have, or should have, managed the present inflation shock differently.

… and recent financial turbulence prompts new stress test …

With interest rates rising by as much and as quickly as we have experienced in the past year, vulnerabilities in financial markets – particularly widespread illiquidity – have been exposed. As a result, the Bank of England announced on 19 June that it will be conducting its first system-wide exploratory scenario stress test exercise, in which it will aim to understand the behaviours of both commercial banks and non-bank financial institutions (NBFIs) in stressed financial market conditions. The inclusion of NBFIs in such an exercise is a step-change from the Bank's in-depth assessment approach to these activities and market infrastructures and should yield novel insights into the dynamics of the 'shadow banking' sector. While it will likely provide the Bank with the opportunity to explain how its various discount facilities are best utilised in such stresses, it is unclear whether this is the first step in the Bank seeking greater regulatory powers in relation to NBFIs (Morris and Collins, 2023).

… while quantitative tightening continues to make losses in the background

Since October, the Bank of England has engaged in balance sheet normalisation, also known as quantitative tightening (QT). To this end, the Bank has committed to selling a fixed quantity of bonds each month; given current market conditions, this has turned into a loss-making exercise for the Asset Purchase Facility (APF), which had previously made significant profits on quantitative easing (QE). Since the Treasury has indemnified the APF, it has, and will continue to, cover any such losses. As a result, QT may become a constraint on fiscal policy in any pre-election Budget as QT-related losses are larger than the OBR has previously factored into its forecasts given interest rate developments (Chadha, quoted in Strauss, 2023). In fact, the OBR's latest Fiscal Risks and Sustainability (FRS) report notes that, under the assumptions used in their March Economic and Fiscal Outlook (EFO), they estimated the cumulative net losses of QT to be £63 billion (OBR 2023). A similar exercise conducted with June data suggests this figure might be £55 billion larger (OBR 2023). NIESR hosted a workshop on 'QT and Reserves' on 16 February where one main policy option that attendees proposed involves increasing the flexibility in QT sales – for instance, by tying sales to market sentiment – in order to manage better the innate tension between the speed, costs and risks of execution of QT. We strongly believe that the Bank should conduct an evaluation of how QT is unfolding and an assessment of whether alternative operating policies ought to be adopted. If the Bank continues to sweep APF-related losses under the rug, attendees at NIESR's conference agreed that it would not only risk embarrassment but also engender the perception that the Treasury has been needed to bail out the Bank of England at the expense of the taxpayer, potentially raising concerns about its independence.

Fiscal Policy

In the quarter since the Chancellor's Spring Budget and the accompanying OBR EFO, no fiscal events were scheduled to take place. And yet, news about fiscal policy during this time has felt rather eventful: we've seen public sector net debt surpass 100 per cent of GDP for the first time in 62 years, the government accept the Pay Review Bodies' recommendations on public sector pay following the largest wave of industrial action in over a decade and the OBR highlight the breadth and magnitude of vulnerabilities to the fiscal outlook in its FRS report. Before we turn to a brief overview of each, our usual disclaimer applies: NIESR has been arguing for some time now that the United Kingdom desperately needs a new fiscal framework that can provide enough flexibility and competence to respond to economic shocks while ensuring credibility is maintained and fiscal policy works for all (Chadha et al. 2021).

The state of public finances

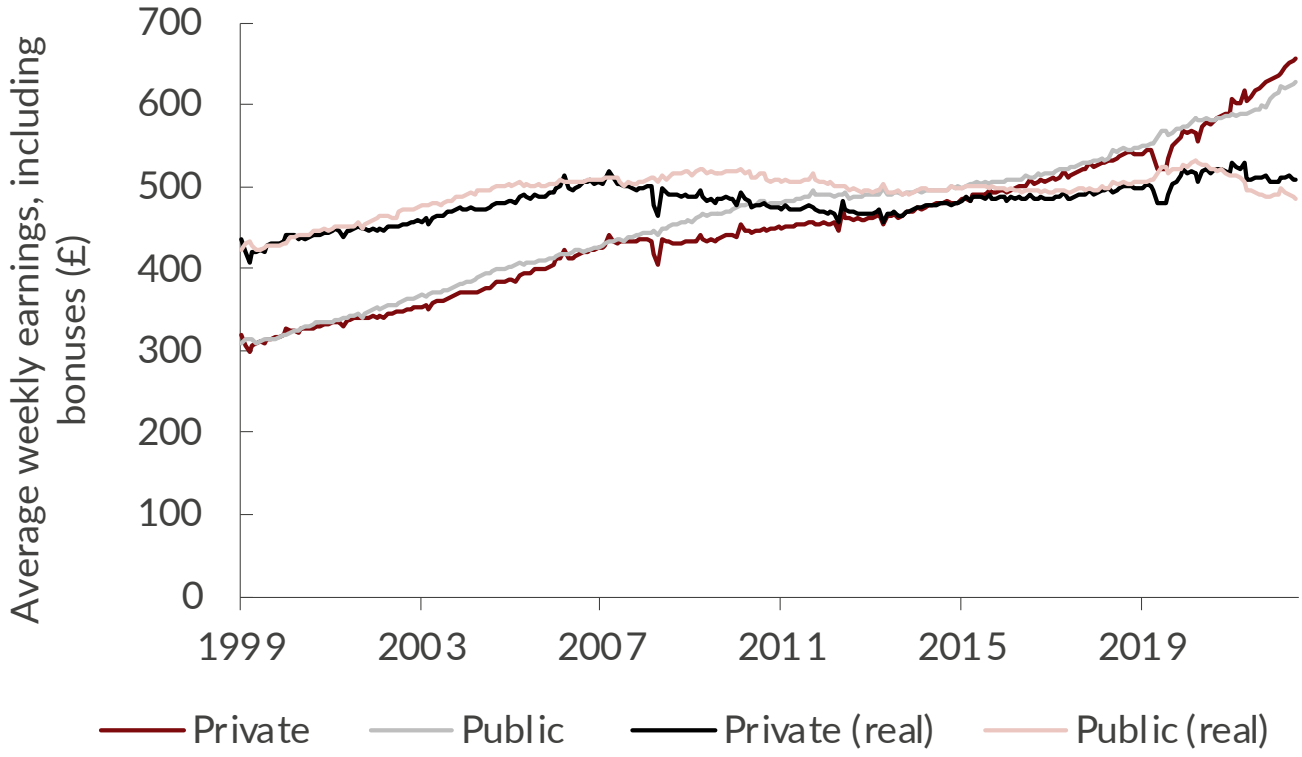
The latest data indicate that public sector net debt (PSND) was 100.8 per cent of GDP in June, though this figure is provisional and may be subject to revision. Still, surpassing the 100 per cent of GDP mark represents a milestone moment, albeit one that was expected; this figure is 1.5 per cent of GDP below the trajectory outlined in the OBR's March forecast, due to lower cash debt and a higher GDP outturn. Excluding the Bank of England, PSND was 90.4 per cent of GDP.

Turning to borrowing, public sector net borrowing (PSNB) was £54.4 billion in the first three months of the financial year - £7.5 billion below the OBR March forecast due to higher central government receipts. However, debt interest was 7.1 per cent above profile, reflecting the risk that persistently high inflation poses for the public purse via debt repayments.

The Chancellor's fiscal targets, as established in his November 2022 Autumn Statement, require: 1) Public-Sector Net Debt (PSND) excluding the Bank of England to fall by 2027-28; and 2) PSNB to be less than 3 per cent of GDP in five years' time. The OBR's March forecast expected the Chancellor to meet these targets by £6.5 billion and £39.2 billion, respectively. Since the March forecast, inflation has proved to be even more persistent than previously thought, elevating the risks of missing these fiscal targets. To explain, by raising the interest rate relative to the growth rate (R-G), higher-than-expected interest rates have made it significantly harder to reduce the debt-to-GDP ratio while also raising the borrowing profile related to debt repayments and interest costs. Although inflation can improve a government's fiscal position, as explained in the FRS, the relatively low growth in the GDP deflator - which would improve the outlook for nominal GDP - seems to be outweighed by more-persistent-than-expected RPI and CPI inflation rates - which are raising the expected path of interest rates and inflation-indexed spending (OBR 2023). Given that the Chancellor gave himself minimal headroom at the time of the last Budget, it is not entirely surprising that the feasibility of meeting these targets has narrowed so quickly.

Looking towards the longer-term state of public finances, the ONS estimate of public sector net worth (PSNW), which is the widest measure of the public balance sheet, suggests that PSNW deteriorated from a deficit of £538.5 billion at the end of June 2022 to £646.1 billion at the end of June 2023. Maintaining or allowing this deficit to worsen is likely unsustainable and will place an immense debt burden on younger generations. It seems that, both in the short term and long term, public finances are showing signs of buckling under pressure.

Figure 1.7 Nominal and Real Average Weekly Earnings by Sector



Source: ONS, NIESR calculations.

Public-sector pay

Following nearly a year of widespread industrial action, Prime Minister Rishi Sunak announced on 13 July that the government would accept the Pay Review Bodies' (PRB) recommendations on public sector pay – entailing average pay rises of around 6 per cent. This is a step in the right direction. That said, the Prime Minister indicated that the pay increases would not be funded by borrowing or taxes, but rather by a questionable increase in immigration fees and departmental cuts – of which the former will deter high-skilled workers from entering the desperately tight labour market while the latter will only contribute to a further deterioration of public services.

Further, as illustrated in figure 1.7, real average weekly earnings, including bonuses, across the public (and private) sectors have been stagnant at best since the years preceding the Great Financial Crisis – representing nearly two decades of economy-wide lost income growth. This led workers in some industries to reject the offer; for instance, the British Medical Association remains steadfast in demanding pay restoration to 2008/2009 levels, which by their calculations would require a 35 per cent pay rise. While it is clear that the government's fiscal targets would not be able to accommodate such a pay rise, it is equally clear that the Prime Minister's bid to curate a "fair way to end the strikes," has largely missed the point. If the offer is accepted, public sector workers will continue to take real income hits and, alongside households, continue to bear the consequences of underfunding and understaffing in public services.

The OBR's Fiscal Risks and Sustainability (FRS) report: Key issues

Inactivity and health

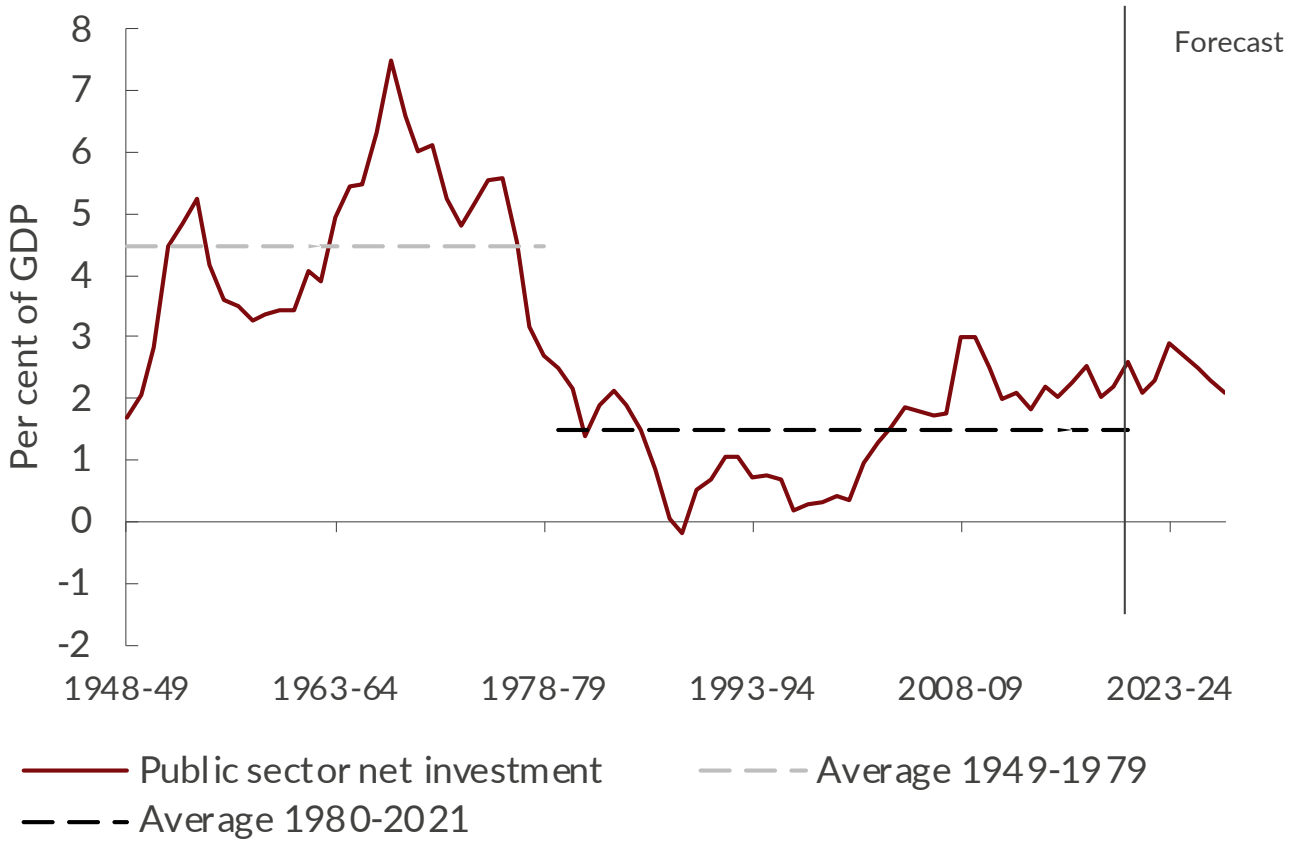
Labour market inactivity has increased sharply since the pandemic, largely caused by a rise in long-term ill-health; the latest ONS data suggest that the number of people reported to be inactive because of long-term sickness was 412,329 in the three months to May, compared to a pre-pandemic (three months to February 2020) figure of 15,112.

The Spring Budget sought to tackle the country's labour supply shortage by announcing reforms to childcare, pensions, disability and universal credit benefits, and skills centres. Following their introduction in 2025-26, these measures will be most effective in bringing certain groups of people into work, such as those that chose to retire early or have been looking after their family and home. That said, the Budget left the long-term sick population mostly unaddressed. The FRS is largely pessimistic about the extent to which reforms to shorten NHS waiting lists will help bring this group back to work, estimating it would only reduce working-age inactivity by around 25,000 (OBR 2023). The mood music in the FRS report is seemingly that this cohort has been 'lost'.

Energy

The United Kingdom is one of the most gas-dependent economies in Europe. Consequently, as we've witnessed over the past year, this inevitably leaves the country quite exposed to sudden changes in global gas prices. This has economic and fiscal consequences, by raising government borrowing if support is offered to households but also by reducing demand for other goods and services and potential output. An obvious policy choice in this sense is to increase public and private investment in renewable energy; this could even be thought of as a 'two birds, one stone' policy option given that public investment is chronically insufficient (figure 1.8). Indeed, public investment has averaged only around 2 per cent of GDP since 1979 as opposed to around 5 per cent of GDP between 1948 and 1979. Given the benefits to increasing public investment – such as the 'crowding-in' effect of attracting more private investment and contributing to increased productivity – it is disappointing that this is not at the forefront of policymaking.

Figure 1.8 Public sector net investment



Source: OBR, ONS, NIESR calculations.

Debt sustainability

Between 2000 and 2023, debt as a share of GDP has risen by over 70 percentage points, representing the largest increase in UK government debt in a peacetime period of such short length and reflecting the magnitude of shocks experienced in this time (OBR 2023). With the United Kingdom facing an ageing population, stagnating GDP and productivity growth, geopolitical tensions leading to increased defense spending and decreased trade, and the impending need to accelerate the transition to net zero, the UK government is facing huge threats to its long-term debt sustainability. It is not unlikely that debt as a share of GDP will have to rise in the medium term, for instance if the economy is to face another major external shock. What's more, the challenges to consistently lowering debt as a share of GDP will grow each year.

It is thus improbable that, without major reform, the UK government will see a sustained reduction to its debt as a share of GDP. Fiscal policymakers therefore ought to be thinking about the massive dilemma they'll be facing in a few years' time: choosing between increasing the amount of debt they're willing to take on, introducing major tax reforms (such as a wealth tax) or deciding to roll back the reach and remit of the welfare state. It would be wise to begin in-depth evaluations of all policy options well ahead of that point in time.

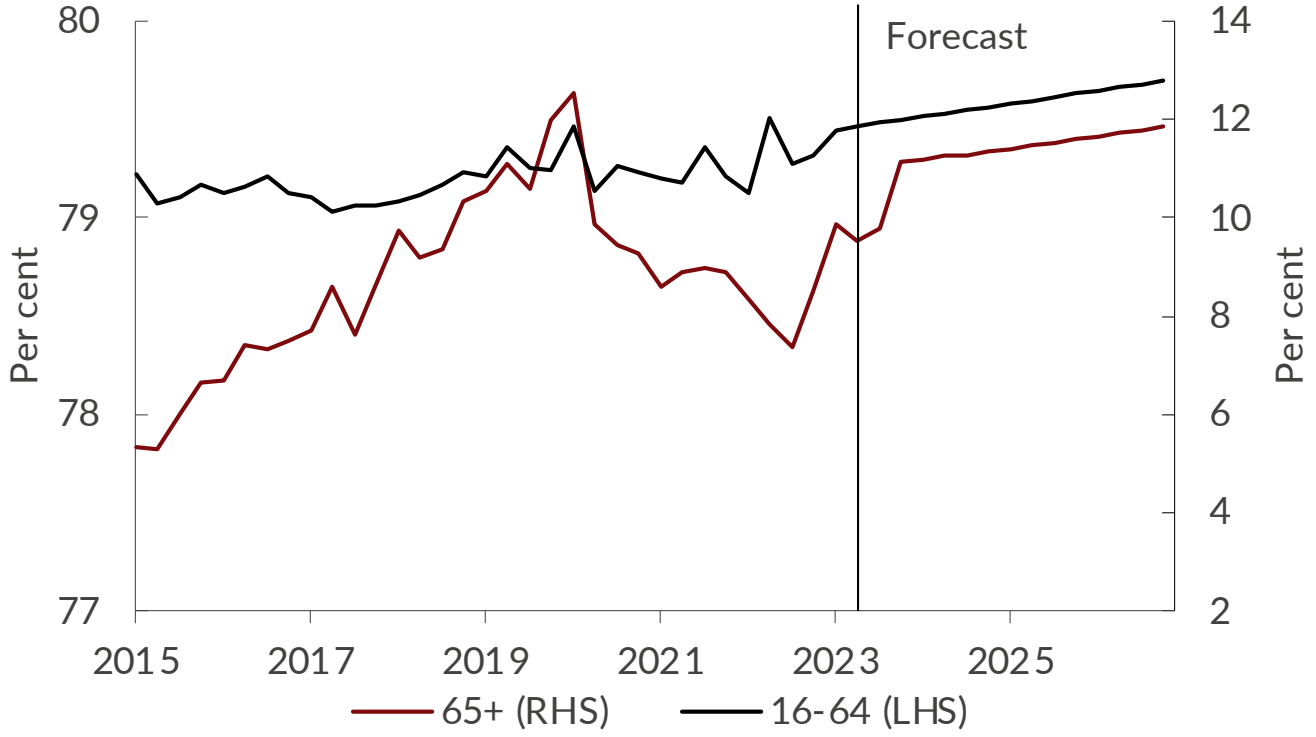
The Forecast in Detail

Conditioning Assumptions

In line with the evolving nature of the whole forecasting process, the approaches used for setting the underlying assumptions are continually reviewed. Our current projections are conditioned on:

- The path for short-term policy interest rates shown in figure 1.6. We believe that a peak of 5.50 per cent in the Bank rate will be enough to bring inflation back to target in the medium term given there are signs of demand weakening and inflation falling.
- A path for the sterling effective exchange rate index that is roughly 4 per cent higher on average than in our Spring forecast. However, in the medium term, exchange rates are assumed to converge in line with the uncovered-interest parity condition based on interest rate differentials relative to the United States.
- Fiscal policy evolving in line with announced government policies to date, adjusted for news in the data. Since our Spring Economic Outlook, we've seen public sector net borrowing (PSNB) coming in £7.5 billion (12.2 per cent) below the OBR's March 2023 forecast profile for 2023-24. Government receipts were £7.7 billion (3.5 per cent) above the March profile; spending was £4.5 billion (1.9 per cent) above; and net debt reached 100.8 per cent of GDP in June, 1.5 per cent below the monthly profile consistent with the OBR's last forecast. The extent of borrowing was revised down by £2.1 billion for 2022-2023, making it £20.3 billion lower than anticipated in March 2023.
- Our oil price assumptions for the short term generally follow those of the US Energy Information Administration (EIA), published in July 2023, and updated with daily spot price data available up to 14 July 2023. The EIA uses information from forward markets as well as an evaluation of supply conditions. Oil prices, in US dollar terms, have fallen since our last forecast in April by about 3.5 per cent, with the expectations for the oil price by the end of 2023 being around 4 per cent lower than three months ago.
- The path for the labour force participation rate shown in figure 1.9, where it returns to its pre-Covid level over the course of the next few years as workers in the 50-64 age bracket return to the labour force on account of diminished savings and fewer workers retiring early.

Figure 1.9 Labour force participation rates



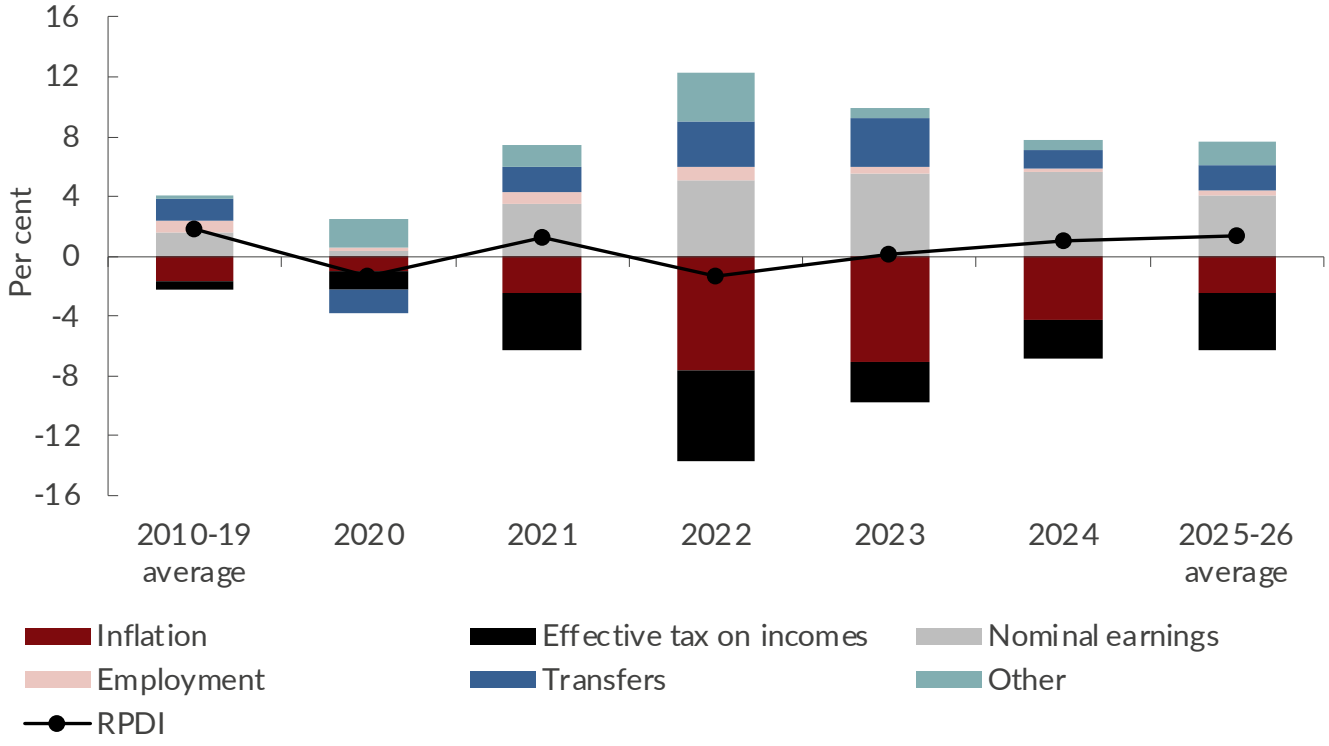
Source: NiGEM database and NIESR forecast.

Demand and Output

Household sector

The fall in real wages has led to a cost-of-living squeeze and falling real disposable income with real personal disposable income falling by 1.4 per cent in 2022. We now expect real personal disposable incomes to grow slightly in 2023 and 2024, by 0.1 and 1.0 per cent, respectively, as inflation falls towards the 2 per cent target while nominal earnings growth remains at around 6 per cent (figure 1.10). Over the medium term, we expect real incomes to grow by around 1.4 per cent (figure 1.10).

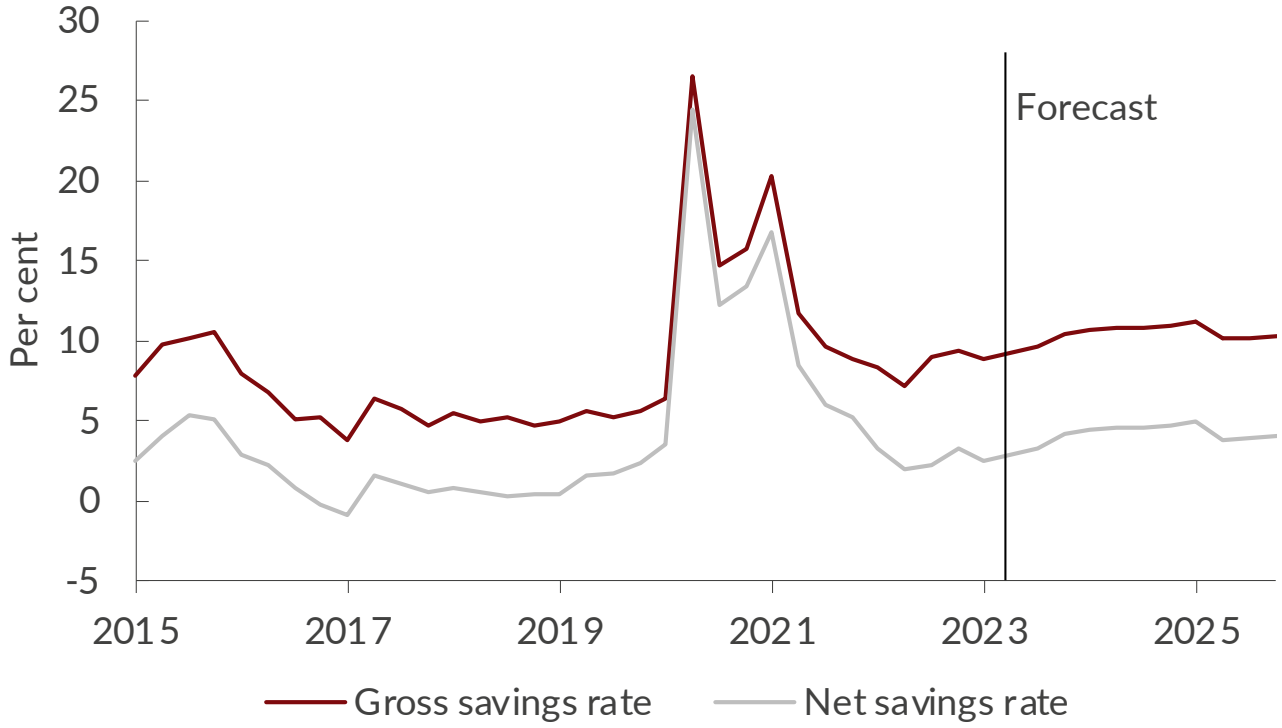
Figure 1.10 Contributions to growth in real personal disposable income



Source: NiGEM database and NIESR forecast.

