National Institute of Economic and Social Research

National Institute UK Economic Outlook

Sailing in Treacherous Seas

Spring 2022

Series A. No. 6

National Institute UK Economic Outlook – Spring 2022
ISSN 2753-9350

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Foreword: Sailing in Treacherous Seas

The British economy is suffering, once again, from a shortage of options in the face of shocks. The injections of monetary and fiscal demand during the Covid-19 lockdowns were still swilling around the system when supply chains started to fail and energy and food costs rose, first in line with a world economic recovery and then from the consequences of Russia's invasion of Ukraine. The inflationary impulse from food and energy costs has fallen more on the expenditure baskets of the poorest households and is acting to drag demand lower, as well as exacerbate income inequalities. It is quite clear that fiscal policy could be used to smooth the income shock in aggregate but also across the distribution. And if it did so, aggregate demand would be supported in such a manner as to allow the Bank of England to raise interest rates more decisively. But our policymakers may be lacking some collective courage to do the right thing and continue to wish to hide behind arbitrary fiscal rules. In our fiscal space, the narrative says 'There Is No Alternative' but there certainly is.

I am forced to ask: when will this game end? Time and again we have been told that there is little room for manoeuvre when the weather turns unpleasant and, as a result, we find that the economy underperforms its peers. Since the financial crisis of 2008, the monetary and fiscal settlement has asked too much of the Bank of England. It has had to stoke up sufficient levels of demand to meet the inflation target. Fiscal policy has been set on too constricted a course, in a world of tighter financial regulations and considerable scarring in the real economy, with insufficient attention paid to supporting the supply side. The result is that excess demand in the shadow of Covid-19 has produced the largest spike in inflation for 30 years. While bringing inflation back to levels consistent with price stability is the main immediate macroeconomic priority, it would be a significantly easier task if HM Treasury provided an appropriate cushion for the poorest households, who have also been the ones to suffer most during Covid-19. Equity alone demands that we pay attention but efficiency makes the siren call.

Let me focus on the supply side. The well documented poor performance in UK productivity is just another way of writing that we are not generating sufficient prosperity across the country and that real wages have tended to stagnate. Our track record makes the current adjustment in real wages, where they have to fall in response to the external terms of trade shock, even harder to bear, as the impact falls disproportionately on households with lower incomes. Actually, we estimate that the impact on those households could easily be reduced with no deterioration in the medium-term sustainability of our fiscal position. And so this is an example of where the politics and economics ought to be closely aligned. Perhaps an even better example of why a fiscal rule can also lead to pro-cyclical rather than countercyclical policy. The right response to a temporary negative income shock is to smooth it with more debt borrowed from our better off futures. Indeed, the inflation shock has, on balance, ameliorated our overall fiscal position as nominal tax revenues have increased relative to fixed cash expenditures. There is money to help steady the ship.

It is though critical that inflation does not persist and is not expected to persist, as that would raise public borrowing costs and pose much more of a problem for fiscal sustainability. And here we turn to the question of the Bank of England. Rightly we should celebrate the 25th anniversary of the central bank's independence, as the Monetary Policy Committee has hit its objective over its lifetime with inflation at around 2 per cent. But it is now set to face its most difficult task, even with the insulation of reputation. How to drain excess demand from the economy, including the liquidity generated by huge asset purchases under quantitative easing, without sinking an economy that is facing the ragged edge of Brexit, a compression in trade and a lack of direction. It can only do so if it continues to be charged with the sole mandate of reaching the safe port of price stability. It does not need a broader remit or to be charged with further objectives, though more dialogue and discussion on complex trade-offs would help us understand better the choices that are faced at every meeting. Indeed, fiscal policy could learn very well from adopting a measure of well-being for its own objective and remembering that deficits are an instrument and not a target of policy. NIESR warned in 1998 that co-ordination problems between monetary and fiscal policy may become rife without a mechanism to ensure the right mix of the two and increasingly this seems to be the case. We will need to work together and not drift apart if we are to avoid being smashed on the rocks.

Jagjit S. Chadha, Director, NIESR
May 2022

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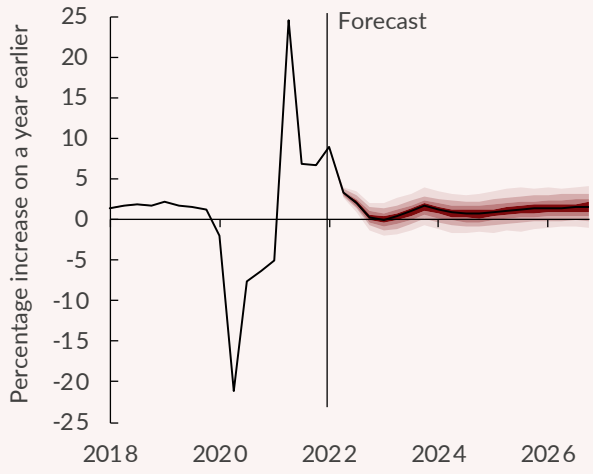
- In addition to the human misery and devastation it has caused, the Russian invasion of Ukraine has led to further rises in oil and gas prices and inflation more generally. From the point of view of the United Kingdom, this has acted as a terms of trade shock and as such would be expected to lead to a rise in inflation and a fall in output and real income. This is reflected in our forecasts for GDP, inflation, real incomes and consumption over the medium term.
- We expect GDP to increase by 3.5 per cent in 2022 – declining in the third and fourth quarters – then by 0.8 per cent in 2023 and 0.9 per cent in 2024. The medium-term outlook for GDP growth is slow even by the standards of recent history, returning to 1.5 per cent only in 2026. The combination of shocks – Brexit, Covid-19 and the recent shocks to energy prices – is set to leave the incomes of people in the UK permanently lower.
- We forecast consumer price index inflation to average 7.8 per cent in 2022 and to peak at 8.3 per cent in the fourth quarter, remaining above the 3 per cent rate at which the Governor of the Bank of England and Chancellor of the Exchequer are required to exchange letters until, at least, the fourth quarter of 2023. We expect retail price index inflation to reach 14.4 per cent in the same quarter: its highest level since 1980.
- Given the terms of trade shock, we expect real incomes to decline. Our forecast suggests a decline of 2.4 per cent in 2022, accompanied by a small rise in unemployment in 2023 to 5.1 per cent. We still, however, expect private consumption growth of 4.7 per cent this year, with the household sector assumed to use some of the estimated £200 billion of savings accumulated under Covid-19 to smooth spending patterns and ensure that consumption falls by less than income.
- Rising prices and higher taxes are squeezing household budgets. For 2022-23 we estimate that 1.5 million households across the UK face food and energy bills greater than their disposable income, with the highest incidence in London and Scotland.
- The Chancellor should provide emergency support to cushion this income shock. We show that a Universal Credit uplift of £25 per week between May and October 2022 would cost around £1.35bn; an additional £2.85bn should be given to the 11.3m lower-income households, amounting to a one-off cash payment worth £250 per household for 2022-23.
- We expect the government's fiscal deficit to fall from 5.8 per cent of GDP in 2021-22 to 2.7 per cent in 2022-23 and 1.0-1.2 per cent in the years thereafter. Government debt as a share of GDP is forecast to fall in each year of the forecast to 81 per cent in 2026-7, aided by higher nominal GDP. With this improvement in the fiscal position, we would expect fiscal policy to loosen to cushion households – particularly poorer households – against real income falls. However, the Spring Statement did not do enough in this regard nor to support regional regeneration as we emerge from Covid-19. This failure of fiscal policy to support the right social outcome again demonstrates the need for a rethink of the fiscal framework, as suggested by NIESR in our Occasional Paper on 'Designing a New Fiscal Framework'.
- The fiscal policy stance has also made the job of the Monetary Policy Committee harder. With inflation continuing to rise to multi-decade highs, we expect further rate rises to take place throughout 2022 with Bank Rate reaching 2 per cent in the final quarter of the year, settling at around 2.5 per cent for the majority of the forecast period. But the MPC will have to navigate carefully the treacherous waters caused by the tension between, on the one hand, allowing inflation expectations to deanchor and, on the other hand, plunging the economy into a deep recession.

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

	2018	2019	2020	2021	*2022*	*2023*	*2024*	*2025*	*2026*
GDP	1.7	1.7	-9.3	7.4	*3.5*	*0.8*	*0.9*	*1.1*	*1.5*
Per capita GDP	1.1	1.1	-9.7	6.9	*3.2*	*0.4*	*0.6*	*0.8*	*1.1*
CPI Inflation	2.4	1.8	0.8	2.6	*7.8*	*5.2*	*1.4*	*1.0*	*1.7*
RPIX Inflation	3.3	2.5	1.7	4.2	*8.9*	*5.8*	*2.0*	*1.7*	*2.4*
RPDI	2.8	1.3	-0.3	1.4	*-2.4*	*0.5*	*3.2*	*2.6*	*2.5*
Unemployment, %	4.1	3.8	4.6	4.5	*4.4*	*5.1*	*4.7*	*4.4*	*4.1*
Bank Rate, %	0.6	0.8	0.2	0.1	*1.3*	*2.4*	*2.5*	*2.6*	*2.6*
Long Rates, %	1.4	0.9	0.3	0.8	*1.7*	*2.7*	*2.7*	*2.8*	*2.8*
Effective exchange rate	1.9	-0.3	0.5	4.8	*1.2*	*-0.6*	*-0.8*	*-0.5*	*-0.4*
Current account as % of GDP	-3.9	-2.7	-2.5	-2.6	*-2.4*	*-4.5*	*-4.7*	*-4.6*	*-4.3*
Net borrowing as % of GDP	1.7	2.3	14.7	5.8	*2.7*	*1.2*	*1.2*	*1.1*	*1.0*
Net debt as % of GDP	79.3	83.9	95.1	93.7	*90.2*	*89.4*	*87.9*	*83.9*	*80.9*

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.

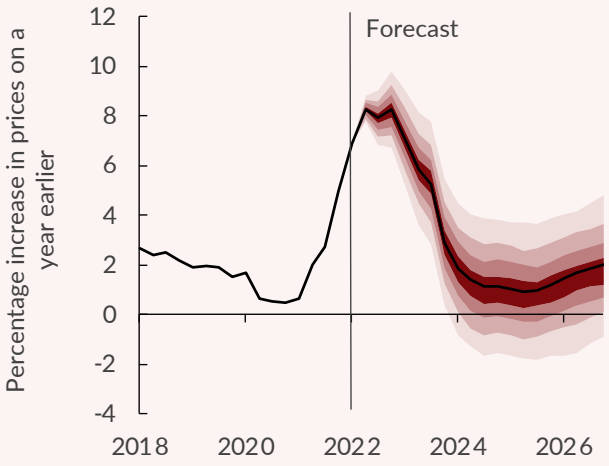
Annual GDP growth



Source: NiGEM database, NIGEM forecast, NIGEM stochastic simulation.

Notes: The fan chart is intended to represent the uncertainty around the main-case forecast scenario shown by the black line. There is a 10 per cent chance that GDP growth in any particular year will lie within any given shaded area in the chart. There is a 20 per cent chance that GDP growth will lie outside the shaded area of the fan chart.

CPI inflation



Source: NiGEM database, NIGEM forecast, NIGEM stochastic simulation and judgement.

Note: The fan chart is intended to represent the uncertainty around the main-case forecast scenario shown by the black line. There is a 10 per cent chance that CPI inflation in any particular year will lie within any given shaded area in the chart. There is a 20 per cent chance that CPI inflation will lie outside the shaded area of the fan. The Bank of England's CPI inflation target is 2 per cent per annum.

1. UK Economic Outlook

By Rory Macqueen, Stephen Millard, Urvish Patel and Kemar Whyte[1]

Economic background

Since our Spring Economic Outlook the UK economy has been subjected to another major shock, following closely behind Brexit and Covid-19. Russia's invasion of Ukraine has caused widespread devastation to the lives and homes of millions and is having economic consequences across the world, particularly, though not exclusively, through disrupting links with the Russian and Ukrainian economies, and leading to a spike in energy prices. From the point of view of the United Kingdom, this has acted as a terms of trade shock and so would be expected to lead to a rise in inflation and a fall in output and real income. The rise in inflation, in turn, is likely to lead to tighter monetary policy than expected in February.

How long the shock persists will have consequences for the optimal policy response: if the shock to supply is permanent, then real incomes in the UK will be permanently lower. As discussed in Box A on page 7, the government is the only agent capable of either bridging a temporary reduction in households' financial wellbeing or smoothing the path to a permanently lower equilibrium growth path for incomes and consumption. At the time of the Spring Statement in March, the fiscal position had improved relative to expectations, largely as a result of upward revisions to inflation, but – as is now widely accepted – the Chancellor of the Exchequer did not provide sufficient support to households, to the point that the government is reported to already be planning further interventions. This failure of fiscal policy to support the right social outcome again demonstrated the need for a rethink of the fiscal framework, as suggested by NIESR in our Occasional Paper on 'Designing a New Fiscal Framework'.

Consumer price index inflation was already substantially above its target by the time of the invasion of Ukraine, reaching 6.2 per cent in February, principally driven by sharp growth in energy prices in late 2021. Annual services price inflation rose to 3 per cent last summer and generally remained between 3 and 3½ per cent over the following six months; goods prices, in contrast, rose by 3.3 per cent in the year to August 2021, but by 8.3 per cent in the year to February, when the war began. This constitutes an annualised rate of 10 per cent over the intervening period, with the largest month-on-month rises coming in October and November 2021. Since the war began, inflation has begun to accelerate again, with energy price increases first hitting businesses – which are not protected by a price cap – and then households. Real incomes are already in decline as a result of the supply shocks of late 2021 and early 2022. Confidence indicators have turned down sharply as higher inflation is expected to eat further into household incomes.

In February we already expected above-target inflation, resulting from a large increase in energy prices in late 2021, to have a dampening effect on incomes and consumption. With Covid-19 depressing output in 2021, we nonetheless anticipated annual growth of close to 5 per cent in 2022, with business investment also contributing strongly. Once again proving more resistant than anticipated to Covid-19, the UK private sector outperformed expectations for growth at the start of the year, with consumer-facing services continuing to return towards pre-Covid levels of activity. Covid-19 cases began to rise again around the start of March, and hospitalisations surpassed their levels in January, but the economic impact is likely to have been even smaller than that from the first wave of Omicron. This continues a trend of each Covid-19 wave causing a smaller negative economic shock than its predecessor.

Since then, the external shock has grown larger and more prolonged, raising the possibility of stagflation. This will increase the pressure on a monetary policy regime accustomed to responding to demand-driven output fluctuations since the Bank of England gained its independence, and which has only recently begun to normalise policy after its Covid-19 interventions. The problem for the Monetary Policy Committee (MPC) has become stark. The policy interest rate has been raised four times since late 2021, though it remains close to historic lows, while real rates have gone deep into negative territory. NIESR has supported this monetary tightening, but we have raised concerns that it may be 'too little too late': given the known lags in monetary policy operation, the tightening cycle should have begun sooner. Indeed, although the emergency response to the Covid-19 crisis in March 2020 was broadly right (Chadha, 2020), the extra stimulus from quantitative easing and from emergency levels of Bank Rate should

1 The authors are grateful to Bart van Ark, Jagjit Chadha and Barry Naisbitt for helpful comments, and to Joanna Nowinska for preparing the charts and the database underlying the forecast. The forecast was completed on 25th April 2022; 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).

Box A: The economic consequences of the Ukraine War for UK household incomes

By Urvish Patel[1]

Introduction

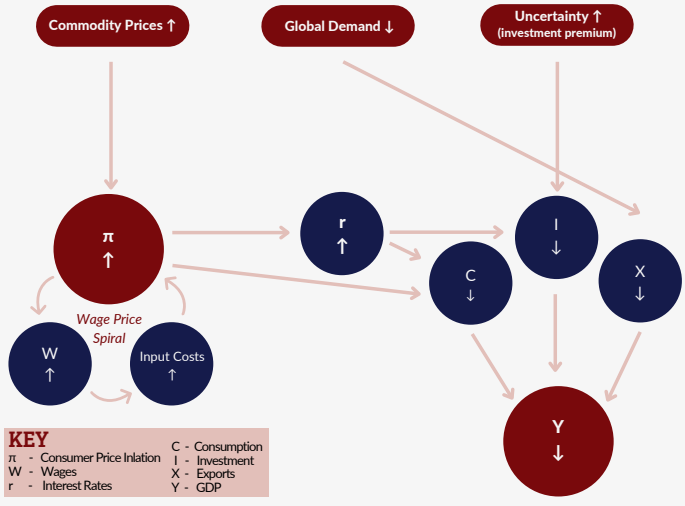
Russia's invasion of Ukraine on 24th February 2022, and the sanctions imposed in response by the UK and other countries, are likely to have a significant impact on the UK economy, despite this country having relatively few direct economic links to Russia. A quantitative analysis was produced by NIESR in early March (Liadze et al, 2022), which should be consulted for more details on the potential magnitudes of the shocks and their impacts.

Both the invasion itself and the sanctions imposed on exports of Russian energy have increased the prices of oil and gas, with oil prices above $100/barrel for the first time since 2014. In 2019, approximately 8 per cent of the UK's oil and 7 per cent of our gas was imported from Russia, compared to almost 60 per cent of gas from Norway. Electricity, gas and other fuels account for only 3.3 per cent of the UK consumer price index (CPI) basket, compared with 7.7 per cent of the US CPI basket. Nonetheless, with global GDP growth expected to slow down considerably this year, the significant negative supply shock which arises from elevated global commodity prices and a slowdown in global demand will have significant negative spillovers for UK GDP.

The prospect of further increases in energy prices heightens the dilemma facing members of the Bank of England's Monetary Policy Committee (MPC), who need to weigh the risk of higher global commodity prices becoming engrained in domestic inflation against the risk of amplifying the impact of the squeeze on incomes. In this box, we explore the channels through which the conflict are likely to impact the UK economy and real incomes in particular, using the channels through which NIESR's macroeconomic model, NiGEM, propagates the effects of the shock.

Analysis

Figure A1 Channels by which war-related shocks impact UK GDP and consumer inflation



Source: NIESR

Firstly, sanctions and supply disruptions have increased global commodity prices. This can be considered as a steepening of the Phillips Curve, so that a given level of demand is more inflationary. The shock has increased import inflation which feeds into higher consumer prices (see Figure A1). Higher domestic inflation directly reduces real disposable incomes, consumption and therefore GDP. If the shock is permanent, this

1 Thanks to Jagjit Chadha, Rory Macqueen, Stephen Millard, Barry Naisbitt and Kemar Whyte for comments.

represents a rapid transition to a new lower equilibrium growth path for the UK, meaning permanently lower real incomes for UK households.

This inflationary shock happened for businesses first and for households with the April rise in the energy price cap, with a large chance of another rise in the price cap in October. Low-income households will suffer the brunt of this worsening squeeze in real incomes, as they spend a larger share of their household budgets on food and energy. Fiscal transfers are also being eroded in real terms. Even before the invasion, NIESR forecast a 30 per cent rise in destitution, bringing the total number of destitute households to about 1 million (NIESR Winter 2022 UK Economic Outlook). As discussed in our UK Economic Outlook, the onus is on the government to provide greater fiscal support under these circumstances. In response to higher consumer prices (and in combination with a pre-existing tight labour market), workers may press for higher nominal wages, which in turn increases pressure on unit labour costs and may increase inflation further, if businesses respond by raising prices. If not contained, this potentially destabilising wage-price spiral may lead to inflation expectations becoming self-fulfilling, making it more difficult for the MPC to bring inflation back to target.

Higher domestic inflation is also likely to lead to tighter monetary policy than would have been the case otherwise, which further acts to reduce consumption and GDP. In addition to greater levels of uncertainty, higher interest rates increase the user cost of capital via long-term interest rates, which dampens investment and further reduces GDP. Finally, weaker global demand, particularly from Europe weighs on UK export volumes. The greater dependence of Europe on Russian energy compared with the UK means Europe faces much larger negative consequences, with negative spillover consequences for the UK.

Elsewhere, and with little impact on household incomes, the UK government is likely to increase temporarily spending on defence and refugee resettlement costs which may provide a small short-term boost to government consumption. More significantly for most households, the Spring Statement contained announcements intended to reduce the impact of rising energy bills, though this temporary rise in transfers and small cut in indirect taxation are likely to prove insufficient and may have to be increased or repeated later in 2022 (Millard et al, 2022). A small increase in the population via migration from Ukraine may also provide support to the economy in the long run. Nevertheless, the positive contributions to GDP and household incomes are small, and their effects will be significantly outweighed by negative GDP effects on consumption, from the erosion of real disposable incomes and higher interest rates, lower investment due to greater uncertainty and higher interest rates, and lower volumes of exports.

Conclusion

The war in Ukraine has further raised the prospects of stagflation and is likely to have a significant impact on the UK economy: in particular, worsening the squeeze on household incomes. Higher commodity prices and trade spillovers represent major channels through which the war will affect economic activity in the UK, and increased uncertainty weighing on confidence also has the potential to further reduce growth. Higher inflation, both directly as a result of higher commodity prices and indirectly through increased unit costs, will add to the squeeze on real household incomes. If rising inflation leads to significantly tighter monetary policy, there will be a further reduction in demand relative to our pre-war forecast, but if monetary policy is not tightened then inflation could be even higher and more persistent. There will need to be larger fiscal policy responses, as the only agent with the capacity to smooth the shock to national income without exacerbating it in the short-to-medium term is the government.

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Patel, U. (2022) 'No respite for UK consumers and the Bank of England as inflation hits 7 per cent' NIESR CPI Tracker, 13 April.

have been reversed late last year, when it was becoming clear that much of the crisis was behind us. We have also called for better communication (Barwell, 2021, and Millard, 2022) and a reduction of the Bank of England's balance sheet (Allen et al, 2021, and Chadha, 2019).

But the problem facing the monetary authorities is being exacerbated by the government's fiscal policy. At the Spring Statement the Chancellor pressed ahead with fiscal tightening in the face of a 2 standard deviations negative shock to household incomes. This will directly exacerbate the hardships faced by those in the lower income deciles (see Chapter 2) and make it harder for the MPC to normalise policy and limit inflationary momentum. Furthermore, with government consumption fixed in nominal terms, consumer price rises will lead to significant cuts to public service provision, large falls in public sector real consumption wages (Civil Service Pay Remit guidance presently allows 2 per cent awards, with a further 1 per cent in limited cases), or both. Previous NIESR research (Chadha et al, 2021) has highlighted how the current fiscal framework does not incentivise the correct social outcomes and remains subject to short-term 'budgetarianism' and the whims of politicians. A more substantial fiscal event – weighing up the long-term sustainability questions with the need for short-term support – could lead to better outcomes for households this year but also faster growth in productivity in future, which would in turn help future governments respond to rising fiscal demands. More supportive fiscal policy in the short term would also have the effect of making the monetary authorities' dilemma less painful.

Private sector wages have begun to respond to rising prices, with median pay settlements rising from 2 per cent to above 3 per cent. There is evidence of larger rises in settlements in the upper quartile, suggesting that a minority of workers (those with skills particularly in demand) are having more success at insulating themselves from the rising cost of living. Given the tightness of the UK labour market – where recently for the first time there was a vacancy for every unemployed person – it is perhaps surprising that wage growth has not yet accelerated more quickly. Recent increases in pay have been pushed upwards by bonuses, rather than regular pay, but it will be important to observe whether these rises become consolidated into further rises in regular pay growth. April being one of the busiest months for wage settlements, any clear signs that regular pay is beginning to catch up with the rising cost of living ought to become evident soon.