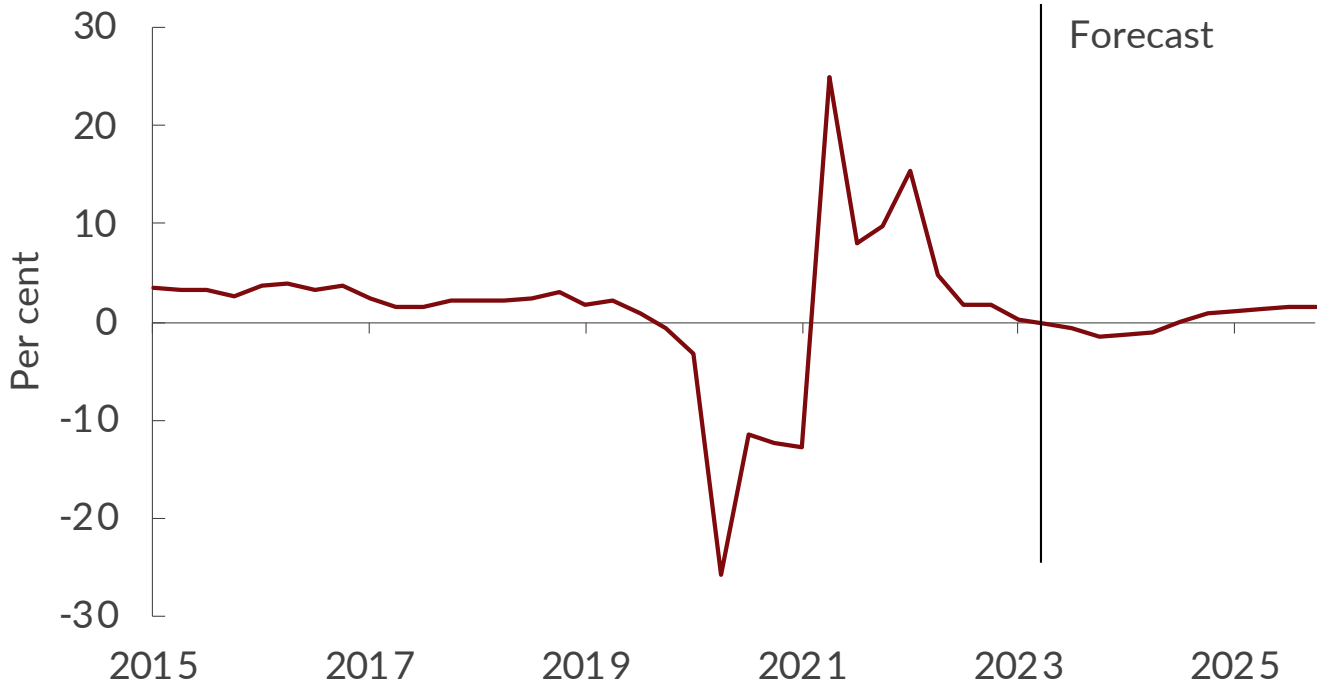
As we have stated in previous Outlooks, the Covid-19 lockdowns led households to build up their savings, to the tune of around £200 billion in aggregate. Since the pandemic, households have been drawing down their savings to maintain their consumption in the face of the cost-of-living crisis. However, we do not now expect this to continue. Despite the small fall in the gross and net savings rates in the first quarter of 2023, we expect them to rise over 2023 and 2024 (figure 1.11). Given this, together with sluggish growth in real personal disposable income, we expect aggregate consumption to fall by 0.5 per cent in 2023 relative to 2022 and 0.4 per cent in 2024 relative to 2023. Consumption then starts to grow in 2025, at around 1.4 per cent (figure 1.12). The gloomy picture for households is completed by the outlook for house prices, where we are expecting further falls in house prices from their peak in the fourth quarter of 2022. We expect a total fall in house prices of around 9.4 per cent by the third quarter of 2025, after which they start rising again.

Figure 1.11 Gross and net savings rates



Notes: The net savings rate is defined simply as 1 – real consumption/real personal disposable income. The gross savings rate accounts for revaluation effects in household financial wealth (ie, the change in the value of net equity in pension funds held by the household sector).
Source: NiGEM database and NIESR forecast.

Figure 1.12 Annual consumption growth

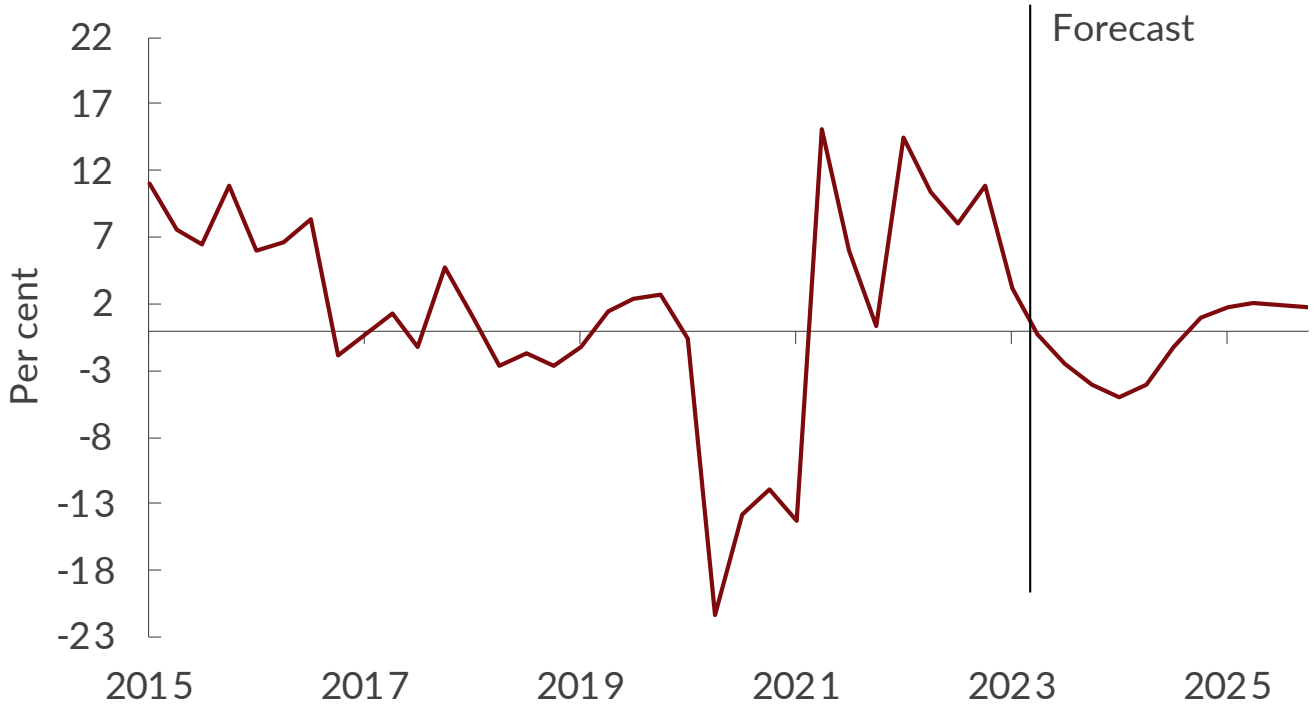


Source: NiGEM database and NIESR forecast.

Corporate sector

Business investment rose in the first quarter of 2022 but given the monetary tightening that we have already seen, we expect falls in business investment of 1.0 per cent in 2023 relative to 2022 and 2.4 per cent in 2024 relative to 2023 (figure 1.13). NIESR has consistently said that to increase productivity growth in the United Kingdom, we need to raise business investment as a proportion of GDP. This view was also voiced in much of the evidence presented to the Productivity Commission (established by NIESR) and written up in its evidence review (NIESR, 2022). Earlier this year, the Productivity Commission took evidence on the underperformance of business investment and this evidence is summarised in NIESR (2023).

Figure 1.13 Annual business investment growth

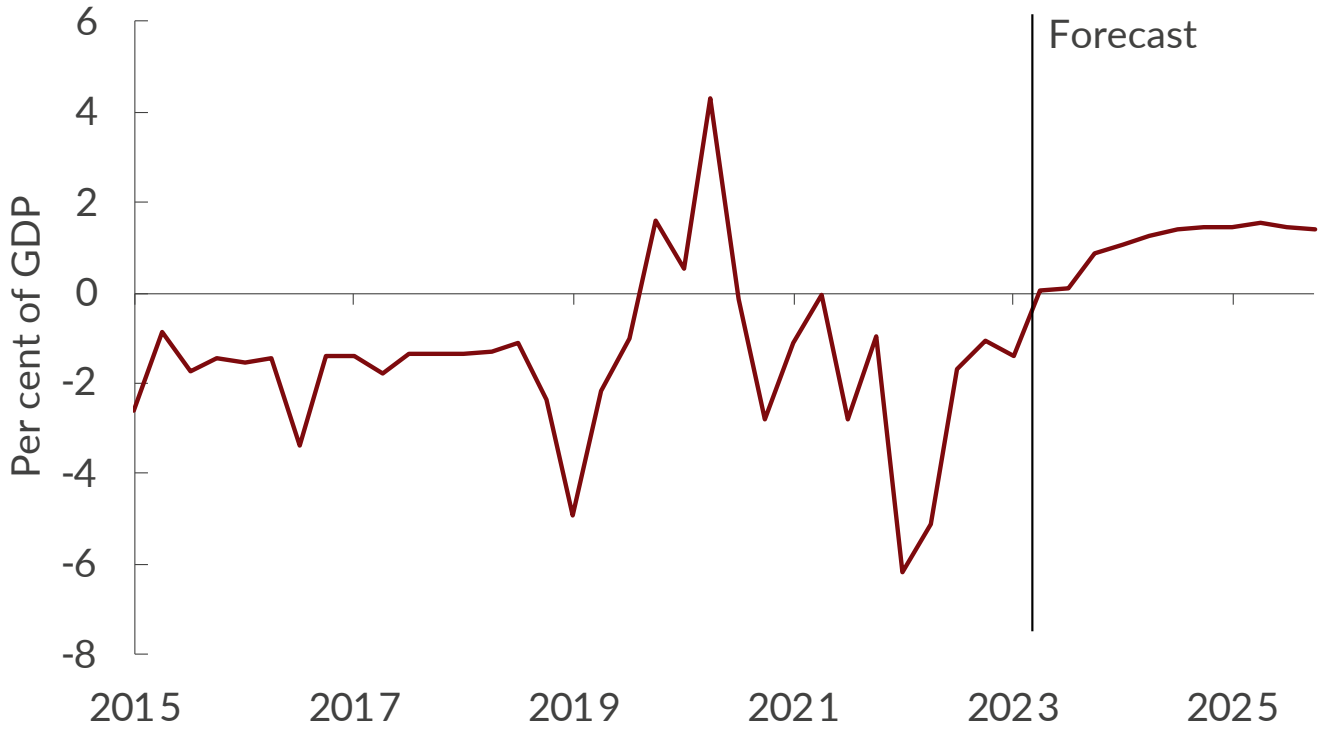


Source: NiGEM database and NIESR forecast.

Trade

The depreciation of sterling through 2021 and 2022, both in effective terms and against the dollar, is likely to help increase exports and reduce imports in 2023. In addition, anaemic GDP growth is also likely to reduce imports in 2023 and the boost to demand in Asia resulting from the reopening of China as the Chinese Government abandon the 'Zero Covid' policy may help to push up on exports in 2023. Given all this, we expect an improvement in the balance of trade in 2023, which we expect to move into surplus over the course of this year (figure 1.14).

Figure 1.14 Balance of trade



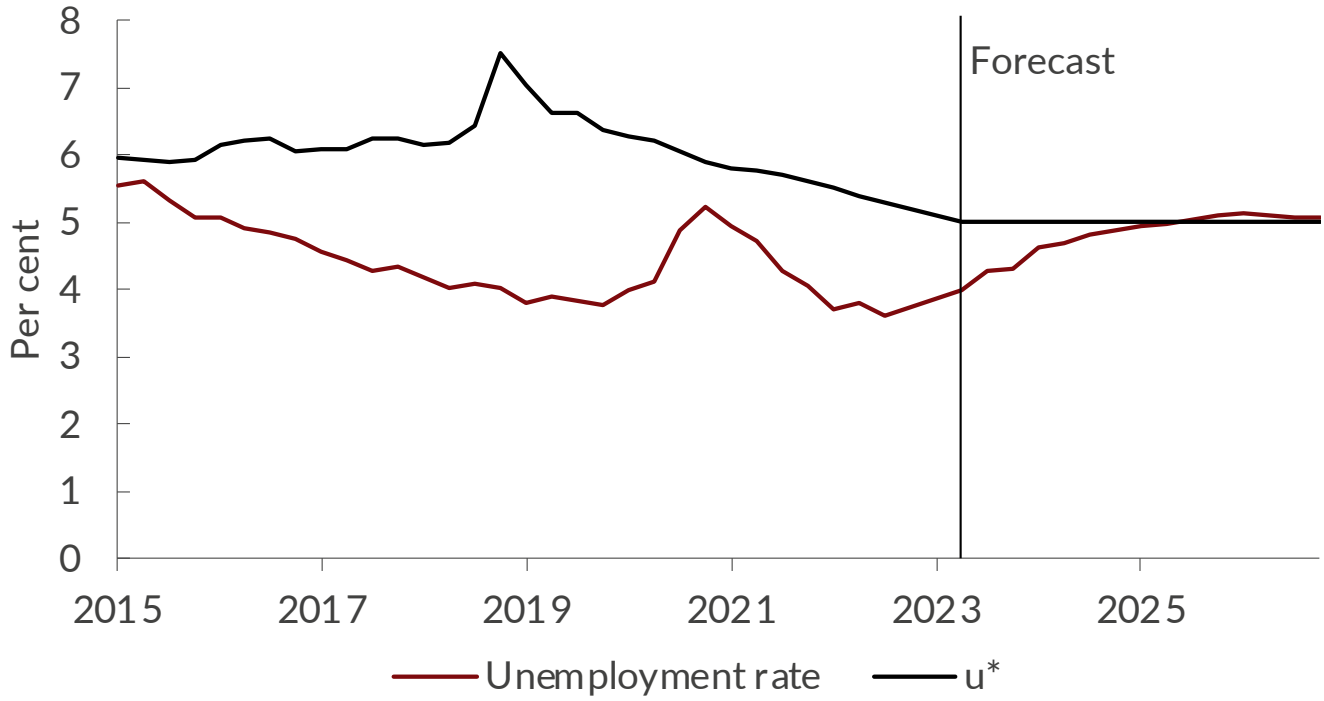
Source: NiGEM database and NIESR forecast.

Labour Market

The key question for the UK labour market remains the extent to which the marked increase in economic inactivity since the Covid-19 pandemic will persist. As we said earlier, our view remains that the participation rate will return to its pre-Covid level over the course of the next few years as workers in the 50-64 age group return to the labour force as they find their savings run down and fewer workers retire early (figure 1.9). In addition, we expect an increase in the number of workers aged 65-and-over staying in the labour force, again reflecting the need to replace the savings that have been spent in response to the cost-of-living crisis. Overall, we expect the participation rate among the whole population aged above 16 to remain at around 63.5 per cent throughout the forecast period. Looking further into the future, the increase in longevity will lead to a rise in the proportion of the population aged over 65 and, hence, lower the labour force participation rate. As argued in, eg, Goodhart and Pradhan (2020), this trend has serious implications for both monetary and fiscal policy.

The UK labour market remains tight with a vacancy to unemployment ratio of 0.84 in the first quarter of 2023, well above the average value of 0.42 in the period since the second quarter of 2001. That said, as discussed in our recent Wage Tracker (Bejarano Carbo, 2023b), there are signs the labour market is loosening. The unemployment rate stood at 4.0 per cent in May, up 0.2 percentage points from the first quarter of 2023, and vacancies fell by 85,000 in the three months to May, resulting in a vacancy to unemployment ratio of 0.75. Looking forward, we expect anaemic output growth over our forecast to lead to a slow rise in the unemployment rate, which reaches its 'natural rate' (u*) of around 5 per cent in the first quarter of 2025 (figure 1.15).

Figure 1.15 Unemployment rate and u*



Source: NiGEM database and NIESR forecast.

As noted in our April Wage Tracker (Bejarano Carbo, 2023b), we estimate that total and regular average weekly earnings will have grown at 7.2 per cent in the year to the second quarter of 2023. Given the tight labour market, and persistent inflation, we expect nominal wage growth to remain high throughout 2023 and 2024 with earnings growing at around 6 per cent (figure 1.16). However, given how high we think CPI inflation is likely to be in 2023, this still implies that nominal wage growth fails to keep up with price inflation; in other words, real wages continue to fall throughout 2023. Further out, we expect some 'catch up' in real wages with growth of between 1.5 and 2 per cent throughout 2024.

Figure 1.16 Nominal and real wage growth

Source: ONS and NIESR forecast.

Key Risks

The outlook for UK GDP remains subject to uncertainty and there are many factors that could impact the growth trajectory. We judge the risks around the projection for UK GDP growth to be mainly on the downside as reflected in our GDP fan chart (figure 1.1).

The main near-term risk on the downside for output growth is inflation remaining higher for longer. More persistent inflation would lead to major headwinds to growth as it would likely mean tighter monetary conditions and higher inflation expectations. Further, this could lead to a re-pricing of long-term financial assets, with adverse macro-financial spillovers. There are also downside risks from a further tightening in global financial conditions, which would limit credit supply. Tighter credit conditions would intensify the pressures already facing businesses and households. The impact on growth would be amplified if there were to be contagion to the UK financial sector. The interconnections between the wider financial system and real economy could result in a feedback loop, which amplifies macroeconomic stress. One such example is a housing market correction. Finally, any escalation of Russia's war against Ukraine or worsening in geopolitical conditions will negatively impact commodity markets, with adverse spillovers to global asset markets and economic activity, further affecting financial and macroeconomic conditions in the UK.

On the upside for GDP, there is the risk that inflation could fall faster than expected on account of the effects of lagged monetary tightening effects feeding through quicker than expected. In such an event, Bank Rate is likely to fall quicker, and real wages grow faster, both providing tailwinds to growth.

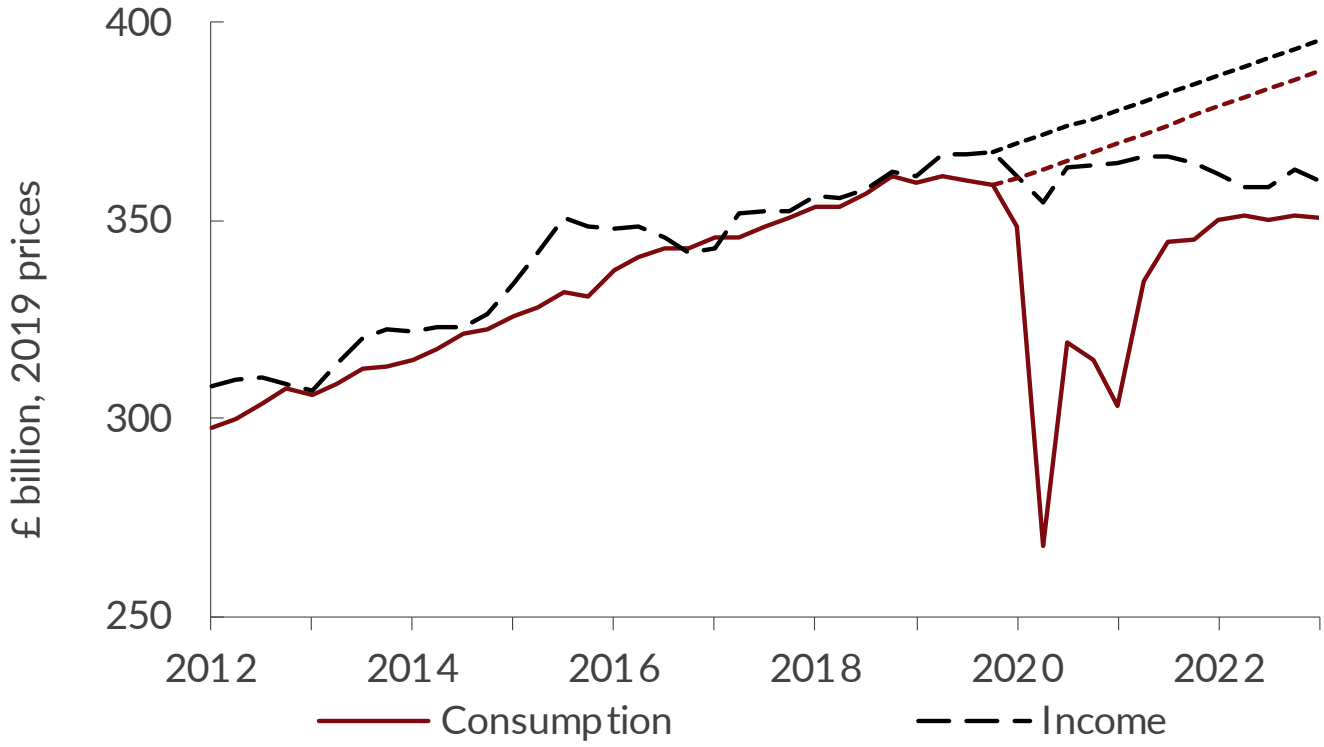
The outlook for inflation remains uncertain with risks tilted to the upside as reflected in our inflation fan chart (figure 1.3). The primary upside risk to the inflation outlook is that households and firms become less confident that inflation will fall quickly enough and as such factor that into their wage and price-setting behaviour. Greater than anticipated persistence in price and wage setting would mean inflation remains higher for longer. There is also the risk of renewed increases in wholesale energy prices should there be an escalation to the war in Ukraine and the heightened uncertainty surrounding Ukrainian exports of grain poses further upside risks to food inflation. On the downside, there is the risk that inflation falls more rapidly than we are expecting over the coming months as last year's rises in energy prices drop out of the index and are not replaced by new inflation. Additionally, if the effect of lagged monetary tightening starts feeding through sooner than we anticipate then inflation will fall faster than we are expecting.

Current Economic Conditions

Demand and Output

Household consumption remained flat in the first quarter of 2023 despite a slight downturn in household income. The decrease in aggregate household income is in contrast to the improvement in aggregate household income we saw in the last quarter of 2022, which was the first improvement to household income since the second quarter of 2020. Both household consumption and income remain below their pre-pandemic trend.

Figure 1.17 Quarterly household consumption and income



Source: NiGEM database, NIESR calculations.

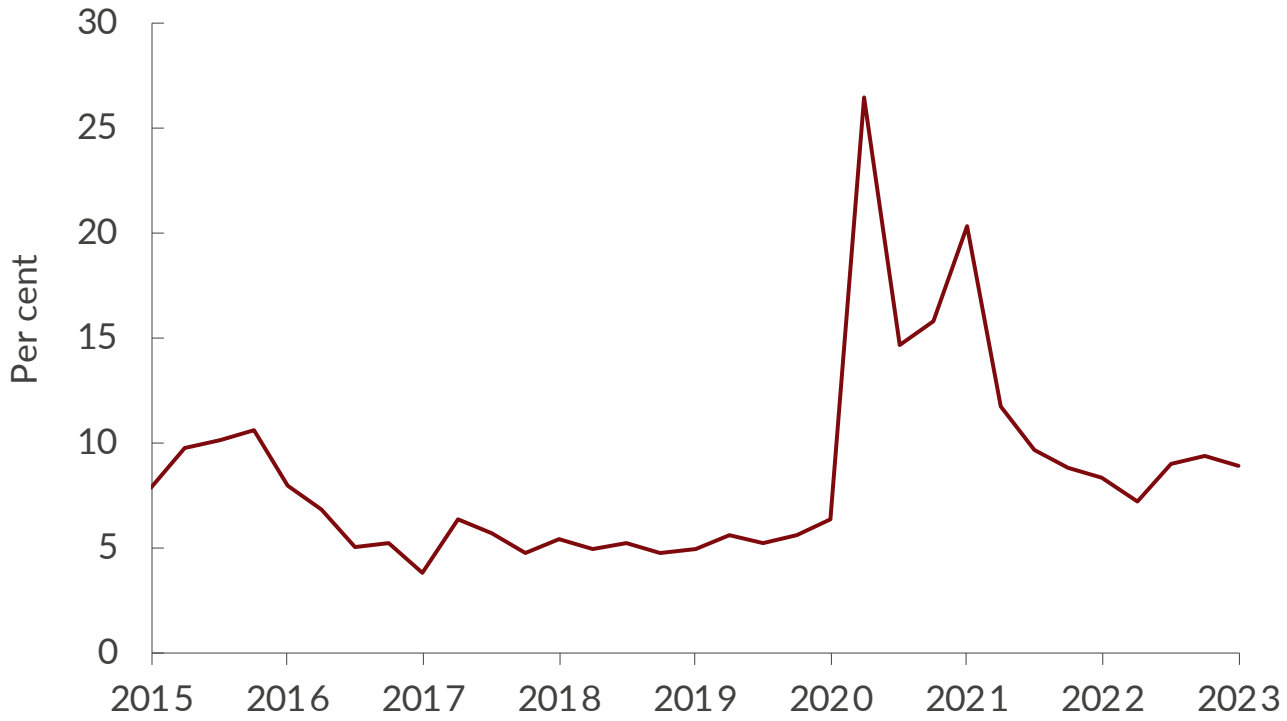
Real disposable personal income (RPDI) also fell in the first quarter of 2023. This was mainly due to a fall in transfers and nominal earnings not keeping pace with a rate of inflation that has taken longer than anticipated to fall. Despite a 1 per cent improvement in RPDI in the fourth quarter of 2022 households have experienced a notable and continuous reduction in their disposable

income since the first quarter of 2020 at the onset of the covid pandemic. Thus, it may require several quarters of sustained increases in disposable income before household disposable income recovers from recent shocks. Any recovery in household disposable income will be dependent on the pace at which inflation slows and the interaction with nominal earnings and effective taxes on incomes.

Savings rate reduces slightly

The gross savings rate reduced slightly in the first quarter of the year to 8.7 per cent, down from 9.3 per cent in the fourth quarter of 2022. Given the continuing relatively high inflation in the United Kingdom eroding spending power, the savings rate is holding up surprisingly well. This may be due to higher rates for savers offered by some banks. Maintaining savings at above pre-pandemic levels could be interpretated as positive for the UK economy. However, it may also indicate that households have substituted discretionary spending for precautionary savings, withdrawing consumption demand out of the economy, opting instead to continue to save at higher interest rates.

Figure 1.18 Quarterly savings rate



Source: NiGEM database, NIESR forecast.

Business confidence

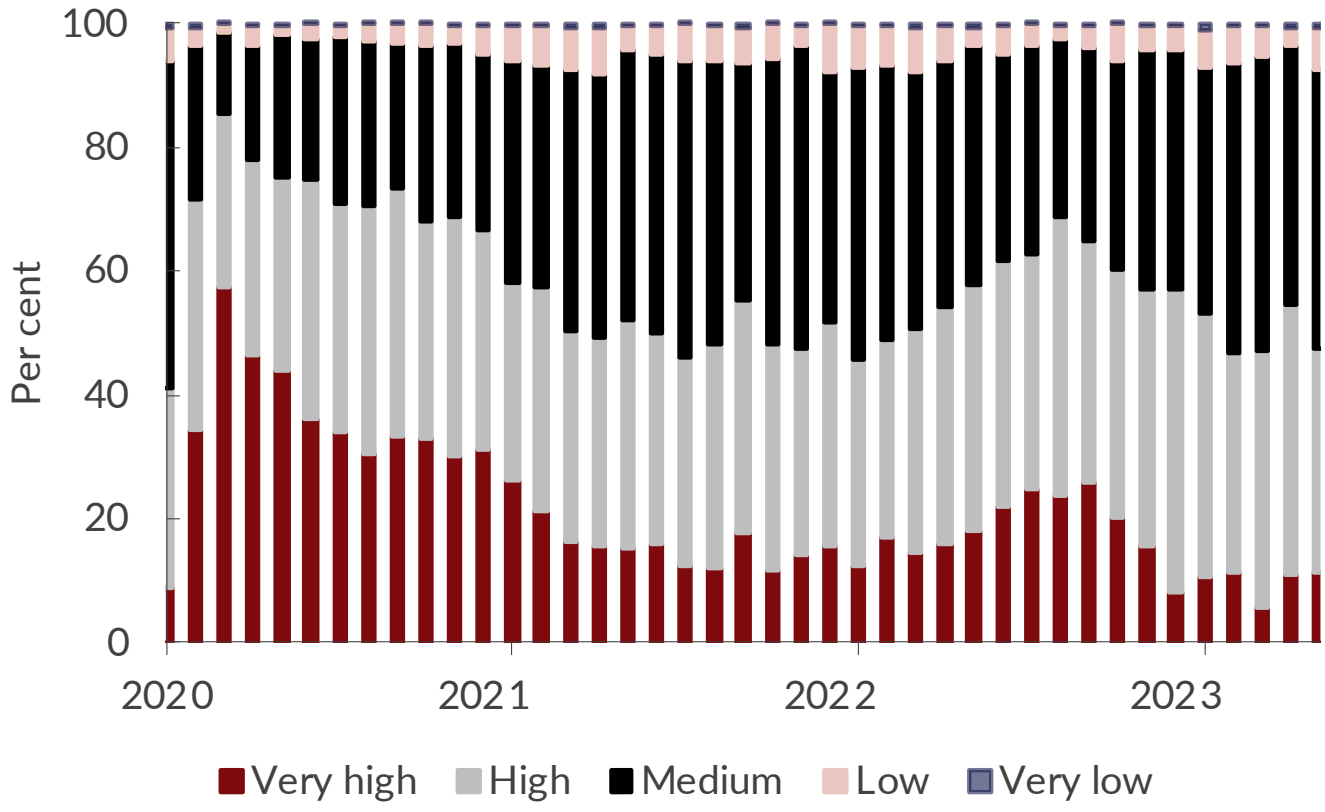
The Bank of England's Decision Makers Panel, which surveys small, medium and large UK companies operating in a representative range of industries, shows a marked improvement in business sentiment.

In June 2023, 47.4 per cent of firms reported very high or high uncertainty. This is an improvement on the level of uncertainty reported by businesses in May 2023, which saw the percentage of firms reporting very high or high uncertainty reaching 54.5 per cent. The three-month average

was 50 per cent. Among respondents, businesses were most concerned with price uncertainty. As shown in figure 1.19, business uncertainty has reduced to levels similar to those in the first quarter of 2022, before the war in Ukraine started.

The Business Conditions and Insights Survey from the ONS finds that the percentage of businesses reporting higher prices for goods or services that they bought in June 2023 compared to those bought in May 2023 was 32 per cent. This is comparable with the previous month's data, indicating a stabilisation of prices over recent months. Regarding price expectations, the survey reports 15 per cent of businesses stating that they will increase the prices of the goods or services that they sell; this is down slightly from the 17 per cent reported last month. Notably, 18 per cent of businesses reported a reduction in domestic demand for their goods and services, up from 16 per cent the previous month. Only 17 per cent of businesses report that they expect an increase in staffing costs over the next three months; this compares to 30 per cent last month. This fall may reflect annual pay agreements in some sectors. In the food services and accommodation sectors expectations of increasing staff costs remain more elevated at 25 per cent, though this is also significantly down from last month when 61 per cent of food services and accommodation businesses reported that they expected increasing staff costs.