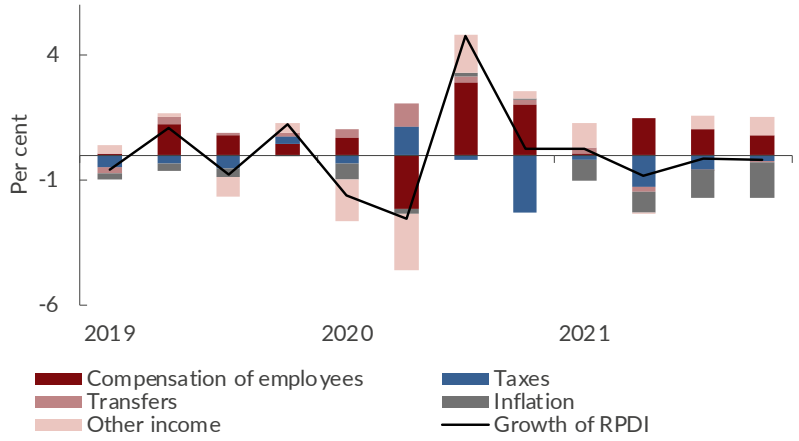
Current economic conditions

Demand and output

Consumption continues to recover…

Private consumption is estimated to have grown by 0.5 per cent in the fourth quarter of 2021, leaving consumption in 2021 6.0 per cent higher than in 2020. On a quarterly basis, however, it remains 2.1 per cent lower than its peak in the second quarter of 2019.

Figure 1.1 Components of growth in real disposable personal income



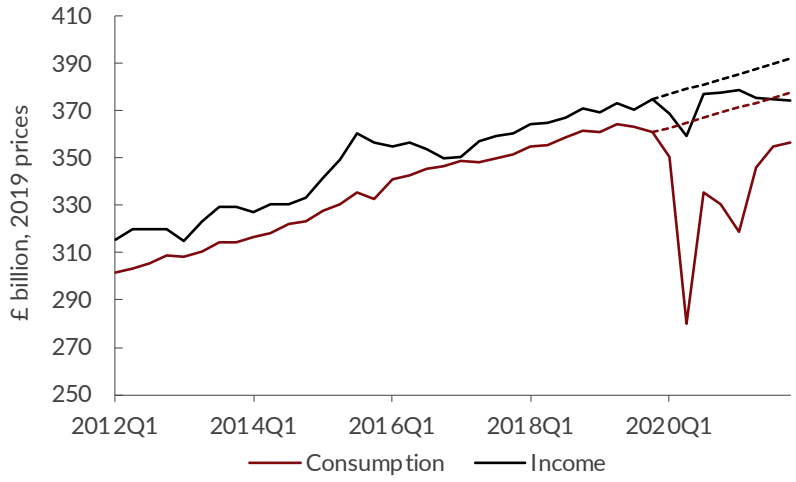
Source: ONS, NIESR calculations

…but households are now facing a major squeeze on their real incomes

Real personal disposable income fell in the final three quarters of 2021 (Figure 1.1) as a result principally of higher taxes and inflation. The freezing of income tax allowances and the introduction of the new Health and Social Care

Levy at the beginning of April will act to push further down on real personal disposable incomes (see 'Forecast' on page 20), offset by the rise in National Insurance thresholds from July.

Figure 1.2 Quarterly household consumption and income 2012-2021

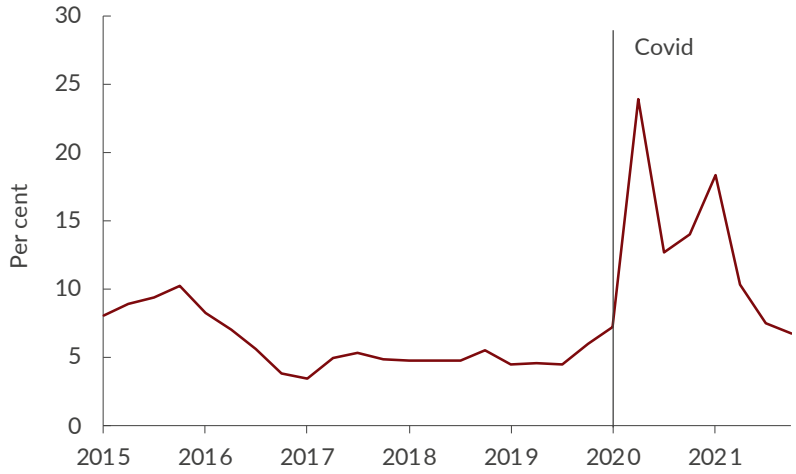


Source: NiGEM database, NIESR calculations

High aggregate savings may help to support consumption…

In aggregate, the household sector should be able to smooth its consumption relative to the fall in real disposable income as a result of the high savings accumulated – whether voluntarily or due to the unavailability of goods and services – during the Covid-19 lockdowns. Compared with a counterfactual of incomes and consumption continuing to grow at their post-2012 average rates, Covid-19 may have led to around £200 billion or more of additional savings for households in aggregate, represented by the difference between the gap between consumption and income in Figure 1.2 relative to the gap between their trends.

Figure 1.3 Savings rate



Source: ONS

Figure 1.3 shows the savings ratio rising to almost 24 per cent in the second quarter of 2020 as a result of the first lockdown. Since then it has fallen back below 7 per cent in the fourth quarter of 2021 and is likely to fall further in 2022. However, the squeeze on incomes is likely to affect particularly the poorest households, who spend a larger fraction of their income on food and fuel; these households were less able to build up savings during the lockdowns[2], being less likely to have remained employed full-time, and are more likely to have spent through any savings

2 See NIESR, UK Economic Outlook Spring 2021, pp12-13.

subsequently. We discuss further the distributional impact of the real income squeeze in Chapter 2 of this Outlook.

…but consumer confidence is low

Support for a weak consumption outlook came in the GfK Consumer Confidence Survey, which fell to -38 in April. This was its fifth consecutive monthly fall and confidence is now lower than it was in April 2020, when the economy was first 'locked down' in response to Covid-19. The forward-looking indices for personal financial situation and general economic situation both fell, to -26 and -55 respectively: both significantly worse than a year earlier. The YouGov Consumer Confidence Survey tells a similar story, its index falling to 103.9 in March 2022 compared to 108.5 a year earlier. The survey outlook for household finances over the next twelve months fell from 59.7 in February to 49.1 in March, having been at 102.3 in March 2021. House price inflation remains strong and, in February 2022, was 10.9 per cent, up from 10.2 per cent in January.

Business investment grew sluggishly in 2021…

Business investment grew by 1 per cent in the fourth quarter of 2021, meaning that in 2021 it was 0.8 per cent higher than in 2020 and, in the fourth quarter, was 8.6 per cent lower than in the last pre-pandemic quarter at the end of 2019. In our previous Outlook, we were expecting robust growth in business investment in 2022, given healthy corporate balance sheets, the need to increase the use of capital in the face of a tight labour market, and the government's 'super-deduction' which lasts only until March 2023. However, given the uncertainty and supply disruptions brought about by the conflict in Ukraine, as well as the likely tightening of monetary policy and, so, credit conditions, it is likely that firms will cut back on their investment plans relative to before the war began.

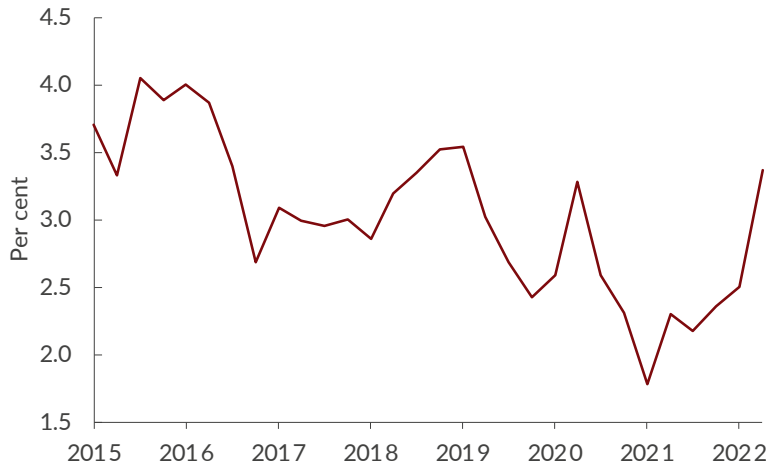
…and this continued in early 2022

Recent survey evidence supports this view. Almost three quarters (73 per cent) of firms in the British Chambers of Commerce Quarterly Economic Survey for the first quarter of 2022 reported no increase to investment in equipment or technology. The Omicron variant of Covid-19 has also had some effect: businesses taking part in the March 2022 Bank of England's Decision Maker Panel (DMP) Survey estimated that their investment in the first quarter would be 8 per cent lower than it otherwise would have been due to Covid-19. Overall, their near-term expectations for the impact of Covid-19 on investment worsened a little on the month.

Uncertainty has only risen a little

The DMP Survey suggested that general uncertainty rose only modestly between February and March, despite the additional uncertainty caused by the Russia-Ukraine conflict. More specifically, 49 per cent of businesses viewed the overall level of uncertainty facing them as high or very high, up slightly from 47 per cent in February.

Figure 1.4 Yields on UK BBB corporate bonds



Source: ICE BofA BBB sterling corporate and collateralised index (yield to maturity)

Cost of capital rising in line with the Bank of England policy rate

Ongoing monetary policy tightening (see 'Inflation and monetary policy', page 17) is likely to be contributing to a tightening in corporate financing conditions. UK corporate bond yields have risen since the start of 2021 (Figure

1.4). The FTSE All Share index fell by just under 10 per cent in response to the Russian invasion of Ukraine (Figure 1.5) but has since recovered. The longer-term context is that – leaving aside the large fall and rebound brought about by Covid-19 – UK equity prices and bond yields have been relatively flat for approximately five years, implying little change in the cost of capital for larger firms. As argued by Bhamra et al (forthcoming), the 'consumer discretionary' sector, which comprises those industries that tend to be most sensitive to economic cycles, saw a large downturn in performance during the Covid-19 crisis. As Russia's invasion of Ukraine continues, we expect a similar drag on the FTSE All-Share from this sector as producers will be forced to withstand higher input costs and inflation, and consumers themselves will see a greater proportion of their real incomes eroded by expenditure on essentials like food and energy.

Figure 1.5 FTSE All-share Index

Source: FTSE

SME lending fell over the past year

Lending to small and medium-sized enterprises was most affected by Covid-19[3] and may also be by the recent rise in corporate bond and lending rates. The effective rate on new bank lending to SMEs published by the Bank of England rose from 2.5 per cent in December 2021 to 3.5 per cent in March 2022, in line with the rise in Bank Rate, while a net repayment of loans by SMEs meant that the total stock of lending to SMEs fell in March for the thirteenth consecutive month.

The UK's trade deficit narrowed towards the end of 2021…

The UK ran a trade deficit of 1.0 per cent of GDP in the fourth quarter of 2021, less than the 2.8 per cent deficit in the third quarter. Excluding movements in non-monetary gold, which are volatile, the UK trade deficit was 1.7 per cent of GDP in the fourth quarter. The narrowing was driven by a rise in export volumes of 6.9 per cent in the fourth quarter (including 9.6 per cent growth in the export of goods and 4.0 per cent in services), while import volumes rose by only 0.3 per cent. This, together with an increase in gross earnings on direct investment paid to the UK by the rest of the world, contributed to a reduction in the UK's net borrowing position with the rest of the world from 5.1 per cent of GDP in the third quarter of 2021 to 1.3 per cent of GDP in the fourth quarter. Sterling has moved within a small band over the course of 2021 and 2022 (Figure 1.6). Looking forward we expect it to remain in this band.

3 See NIESR, UK Economic Outlook Autumn 2021, p21.

Figure 1.6 Sterling effective exchange rate index

Source: ONS

…but looks to be widening again

More recent monthly data for February 2022 suggests that the trade deficit, excluding precious metals, widened by £8.6 billion to £21.2 billion in the three months to February 2022, with the goods deficit widening to £54.4 billion and the services surplus widening to £33.2 billion. This is unlikely to reverse with growth expected to slow more in the Euro Area than in the United Kingdom as a result of the Russia-Ukraine conflict.

Still hard to isolate the 'Brexit effect'

Comparing the three months to February 2022 with the three months to November 2021, exports of goods to the EU increased by 3.3 per cent while those to the rest of the world increased by 4.9 per cent. Over the same period, imports of goods from the EU increased by 15.8 per cent and from the rest of the world by 6.5 per cent. Freeman et al. (2022) suggests that the implementation of Brexit had a large and persistent negative effect on relative UK imports from the EU while the negative effect on relative exports was smaller and only temporary. That said, data from the Business Insights Survey conducted by the ONS suggests that 26 per cent of businesses with 10 or more employees, and 29 per cent of those with fewer than 10 employees, that had exported in the last 12 months were unable to export or exported less in February 2022 compared with normal expectations. In contrast, 18 per cent of businesses with 10 or more employees, and 30 per cent of those with fewer than 10 employees, that had imported in the last 12 months reported that they were unable to import or imported less in the last month. At the same time uncertainty around the effects of Brexit has fallen. The share of firms in the Bank of England's DMP survey that reported Brexit in their top three sources of uncertainty was 22 per cent in March, down from 30 per cent in February. Longer-term changes in the UK's trading relationship with the European Union were discussed in Box A of our Winter UK Economic Outlook (Mortimer-Lee, 2022).

GDP is now well above its pre-Covid level

GDP is estimated to have grown by 1.3 per cent in the fourth quarter of 2021, resulting in annual GDP in 2021 being 7.4 per cent higher than in 2020. The latest measure of monthly GDP – that for February 2022 – was 1.5 per cent above its pre-Covid monthly level, i.e. in February 2020. Output in services and construction were both above their pre-Covid levels (by 2.1 per cent and 1.1 per cent respectively) while production output remained 1.9 per cent below. Consumer-facing services were 5.2 per cent below their pre-Covid level, while all other services were 4.0 per cent above.

Service sector growth may be slowing…

The IHS Markit/CIPS UK services PMI fell from 62.6 in March to 58.9 in April. Our April GDP Tracker estimated service sector activity growth of 0.8 per cent in the first quarter of 2022.

…and production output is likely to fall later this year

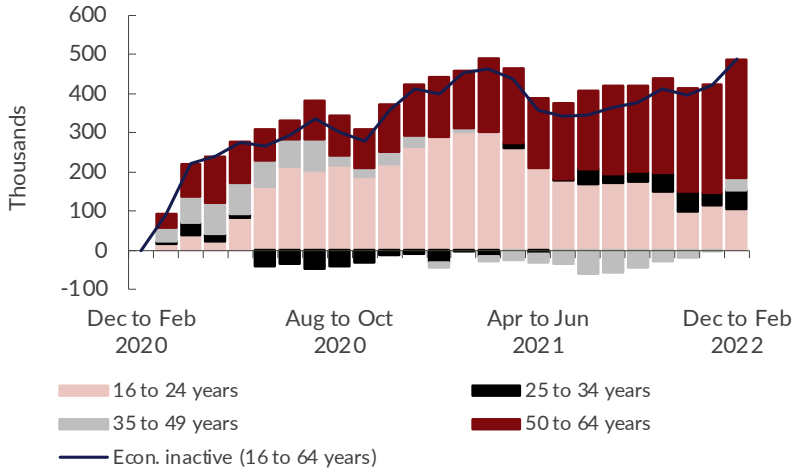
NIESR's April GDP Tracker estimated production sector growth of 0.9 per cent in the first quarter. Within production, the IHS Markit/CIPS PMI for manufacturing fell in March but rose in April and remains above 50, and our estimate for manufacturing is for growth of 1.4 per cent in the first quarter. The IHS Markit/CIPS construction PMI remained at 59.1 in March, unchanged from February. We expect construction output to have grown by 2.7 per cent in the first quarter of 2022.

Labour market and productivity

Unemployment continues to decline

Unemployment has continued to fall, reaching pre-pandemic levels at 3.8 per cent in the three months to February 2022: the lowest since the three months to December 2019. Despite positive headline unemployment figures, there are still 588,000 fewer people in employment than before the pandemic (see Figure 1.7). The ONS' Labour Market Statistics suggests that the 487,000 rise in economic inactivity has been driven by older workers, and includes a notable rise in those absent from the labour market due to long-term health conditions.

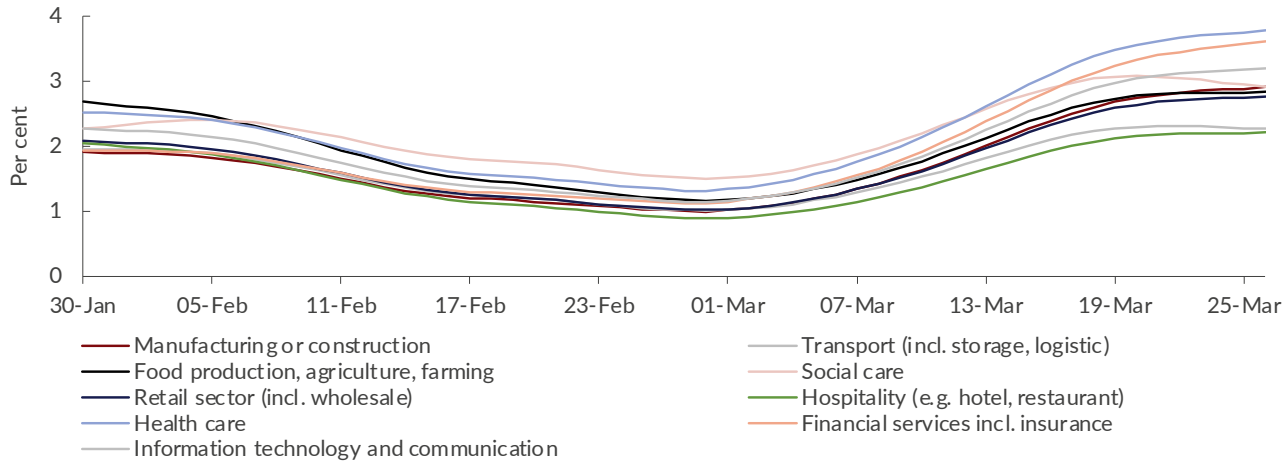
Figure 1.7 Change in economic inactivity by age group since December 2019-February 2020



Source: ONS

Total hours worked in the three months to March 2022 were still 1.4 per cent lower than before the pandemic. A rise in full-time employees has been more than fully offset by declines in part-time employment (which has recovered in recent months) and self-employment (which has not): the latter may be connected to both the Coronavirus Job Retention Scheme and/or new IR35 regulations making self-employment less attractive for tax purposes. Waves of Covid-19 leading to more rounds of staff absences have been a constant risk to labour supply. This was the case in March in particular, especially in white-collar occupations, but also other service sectors, at a time of rising infections without free tests (Figure 1.8).

Figure 1.8 Percentage of workers self-isolating due to Covid-19 by sector



Source: ONS

...but the participation crisis is worsening, driven by 'missing' older and part-time workers

Any recovery in the participation rate may be affected by the course of the pandemic but also the cost-of-living crisis. Higher energy and food prices might be expected to encourage some economically inactive individuals to return to work if pensions, benefits, and savings are not enough to meet basic needs. The ONS Over 50's Lifestyle Survey reports that some 40 per cent of those who left work or lost their job during the pandemic would consider returning to work in the future, but that people in their 50s were unsurprisingly more likely than those aged 60 years and over. There was considerable uncertainty as to when they would return to work, and 70 per cent preferred to return on a part-time basis, compared with just 9 per cent for returning full-time, which matches the greater fall in part-time numbers (see above). On the other hand, 60 per cent of people who lost their job or left work during the pandemic said that they are not considering returning to work at all.

Vacancies rise to new records while availability falls

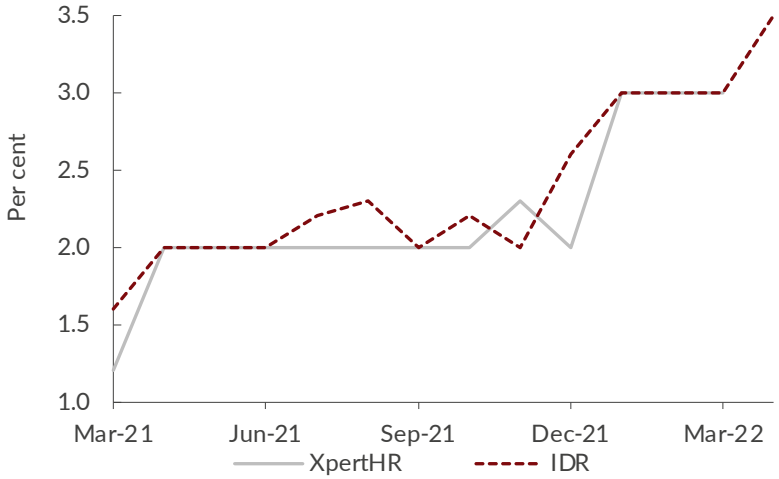
Job vacancies reached a record 1.29 million in January-March 2022. The largest increases were in the human health and social work sector, followed by professional, scientific, and technical activities. March's KPMG/REC jobs market report reported that the availability of workers fell at its fastest rate in four months while demand for permanent and temporary workers remains high. They also report that shortages of available workers may also be attributable to pandemic-related hesitancy and fewer workers from the European Union.

Earnings growth has begun to accelerate a little but is flattered by bonuses

The annual growth rate in average weekly earnings including bonuses in the three months to February was 5.4 per cent. There are some mild base effects because of the winter lockdown at the start of 2021 when there were some 4.5 million people on furlough. In real terms, total pay in the three months to February 2022 grew by 0.4 per cent thanks to strong bonuses, however regular pay (excluding bonuses) declined by 1 per cent. The last time regular pay fell by 1 per cent or more on an annual basis was in May to July 2014, at the end of the post-Global Financial Crisis period of falling real wages.

Annual private sector nominal pay growth during the same period grew by 6.2 per cent, a rate last seen in the first quarter of 2007, while annual public sector pay growth was 1.9 per cent. Pay awards continue to be heavily skewed towards the private sector: in particular, white-collar occupations and individuals in high earnings professions. Income Data Research (2022) suggests that, in the three months to April, the median pay settlement was 3.5 per cent (see Figure 1.9).