Figure 1.19 Overall uncertainty: Percentage of respondents that would rate the overall level of uncertainty facing them at the moment as very high, high, medium, low or very low

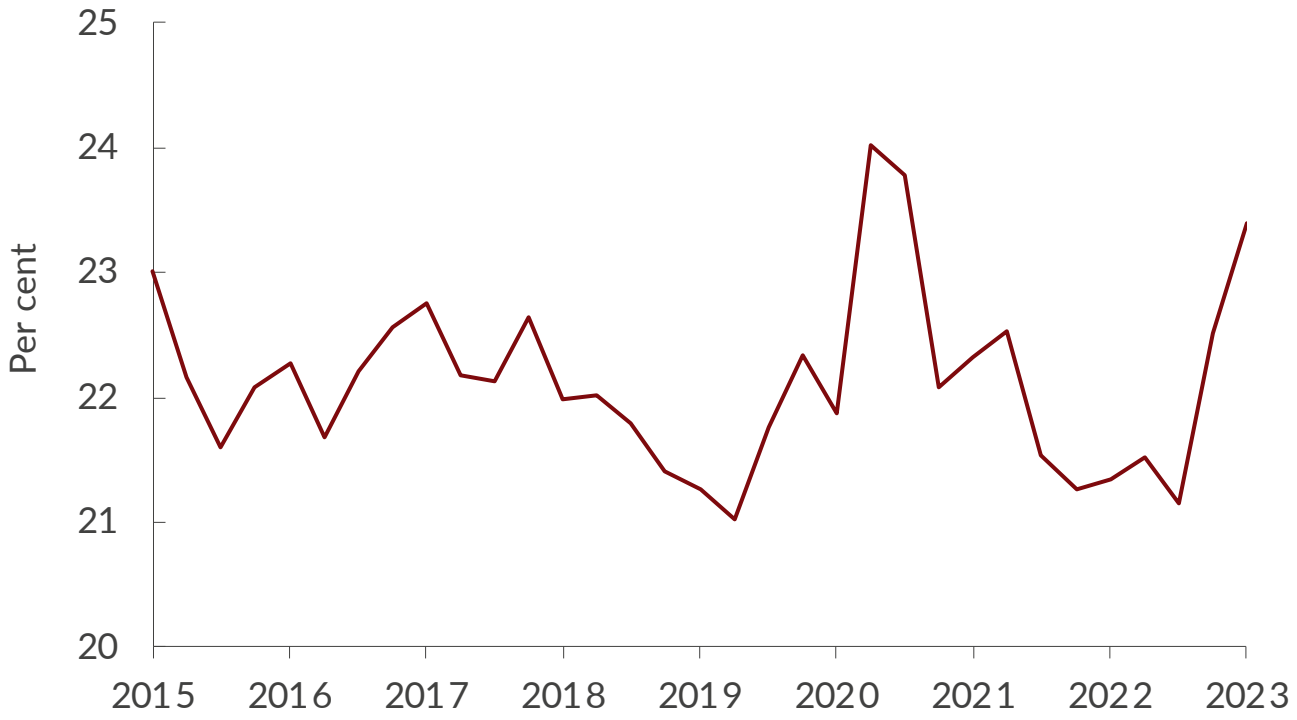


Source: Bank of England Decision Maker Panel.

Business conditions

Business confidence is likely supported by the fact that the profit share in GDP has continued to increase, up from 22.5 per cent in the fourth quarter of 2022 to 23.4 per cent in the first quarter of 2023. This should be caveated by acknowledging that some firms in some sectors have seen their profits increase whilst others have not. Nonetheless, the rise in profits has been noted by the Bank of England and other central banks, and whilst not a primary cause of inflation, the profit margins of some companies in some sectors have directly been boosted in response to the economic turbulence. The rate of pass-through of the slowing rate of inflation in the economy will depend on the price elasticities of demand within specific sectors and for specific goods and services.

Figure 1.20 Profit share in GDP



Source: ONS, NIESR calculations.

Questions remain as to whether this upturn in profit share will translate into increased GDP growth, which is dependent on increased investment and productivity levels. NIESR's Business Conditions Forum reports that while there has been an uptick in business confidence and positive sentiment, economic uncertainty is the main reason for continuing to see businesses delay new and large-scale investment projects.

Trade

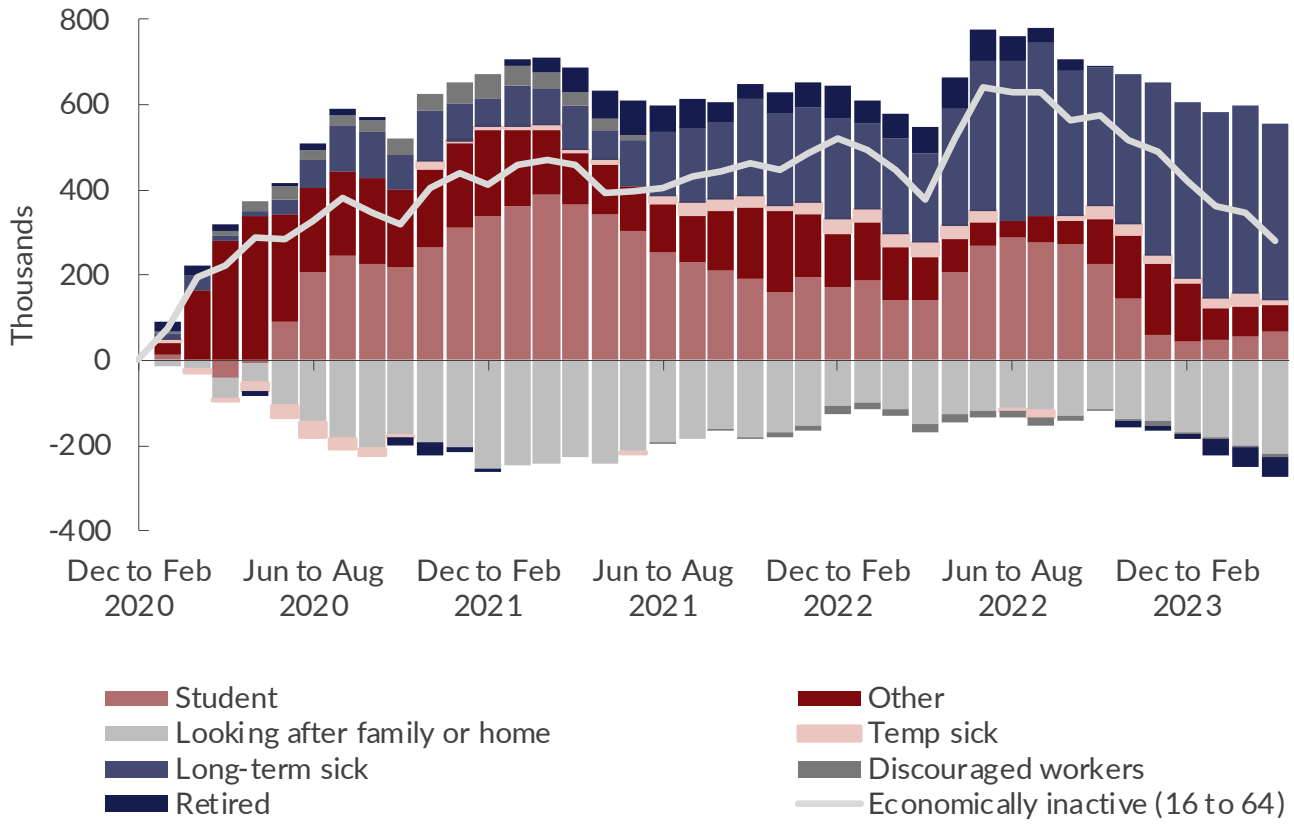
The UK balance of trade as a percentage of GDP showed improvement in the first quarter of 2023. The total trade in goods and services deficit narrowed by £5.9 billion to £18.2 billion in the three months to May 2023 compared with the three months to February. This was a result of a fall in imports and a rise in exports. The S&P Global Purchasing Managers' Index reported growth in service sector output, with strong demand for financial services and IT services. Demand for consumer services remained high though the near-term path looks likely to slow.

Supply and Costs

A tight labour market sending mixed signals

Compared to the preceding 3-month period, the latest labour market figures paint a seemingly mixed picture, as both the employment and unemployment rates are up by 0.2 per cent. Meanwhile, the economic inactivity rate declined sharply to 20.8 per cent (the lowest in three years). Despite this, the labour market remains tight, indicating that more still needs to be done to fill jobs and resolve the structural issues surrounding the labour market. The rise in employment was driven mainly by part-time workers, which might suggest that companies are hesitating to take on permanent placements as uncertainty continues to loom over the economic outlook. This is also echoed in the KPMG and REC July Job report, which showed hiring activity to be muted in June and employers leaning towards temporary hires as permanent placements fell. Redundancies also bounced back in the latest three-month period to an average of 3.3 per thousand employees.

Figure 1.21 Change in economic inactivity by category since December 2019 – February 2020



Source: ONS.

Falling inactivity rate is good news

The fall in the economic inactivity rate to 20.8 per cent, the lowest in 3 years, is undoubtedly good news for the labour market. The most recent fall in the economically inactive was driven by workers aged 25 years and over, specifically from the categories of those who are looking after family or home and retirees. This might suggest that people in these groups, who have left the workforce for personal commitments, are looking for work as they might be having difficulties

managing living expenses. However, the elephant in the room remains the elevated level of long-term sick. While it has decreased by 6.8 per cent on the latest quarter, it remains very high. The long NHS waiting lists that seem to be partly causing the long-term sick category to balloon are unlikely to be shortening any time soon. This group of people could contribute to alleviating the tightness in the labour market, if they were able to re-enter the workforce.

12th consecutive fall in vacancies reflects a slight loosening in the labour market

The number of job vacancies fell for the 12th consecutive month, by 85,000 to 1.03 million in the three months to June 2023, with falls recorded broadly across most industries – 13 of the 18 sectors. Looking by industry, 'financial and insurance' and 'information and communication' recorded the largest falls in vacancies with 15.3 per cent and 13.4 per cent, respectively. This fall in vacancies suggests a slight loosening in the labour market. Another measure of how the labour market is seeing signs of loosening is the number of unemployed people per vacancy, which rose to 1.33 in the three months to June 2023, albeit this remains low by historical standards.

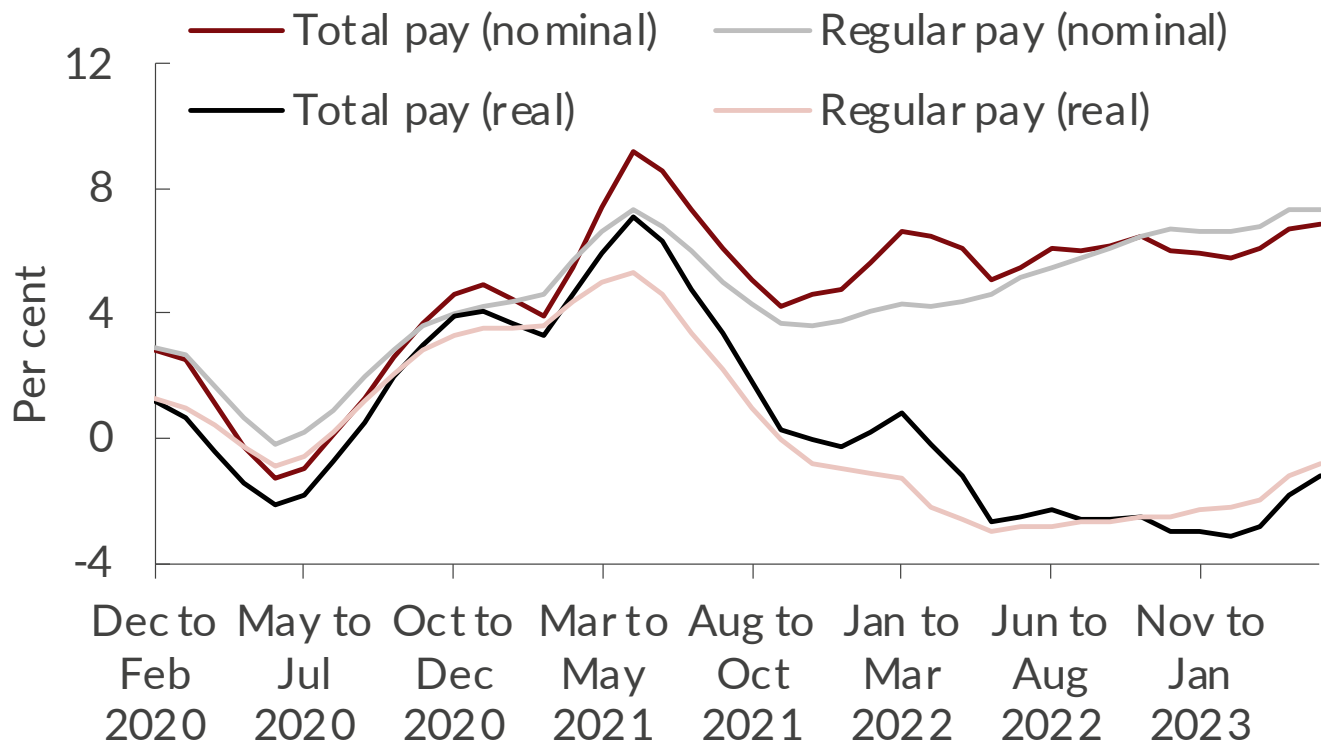
Positive news for weekly hours and working days lost is just the calm before the storm

In March to May 2023, total weekly hours worked increased by 4.5 million to 1.05 billion, which is 2.7 million hours above pre-pandemic levels. Both females and males drove the increase in the latest three-month period, although total hours worked by women remain above pre-pandemic levels contrary to men whose hours are still below pre-pandemic levels. A total of 128,000 working days were lost to labour disputes in May 2023, the lowest monthly figure recorded since July 2022. Nonetheless, with industrial action by various unions already underway, coupled with the junior doctors and rail companies announcing more planned strikes over the summer, it is possible this positive news is just the calm before the second storm.

Nominal pay growth remains high while real pay is still falling

Annual growth in total (including bonuses) and regular pay (excluding bonuses) was 6.9 per cent and 7.3 per cent, respectively, in the three months to May compared to 6.7 per cent and 7.3 per cent, respectively, in the three months to April (figure 1.22). As outlined in our July Wage Tracker (Bejarano Carbo, 2023b), we expect average growth in both regular and total pay to have been 7.2 per cent in the second quarter of 2023. This is higher than the MPC would be hoping for and there is now a momentum in UK wage growth that makes it unlikely this rate of growth will fall any time soon. Aligned with the pattern of the past year, real pay is still falling, albeit at a slower pace - total and regular pay growth fell by 1.2 per cent and 0.8 per cent respectively (figure 1.22).

Figure 1.22 Growth in nominal and real average weekly earnings

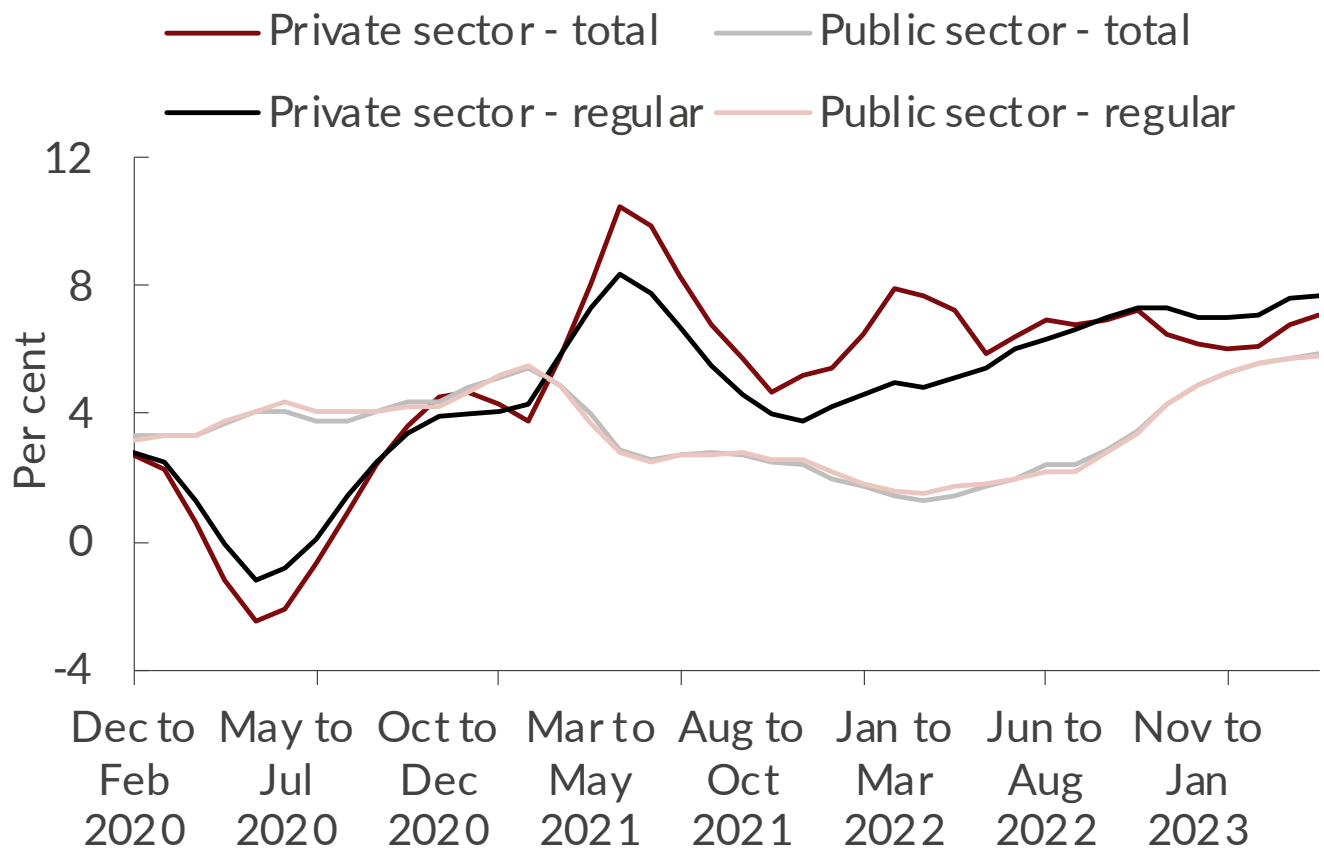


Source: ONS.

Public-sector wages playing catch up with the private sector

The latest earnings data show the disparity between public and private-sector earnings growth starting to widen again. In the three months to May 2023, private-sector wage growth was 7.7 per cent – representing the largest growth rate seen outside of the pandemic period – while for public sector workers this figure was 5.8 per cent (figure 1.23). Furthermore, data collected by XpertHR indicate that the median pay settlement in the 12 months to May was 1.2 per cent higher in the private sector than in the public sector.

Figure 1.23 Average weekly earnings growth by sector

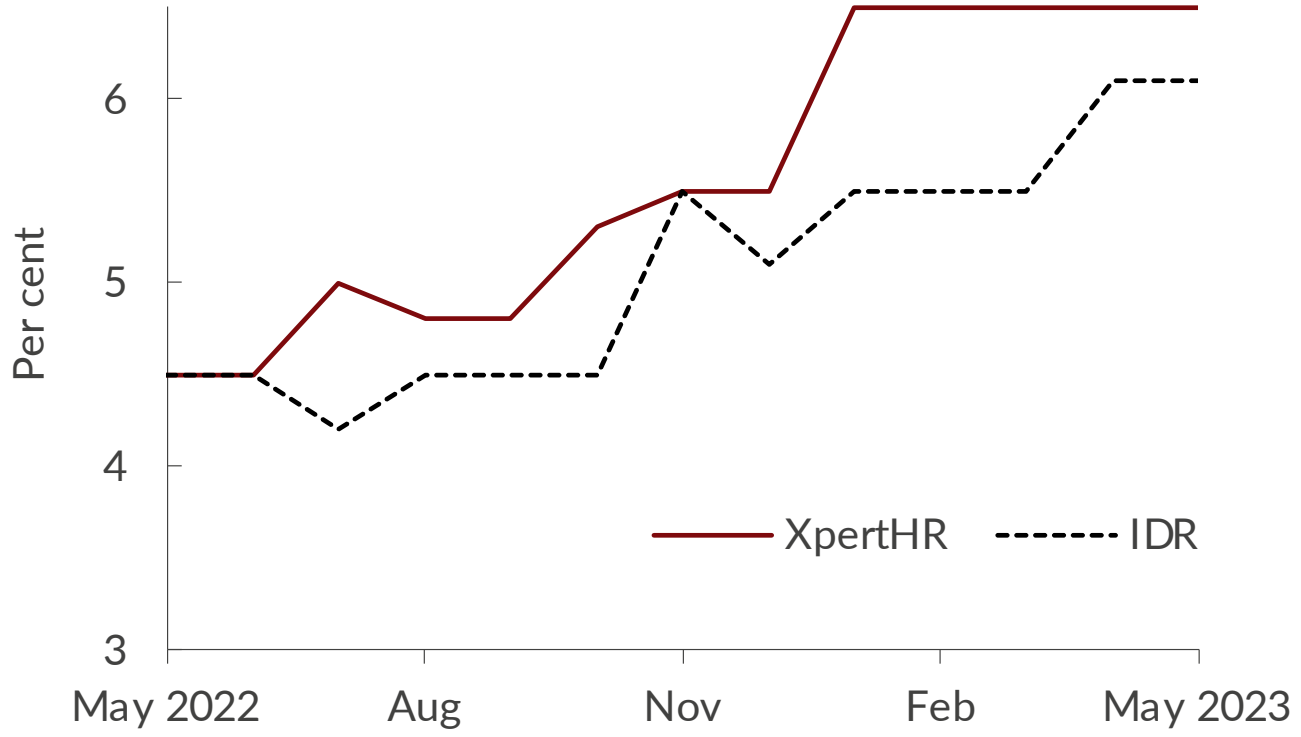


Source: ONS.

Pay settlements

Income Data Research (IDR) report that the median pay award for the whole economy was 5.8 per cent in the three months to May 2023 while XpertHR report 6.0 per cent in the same period (figure 1.24). It is notable that May's wage growth may in part reflect public-sector pay deals as well as the 9.7 per cent increase in the National Living Wage that came into effect in April.

Figure 1.24 Median pay settlements (three-months average)

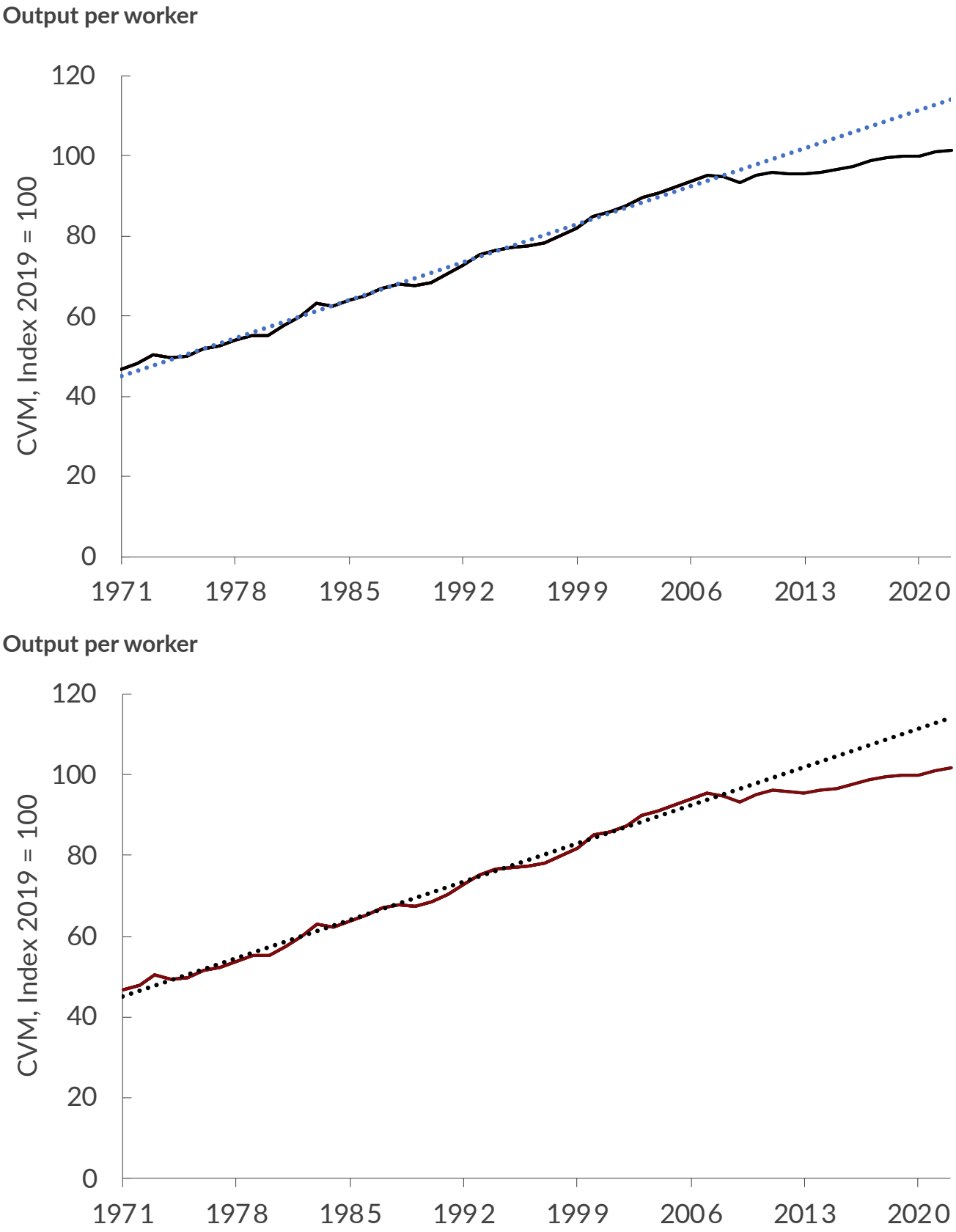


Source: XpertHR, IDR.

Is the United Kingdom trapped in a stagnating productivity doom loop?

Employment growth has proved resilient despite headwinds in the economy and weak GDP growth. This would imply that productivity growth is low, in line with the trend we have seen since the 2008 global financial crisis. Before the global financial crisis, UK productivity was growing steadily. However, this momentum was lost in the middle of the last decade as productivity growth deviated sharply from its pre-financial crisis trend rate (figure 1.25). ONS data suggest that output per hour worked in the first quarter of this year was just 0.6 per cent above its pre-pandemic 2019 average while output per worker remained unchanged over the same period. Like other advanced economies, the United Kingdom has experienced sluggish productivity growth, mainly attributable to a slower rate of innovation and technological diffusion. But, as discussed in the Productivity Commission's Evidence Review (NIESR, 2022), the United Kingdom has faced an additional set of unique problems – prolonged underinvestment, Brexit, Covid-19 and years of political inconsistency – which have resulted in stagnating productivity.

Figure 1.25 UK productivity from 1971 to 2022



Source: ONS.
Notes: CMV stands for chained volume measure.

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2. Outlook for UK Households, the Devolved Nations and the English Regions

By Arnab Bhattacharjee, Max Mosley, Adrian Pabst, Robyn Smith and Tibor Szendrei

- **The aggregate shocks to the UK economy have widened disparities of income and wealth across the household distribution and between prosperous and poor parts of the country:** falling real wages and rising bills and debt levels have hit households in the bottom half of the income distribution hardest, leading to a shortfall in their real disposable incomes by up to 17 per cent over the period 2019-2024.
- **We project that real wages in many UK regions will not return to pre-pandemic levels by the end of 2024:** the East of England, parts of the South East and the West Midlands will be below pre-Covid levels, with median real wages in the West Midlands around 5 per cent lower than in 2019.
- **By the fourth quarter of 2024, we project that median real wages in London will be more than twice as high as UK real median wages,** with wages in Wales, the North East and the West Midlands projected to remain about 20 per cent below the UK median.
- **The distributional impact of the cost-of-living crisis is shifting from energy prices to food prices and in particular housing costs,** with fast-rising monthly mortgage repayments and rents increasing by 5.1 per cent over the past year.
- **Around 1.2 million households (4 per cent) will run out of savings in 2023-24 as a result of higher mortgage repayments:** this will take the total number of households without savings to around 7.8 million (28 per cent).
- **Monthly repayments on fixed-rate mortgages that are refinanced will on average rise from around £700 to £1,000 and monthly repayments for variable-rate mortgages will on average rise from around £450 to £700:** this will affect around 3m households on variable-rate mortgages.
- **Around 1.6 million low-income households with disposable incomes of less than £24,000 per year hold high-cost loans; they spend on average £3,200 per year (£267 per month) to pay back the debt and service interest:** for poorer households, coping with low or no real wage growth and persistent inflation has involved new debt to pay for higher housing, energy and food costs.
- **Despite a robust UK labour market, unemployment and inactivity are rising in Wales:** only Scotland and London are above pre-pandemic levels of employment; unemployment is falling in Northern Ireland, the North East and Yorkshire and the Humber, but inactivity is higher almost everywhere (except Northern Ireland, Scotland and Yorkshire where it is high and stable).

Secular Stagnation

In 2020-21, we forecast that low economic growth and stagnant productivity would increase the financial vulnerability of households in the bottom half of the income distribution and the incidence of destitution at the poorest end (Bhattacharjee and Lisauskaite, 2020; Bhattacharjee et al., 2021). The lack of economic progress over the past few years means that this has come to pass. Our projections for the General Election year of 2024 suggest that inequalities of income and assets will grow, with little real income growth for many, low or no savings, higher debt, as well as elevated housing, energy and food costs.

With economic growth and productivity flatlining, wage growth has so far not been sufficiently strong to offset the impact of inflation on living standards. We project median real wages to fall by up to 6 per cent over the period 2022-24 (compared with 2021 levels), but only by 2 per cent fall in the bottom income decile. This is because of increases in the National Living Wage and the National Minimum Wage (table 2.1).

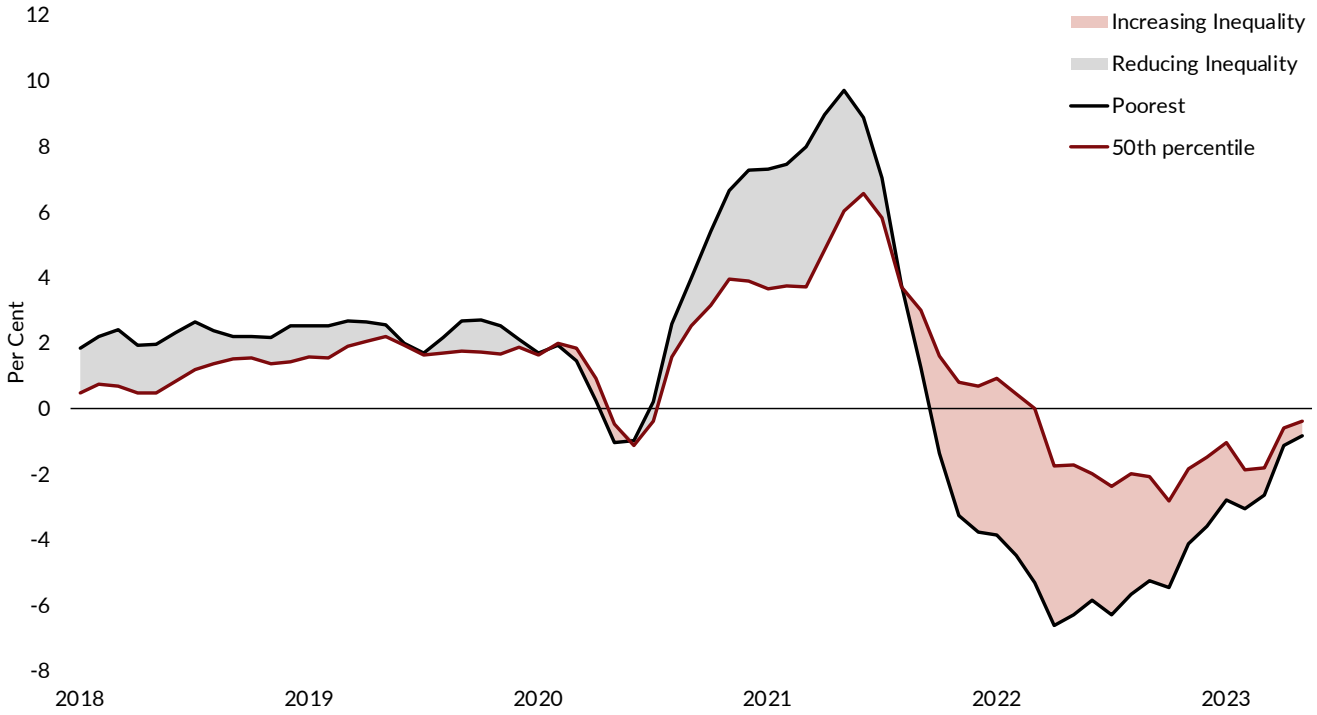
Table 2.1 Annual real wage growth for the lowest, median and highest earners

Date	Poorest (10th percentile)	50th percentile	Richest (90th percentile)
2018	1.1%	1.3%	3.3%
2019	2.4%	2.5%	6.0%
2020	-1.0%	0.2%	1.2%
2021	2.6%	2.3%	3.1%
2022	-1.6%	-3.6%	-0.1%
2023	*-1.0%*	*-2.3%*	*2.8%*
2024	*1.7%*	*-0.1%*	*3.4%*
2025	*1.6%*	*0.3%*	*3.2%*

Note: Figures for 2023, 2024 and 2025 are projections.
Source: NiGEM and LINDA.

The picture is bleaker when we consider labour incomes rather than real wage growth. The projected decrease in labour income is about 10 per cent for the median household and as much as 20 per cent for the bottom decile. Figure 2.1 plots trends in the rate of change in labour incomes (and not income levels) for workers at the median and 10th percentile. The chart shows that the lowest paid workers have seen their real incomes fall more sharply than the median income earners since 2022 when the cost-of-living crisis hit.

Figure 2.1 Year-on-year real earnings growth for the lowest and median earners



Notes: The chart shows the annual changes in real earnings (pay) for both the bottom 10 per cent and median earners. The trajectories track relative growth in labour income between the two categories of households, but not necessarily convergence in individual labour incomes.
Source: ONS PAYE Real Time Information (July 2023).

Even though energy prices have dropped by some 50 per cent since their 2022 peak, persistent food price inflation and much higher housing costs as a result of fast-rising interest rates are squeezing the disposable incomes of households in the bottom half of the income distribution. Real wage growth has picked up significantly in recent months but both regional and sectoral variation mean that disparities between more prosperous parts and more deprived areas of the country are still widening (table 2.2 and figure 2.2).

Amid both state and market failure, public policy needs to navigate not only institutional dysfunction and vested interests but also find ways to bring about supply-side reforms in areas such as housing, energy, education, health and childcare. As we have consistently argued, this requires a better fiscal-monetary mix (Chadha, 2022b) with a focus on boosting public investment in ways that help unlock greater business investment.

Without higher public investment, it is hard to see how the UK can reduce inequalities at the levels of households or regions (Bhattacharjee et al., 2023b). In addition, macroprudential policy must ensure that financial markets are able to give households and firms that are solvent access to credit on reasonable terms. A focus on investment and other targeted policy interventions is necessary if the United Kingdom is to avoid a period of protracted stagnation and fall further behind other advanced economies.

The Distributional Implications of the Cost-of-Living Crisis

Wages

The series of shocks that hit the UK economy over the past few years – from the uncertainty over Brexit via Covid-19 to the spike in inflation following Russia's invasion of Ukraine – has exacerbated underlying structural weaknesses and disparities of wealth. With slow growth, low investment, flatlining productivity as well as gaps in the provision of skills and finance, real disposable incomes and living standards have fallen across the income distribution. This applies notably to households at the bottom end who experience food insecurity and fuel poverty, and who are drawing down their savings or going further in debt (Bhattacharjee et al., 2023a and b; Hills, 2023).

An important further question is the impact that all these shocks have had on people in work, particularly those who experience in-work poverty, defined as a household living in poverty even though at least one adult is in work (JRF, 2023). Table 2.1 shows that the cost-of-living crisis in 2022 had a negative effect on wage growth for the working poor notwithstanding rises in the National Minimum Wage and the Living Wage. The negative impact on the working poor is even more severe, with inflation far exceeding pay for households in the bottom decile, much more so than the median. As a result, the divergence between the poorest workers and the median has grown (figure 2.1).

The regional distribution of real wage growth also shows a growing disparity between the prosperous parts of London and the metropolitan parts of the South East where we project that real wages will have grown by up to 7 per cent between the fourth quarter of 2019 and the fourth quarter of 2024, and poorer parts such as the West Midlands where we project a fall of 5 per cent over the same period (table 2.2).

Table 2.2 Regional distribution of real wage growth

Date	Projected growth of real wages (2024Q4 over 2019Q4)	Projected median real wage levels 2024Q4 (relative to UK median)
North East	2.7%	81.8%
North West	3.1%	103.9%
Yorkshire and the Humber	2.5%	93.0%
East Midlands	1.1%	88.1%
West Midlands	-5.0%	84.7%
East	-0.5%	108.5%
London	7.2%	256.2%
South East	-1.0%	125.2%
South West	1.4%	105.1%
Wales	4.6%	79.4%
Scotland	0.8%	108.1%
N. Ireland	4.0%	87.4%

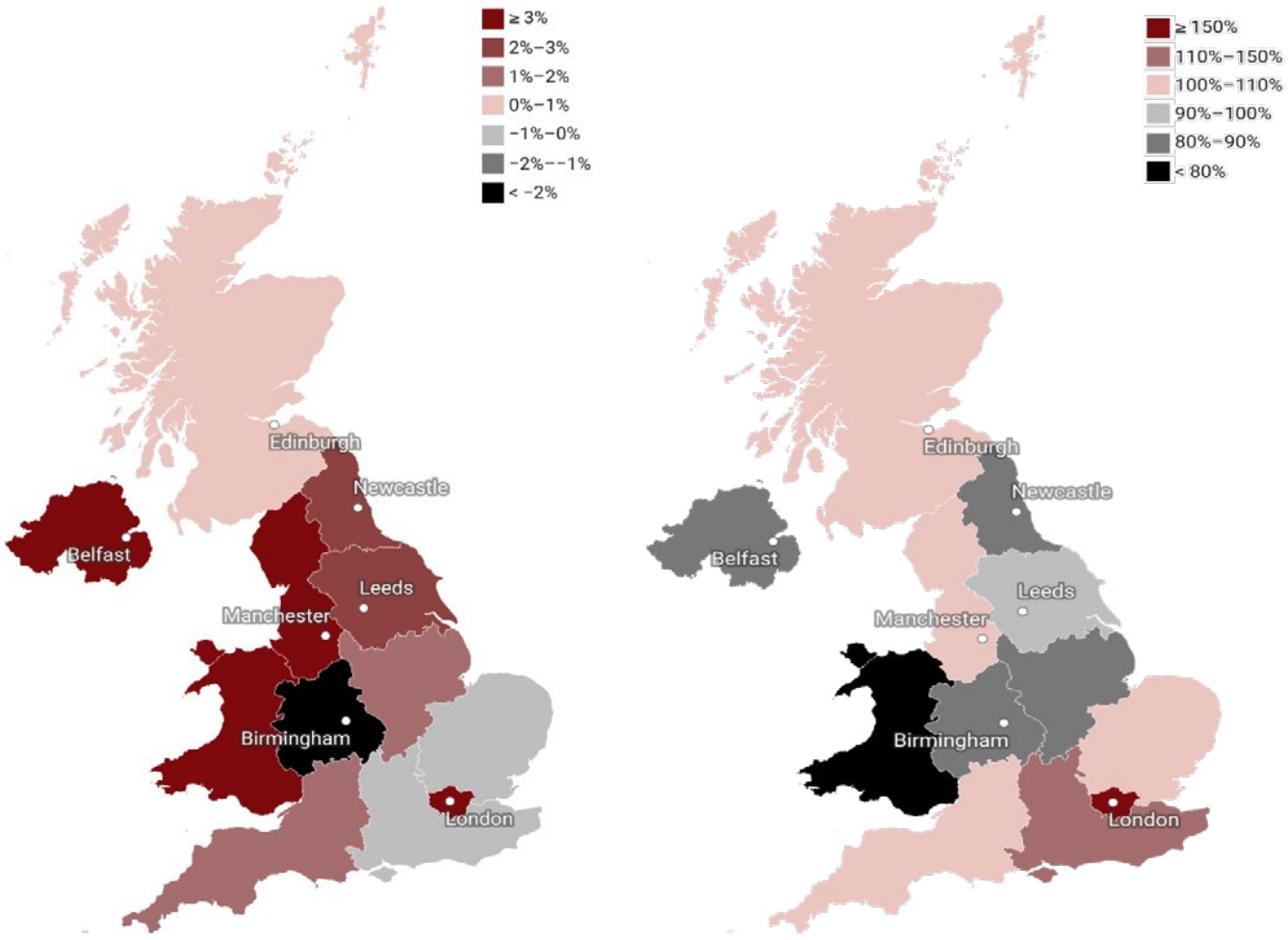
Source: NiReMS and LINDA.

Since the recent rise in the National Living Wage and the Minimum Wage, this situation has started to change, even if year-on-year real wage growth both at the 10th percentile and the median is still negative and growth for the bottom decile has not caught up. Overall, this suggests poor prospects for closing the gap between the high- and low-income households as well as top and worst performing parts of the country, which is the first mission in the 2022 Levelling Up White Paper (DLUHC, 2022).

This pattern is also visible in the regional distribution of wage growth (figure 2.2). Since the start of the pandemic, the West Midlands has experienced the sharpest decline in real wages on average, followed by the East of England and the South East. On the other hand, London has witnessed the sharpest rise in real wages, but so have the North West, Wales and Northern Ireland.

This implies that wages in London have powered ahead and are now projected to be more than twice as high as UK median wages. However, despite experiencing some real growth, wages in Wales are projected to remain about 20 per cent below the UK median, and the situation is similar in the North East and the West Midlands. In fact, only London and the South East are projected to have real wages substantially above the UK median, with wage levels in Scotland, South West, North West and the East of England slightly above the UK median.

Figure 2.2 Regional real wage projection



Source: NiGEM and LINDA

Energy

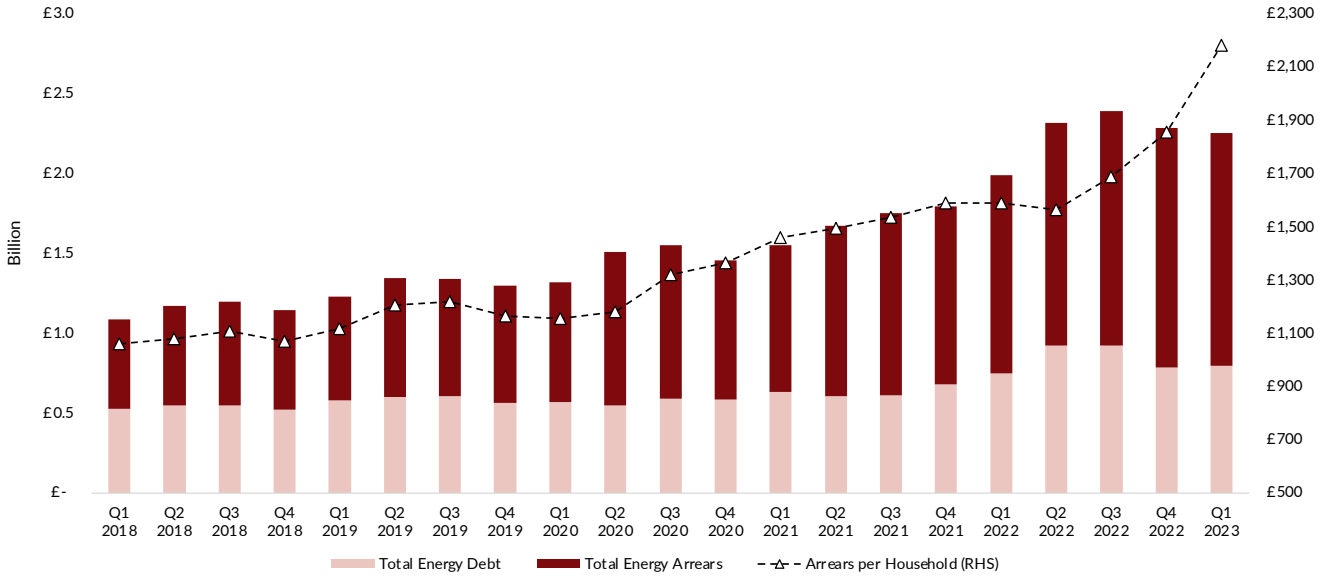
Elevated energy prices in 2022 played a dominant role in the real income hit to UK households. Previously, the energy price cap decided by Ofgem determined the size of household energy bills and was set to rise to over £3,500 in September 2022 for a typical household. Effective 1 October 2022, the government introduced the Energy Price Guarantee (EPG) to limit this rise to £2,500. In the Autumn Statement on 17 November 2022, the Chancellor announced that the EPG would be maintained at this level through the winter 2022-23 and then rise to £3,000 from April 2023 onwards (though it was subsequently held at £2,500 in April).

While the general subsidy of the EPG has helped all households, we have argued for a more targeted approach to help the hardest hit households (Bhattacharjee et al., 2022a). Such an approach would combine the Social Tariff Discount that the government plan to introduce in 2024 with a Variable Price Cap whereby the price per unit of energy used increases with usage (Chadha, 2022a; Bhattacharjee et al., 2022b).

Our proposed policy applies just as much during times of rising energy prices as it does during times of falling prices. The EPG at £2,500 needs to be revised, given that the price cap (the cost of energy charged to households) has now fallen below this level. The energy price cap fell sharply to £2,074 for a typical household as of 1 July 2023. The EPG therefore remains as a limit for energy bills should they rise again but is not currently affecting household energy bills so long as the price cap remains below this level. Household energy bills have therefore returned to being determined by market forces, rather than government chosen levels. The latest projections for the price cap indicate that it will be steady at this level, even though very limited UK storage capacity makes energy prices very sensitive to global shocks and ensuing price movements.

Although energy bills remain high (approximately 66 per cent higher than in 2021), it is likely that energy price inflation will no longer pose the same challenges to UK households as they have done for the past year. Now is the time to reconsider targeted support to reduce wasteful energy consumption at the top end of the income distribution, incentivising energy efficiency and a fair transition towards net zero targets (Fetzer, 2022; Bhattacharjee et al., 2022b). It is important to take stock and consider what legacy these previously elevated bills will have on UK households into the future.

Figure 2.3 Average debt level where there is no arrangement to repay the debt (arrears)



Source: Ofgem

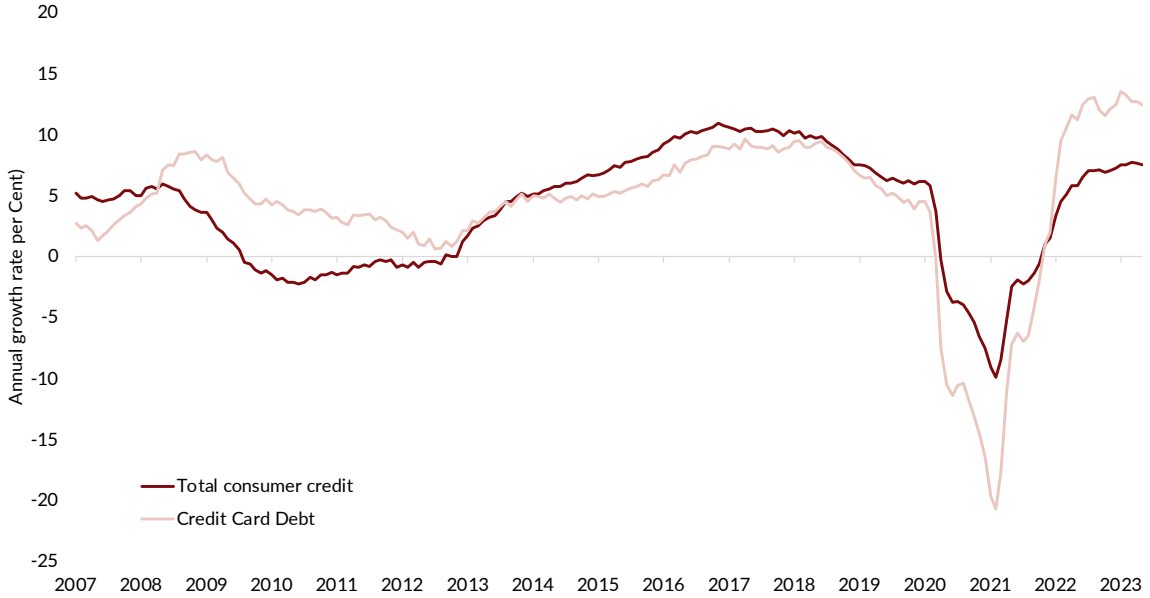
The latest Ofgem data suggests the number of households in arrears with their energy providers is at historically high levels but is beginning to fall. As of March 2023, there were 685,104 households in arrears with their electricity accounts and 647,823 with their gas accounts. This is 29 per cent lower than it was in June 2022, which suggests that households are beginning to recover financially from elevated energy bills. Of the remaining households in arrears, the average debt is around £2,200 (figure 2.3). For households with a repayment plan on their arrears, the average debt is lower, at around £500.

Unsecured Debt

With low or negative real wage growth and the once-in-a-generation inflationary shock, households have had to cut back on consumption and go further into debt. As of Spring 2023, the total amount of unsecured debt was around £300 billion. The average interest rate was around 20 per cent for credit card debt, and often as high as 110 per cent for payday loans.

Since 2021, there has been a steep increase in the growth of credit card debt, which comprises about 30 per cent of unsecured debt (figure 2.4). Over the past 12 months, the annual growth rate for all consumer credit rose from 7.7 per cent in February 2023 to 7.9 per cent in March 2023, which was the fifth consecutive month of increase. The growth rate of credit card borrowing declined slightly from 13.2 per cent in February 2023 to 12.8 per cent in March 2023. The growth rate of other consumer credit went from 5.4 per cent in February to 5.8 per cent in March.

Figure 2.4 Consumer credit growth rate



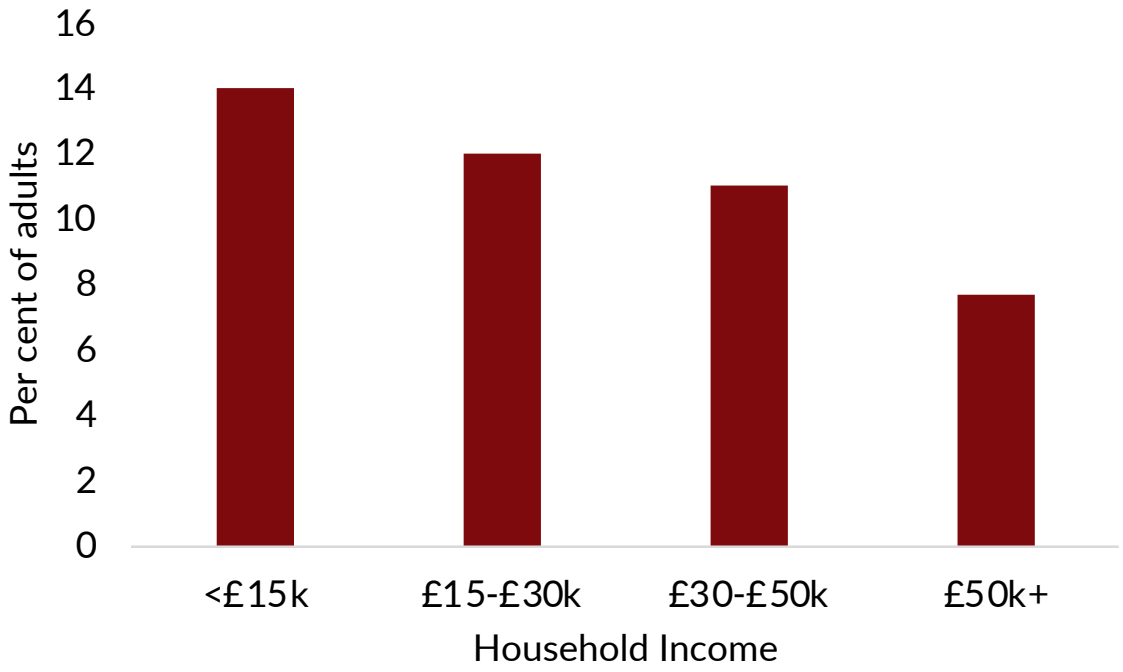
Note: 12-month growth rate in sterling net consumer credit lending to individuals (in percent), seasonally adjusted, excluding student loans.
Source: Bank of England (2023), Household credit, https://www.bankofengland.co.uk/statistics/visual-summaries/household-credit.

In March 2023, consumer credit borrowing was £1.6 billion, up from £1.5 billion in February 2023. The breakdown of the increase was as follows: £0.7 billion from credit card borrowing (remained largely unchanged from February 2023) and £0.9 billion from other forms of consumer credit like car dealership finance and personal loans.

One indication of growing financial vulnerability is the increase in 'high-cost loans', which encompasses high-cost short-term credit (including payday loans), home-collected credit, rent-to-own (RTO), buy now pay later offers, overdrafts, and logbook loans.

The proportion of households with 'high-cost-loans' is higher for lower-income households: according to the FCA's Financial Lives Survey around 14 per cent of households who earn less than £15,000 per year have high-cost loans. By contrast, only about 8 per cent of households earning more than £50,000 hold some form of high-cost credit (figure 2.5).

Figure 2.5 Use of high-cost credit



Source: FCA Financial Lives Survey (2022).

The sharp fall in household savings since the onset of the cost-of-living crisis (Bhattacharjee et al., 2023a and b; Hills, 2023) has exacerbated the hardship. Drawing on the Joseph Rowntree's Cost of Living Tracker (June 2023) and Earwaker and Stirling (2023), we find that 1.6 million households with disposable incomes of less than £24,000 per year (income deciles 1-4) hold high-cost loans. They spend on average £3,200 per year (£267 per month) on these loans, of which about £1,800 is to pay back the debt and £1,400 is to pay interest, which averages approximately 76 per cent (owning to payday loans whose average interest rate is about 110 per cent).

For some of the poorest households in society, this means that as much as 17 per cent of their disposable income is spent on servicing debt. For millions of low-income households, coping with low or no real wage growth and persistent inflation has involved new lending to pay for higher housing, energy and food costs.

Spotlight 1: The Impact of Rising Interest Rates on Housing Costs

By Rosen Chowdhury and Max Mosley

How have fast-rising interest rates affected housing costs across the United Kingdom? What has been the effect on housing costs arising from uncertainty not only about the path of monetary policy but also lending conditions and mortgage providers withdrawing a range of mortgage products? With interest rates forecast to rise to 5.5 per cent, we explore what the short- and long-term implications are for mortgage holders, and whether we can observe any pass-through impact on renters.

Short-term Implications for Mortgage Holders

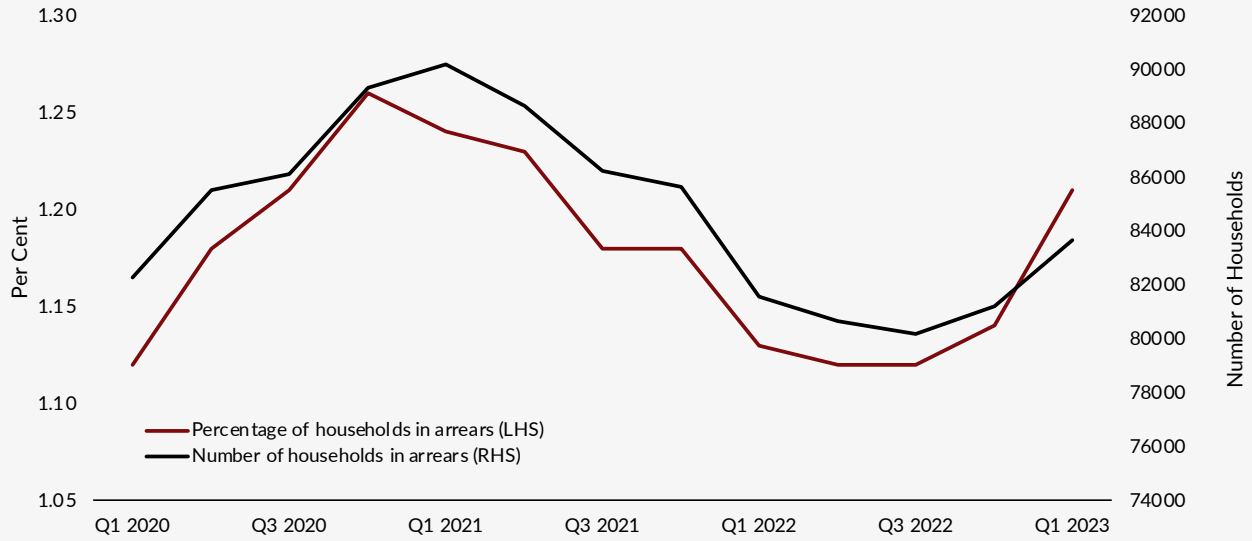
The Bank of England (BoE) has used both conventional and unconventional policy tools (such as Quantitative Tightening) to address persistent inflationary pressures. Although the impact of the latter policy on the financial and housing market is still uncertain, it is thought to be minimal owing to additional measures taken by the BoE such as the introduction of a new short-term repo (STR) facility and owing to the availability of excess reserves in the banking sector. However, the effects of the traditional policy tool (the interest rate) have already been felt by mortgage holders, transmitted via direct (interest rate channel) and indirect (balance sheet channel) channels in the form of higher mortgage costs.

Furthermore, the rising policy rate transmitted via the indirect channels reduces households' net worth (including housing value), increasing the information asymmetry between borrowers and lenders, raising mortgage spreads and resulting in higher mortgage rates (Chowdhury et al., 2022; Iacoviello and Minetti, 2008).

The impact of these effects is presently felt by around 4 million households, including those on variable rates facing an immediate increase in repayments, and the 3 million households nearing the end of their fixed-rate deals. For these households, average mortgage interest costs have risen from approximately 2 per cent last year to around 6.5 per cent currently (BoE, 2023). As an example, a household borrowing £300,000 on a 25-year mortgage would now face a 50 per cent rise in monthly repayments – from £1,200 to £1,800 – as a consequence of interest rates increasing from 2 per cent to 5.25 per cent.

If the Bank rate were to peak at 6 per cent by the end of 2023 or in early 2024, we project that 1.2 million households would run out of savings in 2024 as a direct consequence of rising mortgage repayments (Mosley, 2023). This would take the total number of households with no savings to around 7.8 million. Using data from UK Finance, we show in figure S1 that the number of households with mortgages in arrears has been rising steeply since the third quarter of 2022, with the total number approaching 85,000 compared with 80,000 in the third quarter of 2022.