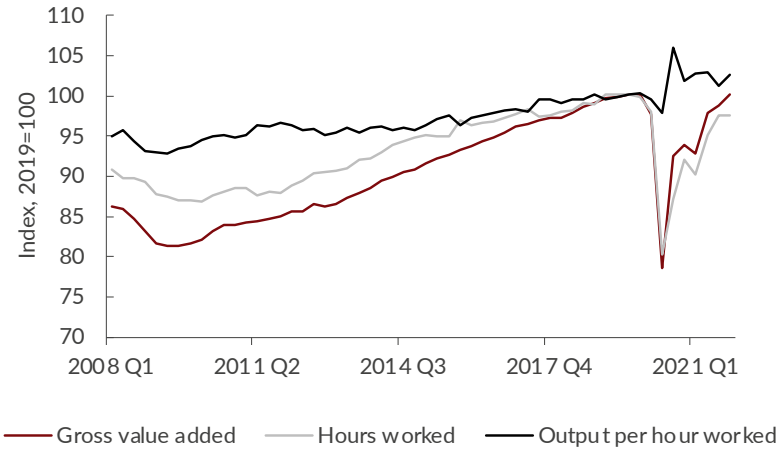
Figure 1.9 Median pay settlements (three-month average)



Source: XpertHR, IDR

In 2021, output per hour worked was 1 per cent higher than in 2020 and 2.4 per cent higher than in 2019 (Figure 1.10), some of which is likely to be due to the compositional effect of low-productivity sectors being hardest hit by the Covid-19 shock. Productivity continues to be hampered by the lack of investment, including in research and development, by businesses. Rising costs of production for firms may also deter employers from investing in productivity-enhancing training. The government's 'Help to Grow' programme, which was set up in August 2021, aimed to boost productivity among small and medium sized businesses, but had only around 2,500 businesses enrolled by February 2022, well below the final target of 30,000. Slowing GDP growth in 2022 is likely to be accompanied by slower growth in labour inputs, however, which would mute the fall in labour productivity growth.

Figure 1.10 Output, hours and output per hour



Source: ONS

Fiscal policy

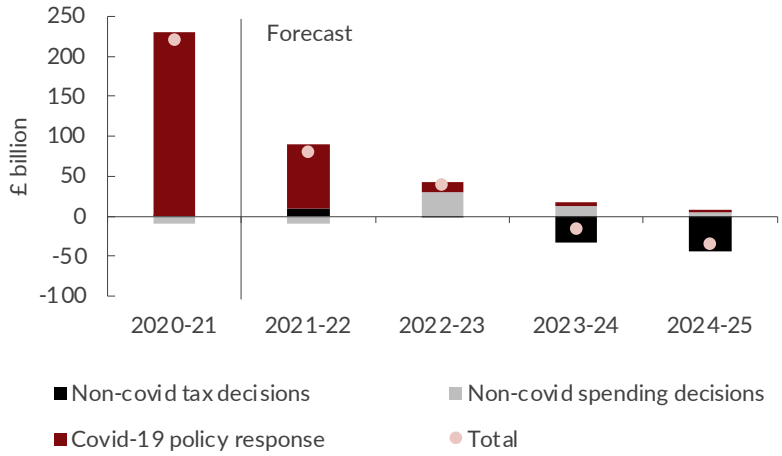
The government deficit fell to around 6 per cent of GDP last year…
Government borrowing surprised on the downside for much of the 2021-22 fiscal year and is reported to have totalled around £152 billion, or 6.4 per cent of GDP, slightly higher than the 5.4 per cent expected by the Office for Budget Responsibility (OBR) at the Spring Statement but below the 7.9 per cent forecast at the 2021 October Budget. This represents a record decline from the 2020-21 deficit of 14.8 per cent, but is still amplified by the Coronavirus Job Retention Scheme, which ended mid-way through the last financial year. Public sector net debt was 96.2 per cent of GDP in 2021-22, or 83.1 per cent excluding the Bank of England's quantitative easing and Term Funding Scheme activities.

…and the Chancellor had good news at March's Spring Statement
At the Spring Statement on 23rd March the government 'received' a net fiscal windfall, principally as a result of faster rising nominal earnings and prices in the context of a previously-announced decision to freeze income tax thresholds from April rather than raising them in line with inflation. This temporary non-discretionary improvement in the fiscal position was estimated by the OBR at £15 billion (½ per cent of GDP) in 2024-25, consisting of £37 billion higher receipts and £23 billion more spending, largely resulting from higher inflation forecasts. The net debt position was also improved by a rise in forecasts for nominal GDP.

Despite this, fiscal policy has only responded minimally to the inflationary shock…
Responding to the anticipated shock to real incomes, discretionary support for household energy bills was announced for 2022-23: effectively £9 billion of rebates and loans to households, most of which is to be repaid over five years from 2023-24 onwards. There was also a rise in the threshold for National Insurance contributions, reducing average tax rates from July onwards, and a cut to the basic rate of income tax from April 2024. Acting to offset this, the effective tax rate on student loans taken out by new students will rise over their working lives as a result of reforms announced to higher education funding.

…and will be tighter over the remainder of this parliament as a result of Covid-19
The net result of discretionary policies was a small loosening relative to the October 2021 forecast, which still leaves fiscal policy tightening rapidly (see 'Forecast' on page 20). The fiscal expansion during the Covid-19 period is set to be followed by a retrenchment: a policy decision not to smooth the impact of the new set of shocks on households by allowing the debt and deficit to naturally return to their downward trajectories at a later date. Figure 1.11 illustrates that, since the March 2020 Budget (the final fiscal event before the majority of the pandemic-related measures were announced), the government is now planning for the fiscal loosening to be followed by tighter discretionary fiscal policy in the coming years than had been planned before the pandemic.

Figure 1.11 Cumulative discretionary fiscal policy changes since March 2020 Budget



Source: OBR, NIESR calculations

The Spring Statement should have been more supportive

At the time of the Spring Statement NIESR said that economic headwinds were likely to eat into fiscal headroom and that there will be severe strain on public spending budgets, which were set for three years in nominal terms at the 2021 Autumn Budget. We felt that the new Health and Social Care Levy also placed significant pressure on households at a time of squeezed living standards and called for more direct support for household budgets. Given the improvement in the fiscal position ahead of the Spring Statement, we hoped that fiscal policy would loosen to cushion households – particularly poorer households – against the real income falls, but this did not happen. This failure of fiscal policy to support the right social outcome again demonstrated the need for a rethink of the fiscal framework, as suggested in NIESR Occasional Paper LXI on 'Designing a New Fiscal Framework' (Chadha et al, 2021).

Debt interest is higher in the short-term due to inflation-linked gilts

Previous Outlooks and NIESR research have highlighted the vulnerability of the UK's debt financing to rises in short-term interest rates (see 'Inflation and monetary policy), but also that, when considering the fiscal consequences of higher interest rates or inflation, the reasons are as important as the rises themselves. For much of the past year, higher than expected nominal GDP resulted in greater tax income and a larger denominator in the debt-to-GDP ratio, despite rising interest rates. With growth slowing and inflation continuing to rise, the OBR now forecast a rise in debt interest payments to £83 billion in 2022-23, principally due to the rise in retail price index inflation, to which around a quarter of UK gilts are linked, but also a higher forecast path for Bank Rate and the erosion of the 'net interest margin' on the Bank of England's Asset Purchase Facility (QE). The yield on the benchmark ten-year gilt has risen by around 50 basis points since February, from 1.4 per cent to 1.9 per cent.

Inflation and monetary policy

Surging inflation shows no sign of slowing

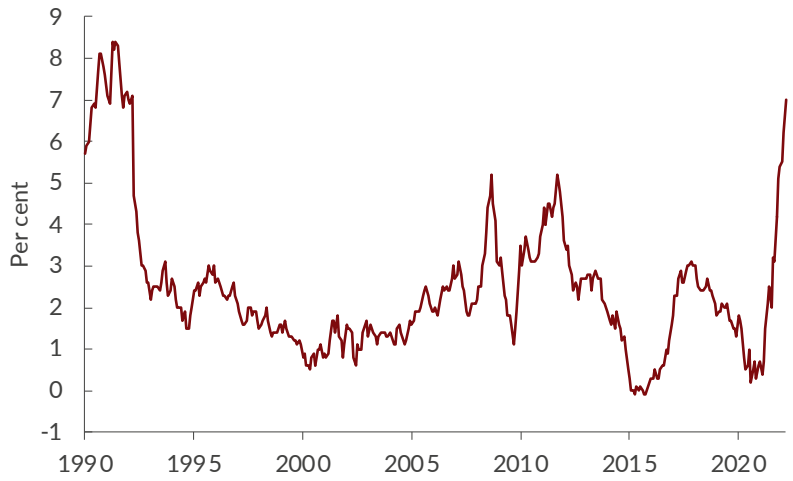
The latest ONS estimates record that consumer prices in the UK rose by 7.0 per cent in the year to March 2022 (Figure 1.12), the highest annual rate of consumer price index (CPI) inflation recorded in the UK since March 1992. This surge in inflation occurred across most types of consumer expenditure to different degrees, with the largest contributions from transport and restaurants and hotels, which together made up almost 0.5 percentage points of the headline number. Monthly inflation between March and February 2022 was very high at 1.1 per cent. Recent NIESR analysis[4] indicates that if it continued at this rate, annual inflation would reach 14 per cent by February 2023.

Goods inflation remains higher than services inflation while core inflation is rising

The rate of goods price inflation rose to 9.4 per cent in March from 8.3 per cent in February, while services price inflation rose to 4.0 per cent in March from 3.5 per cent in February. Core CPI inflation (i.e. CPI inflation excluding energy, food, alcohol and tobacco) rose to 5.7 per cent from 5.2 per cent in February.

4 Dixon, H. 'Surging Inflation Shows No Signs of Slowing', NIESR blog, 13.

Figure 1.12 Consumer price index inflation (annual per cent)



Source: ONS

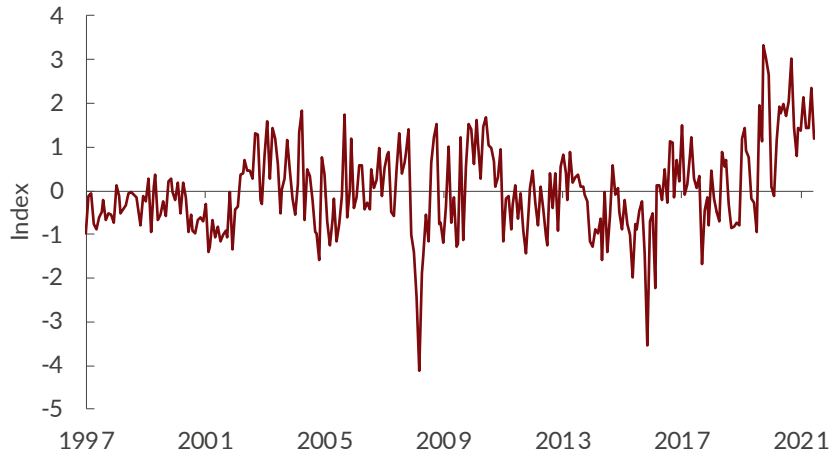
Input prices have also surged

The headline rate of producer input price inflation was 19.2 per cent in the year to March 2022, up from 15.1 per cent in February. Perhaps unsurprisingly, crude oil provided the largest upward contribution to the annual rate of input price inflation.

Supply chain disruptions have been a problem over the past year…

Large rises in the prices of traded goods and services have been the main factor underlying the sharp increases in both input and consumer goods price inflation in the UK. Strong global demand for particular goods and disruption to supply have created bottlenecks in global supply chains (Figure 1.13) which have put upward pressure on prices globally. Although supply chain pressure as measured by the New York Fed's index fell slightly in February (see Benigno, 2022 for details of its construction), it remained elevated before the Russian invasion of Ukraine.

Figure 1.13 UK supply chain pressure index



Source: Federal Reserve Bank of New York

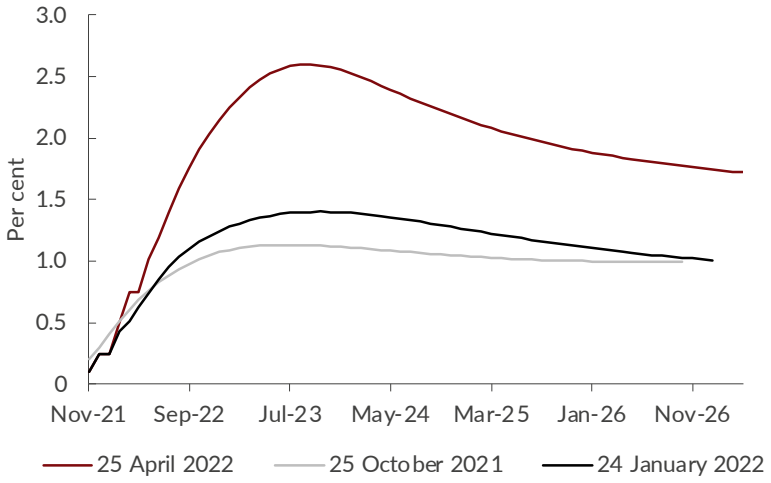
...and the conflict in Ukraine will only have exacerbated this

Global inflationary pressures are likely to strengthen considerably over the coming months. In particular, Russia and Ukraine account for roughly a quarter of the world's exports of wheat; Russia produces 20 per cent of the world's fertiliser and ingredients to make it elsewhere (specifically, urea, ammonia, and potash); about 50 per cent of the world's semiconductor-grade neon, critical for the lasers used to make microchips and smart phones, comes from two Ukrainian companies; Russia is a significant producer of gold, nickel, palladium, copper and aluminium and a major supplier of oil, coal and natural gas. Brexit is also likely to continue to contribute to supply chain disruptions as the UK continues to suffer from increased trading costs with the European Union, as well as fewer workers.[5]

Monetary policy has continued to tighten

At its meeting on 5th May 2022, the MPC increased the Bank of England's policy rate by 0.25 percentage points to 1 per cent, marking the fourth consecutive rate hike since late 2021. With CPI inflation expected to remain above the target of 2 per cent over the next two years, we can expect to see further tightening. Financial markets currently expect a further three or four rate increases this year, with interest rates reaching 2 per cent by January 2023 and 2.5 per cent by May 2023. This is one percentage point higher than the peak in interest rates that was expected at the time of our Autumn Outlook (see Figure

Figure 1.14 Market expectations of Bank Rate on 25th April and at closure date of previous two forecasts



Source: Bank of England

The beginning of quantitative tightening

In addition to interest rate rises, 2022 is seeing the start of 'quantitative tightening' (QT). The MPC has announced that the Bank of England will no longer reinvest the proceeds obtained from maturing government bonds, has begun the process of reducing its holdings of corporate bonds, and is preparing the process of active gilt sales to take place some time after August 2022. Whether QT will have much, if any, effect on demand or inflation is highly uncertain (see Lenoël, 2021); MPC member Silvana Tenreyro, in the 2022 Dow Lecture at NIESR (Tenreyro, 2022), suggested that the effect is likely to be small.

Monetary policymakers face their toughest policy dilemma since Bank independence

The MPC has no control over global energy and commodity prices but is concerned to ensure that, when the current extreme price pressures pass, inflation returns to its 2 per cent target. Against the need to control inflation expectations, the MPC must also contend with the risk of amplifying the impact of the squeeze on incomes. This leaves the Committee with probably the toughest policy dilemma it has had to face since it was established 25 years ago (Chadha, 2022), a dilemma not helped by the lack of support for households coming from fiscal policy.

5 See also: House of Commons Treasury Committee, 'Defeating Putin: the development, implementation and impact of economic sanctions on Russia', Twelfth Report of Session 2021-22.

Forecast

GDP

The terms of trade shock resulting from higher energy prices would be expected to lead to a fall in output and this is reflected in our forecast. Our central case forecast sees GDP grow by 3.5 per cent in 2022, followed by 0.8 per cent in 2023 and 0.9 per cent in 2024 (Figures 1.15 and 1.16). For 2022 this represents a downgrade of 1.3 percentage points since our Winter Economic Outlook, largely reflecting the rise in energy prices coming from the war in Ukraine (see Box A).

Figure 1.15 GDP

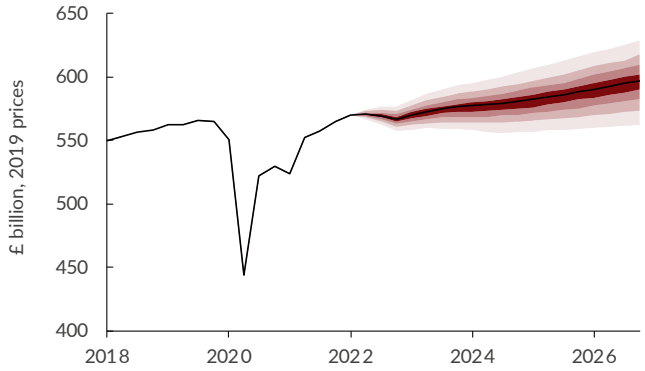
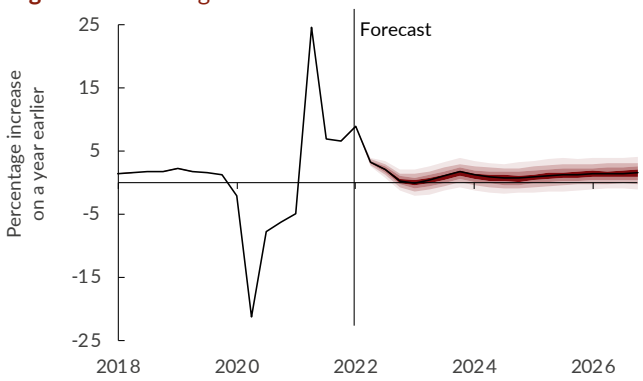
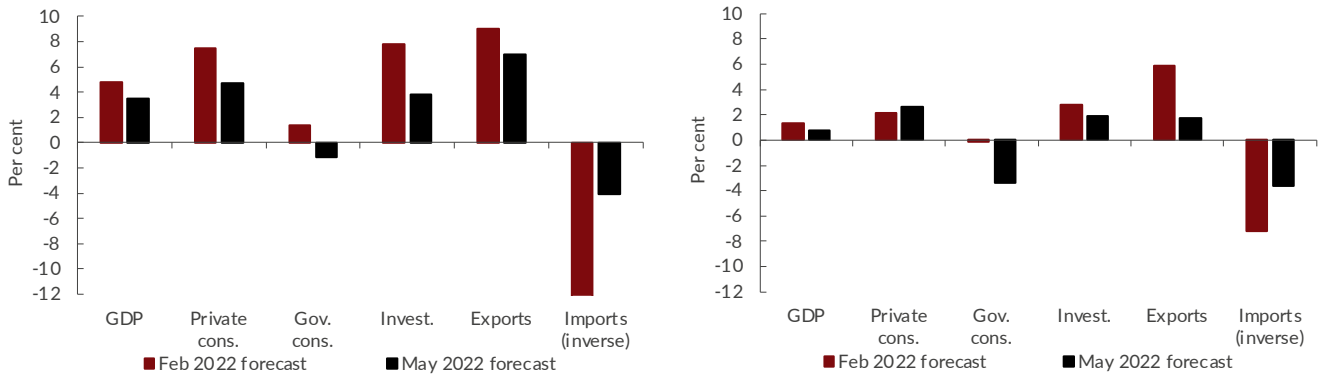


Figure 1.16 GDP growth



Source: NiGEM database, NIESR forecast , NiGEM stochastic simulation. See page 5 for more details of fan-charts.

Figure 1.17 Components of GDP in 2022 (left) and 2023 (right)



Source: NiGEM database, NIESR forecast

In all components of private sector expenditure, Covid-19 and the slow start to 2021 flatter year-on-year growth in 2022. Activity is expected to decline in the third and fourth quarters of the year – a 'technical', but nonetheless relatively shallow, recession – with high and persistent inflation, rising interest rates and tightening fiscal policy combining to restrain output growth. Box B on page 21 discusses the risks of a much deeper recession in which GDP falls year-on-year.

Tax and spending policies are assumed to evolve broadly in line with the government's policy as set out at the Spring Statement, with the deficit (Figure 1.18) forecast to fall from 5.8 per cent in 2021-22 to 2.7 per cent in 2022-23 and 2.1 per cent in 2023-24. Higher inflation, combined with unchanged nominal public spending plans, leads to a forecast fall in government consumption of 1 per cent in 2022 and 3 per cent in 2023. Over the forecast period this constitutes a series of fiscal deficits not only smaller than we forecast a year ago but also than we forecast before the pandemic began. The public sector net debt to GDP ratio is currently around 16 percentage points higher than in our Autumn 2019 forecast, but this gap is forecast to close to around 1.5 percentage points by the end of the 2026-7 fiscal year.

Box B: How likely are we to see a major recession in 2022?

By Peter Dixon[1]

Introduction

Until relatively recently it seemed unlikely that the UK economy would fall into another recession — by which we mean in this case a year-on-year fall in GDP — as the country continued its post-Covid recovery.[2] Since our February 2022 forecast, however, a number of factors have conspired to cast clouds over the economic outlook. In addition to the inflation surge, resulting from rising energy costs and supply constraints in the wake of the pandemic, the economy now faces an additional uncertainty shock triggered by the Russian invasion of Ukraine.

A combination of war and energy price shocks is reminiscent of the problems which hit the UK economy in the 1970s and will clearly increase the strength of economic headwinds, particularly since the UK is already dealing with the risk to growth posed by Brexit. But whilst the risks to the outlook have risen, a recession is by no means inevitable. Here we look back at previous recessionary episodes to identify the factors which impacted on the economy and trace the linkages which brought about a contraction in output. We also look at the information content of the latest data releases to assess what they tell us about the prospect of recession in the context of qualitative choice models. For a more detailed and longer run perspective, NIESR's UK Business Cycle Dating Committee provides a fuller narrative and history of expansions and contractions. (see Chadha, Lennard and Thomas, 2022).

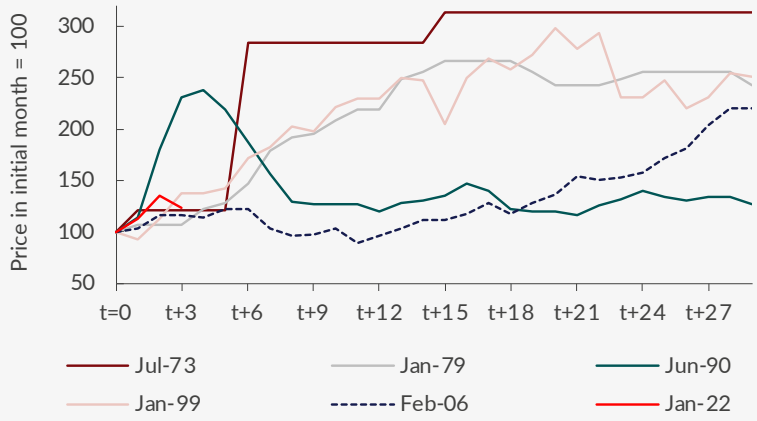
Recessions past and present

It is particularly interesting to compare the current economic picture with that prevailing in 1973 when the UK experienced its first major post-World War II recession (apart from the one quarter of negative annual GDP growth experienced in the second quarter of 1958, see Blackaby, 1975). Then, as now, the economy was coming off a period of extremely rapid growth – compare the Barber boom with today's post-pandemic recovery. In both cases the economy was having to adjust to new institutional arrangements: in 1973 a breakdown in the Bretton Woods system and the transition to a new world of floating exchange rates, today the new post-Brexit environment with all the attendant consequences for trade flows. Both periods were also characterised by regional military conflict which had an impact on global energy prices. However, whereas the war in Ukraine produced a 20 per cent rise in crude oil prices in March 2022, the Yom Kippur conflict between Egypt and Israel in October 1973 generated a near-tripling, from $3.56 in July 1973 to $10.11 by early-1974 (Figure B1).