Figure S1 Percentage and number of households in mortgage arrears



Notes: Arrears defined as outstanding payments worth over 2.5 per cent of total balance.
Source: UK Finance (May 2023).

Previously, households applying for a mortgage were subject to affordability stress-tests, assessing their ability to withstand a 3 percentage point increase in interest rates. Given that rates have risen by more than this, households are now in an environment they would not have been expected to withstand this impact without some adjustment.

As a result of the existing heterogeneity across regional economies and housing markets in the United Kingdom, the regional impact of monetary policy tends to diffuse mainly via demand-side channels, i.e. the balance sheet channel (Dow and Montagnoli, 2007). Owing largely to the lower debt carrying capacity, peripheral regions such as the North East and Wales are worst affected by the current contractionary monetary policy (Mosley, 2023). The large increase in disparity in household wealth between core and peripheral areas can be partly attributed to Large Scale Asset Purchase (LSAP) schemes deployed during the Covid-19 period.

The savings accrued during the Covid-19 pandemic for middle to higher income households are acting as a temporary buffer before households are unable to afford their repayments and enter arrears. The data used in figure S1 show two notable trends. The first is the fast pace of the increase in the total number of households in mortgage arrears, at about 6,000 over the past four months. As a proportion of all households in mortgage arrears, this rise takes the total percentage near to the peak seen during the mortgage holiday in 2020.

The second is that the greatest rise is in those households with arrears with a range of 2.5 per cent to 5 per cent of the total balance, which is the lightest arrears band. This suggests that there is growth in new cases of people who struggle to afford their repayments rather than households that already struggled in the past, for example during the pandemic. Thankfully, despite a strong increase, the overall number of households in mortgage arrears remains low. But this data, coupled with our projections about the drawing down of savings, suggests that the number of households in mortgage arrears is likely to increase over the next 12 months.

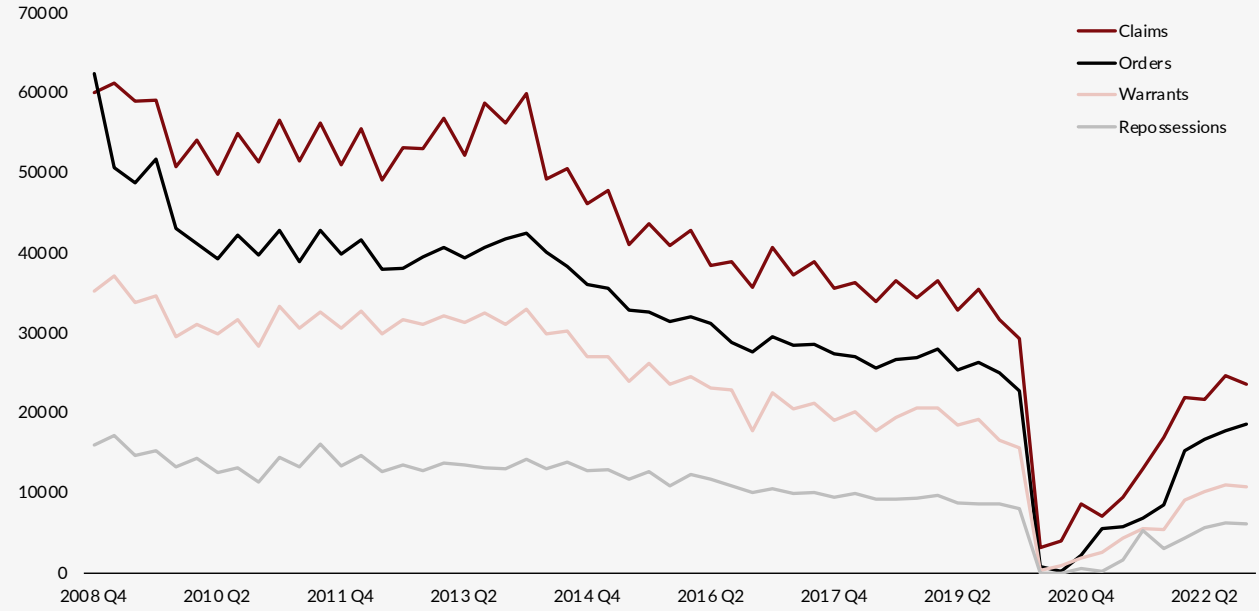
While the above demand-side channels emphasise heterogenous effects, the same is not true for supply-side effects. This is because the United Kingdom has a uniform mortgage market, and hence potential heterogenous effects of the current contractionary monetary policy via supply-side monetary transmission channels (such as the bank lending or the bank capital channel) on regional mortgage markets are likely to be limited.

Long-term Implications for Mortgage Holders

There are several factors that should limit the long-term impact of higher interest rates:

1. The likelihood of this rise in arrears resulting in repossessions remains small. In relation to the rise in arrears seen in the first quarter of 2023, just 750 households and 410 buy-to-let mortgaged properties were taken into possession. Although this is 50 per cent higher than in the previous quarter, it remains small as a proportion of the total number of households with mortgages. The number of claims and subsequent repossessions has increased, but it is historically low, reflecting lenders' preference for payment plans over repossession (figure S2). In short, repossession claims have increased rapidly since the pandemic but remain below historical standards.
2. Higher house prices have provided a protective cushion. Demand from homebuyers seeking more space surged during the pandemic, raising house prices and giving millions of homeowners greater equity in their properties, which has potentially reduced the cost of new home loan deals. The stamp-duty changes from 2020 to 2021 would have further elevated demand and thus prices.
3. Previous regulations have limited the number of individuals facing unmanageable loans. Agreed measures between lenders, the Chancellor, and the Financial Conduct Authority (FCA), including loan-to-income limits and responsible lending requirements, have effectively limited household debt build-up in the mortgage market, increasing borrower resilience and reducing the prevalence of payment difficulties. Although interest rates have risen beyond typical stress-test scenarios, these measures have helped to minimise the number of individuals facing unmanageable loans.

Figure S2 Headline possession actions (repossessions for all claims, 2008Q4 – 2022Q4)



Source: Mortgage and Landlord Possession Statistics (Ministry of Justice), Q4 2022.

4. Borrowers are responding flexibly to rising interest rates. Lenders are reporting that borrowers are exploring options such as extending mortgage terms or adjusting plans for tighter affordability conditions. Despite rising borrowing costs, jobs remain relatively secure, and wages are now rising to offset a higher proportion of real-income loss, allowing some individuals to afford higher mortgage payments. Lenders often attribute the most common reasons for falling behind on mortgage payments or facing home repossession to life-changing events such as job loss or serious illness, rather than rising interest rates in and of themselves.
5. Inflation reduces the real-term value of mortgage debt in the long run, making borrowers financially better off as wages catch up with inflation. The present impact of higher mortgage interest rates poses a short-term cash-flow problem rather than a long-term wealth challenge. Policy should be targeted at helping affected households smooth out the short-term impact, as we argue in the section on policy after this Spotlight.

Rental Costs

Economic theory suggests that common forces such as changes in housing demand can drive both house prices and rents. For example, the expansion of Working From Home (WFH) since the Covid-19 pandemic has increased demand for housing, raising both house prices and rents (Kmetz et al., 2022). To the extent that the stream of current and future rents reflects the fundamental value of a house, house prices can be a leading indicator of future rent inflation (Lansing et al., 2022). Thus, changes in the monetary policy stance can affect both house prices and rents by reducing housing demand.

Besides structural factors, the current rise in rental cost can be attributed to causes relating to inflationary pressure, passed on to tenants by landlords who face rising mortgage costs. At an aggregate level, the literature suggests that the impact of monetary policy on the rental price tends to be negative. But since the impact is only visible after a long lag, approximately after

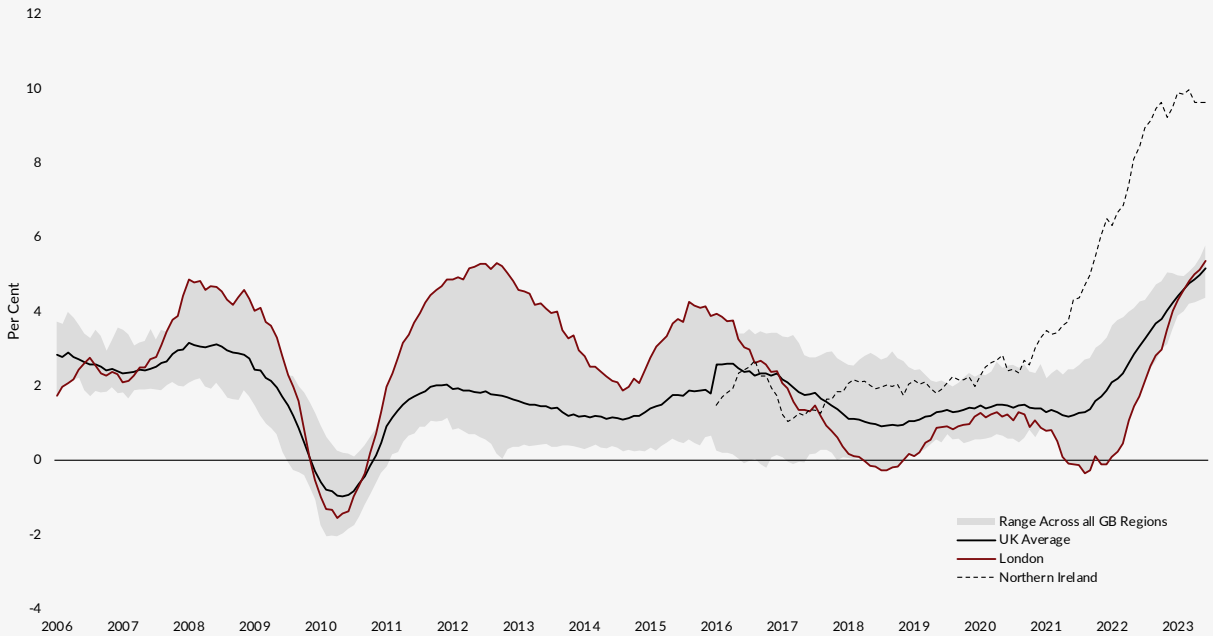
two and a half years following the first rate rise (Liu and Pepper, 2023), there are concerns over the spill-over effects from high mortgage costs to renters in the buy-to-let segment of the housing market. Buy-to-let mortgages often come with higher interest rates compared with those for homeowners.

However, a substantial number of landlords, covering around 2 million out of around 5.5 million properties in the private rental sector, own their properties outright without any mortgage. This means that some landlords may be mostly immune to the impact of interest rate rises. While tenants in non-mortgaged properties may benefit from landlords not passing on higher mortgage rates through increased rents, all landlords face rising costs and this has an upward effect on the market rate for rent.

For buy-to-let landlords, the higher mortgage interest payments, and other structural factors may further strain their incomes which could potentially lead them to sell properties, putting downward pressure on house prices, or pass on the increased costs to renters. Similar to other types of borrowing, buy-to-let mortgages are subject to affordability testing which would reduce the likelihood of renters living in a house with an unaffordable mortgage.

Although in the first half of the 2010s rental costs were increasing in London further than the UK average, the second half of the decade shows rents in London beginning to cool compared with the UK average. Growth rates of rents in both London and the wider country have now converged somewhat over the past year, against the backdrop of a strong surge in rental costs across the country (figure S3). Northern Ireland remains an outlier, with the growth in rental costs considerably exceeding other UK regions. The last time rental costs across the UK increased as sharply as they have done over the past year was in the aftermath of the 2008-09 financial crash.

Figure S3 Annual percentage change in private housing rental prices across the UK



Notes: The data are not seasonally adjusted. Wales is included in the UK average from 2010 onwards, Scotland from 2012 onwards and Northern Ireland from 2016 onwards. Northern Ireland data is not included for last two months because it is an outlier. The latest two monthly estimates are provisional and subject to revision in line with IPHRP's revision policy.
Source: ONS.

The rise in rental costs seems disproportionate to the rise in mortgage costs given the small number of landlords with buy-to-let mortgages. Therefore, not all of this rise can be explained by rising mortgage costs. Arguably, this is also a reflection of changes to regulations in the rental market, such as mortgage costs no longer being tax deductible (now a landlord can only claim relief on the interest component) or the Renters Reform Bill which has provided stronger safeguards on housing quality. These changes have made the rental sector less attractive to landlords, which may lead to some withdrawing their property from the market, reducing supply and increasing rents. To what extent this is a key driver of this rise, or whether landlords are raising costs for other reasons, will require further research.

Is Housing Becoming Unaffordable?

Whether these rises in rental costs present a challenge on affordability is a complex question and not one easily answered with the trends in the available data. This will depend on the level of rents relative to income. In March of 2020, the value of rental costs was approximately 27 per cent of gross median earnings. In London, median rents were more than double, at around 47 per cent of median earnings, above accepted measures of affordability (Whitehead and Meen, 2020).

The number of rental properties affordable to households in receipt of housing benefit is increasingly limited given the decision to freeze the amount households can receive. The Local Housing Allowance (LHA) determines the maximum amount a local authority can offer for housing benefit. These rates were previously set equal to the median rent in a local area, then cut to the 30th percentile of rents in 2011.

In April 2013, the Local Housing Allowance (LHA) rates were increased based on the Consumer Price Index (CPI). Subsequently, in 2014 and 2015, they were further raised by a maximum of 1 per cent (excluding areas with the highest rent increases, which were exempt from the 1 per cent cap). From April 2016 onwards, the LHA rates remained frozen for four years. In April 2020, the LHA rates were adjusted to align with the 30th percentile rent levels, but since then, they have remained unchanged in terms of cash value.

The consequence of freezing the cash-value of housing benefit is a fall in the number of rental properties that are affordable to a household in receipt of the benefit, which is driven by the rapidly increasing cost of rental homes. Since 2020, the cost of rental homes has increased, but the amount a household can receive in housing benefit has remained the same. The growing disparity between the two has resulted in a strong fall in the number of affordable rental properties, from 23 per cent in the first quarter of 2020 to just 5 per cent today (Waters and Wernham, 2023).

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Helping with Housing Costs: Policy Options for the Short and Medium Term

Due to the recent hikes in interest rates, many households have seen their debt servicing costs rise. Not all households have the resources at hand to tackle this sudden squeeze on their budget, which leads to increased probability of default. On account of this, there has been a lot of focus on the ability of banks to cope with the higher risk environment (BoE, 2023a and b). The conclusion of many of the reports on financial stability is that the capital position of UK banks remains strong, which should allow them to support households.

Some demand-side macroprudential tools (such as debt service to income ratio, loan to income and loan to value limits) might pose unreasonable constraints on banks. Since the goal of macroprudential policy is to ensure that banks are not the cause of a disruption of financial intermediation, it is not surprising that forbearance has been proposed in an effort to recruit the banking sector in helping households weather the transition to a higher interest rate environment.

Forbearance might seem counterintuitive to achieve the goals of macroprudential policy, but it should be noted that a lot of the new policy tools have been introduced with the view to stop crises originating from the financial sector. In contrast, the roots of the current macroeconomic instability are not financial, and constraining bank lending can paradoxically lead to a situation where banks contribute to a worsening economic outlook. In essence, a policy of forbearance could help the households most affected by recent macroeconomic developments.

While the upside of forbearance is clear, one must not forget that regulatory forbearance has contributed to the worsening of countless financial crises in the past (e.g. Kane, 1987; Kane and Yu, 1995; Hanazaki and Horiuchi, 2003). As such, a policy of forbearance is only tenable if it is temporary and if the financial regulators are mindful of the implications for financial stability.

Overall Outlook for the Devolved Nations and English Regions

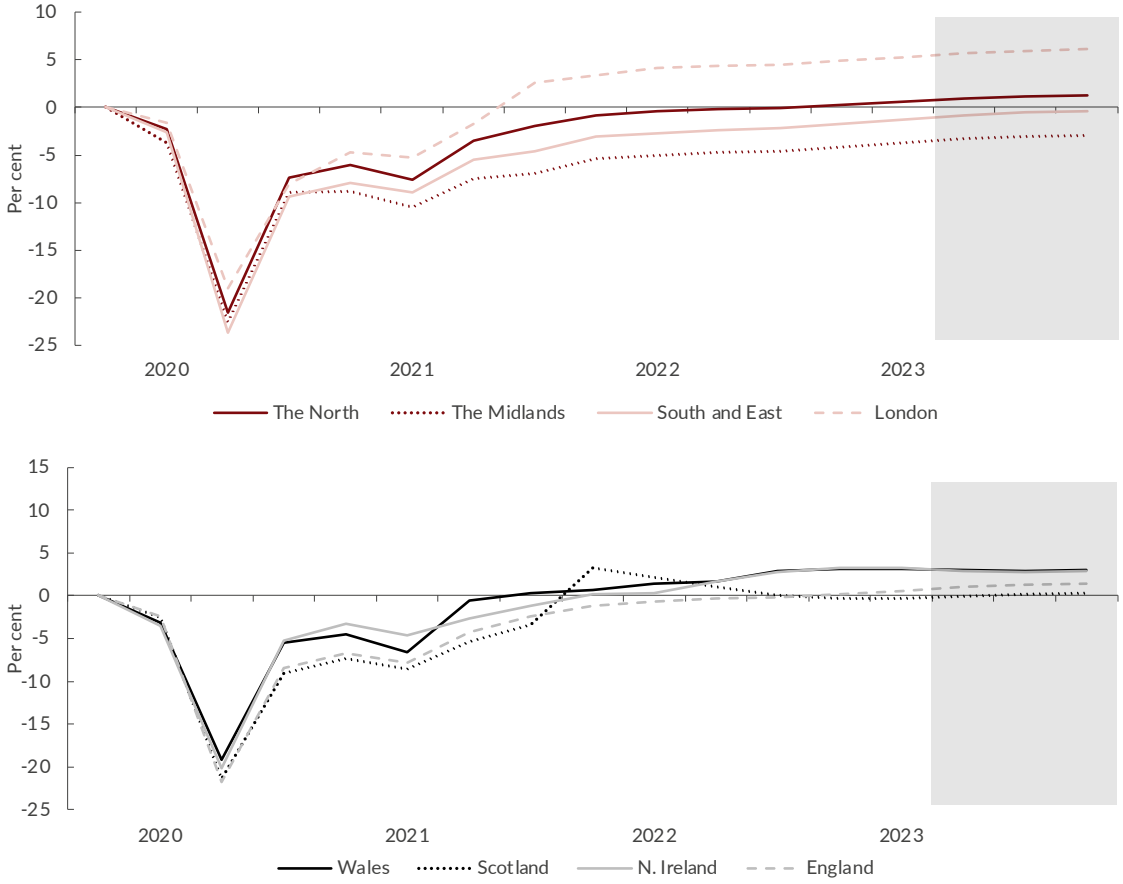
We project very low economic growth for all devolved nations and English regions, though by 2024 they will return to pre-Covid levels of economic output as measured by GVA, except the Midlands which will not revert to pre-pandemic levels until 2025. While employment is generally strong, we have revised downwards our projections for Wales compared with our previous Outlook in May 2023 (Bhattacharjee et al., 2023b). Any improvement in inactivity in 2022-23 is likely to be reversed in 2023-24.

Real wage growth is sluggish and failing to keep up with inflation. Together with productivity flatlining in most parts of the United Kingdom (except London, the metropolitan areas of the South-East and cities such as Manchester or Edinburgh), living standards will not return to 2020-21 levels before 2025. Progress on the 12 missions as set out in the Levelling Up White Paper (DLUHC, 2022) is very limited, highlighting persistent local and regional inequalities.

Gross Value Added (GVA)

- In terms of economic output as measured by GVA, all three devolved nations have returned to pre-Covid levels (figure 2.6).
- In relation to the English regions, the South and East, and the Midlands are still below pre-Covid levels, with the South and East projected to recover in 2024 while the Midlands is lagging further behind (figure 2.6).

Figure 2.6 Regional GVA relative to the fourth quarter of 2019



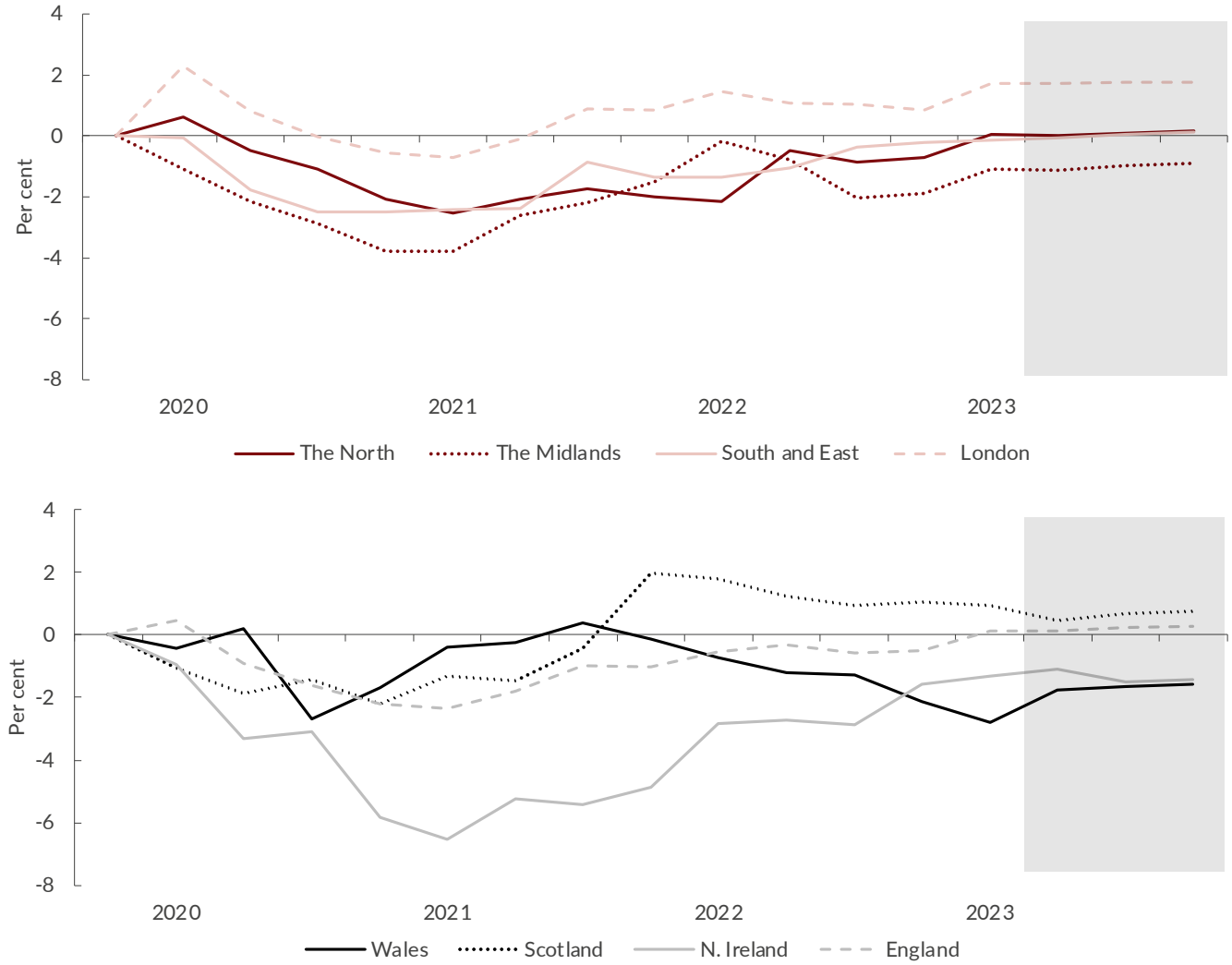
Source: NiReMS.

This analysis highlights the worsening financial position of already vulnerable households that tend to be in low-paid employment and depend on welfare support. We find greater levels of unsecured debt for households in these regions due to a combination of persistent inflation, rising housing costs and the running down of household savings.

Employment

- Employment numbers show a different picture with only Scotland and London being above pre-Covid employment levels (figure 2.7).
- Perhaps most concerning is that Welsh employment figures are consistently weaker in the past few quarters (with both unemployment and inactivity rising), and our projected prospects for employment in Wales remain subdued.
- Among the English regions outside of London, only the North East and Yorkshire and the Humber display positive employment trends.

Figure 2.7 Employment levels relative to the fourth quarter of 2019

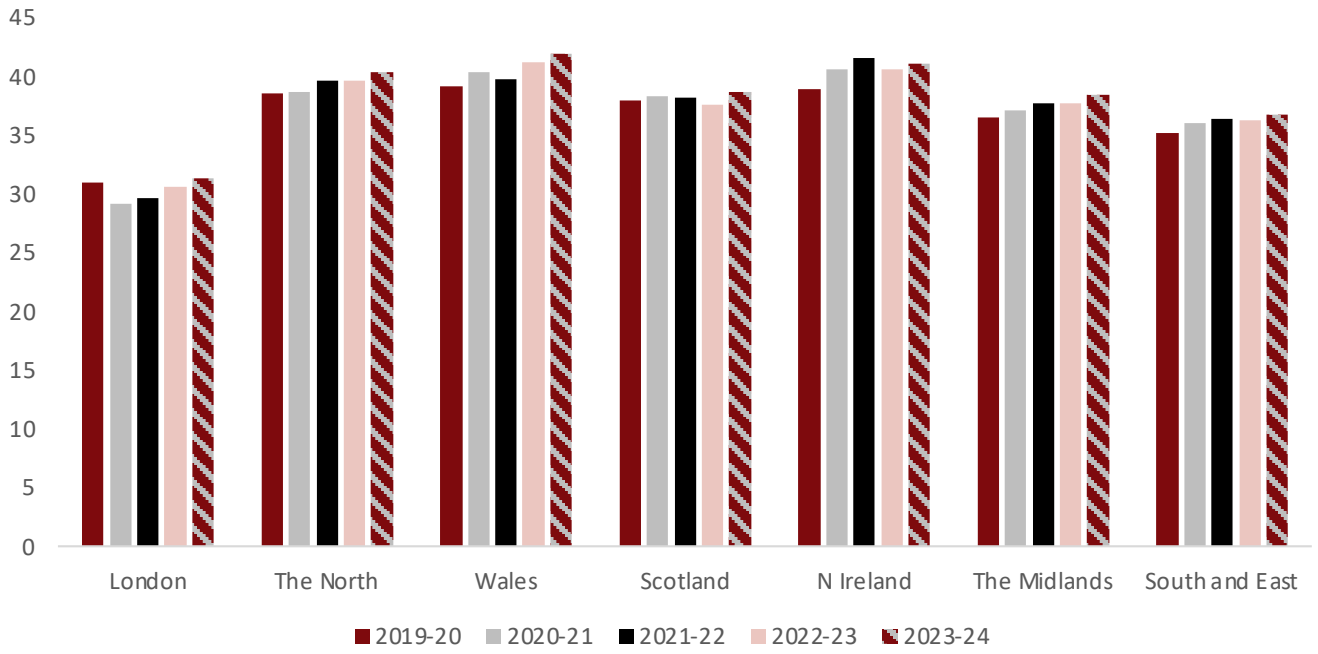


Source: NiReMS.

Inactivity

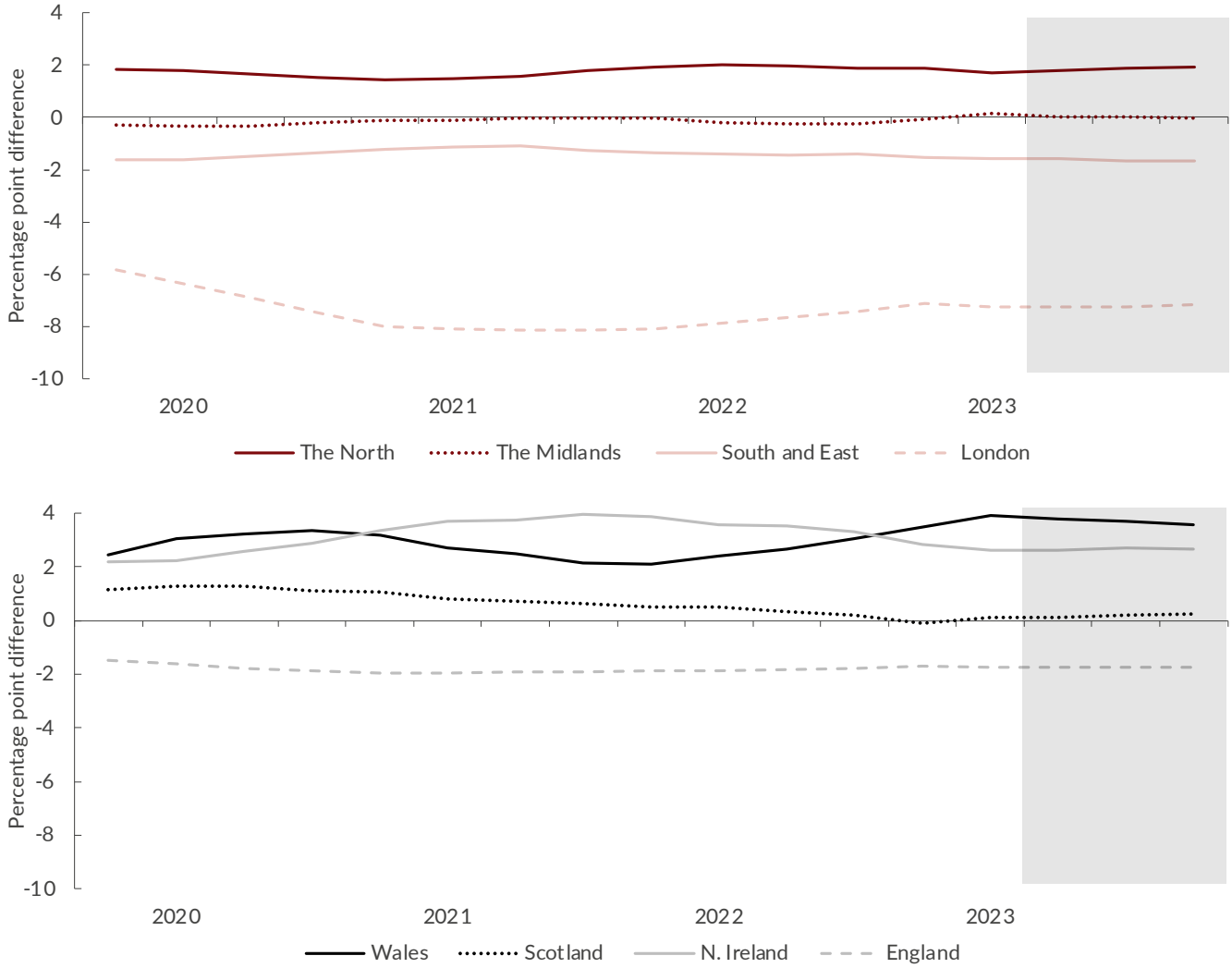
- Inactivity rates are expected to rise throughout 2022-23 (figure 2.8), except in Scotland and Northern Ireland, which have seen stronger than expected employment growth over the past two quarters (figure 2.7).
- For 2023-24, we project higher inactivity rates across the devolved nations and English regions, including London, with the exception of Yorkshire and the Humber (figure 2.9).