Tempting as it is to draw parallels between 1973 and today, there are also significant differences. First, the economy uses oil far more intensively today which will reduce the impact of any given oil price hike: each pound of GDP (measured in constant prices) today consumes only a quarter as much oil as in 1973. Recent empirical evidence (Kirby and Meaning, 2015 and Millard and Shakir, 2013) suggests that a sustained 10 per cent rise in oil prices will only shave between 0.1 per cent and 0.2 per cent from GDP. The starting point for inflation was also higher in 1973, with retail price index inflation already at 9 per cent before the oil price hike kicked in. The resultant inflation surge was amplified by a very different wage bargaining process in which unions played a key role. In the two years prior to the 1973 oil shock, real average earnings increased by 7.5 per cent whereas they have risen by only 2.7 per cent over the past two years. Whilst unions were instrumental in pushing nominal wage inflation into double digits by end-1974, their power has since been much diminished. In 1973 trade union density stood at 46 per cent; latest data suggest that by 2020 that figure had roughly halved to 23.7 per cent (Figure B2). The prospect of a 1970s-style wage-price spiral reinforced by rising costs and union power thus seem remote. Further, we now have an independent central bank setting monetary policy to achieve an inflation target. This has helped anchor inflation expectations, again making a wage-price spiral much less likely.

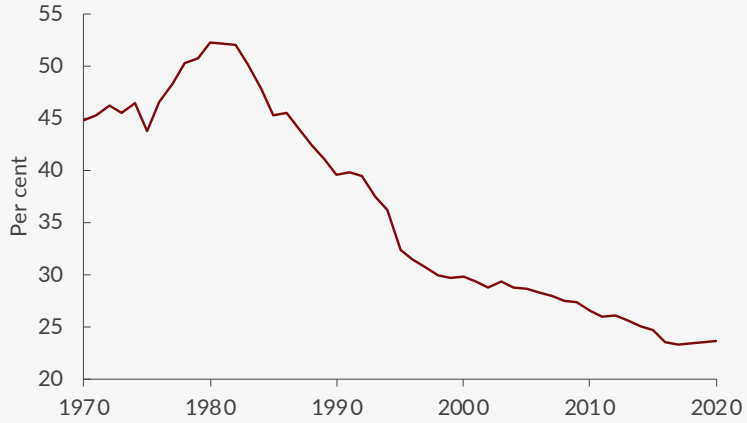
1 Visitor, NIESR.
2 Note that the commonly ascribed definition of a recession, viz. two consecutive quarters of negative quarterly GDP growth is not necessarily helpful, and here we focus on a more serious downturn in the economy. Generally speaking a recession is a sustained fall or contraction in economic activity.

Figure B1 Selected oil price shocks



Source: Federal Reserve Bank of St. Louis, Energy Information Administration

Figure B2 The power of unions continues to decline



Source: OECD, ONS

Spotting the turning point

Looking back over history is an interesting exercise but whilst it provides context it is often not useful in determining how economic patterns are likely to evolve in future. Forecasting turning points in the economic cycle is as much art as science and a considerable amount of research has been devoted to finding optimal indicators. Lenoël and Young (2020) conducted a survey to identify real-time turning point indicators published by international statistical and economic institutions. They found a considerable range of techniques in use across different organisations due in part to variations in the range of available data. Increasingly, the use of high frequency real time data gives an insight into how the economy is evolving and is a useful addition to the data armoury, although there is insufficient data to assess how well it might have performed ahead of past recession cycles. That said, as Chadha and Nolan (2002) show, the business cycle is a medium frequency innovation and thus we might expect that high frequency data may not have strong information content for business cycles.

Our analysis here focuses on the five major recessions since the 1970s. Evidence suggests that the UK's recent recessions were not foreseen a year in advance. Using data from HM Treasury's compendium of forecasters' expectations, which extends back to 1987, the median forecast made in September 1990, 2008 and 2019 failed to anticipate the declines in GDP that occurred in 1991, 2009 and 2020. There are sometimes good

reasons for that: the collapse of Lehman Brothers in 2008 and its attendant consequences for the global financial system was a random shock to which forecasters quickly adjusted. The same is true of the economic reaction to the pandemic when activity collapsed in spring 2020 due to Covid-19 and measures put in place to limit its spread. On other occasions, however, the failure to anticipate recession appears to be a more egregious forecast error – notably the recession of 1990-91.

Lenoël and Young assess some of the various indicators used to measure cyclical turning points, pointing out that until 1997 the ONS published a leading indicator for the UK which was assessed by Artis at al. (1995) as containing "important predictive information." However, the statistical authorities ceased publishing them due to a number of methodological concerns, not the least of which was "an indicator that gave an early signal ahead of one recession may not work so well ahead of another recession if the nature of the recession is different".

One of the methods that received less attention in the Lenoël and Young paper was the use of qualitative choice models in assessing cyclical turning points. This has found considerable traction in the literature which uses financial indicators to predict the cycle (Estrella and Mishkin, 1998). Such techniques are used to model outcomes where the dependent variable takes a binary value depending on the contingent state. In our case the dependent variable is the annual rate of real GDP growth which takes the value 1 when it falls into negative territory and 0 otherwise: in other words when quarterly GDP is less than it was in the quarter a year earlier.[3] In applying the analysis to the UK, the object of the exercise is to find indicators which have decent predictive power six months ahead. We chose as regressors the CBI's business optimism index and the OECD leading indicator for the UK, which is in turn comprised of six variables (RPI, passenger car registrations, consumer confidence, 3-month LIBOR rate, manufacturing production expectations and an index of equity prices). To add an additional financial market indicator, we also include the slope of the gilt curve (specifically, two-year minus ten-year yields).[4]

Based on data from 1972 we have 198 quarters of data and in 30 quarters annual GDP growth was negative. A simple probit model[5] was used to assess the predictive power of the three explanatory variables to give an assessment of recession probabilities six months ahead. The model diagnostics suggest that it fits the data very well, demonstrated by Figure B3, which indicates that it captures the likelihood that GDP growth is negative with a probability of at least 80 per cent (the one exception was the recession of 1990-91 when most forecasters also missed it). Plugging in the latest observations suggests that the probability that annual GDP growth will turn negative this year is negligibly small. This is not surprising given the momentum behind activity in recent months. Given the nowcast for quarterly GDP growth of 1.0 per cent in the first quarter of 2022 suggested by our April 2022 GDP tracker, output would have to decline by 2.3 per cent over the next two quarters for the annual growth rate to turn negative.

In contrast to conventional forecasting techniques, we do not attempt to quantify the rate of GDP growth. But the probabilistic approach outlined here gives a sense of the risks surrounding the outlook and how much the economy would have to slow in order to produce a year-on-year fall in GDP. Since the analysis is based on the information content in current data, it will be subject to change in future. However at the time of writing – and these may prove to be famous last words – the likelihood of a sustained fall or contraction in GDP (ie, a year-on-year fall) in 2022 appears remote. That said, there may well be a small contraction of GDP (and two consecutive quarters of negative quarterly growth) in the second half of 2022.

3 Again, we could define a recession as two consecutive quarters of negative quarter-on-quarter growth. In that case, our dependent variable would need to reflect the quarterly growth profile. However, the explanatory power of the indicators is very limited in this regard.

4 We consider this to be a first pass and so the results should be viewed as preliminary. In future work, we plan to add the Bank rate and oil prices (and possibly other variables) to the regression to see if these variables make a difference to the predictive power of the regression.

5 A probit model is a type of statistical model in which the dependent variable can only take two values; the probability of it taking one of those two values is regressed on the independent variables.

Figure B3 Model estimate of UK recession probabilities

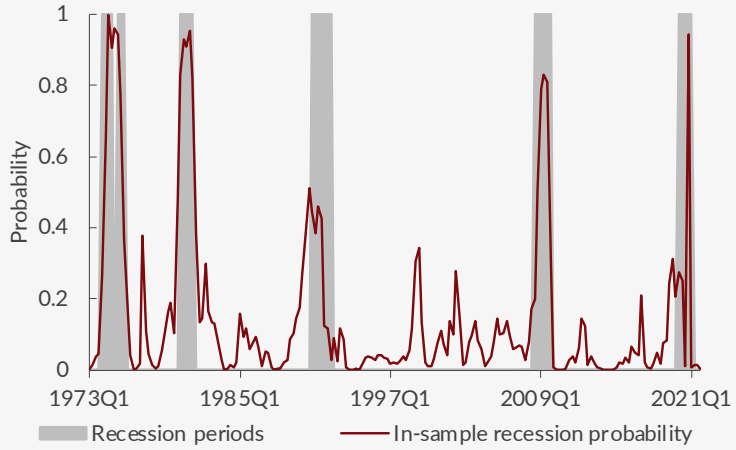


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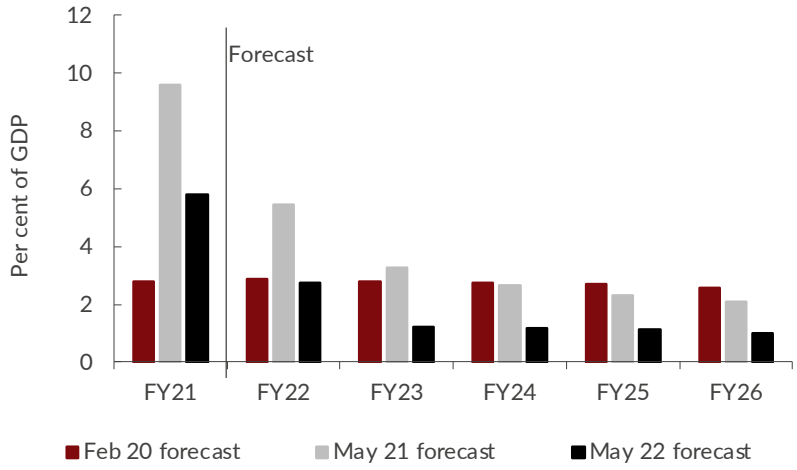
Figure 1.18 Public sector net borrowing

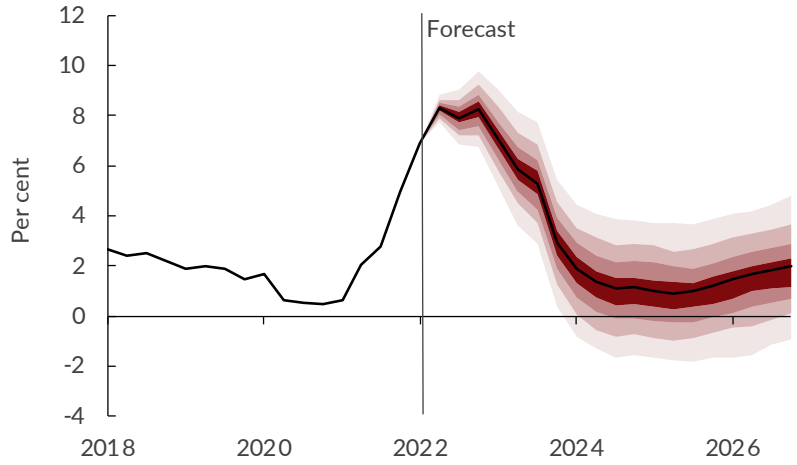


Source: NiGEM database, NIESR forecast

Inflation and monetary policy

In our central case forecast consumer price (CPI) inflation peaks at 8.3 per cent in the fourth quarter of 2022, falling to 2.9 per cent by the end of 2023 (see Figure 1.19).

Figure 1.19 CPI fan chart

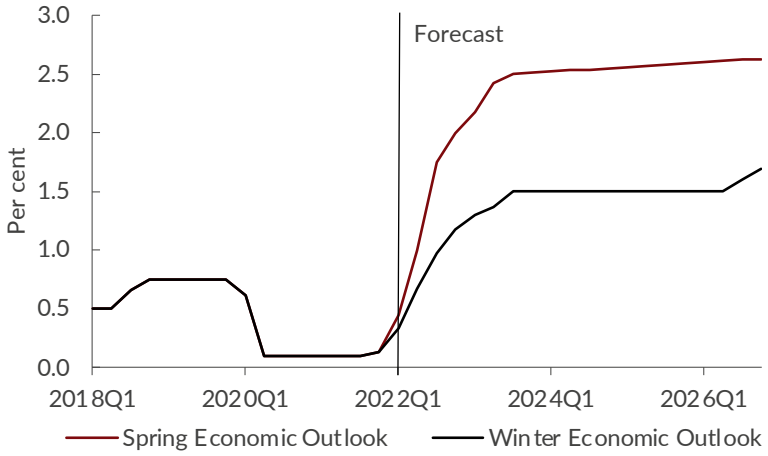


Source: NiGEM database, NIESR forecast, NiGEM stochastic simulation. See page 5 for more details of fan-charts.

Compared with our previous forecast this constitutes a materially higher path for inflation over the next two years, reflecting the effects of the war in Ukraine, which is expected to drive international energy and food prices higher for a longer period. After this shock dissipates, weak demand and higher interest rates force inflation below target for a period.

The Bank of England's policy interest rate is forecast to rise to 2 per cent in the final quarter of 2022 and to rise more slowly thereafter, remaining close to 2.5 per cent for the majority of the forecast period (Figure 1.20). Given the rise in inflation, this remains well below the path that would be implied by a standard Taylor rule.

Figure 1.20 Bank rate

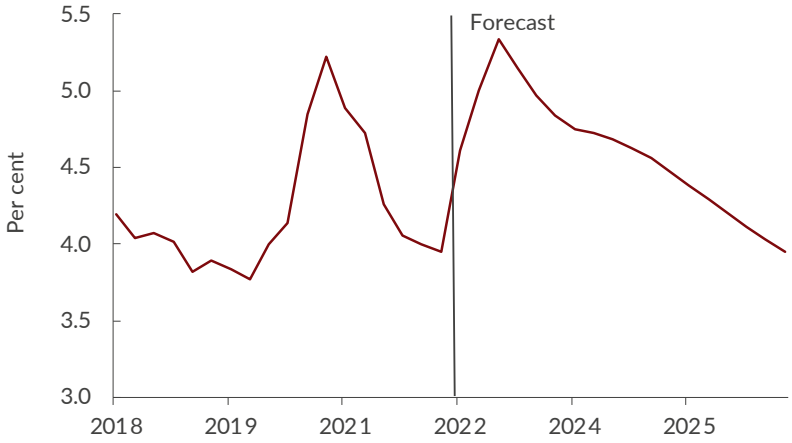


Source: NiGEM database, NIESR forecast

Household incomes

We forecast unemployment to average 4.4 per cent in 2022, rising slightly to average 5 per cent in 2023, as growth slows and interest rates rise (Figure 1.21), returning gradually to around 4 per cent by the end of the forecast period.

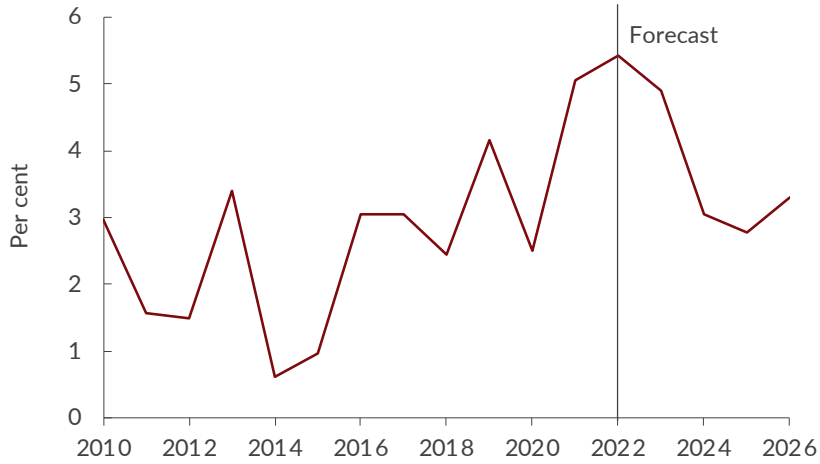
Figure 1.21 Unemployment



Source: NiGEM database, NIESR forecast

Average earnings growth is forecast to average 5.4 per cent in 2022. This includes a small base effect from the furlough scheme, which continued until September 2021 and saw many recipients' earnings reduced by 20 per cent. This is followed by growth of 4.9 per cent in 2023 and around 3 per cent thereafter (Figure 1.22) as inflation returns to target.

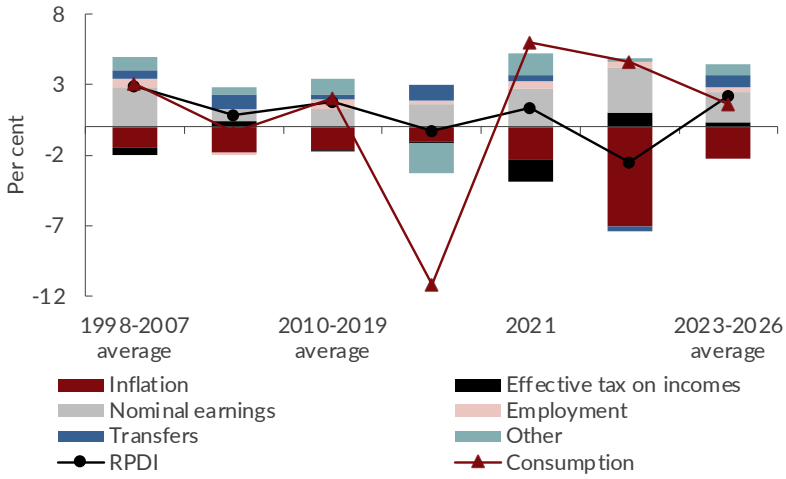
Figure 1.22 Average earnings growth



Source: NiGEM database, NIESR forecast

As expected from a terms-of-trade shock, real household disposable incomes are forecast to fall by 2.4 per cent in 2022 (Figure 1.23), as even the elevated rate of earnings growth fails to keep up with inflation. Real incomes return to growth in 2023, though only marginally, with growth sustainably above zero not returning until inflation is under control.

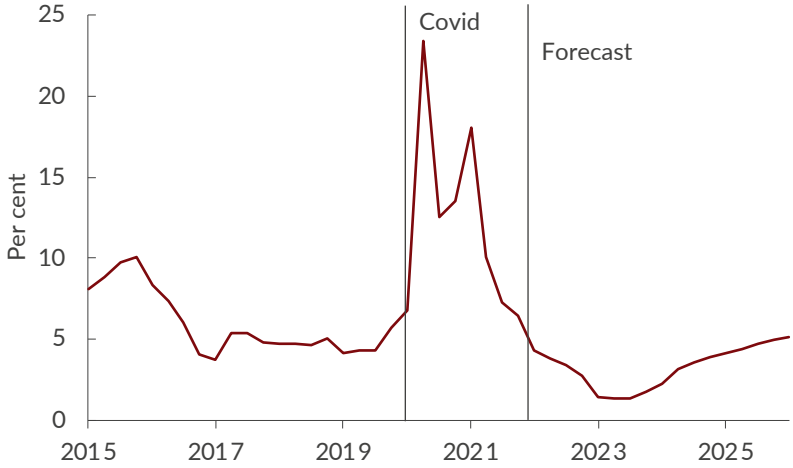
Figure 1.23 Growth in consumption and real personal disposable income, including contributions to RPDI growth



Source: NiGEM database, NIESR forecast

Growth of 4.7 per cent in consumption (see above) is therefore only maintained as a result of a fall in the savings rate to 3.6 per cent in 2022 and 1.5 per cent in 2023 (Figure 1.24).

Figure 1.24 Savings rate



Source: NiGEM database, NIESR forecast

Risks to the forecast

The largest and most dangerous downside risk to our GDP forecast is constituted by the ongoing war in Ukraine and its potential to disrupt the global economy if it either persists beyond our main case forecast assumption for its conclusion in 2022 or expands to draw in more countries. There are significant economic risks from a deepened sanctions regime which impacts on EU growth, with spillover consequences for the UK.

Domestically, the great risk on both sides to GDP and inflation comes from monetary policy. Our relatively weak GDP forecast could be further worsened by a more aggressive path for interest rates, or if the MPC decides to stick to the forecast path of interest rates in the face of weaker economic data than expected.

On the other hand, if policy is looser than forecast, we could see higher and more persistent inflation than in our central case scenario. A wage-price spiral does not take hold in our central scenario but the possibility of this constitutes a further risk to the upside for inflation.

Fiscal policy risks to both GDP and inflation are weighted to the upside, with the Chancellor likely to face calls for redistributive transfers to smooth the shock, more generous public spending plans to mitigate real wage falls for public sector workers, and delays or reductions to the rise in corporation tax scheduled for 2023.

In the longer term our growth assumptions are driven by the annual growth rate of labour productivity returning to around 1 per cent. Box C on page 30 discusses 'Deindustrialisation in the UK', arguably one of the reasons that long-run UK productivity growth is so low. Risks to this are weighted to the upside, with the potential for greater automation and efficiency through the adoption of remote working during Covid-19. One major downside risk to the potential of the UK economy is posed by larger and more persistent damage to labour supply by 'long Covid', whereby the participation rate takes longer to return to its pre-pandemic trend than in our forecast, if it ever does.

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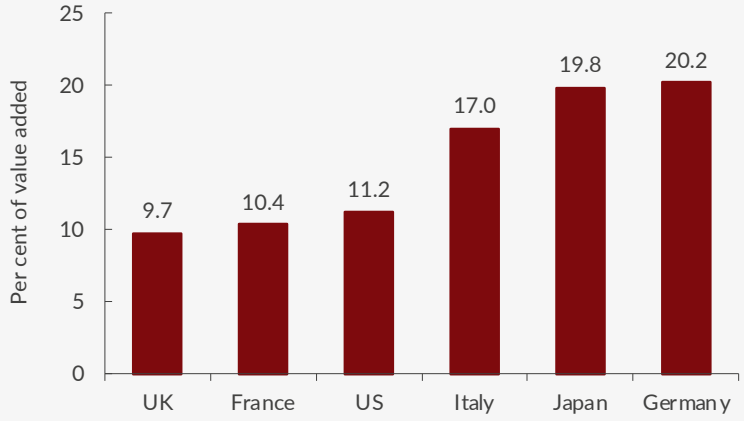
Box C: Deindustrialisation in the UK

By Paul Mortimer-Lee[1] and Xuxin Mao

Introduction

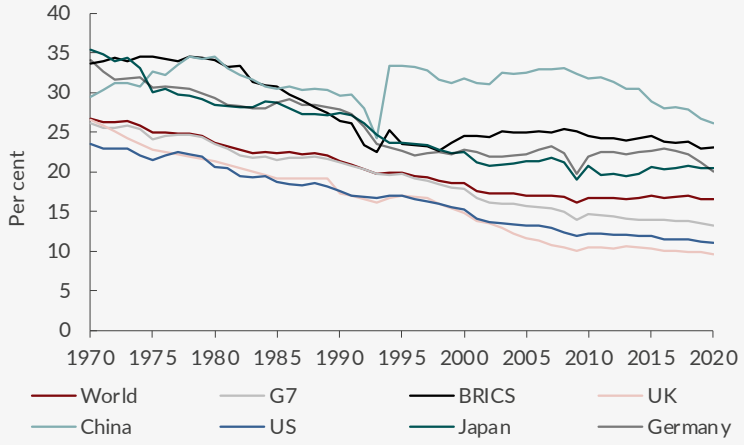
When people talk of "the industrialised countries" they are talking about rich economies with high living standards. Industrial development has been at the heart of several countries' development strategies, including success stories such as Japan, South Korea, and China. Many of the fastest-growing economies over recent decades have seen rapid industrial development. Against this background, does it matter that the UK has the smallest share of industrial output in GDP of any country in the G7 (see Figure C1)? Or that it has seen the most significant decline in manufacturing share of all the G7 economies since 1970 (Figure C2)? This box examines how the manufacturing sector has evolved and suggests that its importance in the economy has shrunk considerably because both domestic and international market forces made this a rational and efficient use of resources as manufacturing has been relatively unprofitable compared with services. To raise manufacturing's share again, the UK needs to cut consumption and run with lower interest rates and a softer exchange rate.

Figure C1 Share of Value Added in Manufacturing



Source: OECD

Figure C2 Manufacturing to GDP Ratio (1970-2020)



Source: UNCTAD

1 Fellow, NIESR

Does deindustrialisation matter?

There are several reasons for believing that the decline in manufacturing in the UK does matter:

- Manufacturing is an important employment sector, with about 2.4 million workers in the UK,
- Productivity growth is often faster in manufacturing than in services, so a small manufacturing share in GDP could mean slow overall productivity growth. From 1997 to 2021, output per hour worked in the manufacturing sector increased by more than 151 per cent, compared with only 31 per cent in the economy as a whole. Manufacturing accounts for about two-thirds of the private sector's Research and Development.
- Manufacturing uses as inputs a large share of the outputs of other industries – the ratio of gross output to net output is around 2½ to one, showing that many other sectors depend on manufacturing as a customer. Other firms distribute manufacturing goods as well as providing inputs.
- Manufacturing is unevenly distributed across the country, employing a higher proportion of workers in the East and West Midlands and a much lower proportion of workers in London, so weak manufacturing can imply regional disparities in incomes, jobs, and prosperity.

In the 1950s, manufacturing employed about a third of the workforce. This had shrunk to one in six by 1997 and is currently only one in twelve (Figure C3).

Figure C3 UK Manufacturing employment to total employment ratio

Source: ONS

Why has UK manufacturing shrunk so much?

Why has UK manufacturing shrunk so much, and much more than in competitor countries like Germany and Italy, where in 2019 manufacturing accounted for nearly twenty-two per cent and seventeen per cent of value added, respectively? We can look at this from two perspectives – one national and the other international.

In a market economy like the UK, the allocation of resources within the economy depends on price signals. In particular, the private sector will allocate capital according to where it can earn the highest rate of return. If we look at rates of return in manufacturing compared with services in the UK since 1997 (Figure C4), we can see that the rate of return in manufacturing has persistently been significantly below the rate of return in services, by an average of three percentage points per year.[2] Eltis (1996) reports this as a long-standing feature of the economy. Moreover, since 1997, manufacturing's rate of return was more variable, with a standard deviation of 2.85 percentage points compared with 2.09 percentage points in services.

2 These are the ONS estimates for net rate of return on capital employed for UK private non-financial corporations in the manufacturing and services sectors.

In other words, investors in manufacturing took about a third more risk to receive a rate of return 20 per cent lower than in services. In that light, a reduction in the share of manufacturing in GDP was a rational and efficient use of resources given the price signals firms faced.

At the start of the 1960s, the rate of profitability in manufacturing measured by the real pre-tax rate of return on total trading assets was 11 per cent, but this fell sharply late in the decade and in the 1970s to 6 per cent (Williams, 1979). Eltis reports troughs of around 2 per cent in 1975 and 1981. There were multiple factors behind this, including union unrest in manufacturing, low flexibility, and high costs as well as slow innovation. The UK's joining the European Economic Community in 1973 exposed a weak UK manufacturing sector to more intense competition from Europe at a time when multinationals were seeking to rationalise production to maximise efficiency in a more open trading system (Cowling, 1985). Competitiveness was also poor for much of the 1970s. The result was loss of market share and increased import penetration, for example in motor manufacturing.

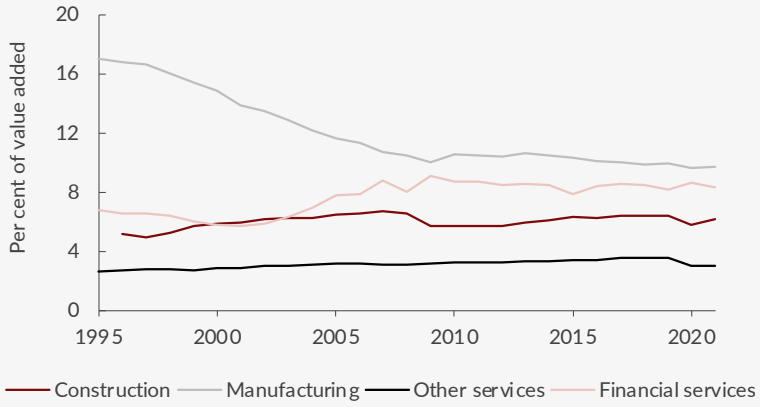
Figure C4 Annual rate of return in the United Kingdom

Source: ONS

The result has been an increased focus on services in both the composition of output and of hours worked (Figure C5).

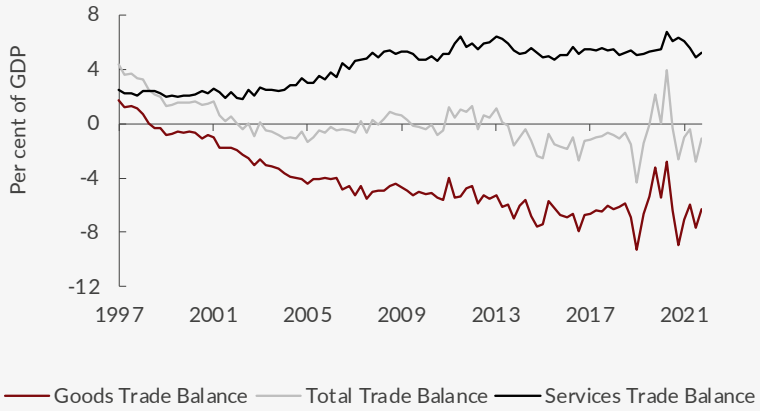
From an international trade perspective, countries will specialise in the production of goods and services where they have a comparative advantage. What the UK's inferior performance in manufacturing suggests is that it has lacked a comparative advantage in manufacturing. Manufacturing profitability has been lower than in other countries (Walton and Citron, 2000) and so manufacturing has increasingly located outside the UK, leaving the UK to specialise in other sectors. In the light of the data reported above on profitability, it should be no surprise that the UK's exports of manufactures have shrunk as a share of total exports and that net imports of manufactures have risen over time while services' share and real net trade surplus has increased. (Figure C6).

Figure C5 Share of sectors in total GVA



Source: OECD

Figure C6 Real trade balance as a percentage of GDP

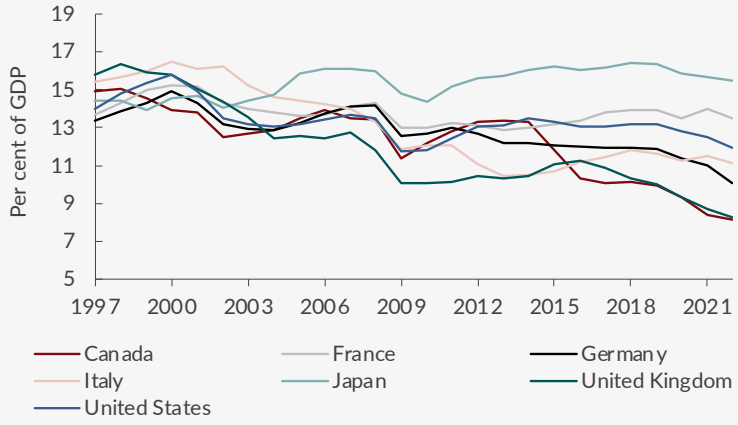


Source: ONS

Is it a lack of capital?

One of the pivotal theorems in international trade theory, the Heckscher-Ohlin Theorem, is that countries will export goods that heavily use factors they have in abundant supply relative to other countries and will import goods that heavily use factors they have in relatively scarce supply. The factor that appears to be in scarce supply in the UK is capital, which shows up in a very low investment rate (both total and business) compared with other countries (Figure C7). One reason for low capital accumulation in the UK is low profitability in manufacturing, which means the incentive to invest in this vital sector is less than to invest in manufacturing abroad or in (less capital-intensive) UK services – capital flows to where it is best remunerated.

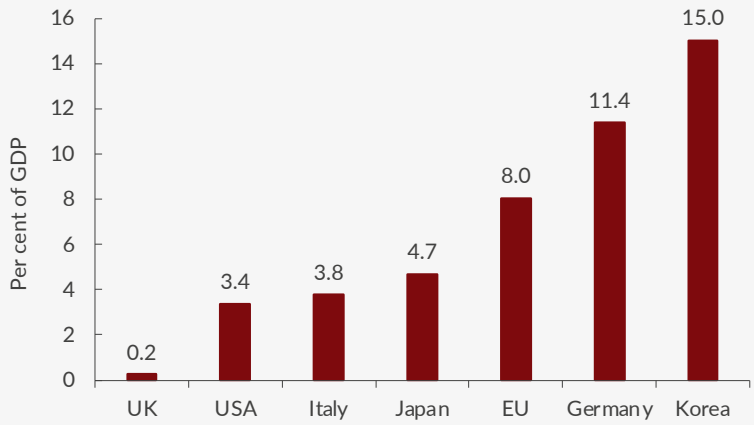
Figure C7 Business investment as a percentage of GDP



Source: OECD

The supply of capital to an economy comes from either domestic saving or foreign direct investment (FDI). In the case of manufacturing, the capital/labour ratio is significantly higher than in services – manufacturing is therefore more suited to countries with high savings ratios e.g., Korea, Japan, Germany, China) than to countries with low savings ratios (UK, USA) (Figure C8).

Figure C8 Household savings as a percentage of GDP



Source: OECD

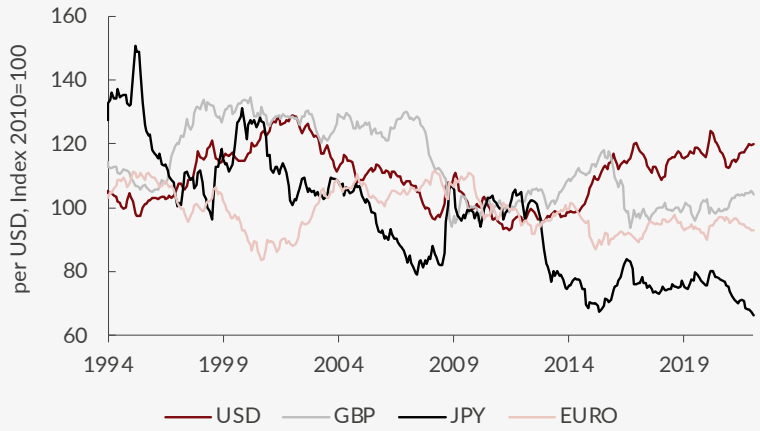
From this perspective, the UK's high rate of consumption by the private and public sectors generated too few savings to provide investment for capital-intensive manufacturing, compared with other countries that saved more and therefore were more suited to manufacturing. The UK therefore specialised in industries where it had a comparative advantage and less need for capital, such as financial and other services, media and tourism.

And what about the exchange rate?

What role has the exchange rate played in this story? The UK currency has been free-floating since its ejection from the European Exchange Rate Mechanism in 1992. It was strong in the boom years leading up to the financial crisis, but then fell sharply because the UK was disproportionately affected by the recession in financial services. A strong recovery followed in the wake of the Euro crisis, which encouraged funds from

Germany and other Northern European countries which previously went to Southern Europe to divert to the UK, worsening competitiveness. These inflows sharply reversed following the 2016 Brexit vote, resulting in manufacturing profitability exceeding that in services in 2017 and 2018 for the first time in two decades. The real exchange rate is currently seven per cent below the average of 1997 to 2021 (Figure C9).

Figure C9 Real broad effective exchange rate



Source: FRED database, Federal Reserve Bank of St Louis

The exchange rate has not played an independent role in the UK's deindustrialisation but is a symptom, like deindustrialisation, of the larger macro forces at play. The fact that other countries, such as China, have at times restricted their currencies' movement, often against the US dollar, has affected the UK's competitiveness relative to those countries, but not necessarily against the bulk of its trading partners. This is not to say that the exchange rate is not an important transmission mechanism. It is, for example, important for the profitability of the manufacturing sector, which clearly benefited from the 2016 depreciation of sterling. But it is not an independent lever: a freely-floating currency will move in order to maintain balance of payments equilibrium given that country's industrial structure. To change the exchange rate, the authorities have to change more basic variables such as the fiscal stance, and domestic interest rates. Given the Bank of England's 2 per cent inflation target, the scope to use interest rates to affect the exchange rate is limited if the inflation target is to be met.

Reindustrialising the UK

If the UK wanted to raise the share of manufacturing in GDP, how could it do so? From the macro perspective, a pre-requisite would be to raise the savings ratio, for example through tighter fiscal policy. That would lead to lower demand than otherwise and to lower inflation., This would, in turn, lead to lower interest rates than otherwise, which would benefit investment and soften the exchange rate. This would improve manufacturing profitability and encourage a movement out of services and into manufacturing. But this would also clearly have distributional and political implications since it would add to the squeeze on household living standards, transfer income from households to corporates, especially in the traded goods sector, and probably increase inequality.

If a country wants to see its manufacturing sector grow faster, it would have to make more capital available to increase manufacturing investment, since manufacturing will require more capital than the services it replaces. This need for more capital implies switching resources away from the household sector and towards firms. Most investment is financed out of retained earnings, so higher profits are needed to incentivise and finance increased manufacturing investment.

Given the difficulties of raising productivity in the UK, increasing manufacturing prices relative to costs is the most appropriate route. The UK is a small part of global manufacturing so allowing UK firms to raise their prices means global manufacturing prices have to rise when expressed in sterling. The way to achieve

that is a softer exchange rate which will make manufacturing more profitable relative to services and which will increase the availability of profits for new investment. A lower exchange implies higher consumer prices and lower living standards than otherwise for many, but workers and communities in regions producing manufactures will benefit, with spillovers to support services and suppliers.

Other policies such as active industrial policy – which arguably helped transform the City of London's financial sector in the 1980s – are another alternative, as is an active regional policy and other measures to improve export competitiveness, such as free-trade zones. However, these measures are really means of diverting already limited savings towards investment in the manufacturing sector and do not overcome the macro imbalances that are at the heart of the UK's manufacturing problem and contribute to its poor productivity performance. The real solution is lower domestic absorption of resources which will allow interest rates and the exchange rate to move to stimulate external demand, which will disproportionately boost manufacturing. Even if this were to happen, the UK would still need to ensure the right conditions for manufacturing to flourish via investment in infrastructure, trade finance and human capital. If not, any gains in competitiveness would quickly be inflated away.

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2 Outlook for the devolved nations, English regions, and UK households

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

- **Rising prices and higher taxes are squeezing household budgets:** for 2022-23 we estimate that about 1.5 million households across the UK face food and energy bills greater than their disposable income, with the highest incidence in London and Scotland.
- **The combined effect of inflation and the measures announced in the Spring Statement is to hit the poorest households hardest:** we calculate that in 2022-23 the 11.3m households in the bottom half of the income distribution are set to lose around £4.2bn more than median households.
- **The Chancellor should provide emergency support to cushion this income shock:** we show that a Universal Credit uplift of £25 per week between May and October 2022 would cost around £1.35bn or £2.7bn for the whole year 2022-23; an additional £2.85bn should be given to the 11.3m lower-income households, amounting to a one-off cash payment worth £250 per household for 2022-23.
- **Without this targeted support we expect a further increase in extreme poverty:** in 2022-23, about 250,000 more households will slide into destitution, taking the total number to around 1 million, while approximately another 500,000 households face choices between eating and heating.
- **Inequalities of income and wealth are growing between and within UK regions:** our forecast shows that London has returned to pre-pandemic output levels, but many regions still lag far behind, especially the Midlands and Scotland.
- **Employment and inactivity remain a persistent problem across the UK:** although Scotland is the first devolved nation to return to pre-pandemic employment levels, all parts of the UK except London are experiencing growing labour inactivity, particularly among older workers.

Income shock and distributional consequences

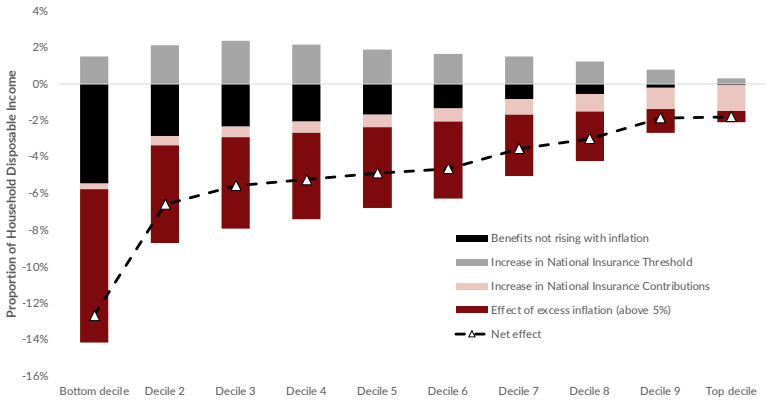
While NIESR's February 2022 Outlook focused on the impact of escalating energy prices on households (Bhattacharjee et al., 2022), in this Outlook we examine the wider shock across the income distribution. As of April, the increase in National Insurance Contributions (NICs), combined with the freezing of income tax thresholds, has had the effect of squeezing incomes. Wage growth has not kept pace with higher energy, food and fuel prices. The shock to household budgets, especially in the lower deciles of the distribution, depresses demand and increases income inequality as benefits have risen by less than the inflation rate and some benefits have been cut altogether, such as the £20 per week Universal Credit uplift.

The effect of the Spring Statement

The Chancellor's measures announced in the Spring Statement on 23 March 2022 amount to help worth about £11.5bn in total, including £5bn to cut fuel duty by 5p per litre, £6bn to raise the National Insurance thresholds from £9,880 to £12,570 and £500m for the Household Support Fund (NIESR, 2022). This is on top of £9bn extra support set out in February 2022 to reduce energy bills by £200 (repayable over five years) and council tax bills by £150 for properties in categories A-D, bringing total government support in the financial year 2022-23 to £22bn.

However, fiscal policy is not being used sufficiently to mitigate the income shock in aggregate terms and across the distribution (Figure 2.1).

Figure 2.1 Effect of the Spring Statement and Inflation on Household Budgets



Source: LINDA

Real household disposable incomes per person are projected to decline significantly. In March the OBR estimated a fall of 2.2 per cent for the financial year 2022-23 (OBR, 2022, p. 55) but based on the latest inflation figures NIESR's forecast is for 2.4 per cent for the calendar year 2022 (see Chapter 1, Table 1.1). The fact that benefits are not rising in line with inflation has further reduced the real incomes of households in the lower deciles. **Incomes will fall given the shocks in the global and the UK economy, but at present the lack of policy mitigation leads to a disproportionate impact on the poorest households** (Figure 2.1).

One factor is that the various government policies either cancel each other out or fail to help those who need it most. Raising the threshold at which employees start paying NICs by about £3,000 from July 2022 onwards does not save working persons £330 per year because it fails to take account of the 1.25 percentage point increase in NICs that came into effect in April 2022. For those earning between £12,570 and £37,000, it will reduce the purported saving of £330 and for those earning more than £37,000 it will wipe it out altogether.

While the increase in the NICs threshold does benefit lower-income workers, our analysis shows that the **overall effect of inflation and the measures announced in the Spring Statement on the incomes of the poorest households is negative** (Appendix I).

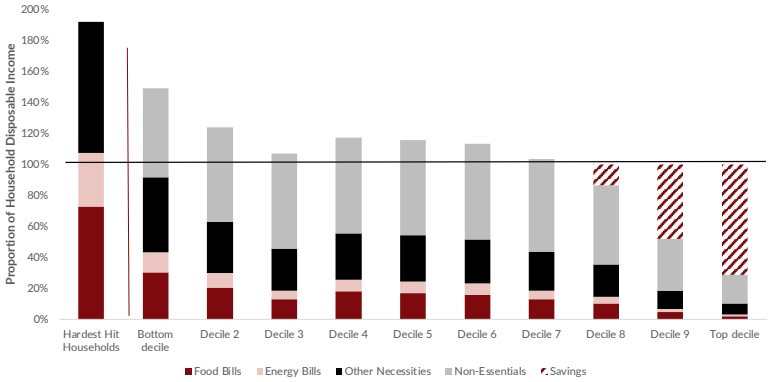
We calculate that in 2022-23 the incomes of 11.3m households in the bottom half of the distribution are set to fall further than the median household, totalling £4.2bn. This, together with the rising costs of necessities (Figure 2.2), is putting a significant strain on household budgets.

The effect of accelerating inflation

We illustrated in our February Outlook how necessities disproportionately dominate the expenditures of the lowest income households (Bhattacharjee et al., 2022). However, this is just one side of the equation, as households across the country have also experienced substantial falls in income – in particular the removal of the £20 per week Universal Credit uplift – meaning households budgets are being doubly squeezed. In this Outlook we extend our analysis to determine how much particular households have to spend to finance these increasing bills. We simulate the effects of the policy changes announced in the Spring Statement and the impact of inflation on household budgets across the income distribution (Figure 2.2).

We show that for the 1.5m hardest hit households, just the bills for necessities exceed their disposable income – by up to 90 per cent. To meet these rising costs, households will either have to run down their savings or resort to consumer credit. Where this is not available to them, they will have to go into arrears, as shown by the Living Wage Foundation (Richardson, 2021). The ensuing debt will constrain their long-term disposable income. Many of the hardest hit households have to choose between eating and heating, and our analysis demonstrates that even forgoing one or the other will not allow them to meet the rising costs.

Figure 2.2 Household Bills by Income Group

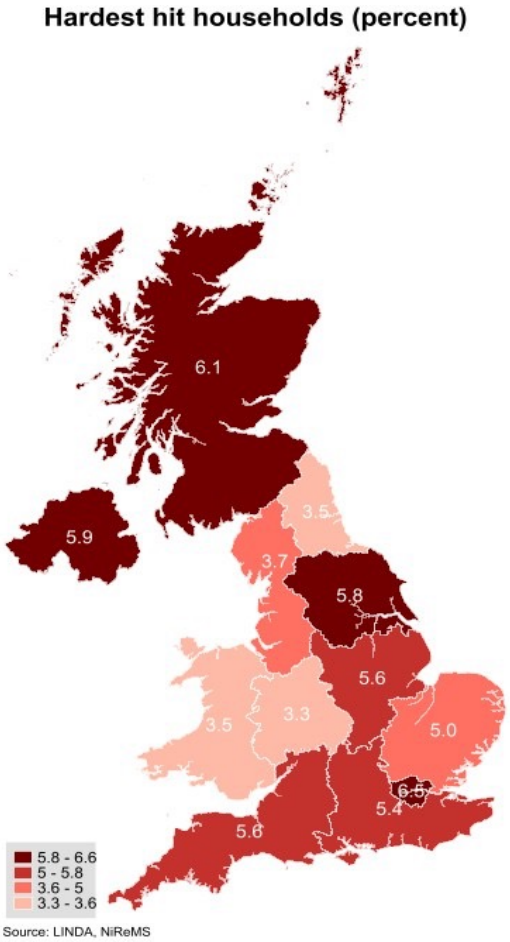


Source: LINDA

The geography of the distributional impact

We show the geographic distribution of these hardest hit households in Figure 2.3, which depicts a heavy concentration in London, Scotland, Northern Ireland, and Yorkshire and the Humber.