Figure 2.8 Devolved nation and regional inactivity rates



Note: Inactivity rate defined as labour force/population aged over 16.
Source: NiReMS.

Figure 2.9 Regional inactivity rates relative to UK average

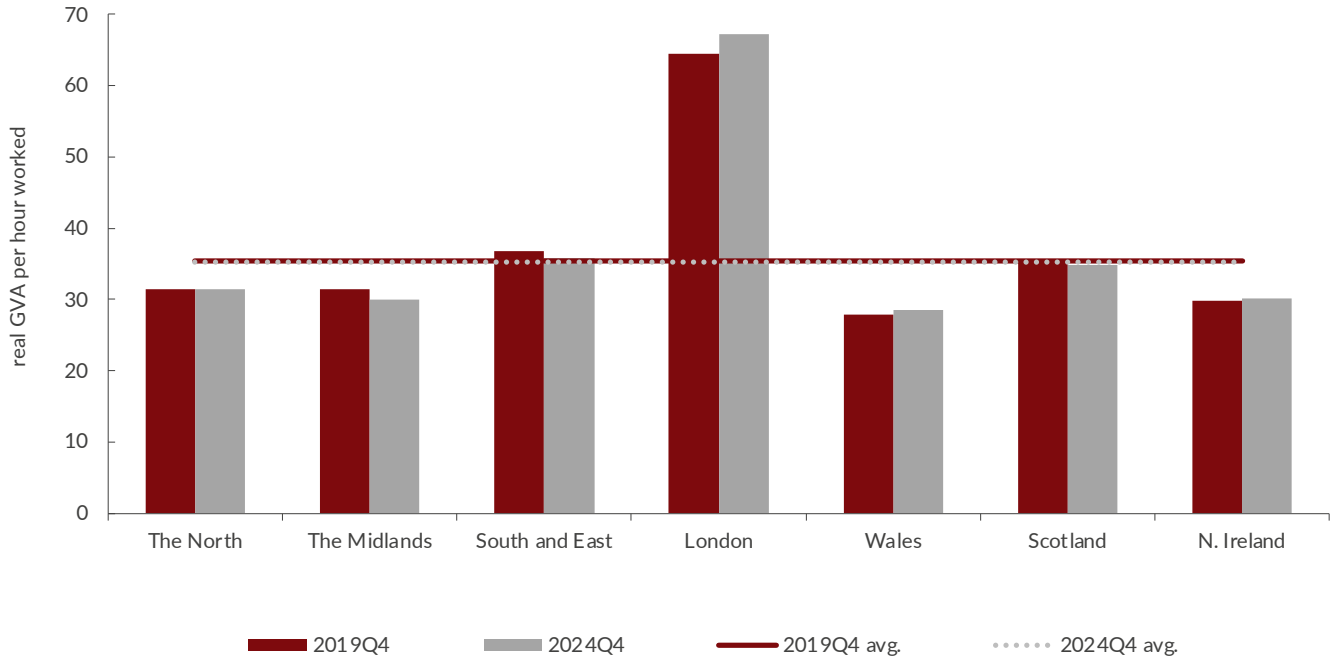


Note: Average Inactivity rate (as defined as labour force/population aged over 16) over the last four quarters, minus UK average inactivity rate.
Source: NiReMS.

Productivity

- Productivity differentials between the more prosperous and the poorer regions of the United Kingdom persist, along with flatlining growth and even a drop in productivity in the Midlands.
- Except for London, only the South/East and Scotland are at the UK average (figure 2.10).

Figure 2.10 Devolved nation and English regional productivity



Source: NiReMS.

Scotland Economic Outlook

While the political debates about devolution (and even independence) rumble on, growth prospects for Scotland in the medium term look uncertain. Employment has remained largely resilient in the face of the impact of Brexit and the cost-of-living pressures, but output growth is still sluggish. Workplace vacancies remain high and long-term health issues are contributing to inactivity and low productivity (CBI, 2023).

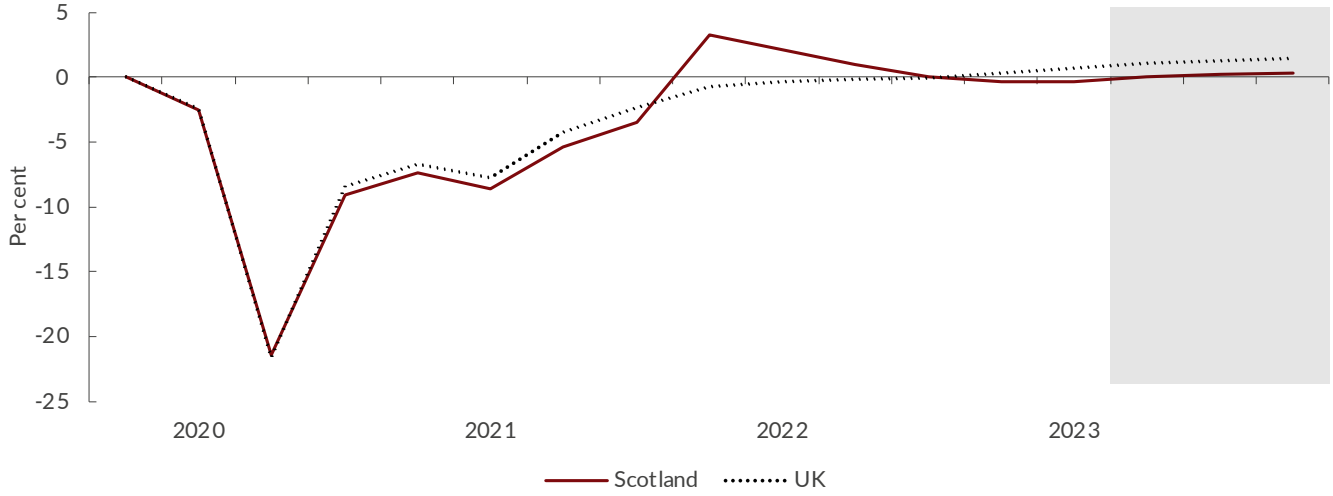
Demographics presents major challenges, particularly out-migration and an ageing population (Ernst and Young, 2023a). However, there are also opportunities for investments and business creation, and inward FDI has been robust (Ernst and Young, 2023b; KPMG, 2023). While important momentum in this direction is seen in recent plans to expand the energy sector – both traditional oil and gas and green energy – policy needs to ensure that industry has the skilled workforce it requires. How the economy and society manage these competing forces and harness growth opportunities remains to be seen.

We find that

- GVA for Scotland is around pre-Covid levels, just below the UK average (figure 2.11). We project the Scottish economy to grow in line with the UK average.
- Employment levels in Scotland are the strongest among all the three devolved nations (figure 2.12).
- Scotland's inactivity rate dropped a bit in 2022-23 driven by robust employment, even if still far higher than London's. Despite the projection of further growth in GVA and employment, inactivity rates in Scotland are projected to rise marginally in the current year (figure 2.8).
- Scottish employment growth is robust, but Scottish output growth has faltered compared to the UK average in 2022, which sees Scotland's productivity drop relative to the UK level (figure 2.13).
- With real wages almost at pre-pandemic levels, median wages in Scotland are projected to remain slightly above UK levels till 2024.

GVA

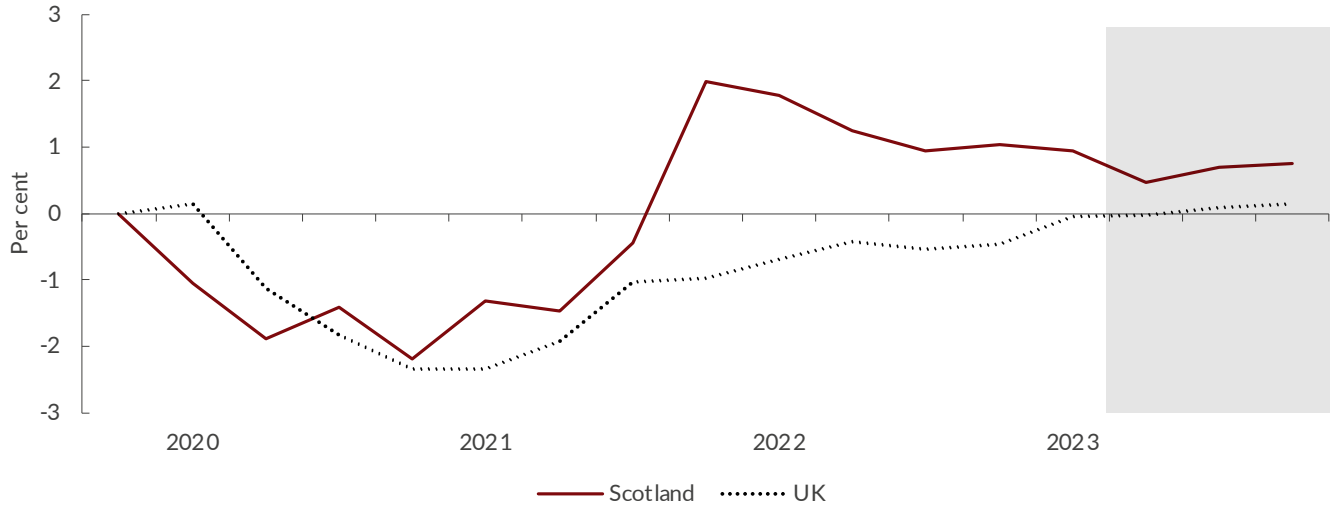
Figure 2.11 GVA in Scotland relative to the fourth quarter of 2019



Source: NiReMS.

Employment

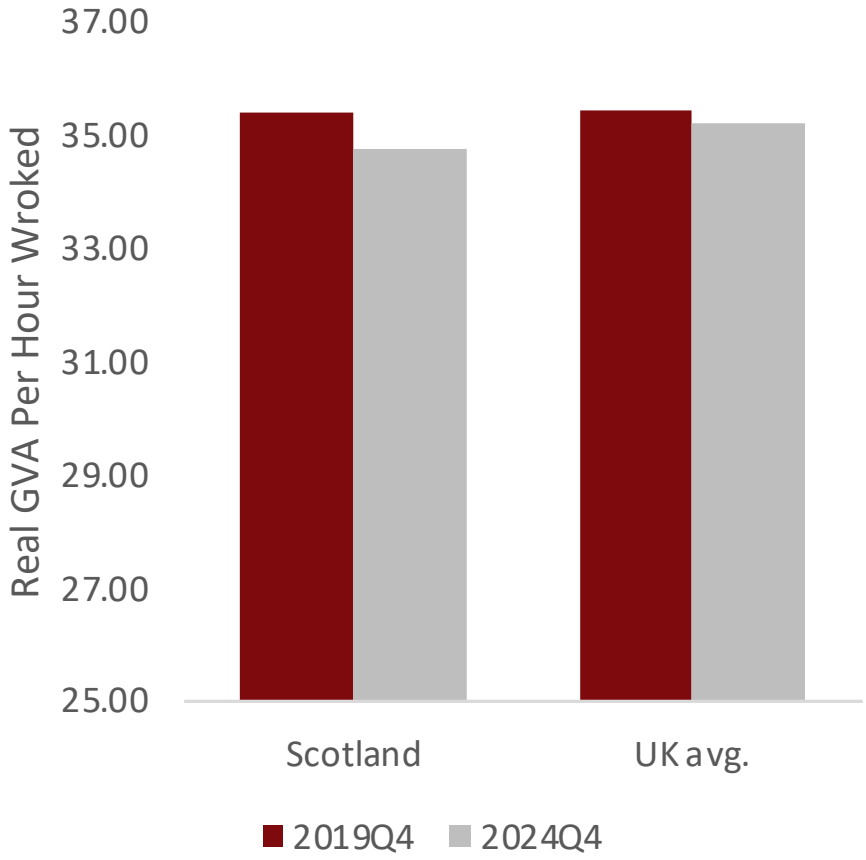
Figure 2.12 Employment in Scotland relative to the fourth quarter of 2019



Source: NiReMS.

Productivity

Figure 2.13 Productivity in Scotland



Source: NiReMS.

Wales Economic Outlook

The Welsh economy, both households and businesses, has suffered severely from the pandemic shock followed by the cost-of-living crisis. There are currently debates as to whether the Barnett formula takes adequate account of regional variations between more rural areas (characterised by higher rates of fuel poverty and low-paid jobs) and more urban areas (characterised by higher levels of food insecurity and rising housing costs) and thereby supports 'levelling up' ambitions. The scale of the task in Wales is all the more significant given sluggish employment and output (and therefore lower taxes) and perceived lack of support for industry (BBC News, 2023).

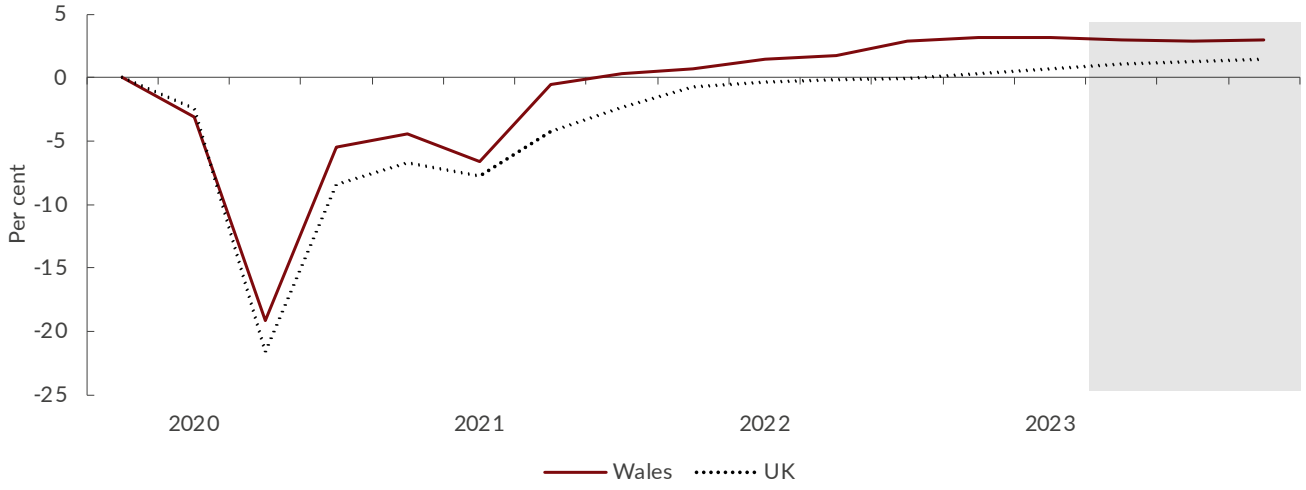
However, there is cautious optimism, as seen in recent CBI surveys (Price, 2023). Manufacturing orders have started picking up, even if a lack of skilled labour and constrained access to finance pose significant challenges and barriers to investment. On the other hand, the creation of two freeports offers new investment opportunities, particularly for creating green jobs. Proactive local and central planning as well as better policy coordination are needed to harness these opportunities. The 2021 Net Zero Wales programme launched by the Welsh government provides opportunities, as does the additional funding for Personal Learning Accounts.

We find that

- Welsh economic output as measured by GVA is above the UK average and above pre-Covid levels (figure 2.14).
- Welsh employment numbers have continued to drop since the last outlook. This has seen a revised, lower projected employment level for the region (figure 2.15). While Welsh productivity is likely to recover somewhat in the near future, due to the continued drop in employment, the region will likely lag behind the rest of the United Kingdom.
- Further investigation of the employment situation in the region reveals that as unemployment increases in the region, lived experiences are vastly different depending on the age and gender of the individuals. The LFS shows that the bulk of the unemployed population in Wales are men aged 25 and older. While the number of unemployed women has dropped, this is largely on account of women dropping out of the labour force.
- The output and employment outlooks imply that Welsh productivity will rise, albeit very slowly (figure 2.16).
- While real wages are about 5 per cent higher than pre-pandemic levels, they are still the lowest across devolved nations and English regions, and projected to remain 20 per cent lower than aggregate UK levels by 2024.

GVA

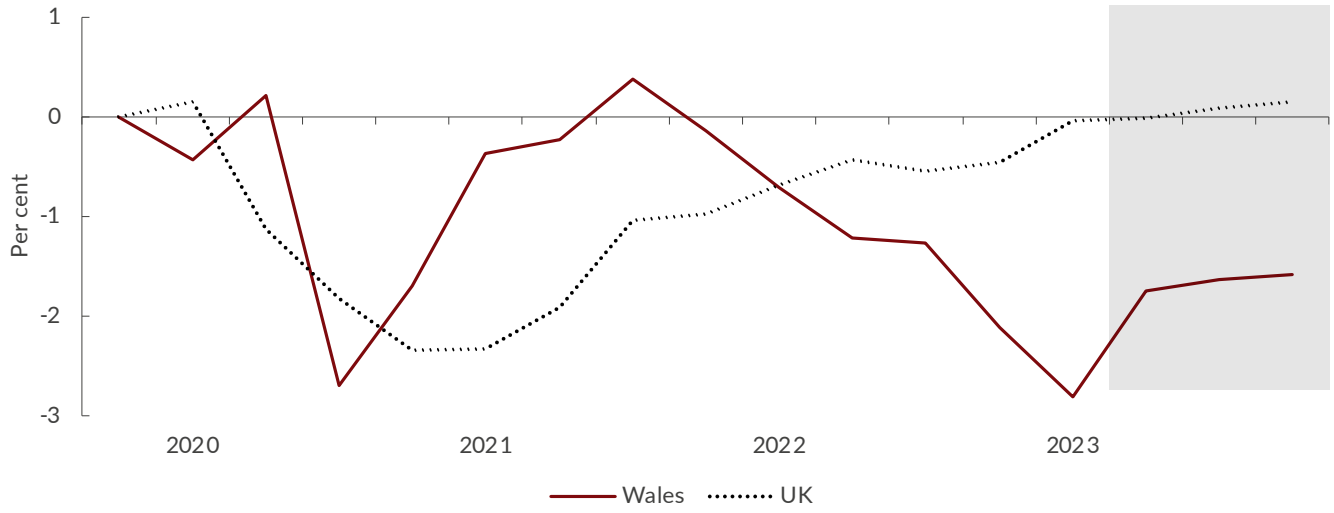
Figure 2.14 GVA in Wales relative to the fourth quarter of 2019



Source: NiReMS.

Employment and inactivity

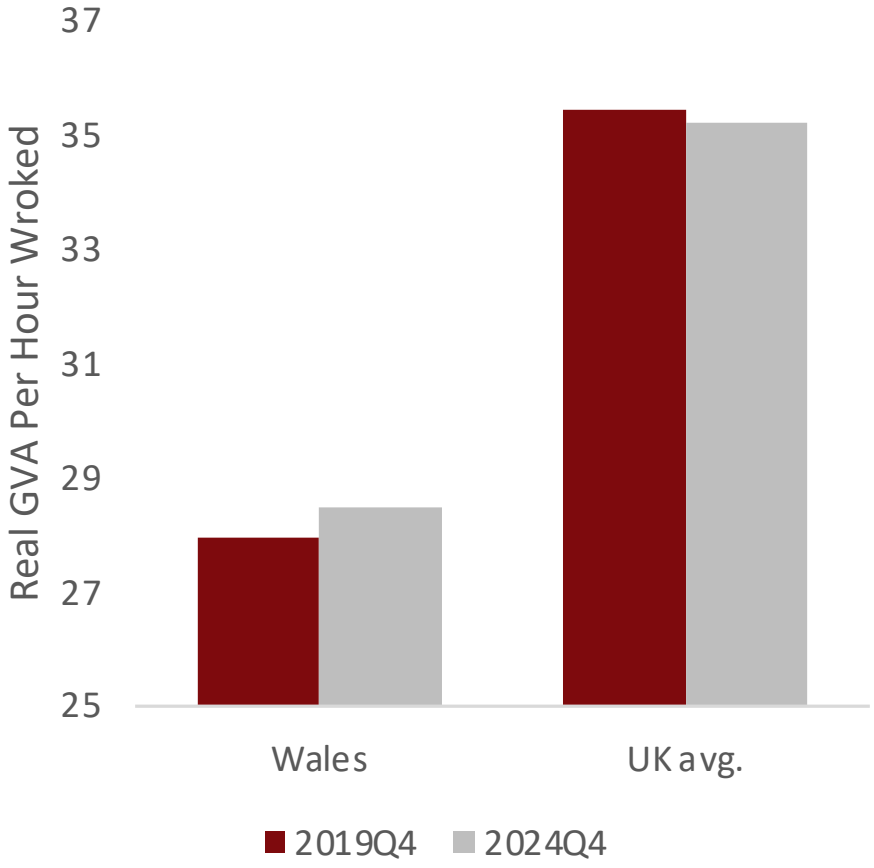
Figure 2.15 Employment in Wales relative to the fourth quarter of 2019



Source: NiReMS.

Productivity

Figure 2.16 Productivity in Wales



Source: NiReMS.

Northern Ireland Economic Outlook

The Northern Irish economy has witnessed some resilience through the cost-of-living crisis, perhaps aided to some extent by the Northern Ireland Protocol (Bhattacharjee et al., 2022; Campbell, 2023), even if low productivity and high inactivity remain severe barriers to recovery from the pandemic (PwC, 2023a). Growth and development prospects for Northern Ireland have also been limited by a wavering Brexit process compounded by prolonged political uncertainty. Against this backdrop, questions about a so-called "peace dividend" remain largely questionable (Brownlow et al. 2023).

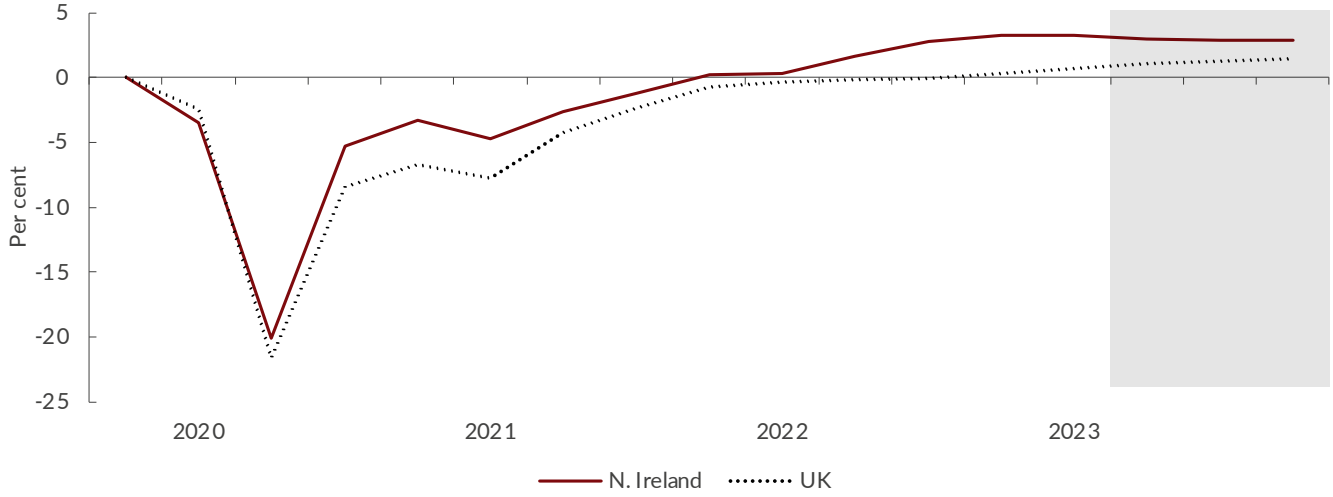
As the Windsor Framework comes into operation, with associated resolution of some uncertainties relating to business and trading processes but with many questions still remaining unanswered (Birnie, 2023), how far it aids Britain's (and Northern Ireland's) transition into a long-run Brexit equilibrium remains a key question. Box B examines this question in further detail. As far as the prospects for growth and catching-up go, our projections see the momentum from a labour market uptick driven by higher wages in low wage sectors as temporary. For medium- to long-run prospects, the politics and policy processes remain critical.

We find that

- Northern Irish economic output as measured by GVA is above UK levels and exceeds pre-Covid levels (figure 2.17).
- Past employment numbers were revised upwards this quarter again, and this has carried over to higher employment figures for this quarter. This has now put the region on a better trajectory (figure 2.18).
- Output growth and employment numbers mean that we forecast Northern Ireland's productivity to grow (figure 2.19).
- Real wages have risen somewhat and are 4 per cent above pre-pandemic levels. These wage rises are largely restricted to low-value activities, leading to stable unemployment and inactivity rates. However, average wages are projected to, remain about 15 per cent lower than aggregate UK levels by 2024.

GVA

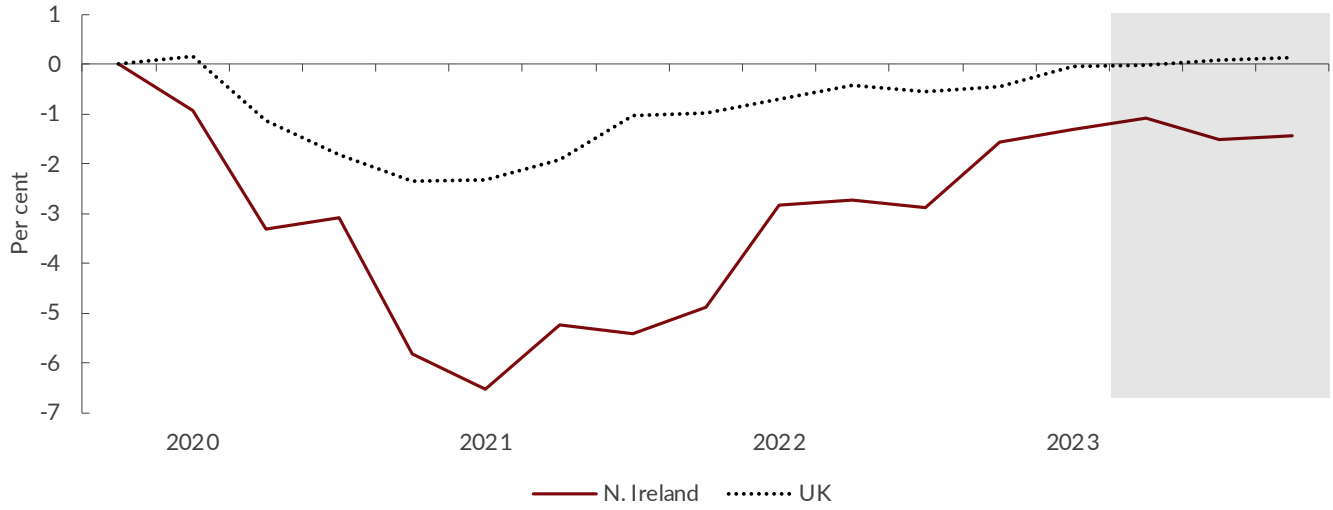
Figure 2.17 GVA in Northern Ireland relative to the fourth quarter of 2019



Source: NiReMS.