Figure 2.3 Geographic distribution of the hardest hit households whose food and energy bills are greater than their disposable income (2022-23)



Source: LINDA, NiReMS

Table 2.1 Geographic distribution of the hardest hit households whose food and energy bills are greater than their disposable incomes (2022-2023)

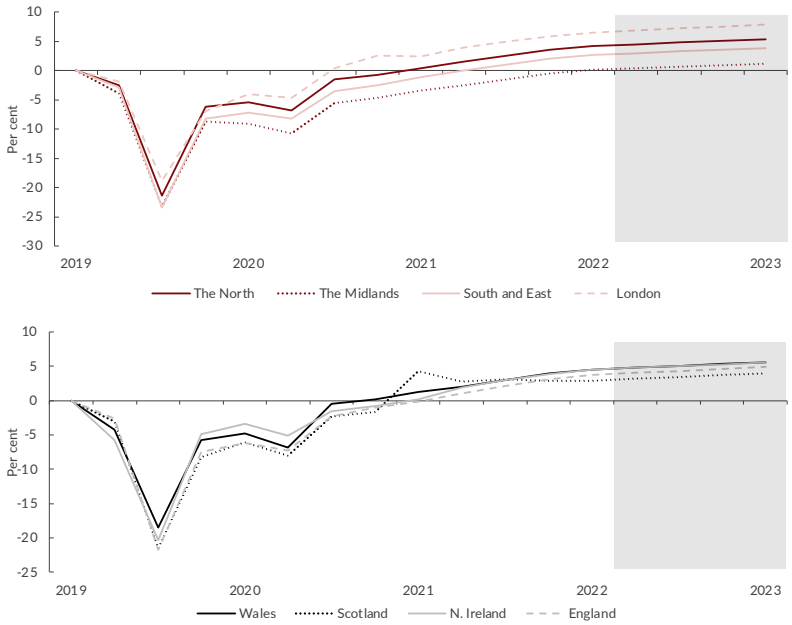
	% of Hardest Hit HH	Number of Hardest Hit HH
UK	**5.09%**	**1,447,000**
North East	3.5%	41,000
North West	3.7%	118,000
Yorks & Humber	5.8%	139,000
East Midlands	5.6%	115,000
West Midlands	3.3%	83,000
East	5.0%	130,000
London	6.5%	236,000
South East	5.4%	202,000
South West	5.6%	136,000
Wales	3.5%	48,000
Scotland	6.1%	154,000
Northern Ireland	5.9%	43,000

Source: LINDA

This situation will worsen for as long as inflation continues to rise and remain above wage growth and the adjustment of benefits. With CPI inflation projected to peak at 8.3 per cent in the fourth quarter of 2022 and to average 7.8 per cent over the year (see Chapter 1, Table 1.1), there is greater need for fiscal support. In the final section we set out potential policy responses that are fiscally feasible and mitigate the substantial squeeze on household budgets.

Overall outlook for the devolved nations and English regions

Figure 2.4 Regional GVA (per cent difference from 2019Q4)



Source: NiReMS

A consistent trend across the UK's devolved nations and English regions is that disparities in economic performance show no sign of narrowing (Figure 2.4). Despite employment growing strongly and GVA in all regions returning to pre-pandemic levels, rising rates of inactivity combined with flatlining productivity weaken the recovery (Mortimer-Lee and Pabst, 2022). As the bounce-back from Covid-19 peters out, slower economic growth makes national and regional regeneration more urgent yet less likely given the tight fiscal stance confirmed by the Spring Statement (NIESR, 2022).

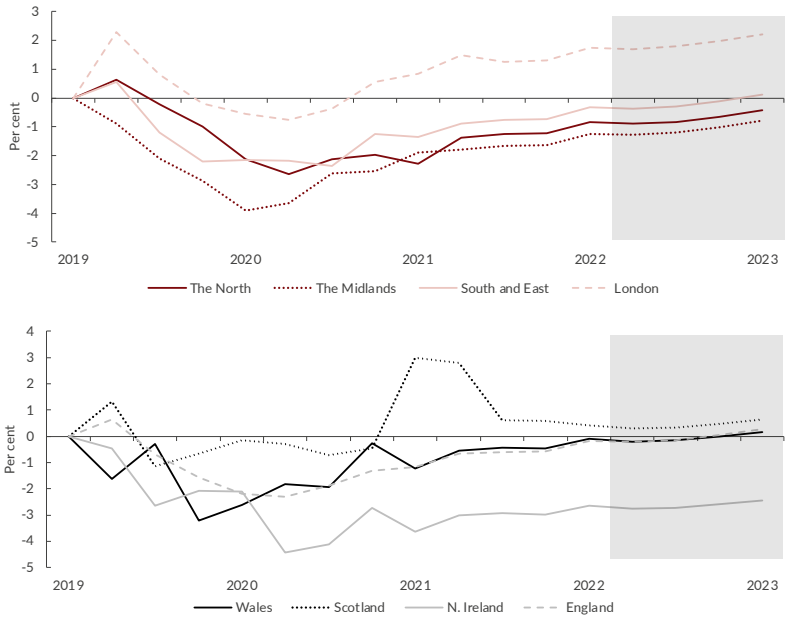
GVA

Our forecast shows all English regions have now recovered their pre-pandemic levels of GVA (Figure 2.4). However, some regions still lag behind others, in particular the Midlands. We estimate broadly similar output growth for the devolved nations, with Scotland only marginally underperforming Wales and Northern Ireland.

Employment

While employment shows promising signs of growth, there is remarkable regional variation. Only a few parts of the UK have returned to pre-pandemic levels – particularly London and areas of the South (Figure 2.5). For the devolved nations, Scotland experienced a strong surge in employment linked to the COP-26 event in Glasgow in the fourth quarter of 2021, which enabled it to exceed and remain above pre-Covid levels. The Scottish economy also continues to outperform employment growth compared with the other home nations. Wales and England are closely behind Scotland's positive employment growth but according to our projection they will not return to pre-pandemic employment levels before the third quarter of 2023.

Figure 2.5 Employment Growth (per cent difference from2019Q4)



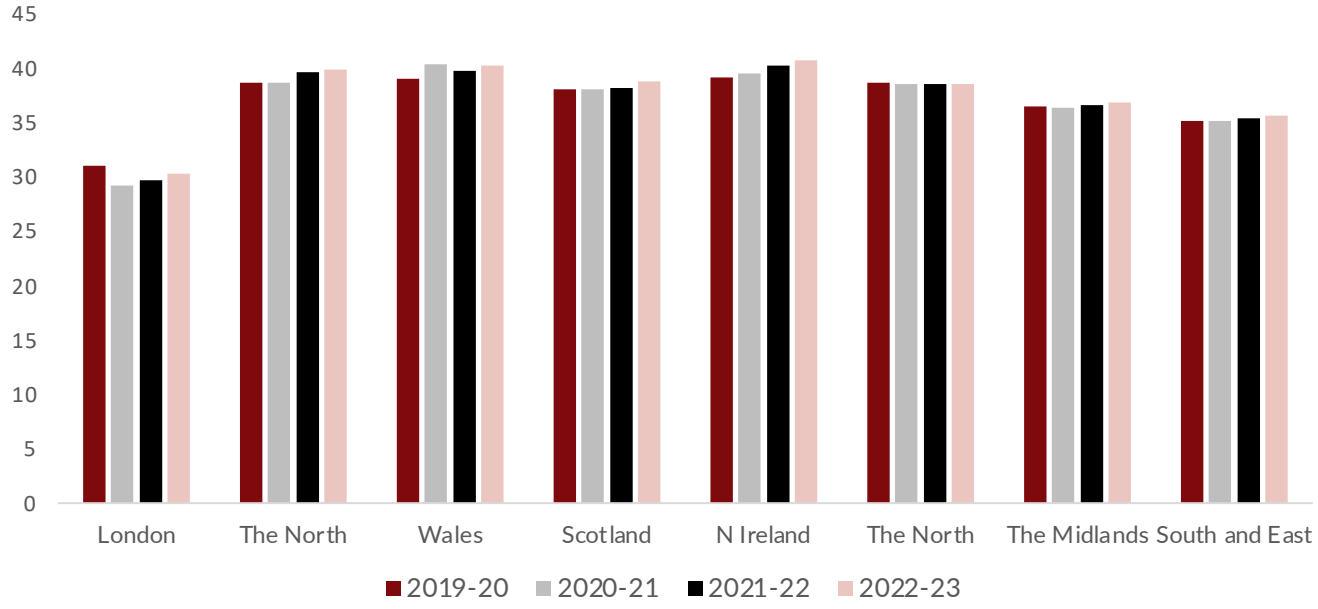
Source: NiReMS

Although Northern Ireland is seeing sustained employment growth, the strong fall in employment during the successive lockdowns left a substantial gap of 4.4 per cent from which the Northern Irish economy has not yet recovered. With the heightened uncertainty over the NI protocol and the ongoing political instability, the low rate of employment growth means that a return to pre-Covid levels is not projected by 2025.

Inactivity

Despite UK employment growth, inactivity rates in the devolved nations and the English regions continue to rise (Figure 2.6). Inactivity grew following the onset of the pandemic (except London) and it did not revert to the pre-Covid level after the lifting of lockdowns. The continuous increase in inactivity can in part be explained by excess deaths from Covid-19, lower net migration and older workers dropping out of the labour market (IES, 2022). As a result, employers are struggling to fill vacancies that stand at record levels.

Figure 2.6 Regional inactivity rates



Source: NiReMS

The regional distribution of inactivity is concentrated in the devolved nations and English regions, whereas London's labour market is buoyant. For all other parts of the UK, there is some degree of growth in inactivity rates which we expect to continue into 2023 as the structural drivers of this remain persistent – including workers aged 50 and over who face barriers (Runge et al., 2021; Stockland, 2021).

Wales economic outlook

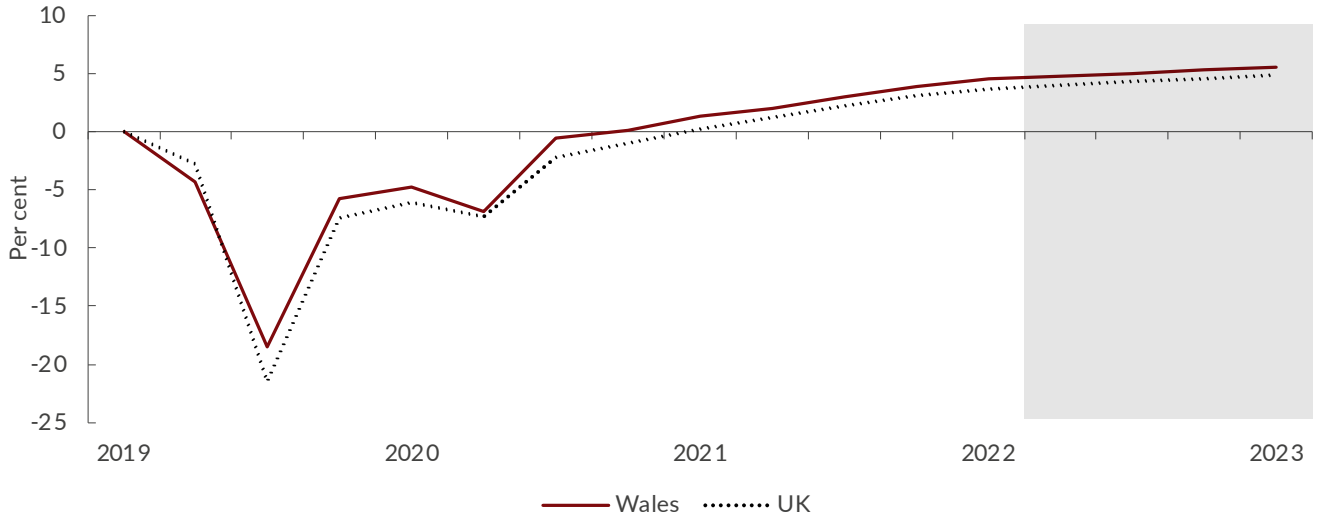
- Welsh output, as measured by GVA, has now recovered and surpassed pre-pandemic levels and is projected to grow faster than the UK average.
- Employment growth in Wales continues to outperform the UK average; while the apprenticeship programme introduced by the Welsh Government provides a positive path towards the employment of younger workers, persistently high and growing inactivity rates remain a source of concern.
- Rising inflation still presents a critical challenge to many Welsh households, with nearly 50,000 households (3.5 per cent) estimated to spend more on food and energy than they have in disposable income in 2022-23.

The Welsh economy shows some promising signs of recovery, but the persistence of structural challenges constrains future growth prospects. In particular, our projections continue to display positive signs for GVA and employment growth, matching and even outperforming the UK average at times. However, the labour force itself, like that of the rest of the UK, appears to be consistently shrinking year on year, resulting in employers struggling to fill vacancies.

We calculate that in 2022-23, 50,000 households in Wales will spend more on food and energy than they have in disposable income. The challenges of inflation and tight fiscal policy mean that these and other households continue to struggle. The Welsh government is somewhat constrained in providing additional support as the government's draft resource budget remains lower in real terms once Covid-19 funding has been allocated (Welsh Government, 2022).

GVA

Figure 2.7 GVA in Wales (per cent difference from 2019Q4)



Source: NiReMS

The Welsh economy continues to recover at a similar trajectory and somewhat faster pace to that of the UK average. Despite these positive signs, deeper structural challenges remain under the surface, constraining Wales' future growth potential. Brexit in particular presents a unique challenge for Wales as the region is naturally more exposed to negative consequences of the UK's changing trading relationship with Europe as a result of the strong concentration of agricultural and manufacturing sectors which have been hardest hit by the exit from the EU's single market and the customs union.

Table 2.2 GVA Relative to fourth quarter of 2019 (2019Q4)

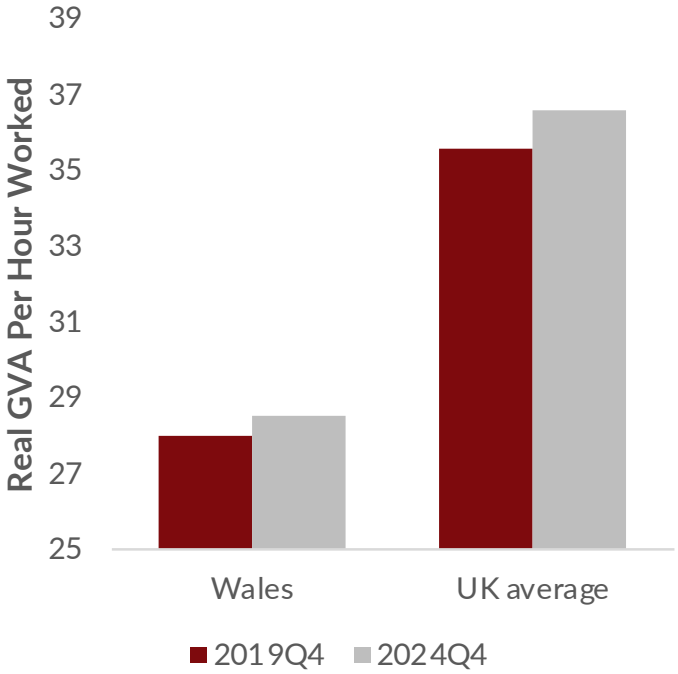
	UK	Wales
2020q4	-6.1%	-4.8%
2021q4	0.2%	1.3%
2022q4	*3.7%*	*4.5%*
2023q4	*4.9%*	*5.5%*
2024q4	*5.9%*	*6.4%*

Source: NiGEM, NiReMS

Productivity

Productivity is growing at the same pace as the UK average, but absolute levels still lag far behind in part due to the challenges from Brexit. We forecast a far lower level of GVA per hour worked, with little prospect for growth into the future. However, the promise of the new UK Shared Prosperity Fund (UKSPF) to protect the favourable funding from the European Structural and Investment (ESI) fund offers a promising prospect for investment to tackle these structural issues.

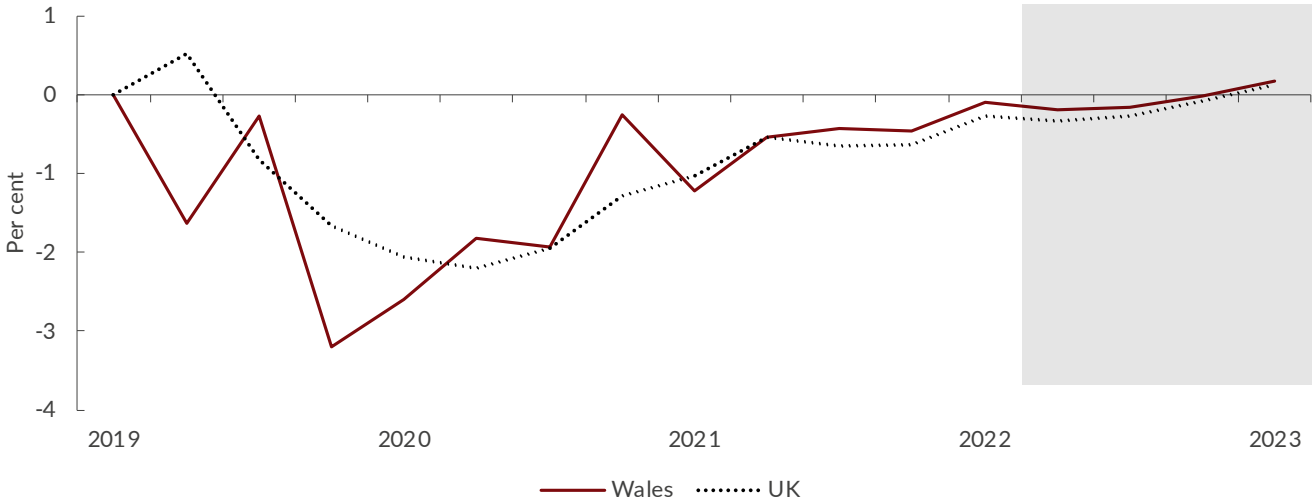
Figure 2.8 Productivity in Wales



Source: NiReMS

Employment and Activity

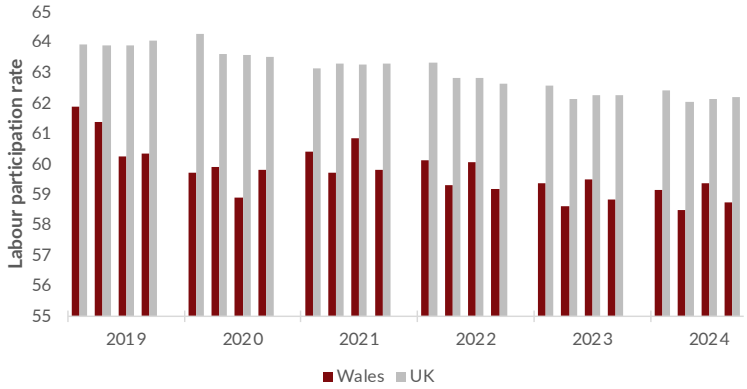
Figure 2.9 Employment growth in Wales (per cent difference from 2019Q4)



Source: NiReMS

The growth in Welsh employment levels is at a similar pace to the UK average, and both are projected to recover to pre-pandemic levels by the third quarter of 2023. However, this masks some underlying weakness, as the overall labour force itself is shrinking following a sharp fall in participation. The Welsh labour force declined during the pandemic and has continued to deteriorate ever since. Part of the problem is increasing inactivity due to ill health, low net migration following Brexit and older people who drop out.

Figure 2.10 Inactivity levels in Wales



Source: NiReMS

Cost of living

The combined effect of Covid-19, rising prices of necessities and tight fiscal policy presents a unique challenge for many households. This is particularly relevant for Wales, due to its higher concentration of low-income households. We showed in our February 2022 Outlook that inflation in essential goods and services is so damaging for these households because they spend a disproportionately high share of their income on necessities. In this Outlook we add the income side of the equation and find that in 2022-23, 48,000 households in Wales (3.5 per cent) spend more on food and energy bills than they have in disposable income. We expect the number of households in this financial condition to increase as high inflation persist.

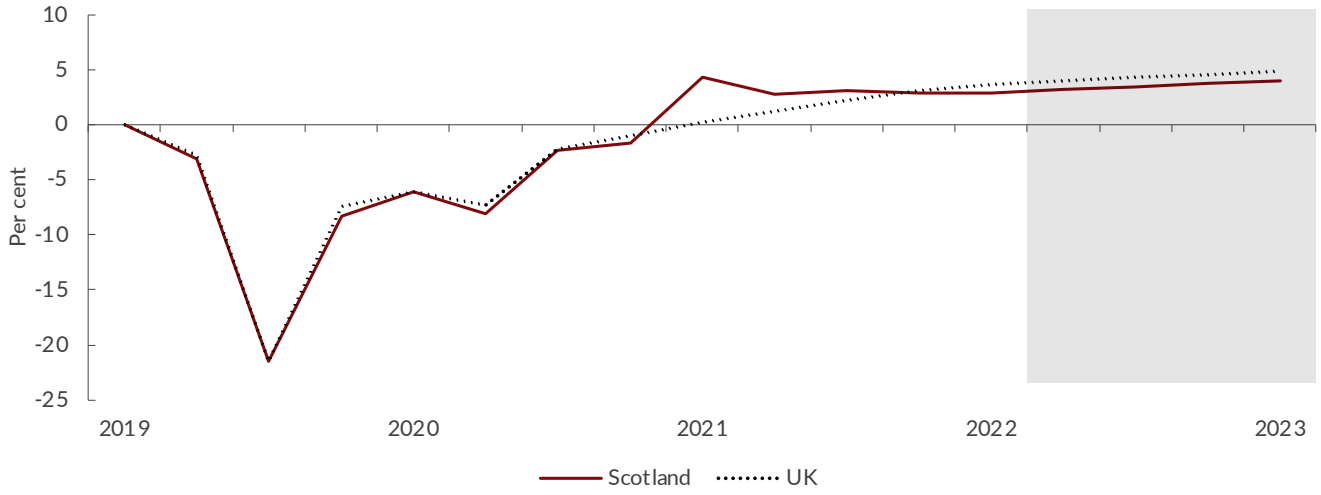
Scotland economic outlook

- Scottish output, as measured by GVA, has returned to pre-pandemic levels but is projected to grow at a slower pace than the UK average.
- Employment levels benefited from a temporary rise during COP-26 and are projected to continue growing at a faster rate than the UK average.
- Rising inflation still presents a critical challenge to many Scottish households, with more than 150,000 households (6.1 per cent) estimated to face food and energy bills greater than their disposable income in 2022-23.
- Against this backdrop, and looking towards the future, the publication of Scotland's National Strategy for Economic Transformation (Scottish Government, 2022) is a significant step; the plans towards regional regeneration in the nation, as well as developments in the energy sector following the war in Ukraine, are important issues to keep in view.

At a time when economic growth is slowing down and living standards are falling, the Scottish government published in March 2022 its ten-year plan for regeneration entitled National Strategy for Economic Transformation (NSET). Over this period, the challenge for policymakers is to tackle the structural problems that reduce productivity and thereby prosperity, including low rates of business start-ups (and the gender gap in start-ups), an insufficient number of businesses that can scale up, a lack of business investment in R&D, persistent skill gaps, increasing inequalities between the regions of Scotland and other structural disparities that hold back the development of parts of the Scottish economy – especially the growing divergence between the core and peripheral areas within Scotland but also compared with the rest of the UK economy.

GVA

Figure 2.11 GVA in Scotland (per cent difference from 2019Q4)



Source: NiReMS

As the UK economy rebounds post Covid-19, this recovery is not felt evenly across the devolved regions. The Scottish economy in particular lags behind the UK average in terms of GVA despite a brief positive period during COP-26 as a result of the above-mentioned structural factors that constrain productivity.

Table 2.3 GVA Relative to fourth quarter of 2019 (2019Q4)

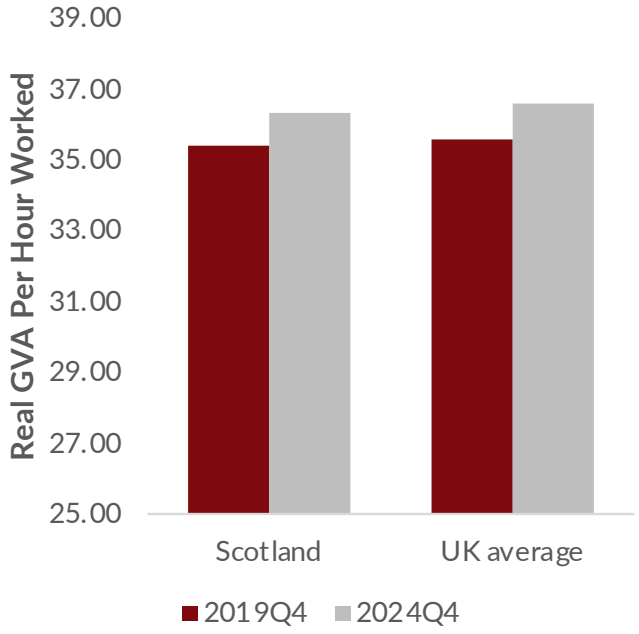
	UK	Scotland
2020q4	-6.1%	-6.1%
2021q4	0.2%	4.3%
2022q4	*3.7%*	*2.9%*
2023q4	*4.9%*	*4.0%*
2024q4	*5.9%*	*4.9%*

Source: NiGEM, NiReMS

Productivity

Although productivity appears to hold steady around the UK average, we forecast stagnating growth for Scotland, with a minimal increase from the pre-Covid period to the fourth quarter of 2024. This underscores the importance for policy-makers to promote greater innovation and skills development to tackle these long-term factors.

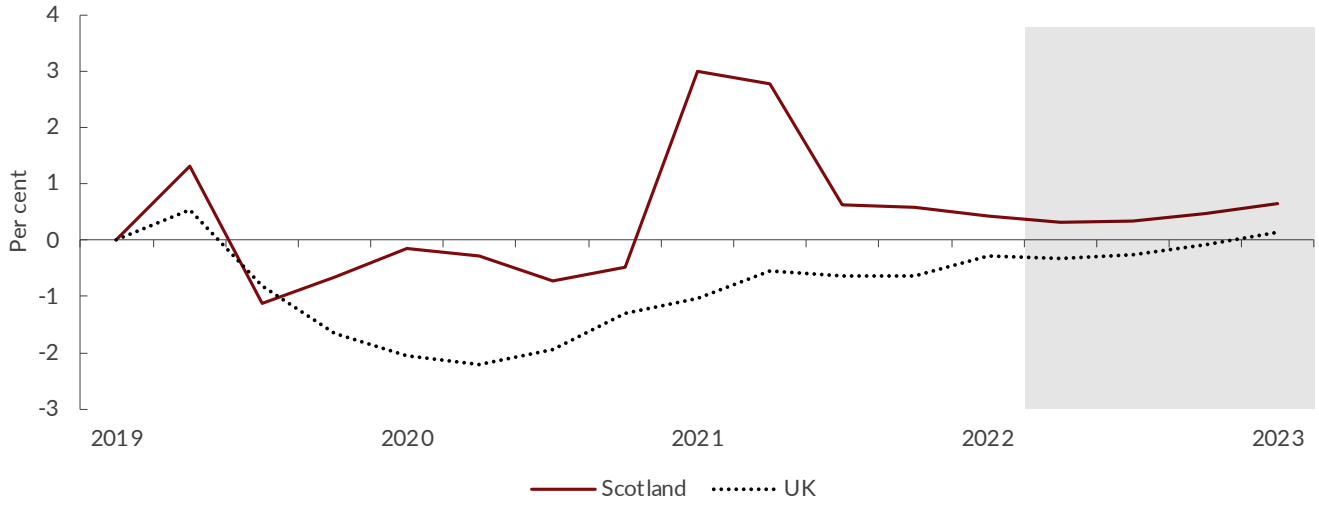
Figure 2.12 Productivity in Scotland



Source: NiReMS

Employment and inactivity

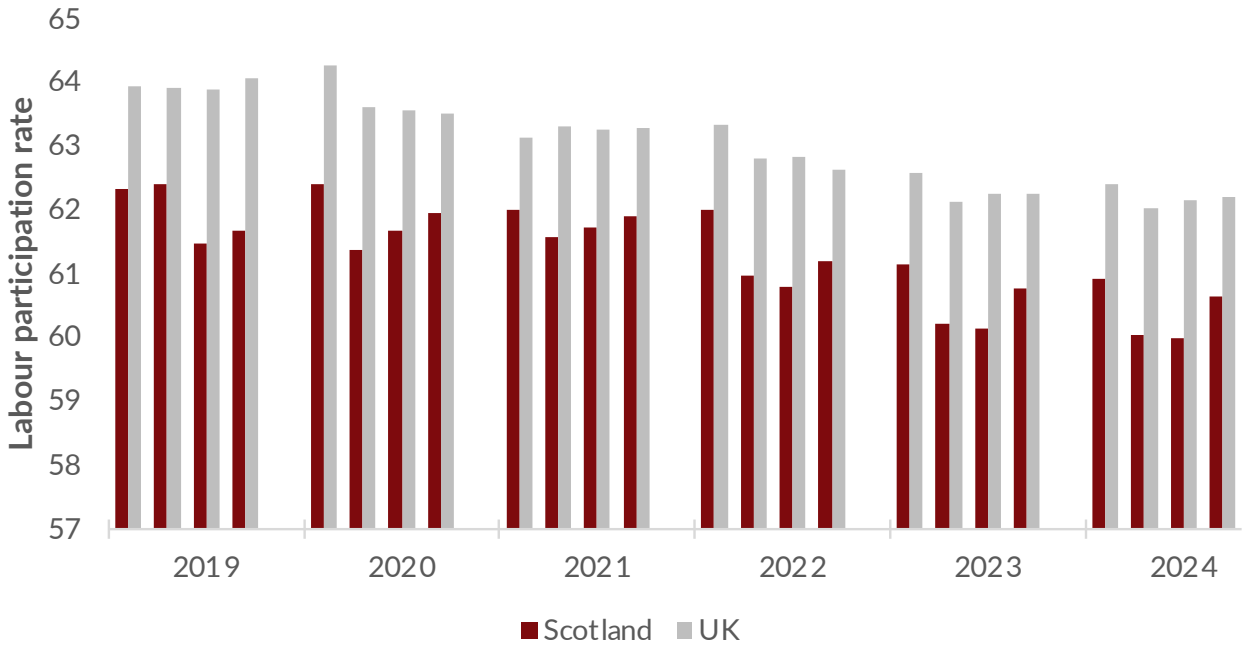
Figure 2.13 Employment growth in Scotland (per cent difference from 2019Q4)



Source: NiReMS

Scottish employment continues to grow at the fastest pace of all the devolved nations. Of course, the noticeable rise from COP-26 was temporary, but Scotland has managed to sustain a strong positive growth rate. Although this trend is positive, it masks some key changes in the Scottish labour market. There has been a steady decline in labour market participation, with a drop following the imposition of the first lockdown restrictions and a continued steady fall ever since. We project this trend to continue, with lower net migration, a growth in workless households as a result of ill health and a decline in labour participation of older workers as potential explanations.

Figure 2.14 Inactivity levels in Scotland



Source: NiReMS

Cost of living

Rising food and energy prices present two challenges to Scottish households. The first is that being in a colder, often wetter part of the country places additional demand on heating. The second is that because gross disposable income in Scotland is below the UK average, expenditures on essential items such as food and energy take up a greater proportion of household budgets. Therefore, the rise in prices of energy and food puts disproportionate pressure on Scottish households.

As a result, Scotland has one of the highest concentrations of households who spend more on food and energy of all UK regions. We calculate that in 2022-23 this financial condition applies to 154,000 households in Scotland (6.1 per cent) and we expect this to worsen for as long as high inflation persists.

Northern Ireland economic outlook

- Northern Irish output, as measured by GVA, has slightly outperformed the UK average; this is partly an outcome of the Northern Irish Protocol and its special status in the Brexit arrangements, including better trade and investment conditions as part of the EU's single market and customs union.
- Employment growth in Northern Ireland falls well below the UK average and is not projected to return to pre-pandemic levels by 2025.
- Rising inflation still presents a critical challenge to many households in Northern Ireland, with nearly 43,000 households (5.9 per cent) estimated to spend more on food and energy alone than they have in disposable income in 2022-23.
- Closer links with the EU, through trade and also potentially labour mobility, have benefited Northern Ireland post-Brexit. But important uncertainties remain. Will this lead to sustained growth in the trading sector? Can traditionally low-productivity trading activities spur growth in high end tradable goods and services in the medium to long run?

GVA

Figure 2.15 GVA in Northern Ireland (per cent difference from 2019Q4)

Source: NiReMS

Despite significant challenges related to employment, the Northern Irish economy continues to recover at a similar trajectory and pace to that of the UK average. GVA in particular has now recovered to pre-pandemic levels, and we forecast a slightly stronger growth in the future than the UK average.

Table 2.4 GVA Relative to fourth quarter of 2019 (2019Q4)

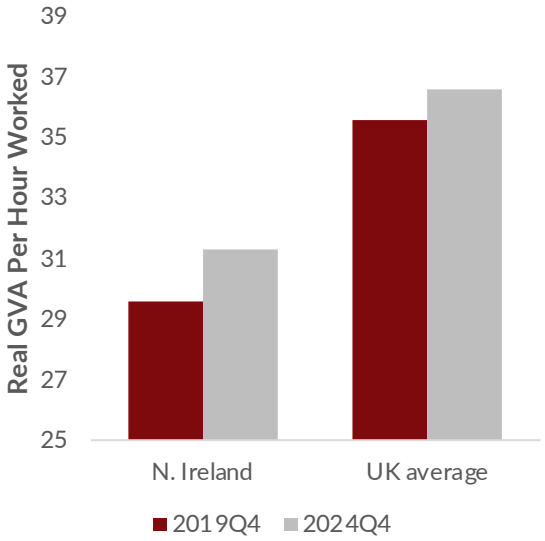
	UK	NI
2020q4	-6.1%	-3.4%
2021q4	0.2%	0.2%
2022q4	*3.7%*	*4.5%*
2023q4	*4.9%*	*5.5%*
2024q4	*5.9%*	*6.4%*

Source: NiGEM, NiReMS

Productivity

Despite these positive signs, productivity remains a key challenge for the Northern Irish economy. Although we project greater productivity growth than for other parts of the UK, the absolute levels lag far behind the UK average.

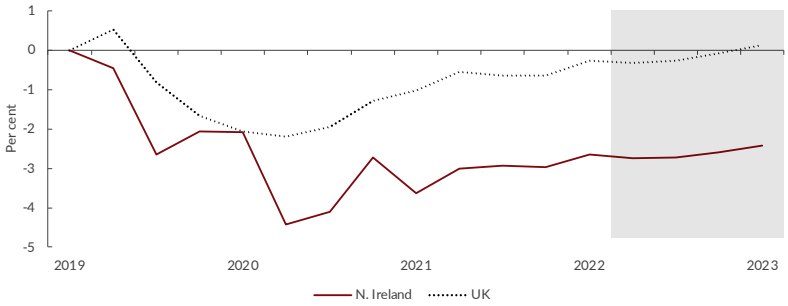
Figure 2.16 Productivity in Northern Ireland



Source: NiReMS

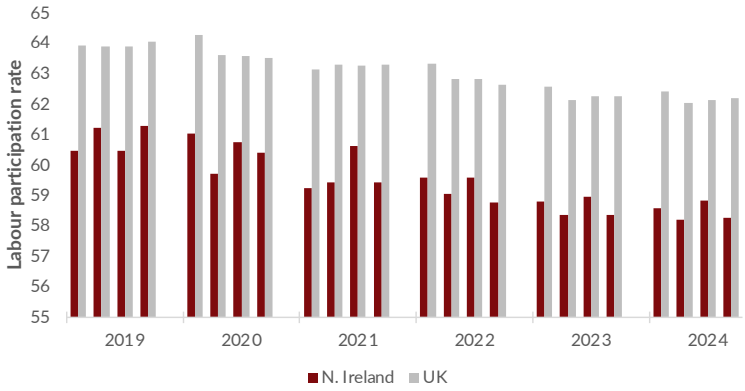
Employment and Activity

Figure 2.17 Employment growth in Northern Ireland (per cent difference from 2019Q4)



Source: NiReMS

Figure 2.18 Inactivity rates in Northern Ireland



Source: NiReMS

Employment levels in Northern Ireland continue to perform worse than in any of the other devolved nations. The Northern Irish economy experienced a sharper contraction following the first lockdown than anywhere else in the UK. Despite the high number of vacancies, employers are struggling to fill these jobs with workers, as the labour force itself has shrunk noticeably since the pandemic. We show that labour market activity has continued to further shrink over time. As a result, we do not forecast a return to pre-pandemic levels by 2025.

Cost of living

The combined effect of Covid-19, high inflation for essential goods and services and tight fiscal policy has presented a unique challenge for many households. The higher concentration of low-income households in Northern Ireland makes this challenge particularly acute. We showed in our February 2022 Outlook that inflation in essentials is so damaging for these households because they spend a disproportionately high share of their income on them. In this Outlook we add the income side of the equation and find that in 2022-23, 43,000 households in Northern Ireland (5.9 per cent) spend more on food and energy bills than they have in disposable income. This places the Northern Irish economy near the top in terms of the concentration of hardest hit households. We expect the number of households in this financial condition to increase as high inflation persists.

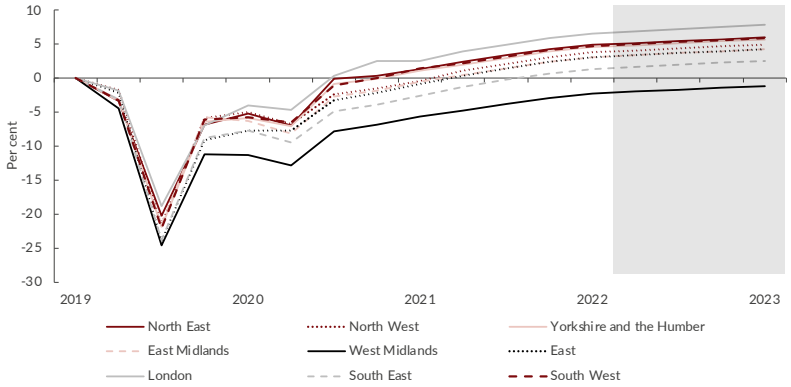
Outlook for England's regions

- Employment growth in England's regions is relatively strong but in the North West and the East Midlands it is not projected to return to pre-pandemic levels before 2024-25.
- Economic output, as measured by GVA, has fared slightly better in England than in the devolved nations of the UK.
- Rising inflation still presents a critical challenge to many households in England, with nearly 1.1m (4.9 per cent) households estimated to spend more on food and energy alone than they have in disposable income in 2022-23.
- The cost of living crisis has significant ramifications – political, economic and social – across the English regions. The results of the local elections point towards interesting implications for the political landscape. Will this bring about a summer of discontent? (How) Will the Chancellor support the worst hit households?

GVA

Economic output, as measured by GVA, is project to rise steadily, with London in the lead and other regions performing strongly too but the West Midlands are lagging behind as a result of problems in the manufacturing sector due to Brexit and supply chain disruptions.

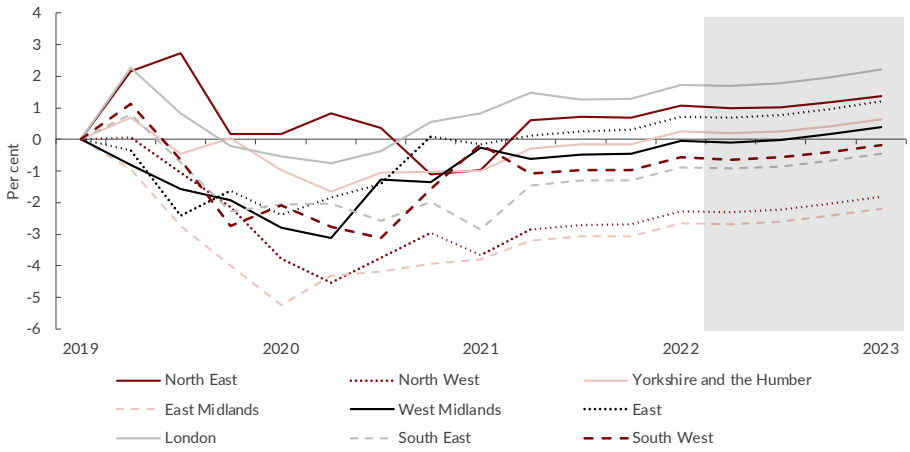
Figure 2.19 GVA in the English regions (per cent difference from 2019Q4)



Source: NiReMS

Employment and inactivity

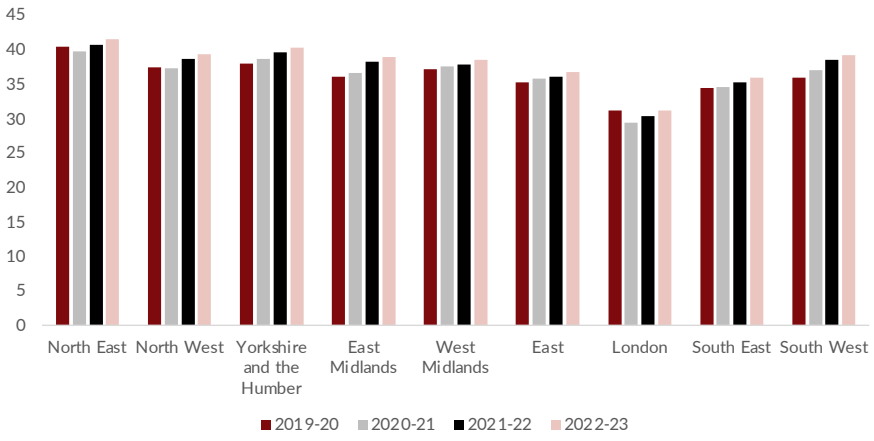
Figure 2.20 Employment growth in the English regions (per cent difference from 2019Q4)



Source: NiReMS

Employment in the English regions continues to grow, especially in London and the North East, and most regions will return to pre-pandemic levels in 2022 or 2023. But the East Midlands and the North West are falling behind. Inactivity rates are lowest in London where labour market participation is the highest in the UK, but everywhere else across England inactivity is increasing, especially in the North East, Yorkshire and the Humber as well as the South West.

Figure 2.21 Inactivity rates in the English regions

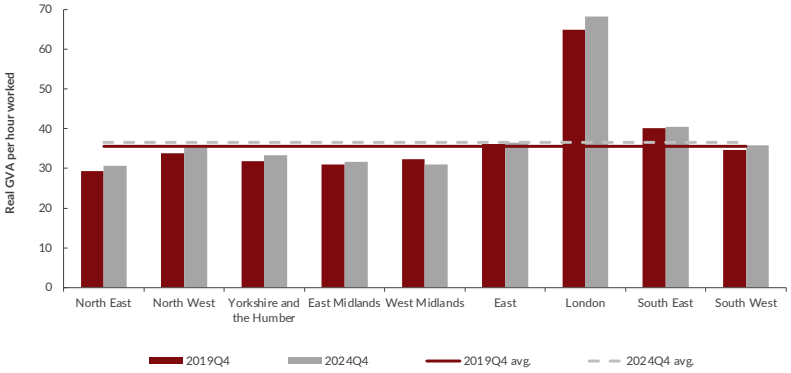


Source: NiReMS

Productivity

Productivity levels in London are not only well ahead of the other English regions but set to grow further, while we project that the Midlands and the North East will fall behind.

Figure 2.22 Productivity in the English regions



Source: NiReMS

Cost of living

The combined effect of Covid-19, rising prices of necessities and tight fiscal policy presents a unique challenge for many households. This is particularly relevant for certain parts of England such as areas in London, the Midlands and Yorkshire and the Humber because of their higher concentration of low-income households (Table 2.4). We showed in our February 2022 Outlook that inflation in essential goods and services is so damaging for these households because they spend a disproportionately high share of their income on necessities. In this Outlook we add the income side of the equation and find that in 2022-23 nearly 1.1m households in England (4.9 per cent) spend more on food and energy bills than they have in disposable income. We expect the number of households in this financial condition to increase as high inflation persist.

Table 2.5 Hardest Hit Households whose food and energy bills are greater than their disposable income (2022-23)

North East	3.5%	41,000
North West	3.7%	118,000
Yorks & Humber	*5.8%*	*139,000*
East Midlands	*5.6%*	*115,000*
West Midlands	*3.3%*	*83,000*
East	*5.0%*	*130,000*
London	*6.5%*	*236,000*
South East	*5.4%*	*202,000*
South West	*5.6%*	*136,000*

Source: LINDA

Policy options

In our February 2022 Outlook, we estimated that higher taxes and soaring energy prices would squeeze the income of average households by about £1,350 in 2022-23. The Chancellor's measures announced the same month and worth £350 per year still leave those households approximately £1,000 worse off. But with faster rising inflation and slower economic growth, average households are now projected to lose at least £1,200.

For households in the lowest-income deciles, we calculated in February that weekly bills would go up by about £10-15 whereas their income in 2022-23 would fall as a result of wages and benefits not keeping pace with inflation. Now with soaring bills those household face a shortfall of about £20-25 per week.

To help the poorest in society, we call for a Universal Credit uplift of £25 per week for at least six months, which would help around 5m households and cost approximately £1.35bn. This should be reviewed in October 2022 and extended to May 2023 if the bills on necessities continue to outstrip real disposable household incomes.

The cost of living crisis is severely affecting households across the income distribution. Hence, in addition, we recommend more emergency support, totalling £2.85bn, to help the 11.3m households below median income with a one-off cash payment of £250 to offset some of the income loss in 2022-23. Like the UC uplift, this measure should be reviewed in October 2022 and renewed for 2023-24 if energy prices rise significantly following the lifting of the current cap.

According to the OBR (2022), the government has fiscal room for manoeuvre in relation to the target year of 2024 worth £20 billion, principally due to faster rising prices and nominal earnings (see Chapter 1, p. 14). Our proposals for a temporary UC uplift of £25 per week for 6 months and a one-off cash payment to 11.3m household would cost a total £4.2bn in 2022-23. There is sufficient fiscal headroom to cushion the income shock and help the hardest hit households make ends meet.

Conclusion

Rising prices and higher taxes combined with moderate wage growth severely squeeze the income of many households across the income distribution, notably the poorest households who live in some of the most deprived areas of the country, such as the North West, pockets in London and the South East, as well as parts of Wales, Scotland and Northern Ireland.