Employment

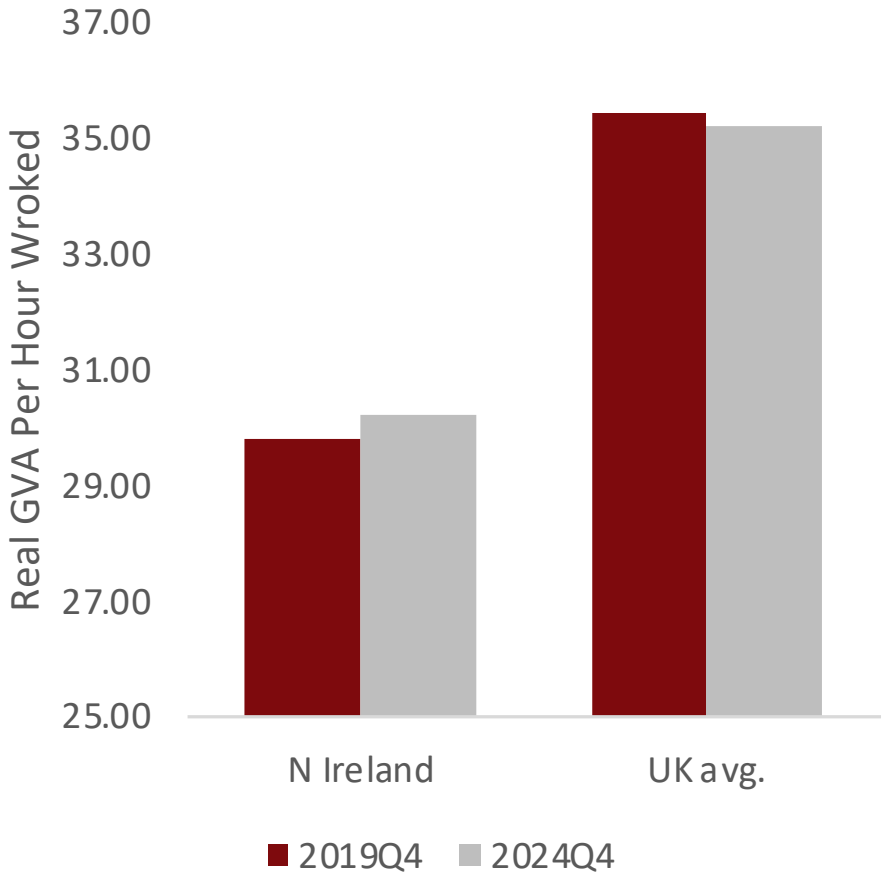
Figure 2.18 Employment in Northern Ireland relative to the fourth quarter of 2019



Source: NiReMS.

Productivity

Figure 2.19 Productivity in Northern Ireland



Source: NiReMS.

Box B: The Windsor Framework: What it is and what it might do

By Katy Hayward and John McStravick

The Windsor Framework was announced by the UK Government and the European Commission on 27 February 2023 after months of negotiations between the two sides. It is not a replacement or rewriting of the Protocol on Ireland/Northern Ireland that formed part of the UK-EU Withdrawal Agreement (2019), but it does make significant adjustments to it. Both sides hope that this will ease the practical and political difficulties associated with the Protocol, which bedevilled their relationship even before it came into force in 2021.

The Windsor Framework changes the Protocol on Ireland/Northern Ireland in several ways. First, there are direct changes to its Articles and Annexes. A new part is added to Article 6(2) allowing specific arrangements for the movement of goods within the UK internal market, including Northern Ireland, 'where the goods are destined for final consumption or final use in Northern Ireland'. As we discuss below, this opens up a highly unusual situation in border management and trade in which 'end destination' is all-important. The impact of the Protocol is further pared back by expunging several EU directives from its Annex 3 (relating to VAT and Excise).

Secondly, the Windsor Framework reframes how the Protocol is to be interpreted. Article 5 of the Protocol (on customs and movement of goods) states: 'no customs duties shall be payable for a good brought into Northern Ireland from another part of the United Kingdom by direct transport… unless that good is at risk of subsequently being moved into the Union'. The original Protocol set the bar high for goods to be considered 'not at risk' of movement into the European Union and thus exempt from the need for tariffs; the Windsor Framework spreads the net far more widely for goods to be able to be categorised as such. Now goods being brought into Northern Ireland 'by direct transport for sale to, or final use by, end consumers' are to be treated, by and large, as if staying within the UK customs territory.

The new flexibility from the European Union about the application of its border rules depends on good communication with the United Kingdom. Indeed, gaining access to relevant UK information systems, networks and databases in order to conduct risk analysis was a key moment in the negotiations that opened the path to overall agreement. And now the United Kingdom is thus committed, for example, to providing the Union with information on the application of Article 5(1) and (2) of the Protocol on a monthly basis. And on a six-monthly basis it will provide information on those authorised under the new Trusted Trader Scheme (the UK Internal Market Scheme).

If adequate information and data access is not given, or if the European Union has other concerns about non-implementation, new safeguards kick in. The emphasis is upon finding 'mutually agreeable solutions' through the Joint Committee, not by recourse to the European Court of Justice or retaliatory measures or termination. For example, if either

party considers there to be significant diversion of trade or fraud or other illegal activities within a year of the commencement of the Windsor Framework, they are to seek an agreed solution through the Joint Committee. If they fail to find agreement within another year, the core part of the Windsor Framework (e.g. on goods trade) will no longer apply. This is intended to concentrate minds on implementation and to incentivise compliance, rather than to sow doubt about the longevity of these arrangements.

Both sides hope that such problems and differences will be avoided in future by better cooperation and consultation at all levels. To that end, the Windsor Framework establishes some new structures for engagement. For example, there will be an 'Enhanced Coordination Mechanism on VAT and Excise' involving a lead expert from the United Kingdom and the European Union to advise officials overseeing the Framework's operation. Those officials can also engage with external representatives and experts through a new 'Special Body on Goods', with a particular focus on managing the implications of UK-EU divergence in areas of law relevant to the Protocol.

Finally, the Windsor Framework will be fleshed out and take effect through new EU and UK legislation. The United Kingdom has already passed secondary legislation allowing the Stormont Brake (a mechanism by which a third of the Members of the Northern Ireland Assembly could require the UK Government to consider halting the automatic update or amendment of a piece of EU legislation applying in the region under the Protocol), and more is expected. And, in record-breaking time, the European Union has legislated for specific rules relating to the entry into Northern Ireland from other parts of the United Kingdom of certain consignments of retail goods (including Sanitary-Phytosanitary [SPS] ones) and medicines for human consumption.

So, what difference might all this make? In political terms, the answer differs depending on where you look. The UK-EU relationship is obviously warmer and more collaborative than before, and this has already reduced the chill factor in the all-important British-Irish relationship too. But the Democratic Unionist Party remains decidedly cool and is refusing to loosen its protest veto over the operation of the Northern Ireland Assembly and Executive until further concessions are made.

In practical terms, we still must see how the legal changes will be translated into operational guidelines. Perhaps the most significant change brought in by the Windsor Framework is the introduction of 'red lanes' and 'green lanes' for products entering Northern Ireland from Great Britain. These lanes are metaphorical (we will not see different coloured channels for lorries in ferry ports, for example), but they serve to distinguish between goods which will remain in the United Kingdom and those which may not. This distinction was something the UK government had been proposing for many months and threatened to enact unilaterally through its (now shelved) Northern Ireland Protocol Bill.

The red lanes are to be used for goods destined for onward movement into the EU Single Market or deemed 'at risk' of doing so. They will thus be subject to the full range of EU administrative requirements (e.g. safety and security declarations) and potential checks. If buyers in Northern Ireland wish to sell into the European Union, then they will need to be careful to ensure that what is supplied to them from Britain enters via the red lane. For example, dairy farmers wanting to sell cheese south of the border will want to make

sure that all their cattle feed and fertilizer is compliant with EU standards and thus enters Northern Ireland through the red lane.

Goods using the green lane will benefit from simplified customs declarations (purportedly with just 21 data fields instead of 80-plus) and will only be checked where illicit activity is suspected. To take advantage of the green lane, businesses will need to register for and submit commercial information to a new UK Internal Market Scheme. Though the details are still to be finalised, the scheme will be open to a wider range of businesses than the existing UK Trader Scheme, whose members are assured of auto-enrolment in the new scheme.

Another trusted trader scheme – the new UK Retail Movement Scheme – has been established to allow agri-food products for final sale and consumption in Northern Ireland to use streamlined paperwork, with the promise of physical checks on just 5 per cent of consignments by 2025. Those goods brought by such authorised operators through the green lane for consumption in Northern Ireland need only comply with UK (not EU) public health and consumer protection rules. A condition of using the green lane is that agri-food retail products will have a 'Not for EU' label applied to them; this labelling is expected to be phased in across Great Britain over the next two years.

Although such measures constitute a reduction of requirements originally expected under the Protocol, they will mean some adjustment over time. The fact that the timetable closely resembles that of the UK Border Targeted Operating Model (for goods entering Great Britain from outside) adds to the near-term challenges facing the multiple agents managing goods trade across Britain's borders.

The Windsor Framework also addresses other concerns that had been raised about the practical effects of the Protocol. For example, it builds on previous EU commitments on the availability of medicines by allowing UK regulators to approve new and innovative drugs for Northern Ireland at the same time as the rest of the United Kingdom and removing packaging and labelling rules under the Falsified Medicines Directive (though, again, "UK only" labels will be required). Additionally, parcels being sent to a personal contact or for Business to Consumer retail from Great Britain to Northern Ireland will not require customs paperwork or incur fees.

Although rules of the EU common system of VAT will still apply in Northern Ireland for goods, there is now a carve-out for Northern Ireland to be able to avail of UK VAT cuts under certain conditions. And there is a new limitation on the interpretation of when EU state aid rules should apply in Northern Ireland, i.e. how to interpret Article 10(1). Now there must be a proven real, genuine, and material link to Northern Ireland's trade with the European Union for the aid to be deemed to be in the scope of EU rules for state aid.

But some issues remain outstanding. Veterinary medicines are not covered by the same procedure as human medicines (although a grace period is in place until 2025). And although the European Union and United Kingdom were able to agree that companies in Northern Ireland will be able to use European tariff rate quotas (TRQs) (the trade volume threshold, below which imports may qualify for reduced tariff rates) when bringing in steel from Great Britain, no solution has yet been found to allow Northern Irish business to use TRQs for other commodities. The hope is that a better UK-EU relationship can ultimately create conditions for 'agreed solutions' on these too.

The Windsor Framework has allowed UK, EU and even US politicians to flag the unique economic potential for Northern Ireland arising through dual market access. But for Northern Ireland goods to benefit from free circulation in the European Union (and across the Irish border), goods produced and manufactured in Northern Ireland must continue to comply with EU law, in areas of European regulation covered by the Protocol, no matter where they are sold. As such, one effect of this agreement is to bring Northern Ireland closer to the position of Wales and Scotland under the UK Internal Market Act (2020), with home-produced goods potentially being at a competitive disadvantage if regulatory standards are lowered in England. As such, the issue of UK-EU regulatory divergence remains a concern for the UK internal market itself.

The Windsor Framework is appropriately named; it is a framework that is still to be fleshed out rather than an agreement in full or an operational plan. The reaction in Northern Ireland has, by and large, been cautiously positive. Business has long been calling for stability and certainty and there is a sense that there are better prospects now for that than there have been for several years. Most fundamentally, it offers the chance to address at last the concerns that businesses and officials have had about having to operate in a legal 'liminal zone' of extended grace periods and suspended legal action.

Making the most of this new opportunity, however, will depend not so much on what was agreed but on how it is implemented. In the months after the Protocol was negotiated, experts and stakeholders were calling for clear, consistent, and timely guidance to be issued, even as politicians disagreed over its interpretation. There is an unnerving sense of déjà vu. Northern Ireland is a place which can ill-afford any repetition of history.

Recommended reading

House of Commons Library (2023) Northern Ireland Protocol: The Windsor Framework, https://researchbriefings.files.parliament.uk/documents/CBP-9736/CBP-9736.pdf

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Post-Brexit Governance NI (2023) The Windsor Framework, https://www.qub.ac.uk/sites/post-brexit-governance-ni/ProtocolMonitor/TheWindsorFramework/

UK Government (May 2023) The Border Target Operating Model: Draft for Feedback, https://www.gov.uk/government/publications/the-border-target-operating-model-draft-for-feedback

Economic Outlook for England's Regions

Criticism towards regional policy and some key aspects of devolution is growing in the English regions. There are three aspects to this. First, manufacturing has been in decline across the country, particularly following the Covid-19 and Brexit shocks. Regions with substantial manufacturing have not had robust recoveries and continue to struggle, while London and metropolitan areas of the South East have less manufacturing activities and are more resilient – certainly service sectors connected to the City of London (PwC, 2023b). This is an opportunity for industrial restructuring, moving towards green and globally tradeable activities on the path towards a just transition to net zero. It is also important in the reallocation of skills, for example, from mining and quarrying towards green manufacturing.

This then raises the issue of 'levelling up'. Capital investments and FDI are starting to bring about some positive effects in some places (Keighley, 2023). This is particularly true of Yorkshire and the Humber and the North East, which are regions plagued by a chronic prevalence of low-productivity firms and under-investment in research and development (TPI, 2003). Interestingly, some of the places in these regions are starting to generate more employment opportunities; see for example Make UK/BDO (2023) together with the latest CSO employment figures. This requires further research, not least since the Leeds/Bradford city region is a case study included in NIESR's Nuffield Foundation project on regional regeneration. Similar green energy projects are also planned in parts of the West Midlands and the North West.

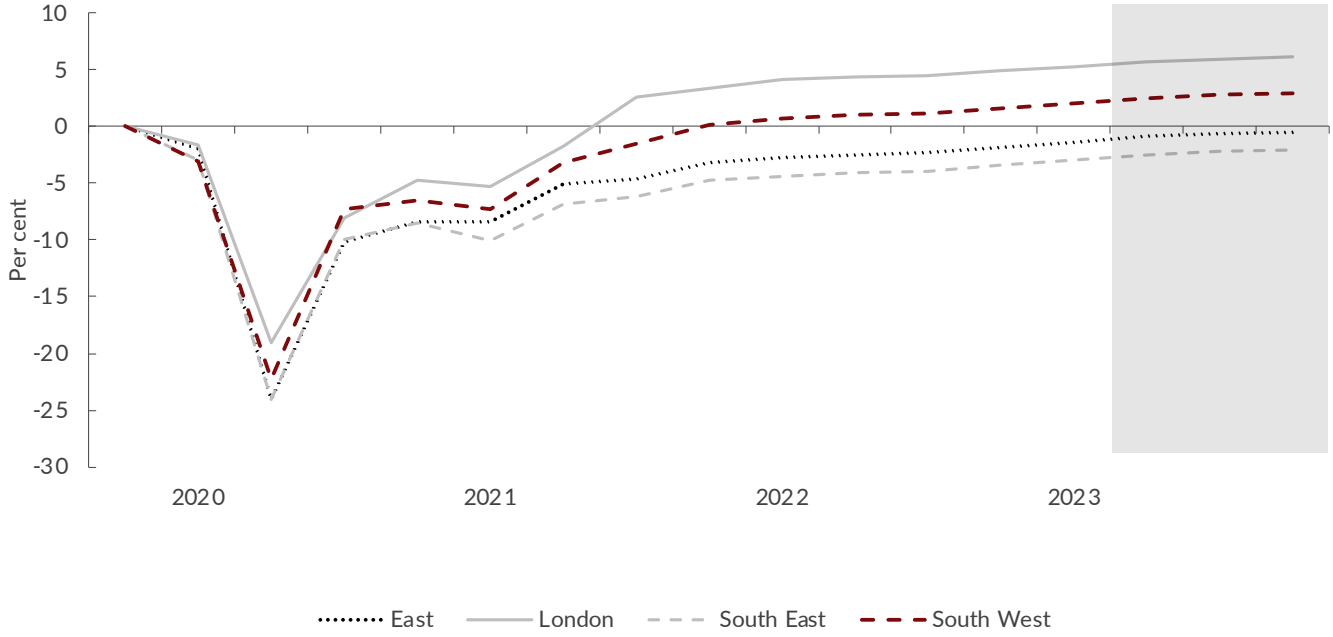
Finally, linked to green transition is also the question of management of natural resources. The extension of clean-air policies is viewed as desirable in the medium run but the modalities of implementation have also been contested, not least in the political space. Likewise, the management of water quality in public water bodies has been both a matter of engaged politics and restructuring of the utilities sector. Both issues are likely to play an important role in the next General Election, which will take place before 25 January 2025.

We find that

- The only region well below pre-Covid levels of GVA remains the West Midlands, with the other regions expected to be around pre-Covid levels by the end of 2023 (figures 2.20 and 2.21).
- Only the West Midlands and the non-metropolitan parts of the South East are projected to have lower levels of GVA at the end of 2024 than at the end of 2019 (although the South East will be only just below its level in the fourth quarter of 2019).
- Latest LFS numbers suggest the North East as well as Yorkshire and Humber are experiencing higher employment levels than previously anticipated. This has led Northern England's employment to rival that of the Midlands. Nevertheless, there still remains inter-regional inequality in terms of the employment outlook, with the North West being one of the worst performers (figure 2.23).
- Employment in every other region is around pre-Covid levels and is expected to be above pre-Covid levels in early 2024 (figure 2.22). In our last outlook we expected the South West to revert towards its projected path, which the latest LFS numbers confirm: the uptick in employment was only transitory.
- London remains the strongest performer amongst the English regions for output, employment and productivity (figures 2.20, 2.22 and 2.25). Relatively robust growth in real wages (7 per cent above pre-pandemic levels) is expected to take median wages in London to over 250 per cent higher than UK median wages (table 2.2).
- Productivity in the North West, the North East, Yorkshire and Humber, the East, and the South West will grow, albeit at a lower rate than in London (figure 2.25).

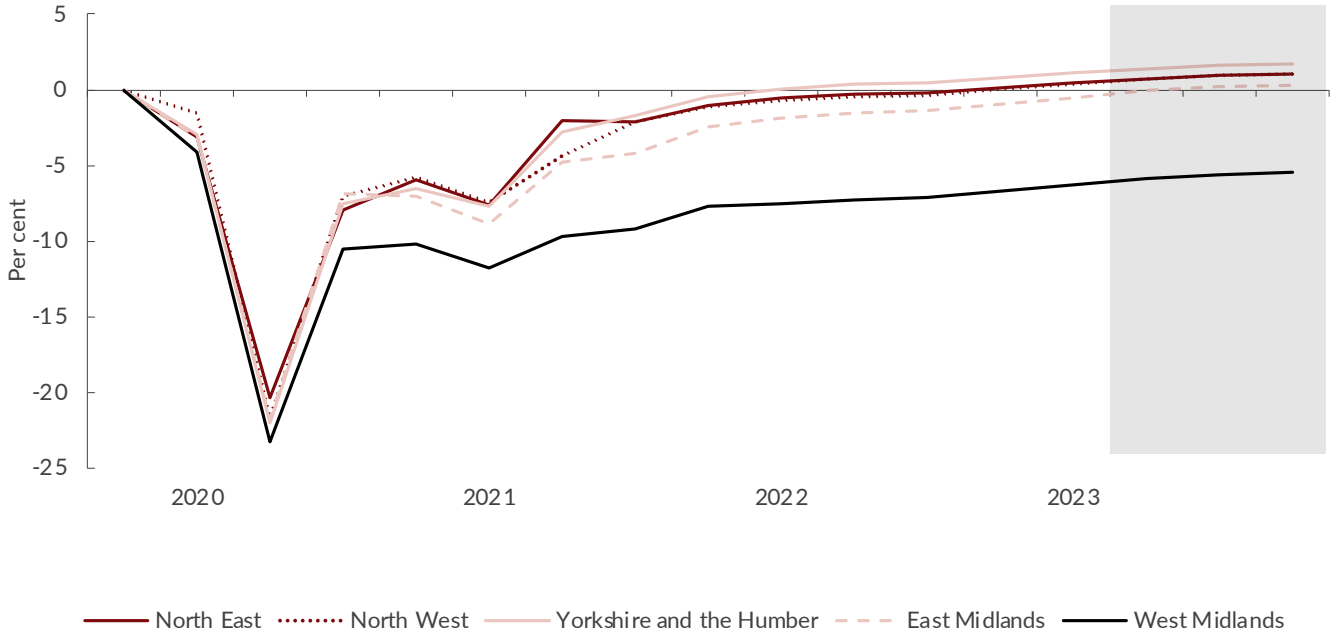
GVA

Figure 2.20 GVA in the English regions relative to the fourth quarter of 2019



Source: NiReMS.

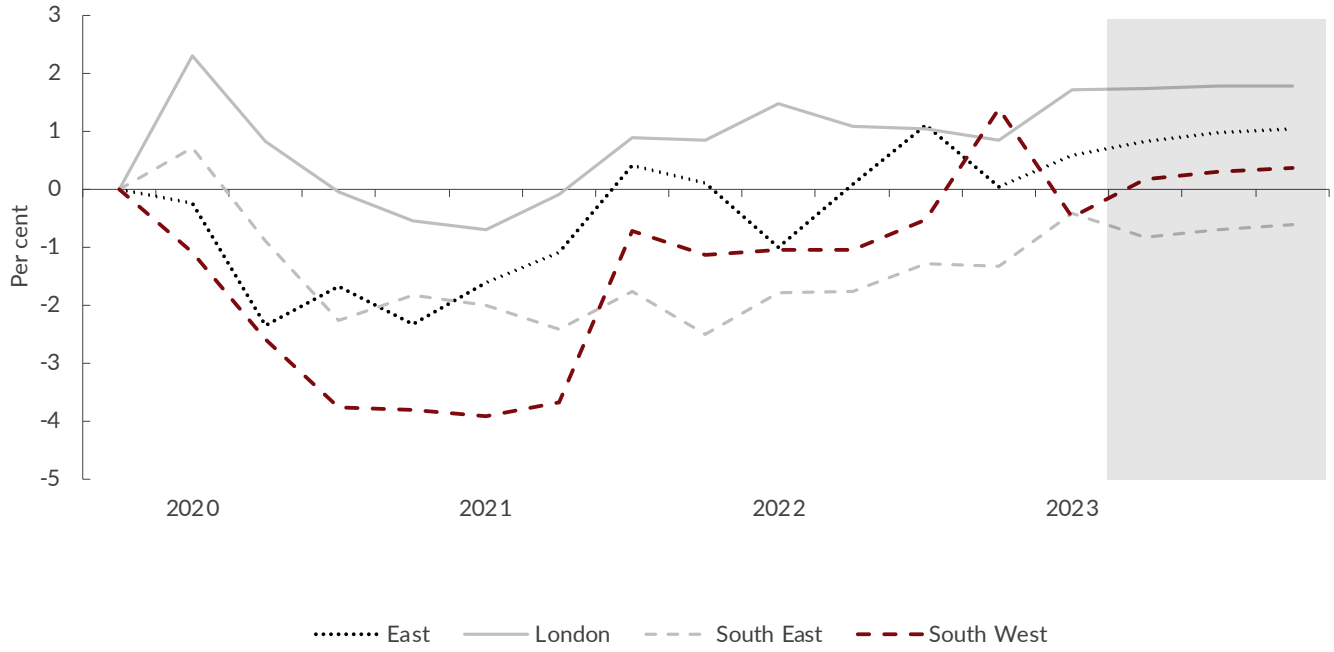
Figure 2.21 GVA in the English regions relative to the fourth quarter of 2019



Source: NiReMS.

Employment

Figure 2.22 Employment in the English regions relative to the fourth quarter of 2019

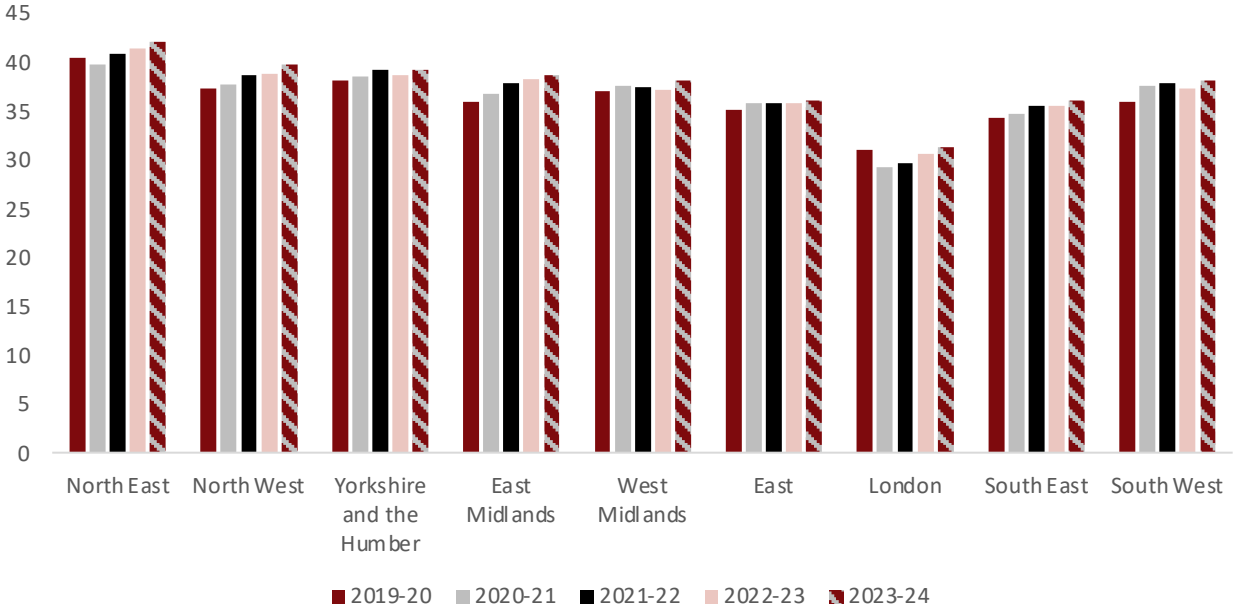


Source: NiReMS.

Figure 2.23 Employment in the English regions relative to the fourth quarter of 2019

Source: NiReMS.

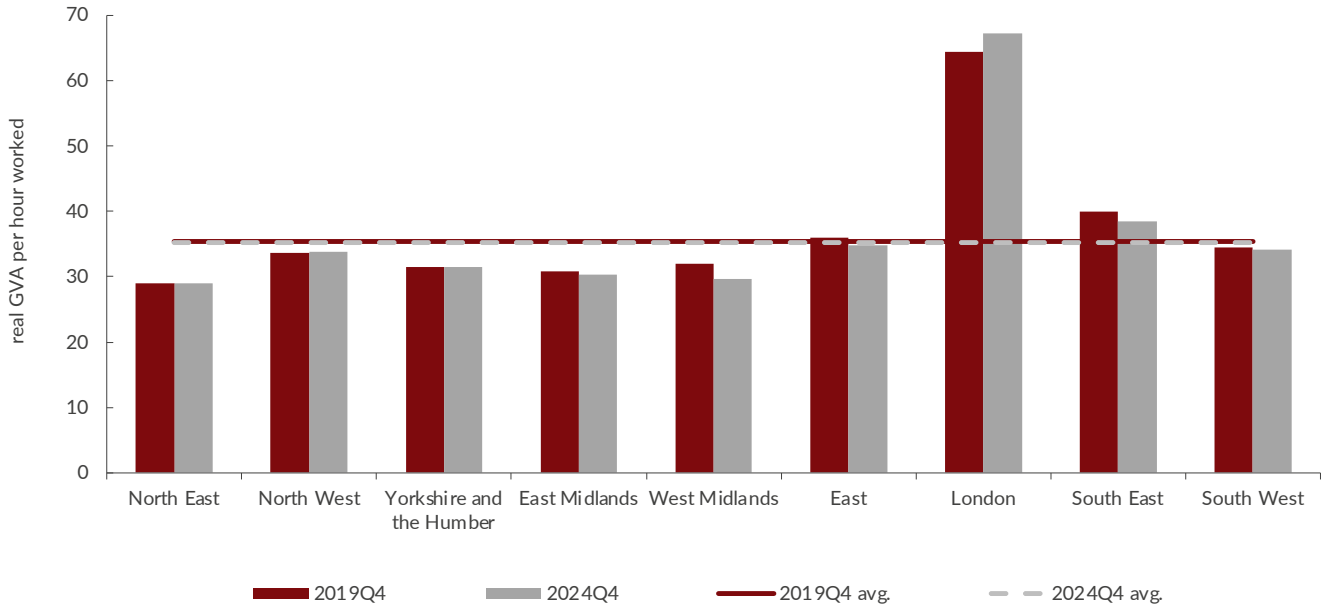
Figure 2.24 Inactivity rates in the English regions



Source: NiReMS.

Productivity

Figure 2.25 Productivity in the English regions



Source: NiReMS.

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Forecast tables:

Table A1 Exchange rates and interest rates

	UK exchange rates			FTSE All-share index			
	Effective 2017=100	Dollar	Euro		10-year gilts	World[a]	Bank Rate[b]
2017	99.98	1.29	1.14	2929.6	1.2	1.2	0.41
2018	101.88	1.34	1.13	2937.1	1.4	1.9	0.75
2019	101.42	1.28	1.14	2898	0.9	2.1	0.75
2020	101.9	1.28	1.13	2536.6	0.3	0.9	0.1
2021	106.72	1.38	1.16	2899.8	0.8	1.1	0.13
2022	104.35	1.24	1.17	2953.3	2.4	2.2	2.83
2023	*106.71*	*1.27*	*1.16*	*3010.3*	*4.1*	*4.9*	*5.5*
2024	*108.96*	*1.31*	*1.17*	*3276.4*	*4.2*	*5.1*	*5.33*
2025	*107.92*	*1.3*	*1.15*	*3652.8*	*3.8*	*4.3*	*4.63*
2026	*106.87*	*1.29*	*1.14*	*3927*	*3.5*	*3.7*	*3.94*
2027	106.27	1.29	1.13	4110.4	3.4	3.5	3.25
2022Q1	*108.02*	*1.34*	*1.2*	*3025.1*	*1.4*	*1.2*	*0.45*
2022Q2	*105.07*	*1.25*	*1.18*	*2985.8*	*2*	*1.7*	*0.95*
2022Q3	*102.2*	*1.18*	*1.17*	*2913.7*	*2.6*	*2.5*	*1.62*
2022Q4	*102.12*	*1.17*	*1.15*	*2888.6*	*3.5*	*3.5*	*2.83*
2023Q1	102.7	1.22	1.13	3075.8	3.4	4.2	3.85
2023Q2	*105.66*	*1.25*	*1.15*	*3039.8*	*4*	*4.7*	*4.45*
2023Q3	*109.17*	*1.31*	*1.17*	*2922.8*	*4.6*	*5.3*	*5.08*
2023Q4	*109.3*	*1.31*	*1.17*	*3002.7*	*4.4*	*5.4*	*5.5*
2024Q1	*109.31*	*1.31*	*1.17*	*3102.2*	*4.3*	*5.3*	*5.5*
2024Q2	*109.1*	*1.31*	*1.17*	*3231.4*	*4.2*	*5.2*	*5.5*
2024Q3	*108.85*	*1.31*	*1.16*	*3326*	*4.1*	*5.1*	*5.5*
2024Q4	*108.59*	*1.31*	*1.16*	*3446.1*	*4*	*4.9*	*5.33*
Percentage changes							
2017/2016	-5.6	-4.9	-6.7	14.2	-4	35.9	64.8
2018/2017	1.9	3.6	-1	0.3	18.4	57.52	82
2019/2018	-0.5	-4.4	0.9	-1.3	-38.5	7.43	0
2020/2019	0.5	0.5	-1.3	-12.5	-65.8	-55.31	-86.7
2021/2020	4.7	7.2	3.3	14.3	154.5	18.28	27
2022/2021	-2.2	-10.1	0.9	1.8	211.5	101.95	2126
2023/2022	*2.3*	*2.9*	*-1.5*	*1.9*	72.3	118.99	94.6
2024/2023	*2.1*	*3.1*	*0.9*	*8.8*	1.6	5.41	-3.1
2025/2024	*-1*	*-0.6*	*-1*	*11.5*	-8.8	-15.48	-13.1
2026/2025	*-1*	*-0.9*	*-1.1*	*7.5*	-6.7	-14.27	-14.9
2027/2026	*-0.6*	*-0.6*	*-0.7*	*4.7*	-3.9	-5.13	-17.5
2022Q4/2021Q1	-4.5	-12.9	-2.3	-3.6	272.7	223.84	2126
2023Q4/2022Q1	*7*	*11.8*	*1.6*	*4*	25.3	53.88	94.6
2024Q4/2023Q1	*-0.6*	*-0.2*	*-0.7*	*14.8*	-9.7	-9.06	-3.1

Notes: [a] Weighted average of central bank intervention rates in OECD economies. [b] End of period.

Table A2 Price indices (2019=100)

	Unit labour costs	Imports deflator	Exports deflator	World Oil Price ($)[a]	Consumption deflator	GDP deflator (market prices)	Consumer prices RPI[b]	CPI[c]	CPIH[d]
2017	94.5	96.5	95.9	54	96.7	96.3	94.3	95.9	96.1
2018	97.1	98.5	98	70.4	98.4	97.9	97.5	98.2	98.3
2019	100	100	100	63.7	100	100	100	100	100
2020	113.6	98.5	100.3	43	101	106.2	101.5	100.8	101
2021	111.3	103.9	103.9	69.9	103.5	106	105.6	103.5	103.5
2022	114.8	121.4	117.7	97.2	111.7	111.7	117.8	112.9	111.7
2023	*122.3*	*116*	*118*	*79.7*	*120*	*119.4*	*131.4*	*121.5*	*120.6*
2024	*129.6*	*114.4*	*118.4*	*84.1*	*125.2*	*125.2*	*141.7*	*126.5*	*125.8*
2025	*134.4*	*116.7*	*121.3*	*86.4*	*128.3*	*128.4*	*146.3*	*129.3*	*128.9*
2026	*138.8*	*119.8*	*124.2*	*87.6*	*131.7*	*131.7*	*150.4*	*132.4*	*132.3*
2027	*142.5*	*122.9*	*127.1*	*88.8*	*134.9*	*134.8*	*154.3*	*135.3*	*135.5*
Percentage changes									
2017/2016	1.4	6	4.5	1.7	1.8	3.6	2.7	2.6	2.6
2018/2017	2.7	2.1	2.1	1.7	1.7	3.3	2.4	2.3	2.3
2019/2018	3	1.5	2.1	1.7	2.1	2.6	1.8	1.7	1.7
2020/2019	13.6	-1.5	0.3	1	6.2	1.5	0.8	1	1
2021/2020	-2	5.4	3.7	2.5	-0.2	4.1	2.6	2.5	2.5
2022/2021	3.2	16.9	13.3	7.9	5.4	11.6	9.1	7.9	7.9
2023/2022	*6.5*	*-4.5*	*0.2*	*7.4*	*6.9*	*11.5*	*7.7*	*7.9*	*7.9*
2024/2023	*6*	*-1.3*	*0.3*	*4.4*	*4.9*	*7.8*	*4.1*	*4.4*	*4.4*
2025/2024	*3.7*	*2*	*2.5*	*2.5*	*2.6*	*3.3*	*2.3*	*2.5*	*2.5*
2026/2025	*3.2*	*2.7*	*2.4*	*2.6*	*2.5*	*2.8*	*2.4*	*2.6*	*2.6*
2027/2026	*2.7*	*2.6*	*2.3*	*2.5*	*2.3*	*2.6*	*2.2*	*2.4*	*2.4*
2022Q4/2021Q1	6.2	14.7	13.6	9.9	9.7	7.3	13.9	10.8	9.4
2023Q4/2022Q1	*6.8*	*-9.4*	*-4.4*	*-6.9*	*5.6*	*6.3*	*9.9*	*5.2*	*6.1*
2024Q4/2023Q1	*5.4*	*1.8*	*2.4*	*6.6*	*4.1*	*4.3*	*5.9*	*3.9*	*4.1*

Notes: [a] Per barrel, average of Dubai and Brent spot prices. [b] Retail price index. [c] Consumer price index. [d] Consumer prices index, including owner occupiers' housing costs.

Table A3 Gross domestic product and components of expenditure (£ billion, 2019 prices)

	Final consumption expenditure		Gross capital formation		Domestic demand	Total exports[c]	Total final expenditure	Total imports[c]	Net trade	GDP at market prices[d]
	H-Holds & NPISH[a]	General govt.	Gross fixed investment	Changes in inventories[b]						
2017	1390.7	407.3	396.9	13.3	2193.1	666.9	2860	694	-27.1	2166.1
2018	1424.9	408.6	396	4.4	2232.3	687.9	2920.1	717.1	-29.3	2203
2019	1440	425.6	403.4	5.5	2274.5	699.7	2974.1	735.8	-36.1	2238.3
2020	1250.4	394.5	361	-11.8	1994	615.1	2609.2	617.7	-2.6	1991.4
2021	1328.5	443.9	383	15	2170.4	628.9	2799.3	656	-27	2142.7
2022	1402.5	452	415.8	-4.7	2265.7	691.1	2956.8	743.2	-52	2230.6
2023	*1395.8*	*435.4*	*419.9*	*-15.7*	*2235.4*	*671.4*	*2906.8*	*684.5*	*-13.1*	*2240.4*
2024	*1390.4*	*420.2*	*408.8*	*0*	*2219.3*	*666.2*	*2885.5*	*656.9*	*9.3*	*2246.8*
2025	*1410.1*	*414.7*	*407.7*	*0*	*2232.5*	*682.5*	*2915*	*672.7*	*9.8*	*2260.5*
2026	*1434.8*	*413.4*	*409.4*	*0*	*2257.5*	*708.5*	*2966.1*	*696.9*	*11.6*	*2287.3*
2027	*1462.3*	*414.8*	*413.8*	*0*	*2291*	*738*	*3028.9*	*721.1*	*16.9*	*2326*
Percentage changes										
2017/2016	1.9	0.4	3.5	35.4	1.5	6.8	2.7	3.3	-42.8	2.4
2018/2017	2.5	0.3	-0.2	-66.5	1.8	3.1	2.1	3.3	7.9	1.7
2019/2018	1.1	4.1	1.9	23.9	1.9	1.7	1.9	2.6	23.5	1.6
2020/2019	-13.2	-7.3	-10.5	-313.8	-12.3	-12.1	-12.3	-16	-92.8	-11
2021/2020	6.2	12.5	6.1	-227.6	8.8	2.2	7.3	6.2	939.1	7.6
2022/2021	5.6	1.8	8.6	-131.1	4.4	9.9	5.6	13.3	92.4	4.1
2023/2022	*-0.5*	*-3.7*	*1*	*235.3*	*-1.3*	*-2.9*	*-1.7*	*-7.9*	*-74.8*	*0.4*
2024/2023	*-0.4*	*-3.5*	*-2.6*	*-100*	*-0.7*	*-0.8*	*-0.7*	*-4*	*-170.8*	*0.3*
2025/2024	*1.4*	*-1.3*	*-0.2*	*100*	*0.6*	*2.4*	*1*	*2.4*	*5*	*0.6*
2026/2025	*1.8*	*-0.3*	*0.4*	*100*	*1.1*	*3.8*	*1.8*	*3.6*	*18.9*	*1.2*
2027/2026	*1.9*	*0.3*	*1.1*	*100*	*1.5*	*4.2*	*2.1*	*3.5*	*45.3*	*1.7*

Notes: [a] Non–profit institutions serving households. [b] Including acquisitions less disposals of valuables and quarterly alignment adjustment. [c] Includes Missing Trader Intra–Community Fraud. [d] Components may not add up to total GDP growth due to rounding and the statistical discrepancy included in GDP.

Table A4 External sector

	Exports of goods[a]	Imports of goods[a]	Net trade in goods[a]	Exports of services	Imports of services	Net trade in services	Export price competitiveness[c]	World trade[d]	Terms of trade[e]	Current balance
	£ billion, 2019 prices[b]						2019=100			% of GDP
2017	355.9	497.2	-141.3	311.2	196.9	114.3	98	92.2	99.4	-3.6
2018	356.8	498.9	-142.1	331.1	218.2	112.9	100.9	95.7	99.4	-4.1
2019	363.5	511.7	-148.2	336.2	224.1	112	100	100	100	-2.9
2020	316.3	448.9	-132.6	298.8	168.8	130	100.3	92.5	101.7	-3.1
2021	316.7	472.4	-155.6	312.2	183.6	128.6	105.8	100.3	100.1	-1.5
2022	347.4	521.4	-174	343.7	221.7	122	106.3	107.4	97	-3.8
2023	*334.2*	*463.9*	*-129.7*	*337.2*	*220.6*	*116.6*	*104.8*	*110.4*	*101.8*	*-4.5*
2024	*343.9*	*458.9*	*-115*	*322.3*	*197.9*	*124.3*	*106*	*113.2*	*103.4*	*-4.9*
2025	*359*	*482.5*	*-123.5*	*323.4*	*190.2*	*133.3*	*105.7*	*118.4*	*103.9*	*-4.5*
2026	*376.6*	*509.5*	*-132.9*	*332*	*187.5*	*144.5*	*105.3*	*123.6*	*103.7*	*-3.7*
2027	*394*	*533.7*	*-139.7*	*344*	*187.5*	*156.5*	*105.2*	*128.5*	*103.4*	*-2.9*
Percentage changes										
2017/2016	7	2.4	-7.7	6.7	5.8	8.3	-2.8	5.2	-1.4	-34.2
2018/2017	0.2	0.3	0.6	6.4	10.8	-1.2	2.9	3.8	0	12.6
2019/2018	1.9	2.6	4.2	1.5	2.7	-0.7	-0.9	4.5	0.6	-29.9
2020/2019	-13	-12.3	-10.5	-11.1	-24.7	16	0.3	-7.5	1.7	10.3
2021/2020	0.2	5.2	17.3	4.5	8.7	-1.1	5.4	8.4	-1.6	-52.1
2022/2021	9.7	10.4	11.8	10.1	20.8	-5.1	0.5	7.2	-3.1	153.6
2023/2022	*-3.8*	*-11*	*-25.4*	*-1.9*	*-0.5*	*-4.4*	*-1.4*	*2.8*	*4.9*	*16.6*
2024/2023	*2.9*	*-1.1*	*-11.3*	*-4.4*	*-10.3*	*6.6*	*1.2*	*2.5*	*1.6*	*9.4*
2025/2024	*4.4*	*5.1*	*7.3*	*0.4*	*-3.9*	*7.2*	*-0.3*	*4.6*	*0.5*	*-7.9*
2026/2025	*4.9*	*5.6*	*7.6*	*2.6*	*-1.4*	*8.4*	*-0.4*	*4.5*	*-0.2*	*-18.2*
2027/2026	*4.6*	*4.8*	*5.1*	*3.6*	*0*	*8.3*	*-0.1*	*3.9*	*-0.3*	*-20*

Notes: [a] Includes Missing Trader Intra–Community Fraud. [b] Balance of payments basis. [c] A rise denotes a loss in UK competitiveness. [d] Weighted by import shares in UK export markets. [e] Ratio of average value of exports to imports.

Table A5 Household sector

	Average[a] earnings	Employee compensation	Total personal income	Gross disposable income	Real disposable income[b]	Final consumption expenditure	Saving ratio[c]	House prices[d]	Net worth to income ratio[e]
	£ billion, current prices				£ billion, 2019 prices		% of GDP	2019=100	
2017	93.5	997.3	1742.1	1352.6	1398.8	1390.7	5.1	95.9	7.3
2018	96.1	1042	1813.7	1408.9	1432.4	1424.9	5.1	99.1	6.8
2019	100	1090.2	1888.8	1462.3	1462.2	1440	5.3	100	7
2020	100.1	1094.8	1891.6	1458	1443.3	1250.4	15.8	102.8	7.6
2021	105	1160.5	1989.8	1512.6	1461.5	1328.5	12.6	111.9	7.7
2022	111.7	1247.5	2137.8	1610.3	1441.4	1402.5	8.5	123.1	7
2023	*118.9*	*1334.2*	*2282.9*	*1730.8*	*1442.8*	*1395.8*	*9.5*	*122.5*	*6.4*
2024	*126.2*	*1418.3*	*2405.2*	*1825.1*	*1457.4*	*1390.4*	*10.8*	*115.9*	*6.2*
2025	*131.4*	*1479.9*	*2515.3*	*1889.6*	*1472.4*	*1410.1*	*10.4*	*114.3*	*6.2*
2026	*136.7*	*1546.2*	*2634*	*1972.4*	*1497.9*	*1434.8*	*10.4*	*115.6*	*6.1*
2027	*141.9*	*1614.9*	*2755*	*2063*	*1529.1*	*1462.3*	*10.5*	*118.6*	*5.9*
Percentage changes									
2017/2016	2.8	3.9	3.3	2.8	1	1.9	-17.6	4.5	1
2018/2017	2.9	4.5	4.1	4.2	2.4	2.5	-1.5	3.3	-6
2019/2018	4	4.6	4.1	3.8	2.1	1.1	4.9	0.9	2.6
2020/2019	0.1	0.4	0.1	-0.3	-1.3	-13.2	197.6	2.8	8.3
2021/2020	5	6	5.2	3.7	1.3	6.2	-20.3	8.8	2
2022/2021	6.4	7.5	7.4	6.5	-1.4	5.6	-32.9	10	-9.7
2023/2022	*6.5*	*6.9*	*6.8*	*7.5*	*0.1*	*-0.5*	*12.8*	*-0.4*	*-7.5*
2024/2023	*6.1*	*6.3*	*5.4*	*5.4*	*1*	*-0.4*	*13*	*-5.5*	*-3.8*
2025/2024	*4.1*	*4.3*	*4.6*	*3.5*	*1*	*1.4*	*-3.3*	*-1.4*	*-0.7*
2026/2025	*4*	*4.5*	*4.7*	*4.4*	*1.7*	*1.8*	*-0.5*	*1.1*	*-1.6*
2027/2026	*3.8*	*4.4*	*4.6*	*4.6*	*2.1*	*1.9*	*1.1*	*2.6*	*-2.3*

Notes: [a] Average earnings equals total labour compensation divided by the number of employees. [b] Deflated by consumers' expenditure deflator. [c] Includes adjustment for change in net equity of households in pension funds. [d] Office for National Statistics, mix–adjusted. [e] Net worth is defined as housing wealth plus net financial assets.

Table A6 Fixed investment and capital (£ billion, 2019 prices)

	Gross Capital Formation				User cost of capital (%)	Corporate profit share of GDP (%)	Capital stock	
	Business investment	Private housing[a]	General government	Total			Private	Public[b]
2017	225.7	103.8	67.4	396.9	12.9	25.5	3674	739
2018	222.4	110.1	63.7	396	12.7	24.8	3730	755
2019	225.3	112.1	66.1	403.4	12.9	24.5	3785	773
2020	198.4	94.1	68.5	361	12.9	24.4	3793	793
2021	200.2	110	72.7	383	10.3	24.1	3815	817
2022	221.9	118.2	75.7	415.8	9.8	24.4	3877.7	840.2
2023	*219.8*	*113*	*85.6*	*419.9*	*15*	*24.5*	*3929.7*	*871.7*
2024	*214.6*	*107.9*	*86.2*	*408.8*	*15.4*	*23.8*	*3969.3*	*901.8*
2025	*218.6*	*104.6*	*84.5*	*407.7*	*15*	*23.8*	*4007.5*	*928.4*
2026	*222.3*	*102.8*	*84.3*	*409.4*	*14.4*	*23.7*	*4045.6*	*953.1*
2027	*227.6*	*101.7*	*84.6*	*413.8*	*14.1*	*23.8*	*4085.6*	*976.5*
Percentage changes								
2017/2016	1.1	10.3	3	3.5	-0.9	1.1	3.6	-6.3
2018/2017	-1.5	6.1	-5.4	-0.2	-1.5	-2.8	1.5	2.2
2019/2018	1.3	1.8	3.7	1.9	1.1	-1.1	1.5	2.4
2020/2019	-11.9	-16	3.6	-10.5	0.4	-0.3	0.2	2.6
2021/2020	0.9	16.9	6.2	6.1	-20.2	-1.2	0.6	3
2022/2021	10.8	7.4	4.1	8.6	-5.3	1.2	1.6	2.8
2023/2022	*-1*	*-4.4*	*13.1*	*1*	*53.3*	*0.3*	*1.3*	*3.8*
2024/2023	*-2.4*	*-4.5*	*0.7*	*-2.6*	*3.1*	*-2.7*	*1*	*3.5*
2025/2024	*1.9*	*-3.1*	*-2*	*-0.2*	*-3*	*0.1*	*1*	*2.9*
2026/2025	*1.7*	*-1.8*	*-0.3*	*0.4*	*-3.9*	*-0.8*	*0.9*	*2.7*
2027/2026	*2.4*	*-1*	*0.3*	*1.1*	*-1.8*	*0.5*	*1*	*2.5*

Notes: [a] Includes private sector transfer costs of non–produced assets. [b] Including public sector non–financial corporations.

Table A7 Productivity and the labour market (thousands unless otherwise stated)

	Employment		ILO unemployment	Labour force[b]	Population of working age[c]	Productivity (2019=100) per hour	ILO unemployment rate
	Employees	Total[a]					
2017	27065	32057	1476	33533	41169	98.9	4.4
2018	27494	32439	1380	33819	41260	99.7	4.1
2019	27652	32799	1306	34105	41344	100	3.8
2020	27752	32509	1551	34060	41362	99.9	4.6
2021	28023	32407	1525	33931	41392	101.1	4.5
2022	28324	32744	1262	34006	41532	101.6	3.7
2023	*28454*	*32981*	*1416*	*34397*	*41640*	*100.4*	*4.1*
2024	*28500*	*33055*	*1652*	*34707*	*41801*	*100.3*	*4.8*
2025	*28573*	*33154*	*1752*	*34906*	*41942*	*100.5*	*5*
2026	*28693*	*33298*	*1789*	*35086*	*42053*	*101.1*	*5.1*
2027	*28867*	*33494*	*1761*	*35255*	*42145*	*102.1*	*5*
Percentage changes							
2017/2016	1.1	1	-9.6	0.5	0.3	1.4	-10.1
2018/2017	1.6	1.2	-6.5	0.9	0.2	0.8	-7.3
2019/2018	0.6	1.1	-5.4	0.8	0.2	0.3	-6.2
2020/2019	0.4	-0.9	18.8	-0.1	0	-0.1	19
2021/2020	1	-0.3	-1.7	-0.4	0.1	1.2	-1.4
2022/2021	1.1	1	-17.2	0.2	0.3	0.4	-17.4
2023/2022	*0.5*	*0.7*	*12.2*	*1.1*	*0.3*	*-1.2*	10.9
2024/2023	*0.2*	*0.2*	*16.7*	*0.9*	*0.4*	*0*	15.7
2025/2024	*0.3*	*0.3*	*6*	*0.6*	*0.3*	*0.1*	5.4
2026/2025	*0.4*	*0.4*	*2.1*	*0.5*	*0.3*	*0.6*	1.6
2027/2026	*0.6*	*0.6*	*-1.5*	*0.5*	*0.2*	*1*	-2

Notes: [a] Includes self–employed, government–supported trainees and unpaid family members. [b] Employment plus ILO unemployment. [c] Population projections are based on annual rates of growth from 2018–based population projections by the ONS.

Table A8 Public sector financial balance and borrowing requirement (£ billion, fiscal years)

		2019	2020	2021	2022	2023	2024	2025	2026	2027
Current receipts:	Taxes on income	484.1	495.9	562	621.6	*711.1*	*742.2*	*799*	*833.9*	*869.6*
	Taxes on expenditure	282.5	144.5	258.4	315	*313.9*	*322.4*	*322.3*	*336.4*	*351*
	Other current receipts	60.9	151.7	95.4	82.2	*107*	*108.2*	*107.4*	*110.5*	*116.9*
	Total	827.5	792.1	915.8	1018.8	*1132*	*1172.8*	*1228.7*	*1280.8*	*1337.6*
	(as a % of GDP)	36.8	38	39.1	40.2	*41.6*	*41.3*	*41.9*	*42.1*	*42.3*
Current expenditure:	Goods and services	431.5	495.5	512.7	522.8	*528.6*	*538.2*	*550.2*	*567.7*	*589.2*
	Net social benefits paid	242	262.9	261.6	280.7	*358.9*	*358.9*	*367.9*	*367.9*	*346.6*
	Debt interest	54.8	42.3	77.2	129.8	*119*	*107*	*103.6*	*102.7*	*101.7*
	Other current expenditure	65.8	181.1	86.1	110.1	*63*	*65.9*	*67.8*	*69*	*70*
	Total	794.2	981.8	937.6	1043.4	*1069.4*	*1070*	*1089.5*	*1107.4*	*1107.5*
	(as a % of GDP)	35.3	47.2	40.1	41.2	*39.3*	*37.7*	*37.2*	*36.4*	*35*
Depreciation		52.8	53.7	55.1	60.2	*65.6*	*68.4*	*70.7*	*73.3*	*76.3*
Surplus on public sector current budget[a]		-19.4	-243.3	-77	-84.8	*-3*	*34.4*	*68.5*	*100.1*	*153.8*
(as a % of GDP)		-0.9	-11.9	-3.3	-3.3	*-0.1*	*1.2*	*2.3*	*3.3*	*4.9*
Gross investment		90.4	123.5	109.9	109.8	*172.8*	*174.7*	*176.2*	*176.2*	*178.6*
Net investment		37.6	69.8	54.8	49.6	*107.2*	*106.2*	*105.5*	*102.9*	*102.2*
(as a % of GDP)		1.7	3.4	2.3	2	*3.9*	*3.7*	*3.6*	*3.4*	*3.2*
Total managed expenditure		884.6	1105.3	1047.5	1153.2	*1242.2*	*1244.6*	*1265.7*	*1283.6*	*1286.1*
(as a % of GDP)		39.4	53.2	44.8	45.5	*45.7*	*43.9*	*43.2*	*42.2*	*40.6*
Public sector net borrowing		57	313.2	131.8	134.4	*146.5*	*95*	*36.5*	*-1.4*	*-60.7*
(as a % of GDP)		2.5	15.3	5.7	5.3	*5.4*	*3.4*	*1.3*	*0*	*-1.9*
Public sector net debt (% of GDP)		105.7	98.3	97.4	97.9	*98.7*	*96.7*	*92.4*	*87.6*	*82*
GDP deflator at market prices (2019=100)		100.9	107.2	106.5	113.4	*121.2*	*126.1*	*129.3*	*132.4*	*135.5*
Money GDP (£ billion)		2247.1	2087.6	2338.6	2532.1	*2718.6*	*2837.1*	*2930*	*3041*	*3165.7*

Notes: These data are constructed from seasonally adjusted national accounts data. This results in differences between the figures here and unadjusted fiscal year data. Data exclude the impact of financial sector interventions, but include flows from the Asset Purchase Facility of the Bank of England. [a] Public sector current budget surplus is total current receipts less total current expenditure and depreciation.

Table A9 Accumulation (percentage of GDP)

	Households		Companies		General government		Whole economy		Finance from abroad[a]		Net national saving
	Saving	Investment	Saving	Investment	Saving	Investment	Saving	Investment	Total	Net factor income	
2017	3.5	4.8	10.2	11	1	2.5	14.8	18.4	3.6	1	0
2018	3.5	4.8	9.3	10.8	1.3	2.6	14	18.1	4.1	1.3	-0.8
2019	3.6	4.6	10.7	11	1.1	2.7	15.4	18.3	2.9	0	0.6
2020	11.5	4.3	10.8	9.8	-8.3	3.1	14	17.2	3.1	2.2	-2.2
2021	8.8	4.6	11.9	10.6	-4	3	16.8	18.3	1.5	-0.5	1.6
2022	5.8	4.9	10.6	10.9	-1.4	3.1	15	18.8	3.8	-0.6	0.1
2023	*6.6*	*5*	*8.9*	*10.4*	*-0.4*	*4.2*	*15.1*	*19.5*	*4.5*	*3.2*	*0.1*
2024	*7.5*	*4.9*	*6.1*	*11.2*	*2*	*4.3*	*15.6*	*20.4*	*4.9*	*5.1*	*0.6*
2025	*7.3*	*4.8*	*4.9*	*11.5*	*3.8*	*4.2*	*16*	*20.4*	*4.5*	*4.8*	*1*
2026	*7.3*	*4.7*	*4.1*	*11.6*	*5.2*	*4*	*16.6*	*20.2*	*3.7*	*4*	*1.6*
2027	*7.4*	*4.5*	*3*	*11.7*	*6.7*	*3.8*	*17.2*	*20.1*	*2.9*	*3.5*	*2.2*

Notes: Saving and investment data are gross of depreciation unless otherwise stated. [a] Negative sign indicates a surplus for the UK.

Table A10 Medium– and long–term projections (percentage change unless otherwise stated)

	2021	2022	2023	2024	2025	2026	2027	2028-2032
GDP (market prices)	7.6	4.1	0.4	0.3	0.6	1.2	1.7	1.7
Average earnings	5	6.4	6.5	6.1	4.1	4	3.8	3.4
GDP deflator (market prices)	-0.2	5.4	6.9	4.9	2.6	2.5	2.3	2.1
Consumer Prices Index	2.6	9.1	7.7	4.1	2.3	2.4	2.2	1.9
Per capita GDP	7.2	3.4	-0.1	-0.2	0.2	0.8	1.3	1.3
Whole economy productivity[a]	1.2	0.4	-1.2	0	0.1	0.6	1	1.2
Labour input[b]	6.6	3.6	1.1	0.2	0.4	0.5	0.7	0.4
ILO Unemployment rate (%)	4.5	3.7	4.1	4.8	5	5.1	5	5.2
Current account (% of GDP)	-1.5	-3.8	-4.5	-4.9	-4.5	-3.7	-2.9	-2.4
Total managed expenditure (% of GDP)	46.5	44.6	46.5	44.2	43.3	42.5	41	42
Public sector net borrowing (% of GDP)	7.6	4.6	6.1	3.8	1.8	0.3	-1.5	1.4
Public sector net debt (% GDP)	98.9	97.8	98.5	98.5	96.1	91.8	86.8	77.6
Effective exchange rate (2011=100)	106.7	104.4	106.7	109	107.9	106.9	106.3	106.5
Bank Rate (%)	0.1	1.5	4.7	5.5	4.9	4.2	3.5	3.3
10 year interest rates (%)	0.8	2.4	4.1	4.2	3.8	3.5	3.4	3.3

Notes: [a] Per hour. [b] Total hours worked.

Table A11 Gross Value Added by sector percentage change

	2018	2019	2020	2021	2022	2023	2024	2025	2026
Utilities and agriculture	-3.5	8.9	5	6.2	-0.3	-1.1	0.1	0.2	0.3
Mining and quarrying	6.3	2.2	-3.2	-11.7	2.1	-11.6	-5.2	-4.5	-4.6
Manufacturing	4.3	1.2	0.1	9.7	-3.7	-0.5	0.5	1.2	0.9
Construction	-1.7	1.5	-13.5	13.1	6.2	1.5	-0.3	0.3	0.4
Public sector	1.3	2.7	-19.8	11.4	6.9	-0.9	-0.3	0.2	0.5
Private non-traded services	0.8	1.2	-18.4	4.8	4.5	0.4	1.5	1.5	1.5
Financial services	-0.9	-2.5	0.3	5.2	-0.4	-0.3	0	0.1	0.2
Imputed rent	2	1.2	0.1	1	0.9	0.1	0.3	0.5	0.6
Private traded services	3.9	2.5	-10.5	9.1	9.6	2.1	1.1	1.3	1.4
Total economy	1.6	1.7	-10.6	7.4	4.3	0.3	0.5	0.8	0.9

Notes: NiSEM database and forecast. Public sector is composed of Public administration and defence, compulsory social security (O), Education (P) and Human Health and Social Work activities (Q). Private non-traded services sector is composed of Wholesale and Retail Trade, Repair of Motor vehicles and Motorcycles (G), Accommodation and Food services (I), Arts, Entertainment and Recreation (S), Real Estate Activities excluding imputed rent (L-68.2IMP) and Activities of Households as Employers (T). Private traded sector is composed of Professional, Scientific and Technical Activities (M), Transport and Storage (H), Information and Communication (J) and Administrative and Support Services Activities (N).