April's 54 per cent rise in the energy price cap will continue to feed through to the inflation rate, as will higher food, fuel and mortgage/rental costs. This, combined with higher taxes (NICs and the freezing of income tax thresholds), represents a significant shock to household budgets, which the measures announced by the Chancellor in February and in the March Spring Statement do not mitigate sufficiently to avoid a rise in debt and destitution. Our policy proposals are fiscally affordable and provide emergency support for the hardest hit households.

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Appendix I

Table 2.6 Impact of Spring Budget and Cost of living on household finances, by income decile
(Average, annual, nominal terms; *per cent of Household disposable income*)

Sources/uses of income	Bottom decile	Decile 2	Decile 3	Decile 4	Decile 5	Decile 6	Decile 7	Decile 8	Decile 9	Top decile	Aggregate
Disp. Income	14,300	19,600	*21,100*	*23,900*	*29,400*	*37,700*	*46,900*	*62,800*	*105,100*	*260,600*	*62,000*
Spring Statement	-4.3%	-1.3%	*-0.6%*	*-0.5%*	*-0.5%*	*-0.4%*	*-0.2%*	*-0.3%*	*-0.6%*	*-1.2%*	*-0.8%*
Benefits	-780	-559	*-492*	*-494*	*-497*	*-503*	*-387*	*-345*	*-227*	*-210*	*-421*
NI thresh.	213	412	*495*	*516*	*556*	*618*	*711*	*765*	*833*	*820*	*622*
NI rates	-45	-99	*-122*	*-149*	*-201*	*-279*	*-402*	*-605*	*-1,206*	*-3,647*	*-678*
Net Income	13,700	19,400	*21,000*	*23,800*	*29,300*	*37,600*	*46,800*	*62,500*	*104,500*	*257,500*	*61,600*
Necessities	11,200	10,300	*10,400*	*11,300*	*13,100*	*15,800*	*16,400*	*17,600*	*14,900*	*18,700*	*13,500*
	78.1%	52.6%	*49.3%*	*47.3%*	*44.5%*	*41.8%*	*35.0%*	*28.0%*	*14.2%*	*7.2%*	*21.8%*
Food	4,300	4,000	*4,000*	*4,300*	*5,000*	*6,000*	*6,100*	*6,400*	*5,000*	*5,600*	*4,900*
Fuel	2,300	1,900	*1,900*	*2,000*	*2,300*	*2,700*	*2,700*	*2,800*	*2,200*	*2,500*	*2,200*
Transport	1,600	1,600	*1,700*	*1,900*	*2,400*	*3,000*	*3,500*	*4,100*	*4,300*	*7,100*	*3,100*
Excess Inflation	*-8.3%*	*-5.4%*	*-5.0%*	*-4.7%*	*-4.4%*	*-4.2%*	*-3.4%*	*-2.7%*	*-1.3%*	*-0.6%*	*-2.1%*
Discretionary	*8,200*	*11,900*	*12,900*	*14,700*	*18,000*	*23,200*	*28,000*	*32,000*	*34,700*	*48,700*	*23,000*
	57.1%	*60.4%*	*61.1%*	*61.2%*	*61.3%*	*61.3%*	*59.7%*	*51.1%*	*33.0%*	*18.7%*	*37.0%*
Consumption	*19,400*	*22,200*	*23,300*	*26,000*	*31,100*	*38,900*	*44,400*	*49,600*	*49,600*	*67,400*	*36,500*
Savings	*-5,700*	*-2,800*	*-2,300*	*-2,100*	*-1,800*	*-1,400*	*2,400*	*12,900*	*54,900*	*190,200*	*25,100*
	-39.4%	*-14.2%*	*-10.9%*	*-9.0%*	*-6.2%*	*-3.6%*	*5.2%*	*20.6%*	*52.2%*	*73.0%*	*40.4%*
Spring Statement. + Inflation	***-12.6%***	***-6.7%***	**-5.6%**	**-5.1%**	**-4.9%**	**-4.8%**	**-3.6%**	**-3.0%**	**-1.9%**	**-1.8%**	**-2.9%**

Source: LINDA

Box D: Measuring the effect of the cost-of-living crisis on low-income households

By Max Mosley and Tibor Szendrei

With wages failing to keep up with spiralling prices, poorly-timed tax rises, a benefits squeeze in real terms and government support schemes failing to cushion the income and inflation shocks, millions of households are facing a cost-of-living crisis.

We have highlighted in our previous Outlook how a more than 50 per cent rise in spending on energy bills now dominates the budgets of households least able to cope with them (Bhattacharjee et al., 2022). Following this analysis clear questions of how households adapt to these rising prices emerge. In particular, are households having to live without adequate nutrition or heating as a consequence? Such questions are difficult to answer. However, the aim of this box is to offer a tractable and relatively easily measurable indicator of the effect the cost-of-living crisis is having at the household level.

NIESR has been using destitution as a concept to measure extreme poverty (Bhattacharjee and Lisauskaite, 2020; Bhattacharjee et al., 2022). Specifically, the income component of the Joseph Rowntree Foundation's definition (Fitzpatrick et al., 2020) is used as a benchmark, whereby a single person household is considered destitute when their income falls below £70 per week, with any additional adult requiring another £30 per week and a child needing £20 per week. This measure assumes a fixed basket of necessities at the destitution threshold, which is clearly inadequate in the current context where low-income households are often having to choose between skipping a meal or switching their heating off (Richardson, 2022).

A clear way to present the effect the current crisis has had on households by determining whether the dilemma many households face between choosing to eat or to heat their homes is leaving many of them hungry and/or cold. A standard measure of food poverty is based on caloric intake below the minimum needed to sustain good health (Eli and Li, 2015).

However, it is not as straightforward to extend this to measure fuel poverty. To identify the minimum level heating necessary for a particular household, we would need to know key characteristics, such as the size and age of the dwelling along with the composition of its occupants. The UK Government uses a related Low Income Low Energy Efficiency (LILEE) metric to measure fuel poverty, whereby a household is defined as being poor if it is living in a property with a low energy efficiency rating (Bands D, E, F or G), and its disposable income (after housing costs [AHC] and energy needs) is below the poverty line, that is, 60 per cent of the national median AHC (ONS, 2022).

The income component of this measure is relatively fixed and also relies on a fixed consumption basket; therefore, it is not suitable for the high inflationary period we are currently in. Furthermore, the measure requires additional information on energy efficient housing, which is difficult to obtain, particularly in relation to the energy needs of households. Therefore, the measure is not only less relevant for current economic conditions, but its data intensive nature makes it particularly cumbersome to provide immediate results as the situation unfolds.

The Resolution Foundation has recently proposed a simpler alternative, whereby a household is considered as suffering 'fuel stress' if their energy bills exceed 10 percent of their household budget (Corlett and Marshall, 2022). Although the proportion spent on energy correlates with income, it does not do so perfectly, as it is possible for rich households to exceed this threshold by increasing their energy consumption.

NIESR proposes a potential solution that is both practical and better suited to identifying the effect the cost-of-living crisis is having on households. We focus on the households' budget constraint, which poses a hard upper limit on the amount one can normally spend on necessary and non-necessary goods. Then, following Moore (2009, 2012), fuel poverty can be defined as the situation when fuel costs needed for heating exceeds disposable income, after minimum living costs - including food expenditures, and other housing costs - have been deducted.

While energy prices have substantially increased, fuel poverty only captures one side of the cost-of-living equation. Alongside increased energy prices, food prices have surged as well. In the terminology of Moore (2012), this would entail not just fuel costs increasing, but also minimum living costs rising simultaneously. To account for this dual pressure, our measure allows to incorporate the effect of rising costs of other necessity goods by focusing on households whose minimum living costs are already higher than their income. To distinguish from fuel poverty and fuel stress as used elsewhere, we refer to these households as "hardest hit households" within the context of the cost-of-living crisis.

This definition, in the spirit of Moore (2012), captures the effect of inflation by assessing the capacity of a household to pay for necessities with their disposable income. For many, their disposable income will not cover these essential items, especially as prices continue to rise. The resulting decisions that household will have to make are likely to have significant social repercussions, particularly the health consequences of cold homes and irregular meals.

Beyond this, there is the potential for lower productivity, slower growth and even social and political unrest (Bellemare, 2015; mudlark121, 2020). Chapter 2 of the UK Outlook reports that in 2022-23 1.5m households are facing choices between eating and heating, which reflects both the reality of increasingly unstable conditions and relevance of this measure for a substantial proportion of UK households.

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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]
2016	105.9	1.35	1.22	2565	1.30	0.90	0.25
2017	100.0	1.29	1.14	2930	1.20	1.20	0.41
2018	101.9	1.34	1.13	2937	1.40	1.90	0.75
2019	101.6	1.28	1.14	2898	0.90	2.10	0.75
2020	102.1	1.28	1.13	2537	0.30	0.90	0.10
2021	106.9	1.38	1.16	2900	0.80	1.10	0.13
2022	*108.2*	*1.32*	*1.20*	*3065*	*1.70*	*1.60*	*2.00*
2023	*107.5*	*1.31*	*1.19*	*3156*	*2.70*	*2.40*	*2.51*
2024	*106.6*	*1.31*	*1.17*	*3346*	*2.70*	*2.50*	*2.55*
2025	*106.1*	*1.32*	*1.16*	*3572*	*2.80*	*2.60*	*2.59*
2026	*105.6*	*1.32*	*1.15*	*3762*	*2.80*	*2.60*	*2.63*
2021Q1	105.6	1.38	1.14	2749	0.60	1.10	0.10
2021Q2	107.3	1.40	1.16	2903	0.80	1.10	0.10
2021Q3	107.4	1.38	1.17	2952	0.70	1.10	0.10
2021Q4	107.4	1.35	1.18	2995	0.90	1.10	0.13
2022Q1	*108.6*	*1.34*	*1.20*	*3026*	*1.40*	*1.20*	*0.45*
2022Q2	*108.0*	*1.31*	*1.20*	*3056*	*1.70*	*1.50*	*1.00*
2022Q3	*108.1*	*1.31*	*1.20*	*3084*	*1.80*	*1.70*	*1.75*
2022Q4	*108.2*	*1.31*	*1.20*	*3096*	*2.00*	*2.10*	*2.00*
2023Q1	*107.9*	*1.31*	*1.20*	*3113*	*2.70*	*2.20*	*2.17*
2023Q2	*107.7*	*1.31*	*1.19*	*3138*	*2.70*	*2.30*	*2.42*
2023Q3	*107.4*	*1.31*	*1.19*	*3169*	*2.70*	*2.40*	*2.50*
2023Q4	*107.2*	*1.31*	*1.18*	*3204*	*2.70*	*2.50*	*2.51*
Percentage changes							
2016/2015	-9.8	-11.4	-11.2	-1.5			
2017/2016	-5.6	-4.9	-6.7	14.2			
2018/2017	1.9	3.6	-1.0	0.3			
2019/2018	-0.3	-4.4	0.9	-1.3			
2020/2019	0.5	0.5	-1.3	-12.5			
2021/2020	4.8	7.2	3.3	14.3			
2022/2021	*1.2*	*-4.2*	*3.3*	*5.7*			
2023/2022	*-0.6*	*-0.5*	*-1.0*	*3.0*			
2024/2023	*-0.8*	*0.2*	*-1.7*	*6.0*			
2025/2024	*-0.5*	*0.2*	*-1.1*	*6.8*			
2026/2025	*-0.4*	*0.2*	*-1.0*	*5.3*			
2021Q4/2020Q4	5.0	2.1	6.4	18.0			
2022Q4/2021Q4	*0.8*	*-2.8*	*2.1*	*3.3*			
2023Q4/2022Q4	*-1.0*	*0.1*	*-1.8*	*3.5*			

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]
2016	92.9	91.3	91.3	42.9	95.1	94.4	91.1	93.3	93.7
2017	94.8	96.7	95.7	54.0	96.8	96.1	94.3	95.9	96.1
2018	97.1	98.8	98.0	70.4	98.7	98.0	97.5	98.2	98.3
2019	100.0	100.0	100.0	63.7	100.0	100.0	100.0	100.0	100.0
2020	114.0	99.4	100.2	43.0	101.1	105.3	101.5	100.8	101.0
2021	111.8	103.8	104.0	69.9	103.5	105.4	105.6	103.5	103.5
2022	*114.7*	*108.7*	*110.1*	*80.8*	*111.0*	*112.6*	*119.0*	*111.6*	*111.7*
2023	*119.2*	*110.6*	*113.2*	*84.0*	*116.2*	*118.2*	*129.4*	*117.4*	*116.9*
2024	*122.9*	*111.3*	*114.7*	*86.1*	*117.8*	*120.0*	*132.7*	*119.0*	*118.5*
2025	*126.0*	*112.8*	*116.2*	*87.5*	*119.2*	*121.5*	*135.2*	*120.3*	*120.0*
2026	*129.5*	*115.1*	*118.3*	*88.9*	*121.6*	*123.8*	*138.7*	*122.4*	*122.3*
Percentage changes									
2016/2015	1.8	4.5	4.6	-17.7	1.1	1.9	1.7	0.7	1.0
2017/2016	2.0	6.0	4.8	25.8	1.8	1.8	3.6	2.7	2.6
2018/2017	2.4	2.2	2.4	30.5	2.0	2.0	3.3	2.4	2.3
2019/2018	3.0	1.2	2.0	-9.6	1.3	2.0	2.6	1.8	1.7
2020/2019	14.1	-0.6	0.2	-32.5	1.1	5.3	1.5	0.8	1.0
2021/2020	-1.9	4.4	3.8	62.6	2.4	0.1	4.1	2.6	2.5
2022/2021	*2.6*	*4.7*	*5.8*	*15.7*	*7.3*	*6.9*	*12.7*	*7.8*	*7.8*
2023/2022	*3.8*	*1.8*	*2.9*	*4.0*	*4.7*	*5.0*	*8.7*	*5.2*	*4.7*
2024/2023	*3.1*	*0.6*	*1.3*	*2.5*	*1.3*	*1.6*	*2.6*	*1.4*	*1.3*
2025/2024	*2.5*	*1.4*	*1.3*	*1.6*	*1.3*	*1.2*	*1.9*	*1.0*	*1.2*
2026/2025	*2.7*	*2.0*	*1.8*	*1.6*	*2.0*	*1.9*	*2.6*	*1.7*	*1.9*
2021Q4/2020Q4	-2.0	6.6	6.6	74.7	4.3	1.7	6.9	5.0	4.4
2022Q4/2021Q4	*5.7*	*2.0*	*3.9*	*4.3*	*8.5*	*9.1*	*14.4*	*8.3*	*8.8*
2023Q4/2022Q4	*2.6*	*1.0*	*1.7*	*3.9*	*2.1*	*2.3*	*5.1*	*2.9*	*2.1*

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]						
2016	1376	403	385	10	2172	623	2796	659	-36	2137
2017	1398	405	398	13	2202	658	2861	679	-20	2182
2018	1431	407	397	5	2241	677	2918	700	-23	2218
2019	1449	424	400	3	2276	699	2975	720	-21	2255
2020	1296	399	362	-10	2047	609	2655	606	2	2046
2021	1376	456	383	6	2221	601	2822	630	-29	2199
2022	*1441*	*451*	*398*	*-8*	*2282*	*643*	*2925*	*656*	*-13*	*2276*
2023	*1480*	*436*	*405*	*-8*	*2313*	*654*	*2967*	*679*	*-26*	*2294*
2024	*1499*	*438*	*408*	*-8*	*2338*	*677*	*3015*	*707*	*-30*	*2315*
2025	*1516*	*444*	*409*	*-8*	*2362*	*704*	*3065*	*731*	*-27*	*2341*
2026	*1538*	*450*	*412*	*-8*	*2392*	*730*	*3122*	*754*	*-24*	*2375*
Percentage changes										
2016/2015	3.7	0.5	4.7		2.3	3.3	2.5	3.5		2.3
2017/2016	1.6	0.6	3.3		1.4	5.7	2.3	2.9		2.1
2018/2017	2.4	0.4	-0.1		1.8	2.8	2.0	3.1		1.7
2019/2018	1.3	4.2	0.5		1.6	3.4	2.0	2.9		1.7
2020/2019	-10.6	-5.9	-9.5		-10.1	-13.0	-10.8	-15.8		-9.3
2021/2020	6.2	14.3	5.9		8.5	-1.3	6.3	3.8		7.4
2022/2021	*4.7*	*-1.2*	*3.8*		*2.7*	*7.0*	*3.6*	*4.1*		*3.5*
2023/2022	*2.7*	*-3.4*	*1.9*		*1.4*	*1.7*	*1.4*	*3.7*		*0.8*
2024/2023	*1.3*	*0.6*	*0.8*		*1.1*	*3.5*	*1.6*	*4.0*		*0.9*
2025/2024	*1.1*	*1.4*	*0.2*		*1.0*	*4.0*	*1.7*	*3.5*		*1.1*
2026/2025	*1.5*	*1.3*	*0.6*		*1.3*	*3.7*	*1.9*	*3.1*		*1.5*
Decomposition of growth in GDP (percentage points)										
2016	2.3	0.1	0.8	-0.1	2.4	1.0	3.3	-1.1	-0.1	2.3
2017	1.0	0.1	0.6	0.2	1.4	1.6	3.0	-0.9	0.7	2.1
2018	1.5	0.1	0.0	-0.4	1.8	0.8	2.6	-1.0	-0.1	1.7
2019	0.8	0.8	0.1	-0.1	1.6	1.0	2.6	-0.9	0.1	1.7
2020	-6.8	-1.1	-1.7	-0.6	-10.2	-4.0	-14.2	5.0	1.0	-9.3
2021	3.9	2.8	1.0	0.8	8.5	-0.4	8.1	-1.1	-1.5	7.4
2022	*3.0*	*-0.2*	*0.7*	*-0.6*	*2.8*	*1.9*	*4.7*	*-1.2*	*0.7*	*3.5*
2023	*1.7*	*-0.7*	*0.3*	*0.0*	*1.4*	*0.5*	*1.8*	*-1.1*	*-0.6*	*0.8*
2024	*0.8*	*0.1*	*0.1*	*0.0*	*1.1*	*1.0*	*2.1*	*-1.2*	*-0.2*	*0.9*
2025	*0.7*	*0.3*	*0.0*	*0.0*	*1.0*	*1.2*	*2.2*	*-1.1*	*0.1*	*1.1*
2026	*1.0*	*0.2*	*0.1*	*0.0*	*1.3*	*1.1*	*2.4*	*-1.0*	*0.2*	*1.5*

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
2016	334	485	-150	289	175	114	100.0	87.5	100.1	-5.3
2017	357	497	-139	301	182	119	97.6	91.9	99.0	-3.6
2018	358	498	-140	319	202	117	101.4	95.2	99.2	-3.9
2019	372	510	-138	327	210	118	100.0	100.0	100.0	-2.7
2020	319	443	-123	289	164	125	98.4	91.6	100.7	-2.5
2021	315	463	-148	286	167	119	104.5	98.8	100.2	-2.6
2022	*340*	*479*	*-139*	*302*	*176*	*126*	*104.0*	*102.9*	*101.3*	*-2.4*
2023	*346*	*502*	*-156*	*308*	*177*	*130*	*103.9*	*105.8*	*102.3*	*-4.5*
2024	*359*	*527*	*-167*	*317*	*180*	*137*	*102.8*	*110.5*	*103.1*	*-4.7*
2025	*375*	*548*	*-173*	*329*	*183*	*146*	*102.2*	*115.5*	*103.0*	*-4.6*
2026	*389*	*567*	*-178*	*341*	*187*	*154*	*102.0*	*120.3*	*102.8*	*-4.3*
Percentage changes										
2016/2015	0.7	3.6		6.3	3.3		-5.2	3.5	0.1	
2017/2016	6.8	2.4		4.4	4.2		-2.4	5.0	-1.1	
2018/2017	0.2	0.2		5.8	10.7		3.8	3.6	0.2	
2019/2018	3.9	2.5		2.7	4.0		-1.3	5.1	0.8	
2020/2019	-14.1	-13.3		-11.6	-21.9		-1.6	-8.4	0.7	
2021/2020	-1.4	4.6		-1.1	1.8		6.2	7.8	-0.6	
2022/2021	*8.0*	*3.5*		*5.8*	*5.7*		*-0.5*	*4.2*	*1.1*	
2023/2022	*1.7*	*4.8*		*1.7*	*0.5*		*-0.1*	*2.8*	*1.1*	
2024/2023	*3.8*	*4.9*		*3.2*	*1.6*		*-1.0*	*4.5*	*0.7*	
2025/2024	*4.2*	*4.1*		*3.7*	*1.8*		*-0.6*	*4.5*	*-0.1*	
2026/2025	*3.9*	*3.4*		*3.6*	*2.1*		*-0.2*	*4.1*	*-0.2*	

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]	Net worth to income ratio[e]	House prices[d]
		£ billion, current prices			£ billion, 2019 prices		% of GDP		2019=100
2016	90.9	966	1715	1345	1415	1376	6.4	7.0	91.8
2017	93.7	1007	1771	1381	1427	1398	4.8	7.0	95.9
2018	96.0	1048	1853	1448	1467	1431	4.8	6.6	99.0
2019	100.0	1097	1916	1487	1487	1449	4.6	6.8	100.0
2020	102.5	1129	1932	1499	1483	1296	14.1	7.3	102.8
2021	107.7	1196	2035	1556	1504	1376	10.5	7.5	112.8
2022	*113.5*	*1271*	*2109*	*1629*	*1467*	*1441*	*3.6*	*7.1*	*116.7*
2023	*119.1*	*1330*	*2209*	*1714*	*1475*	*1480*	*1.5*	*6.7*	*116.7*
2024	*122.7*	*1384*	*2302*	*1793*	*1523*	*1499*	*3.2*	*6.4*	*114.9*
2025	*126.1*	*1435*	*2386*	*1862*	*1562*	*1516*	*4.5*	*6.2*	*114.3*
2026	*130.3*	*1496*	*2486*	*1947*	*1601*	*1538*	*5.5*	*6.0*	*114.8*
Percentage changes									
2016/2015	3.1	4.1	2.3	1.6	0.5	3.7			7.0
2017/2016	3.1	4.2	3.3	2.7	0.9	1.6			4.5
2018/2017	2.4	4.1	4.7	4.9	2.8	2.4			3.3
2019/2018	4.2	4.8	3.4	2.7	1.3	1.3			0.9
2020/2019	2.5	2.9	0.8	0.8	-0.3	-10.6			2.8
2021/2020	5.1	5.9	5.4	3.8	1.4	6.2			9.6
2022/2021	*5.4*	*6.3*	*3.6*	*4.7*	*-2.4*	*4.7*			*3.5*
2023/2022	*4.9*	*4.7*	*4.7*	*5.2*	*0.5*	*2.7*			*0.0*
2024/2023	*3.1*	*4.1*	*4.2*	*4.6*	*3.2*	*1.3*			*-1.5*
2025/2024	*2.8*	*3.7*	*3.7*	*3.9*	*2.6*	*1.1*			*-0.6*
2026/2025	*3.3*	*4.3*	*4.2*	*4.5*	*2.5*	*1.5*			*0.5*

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 fixed investment				User cost of capital (%)	Corporate profit share of GDP (%)	Capital stock	
	Business investment	Private housing[a]	General government	Total			Private	Public[b]
2016	227	93	66	385	13.1	25.4	3537	789
2017	228	102	68	398	12.9	25.3	3664	740
2018	224	109	65	397	12.7	25.0	3721	756
2019	226	106	67	400	12.9	24.8	3772	774
2020	200	93	69	362	12.9	24.3	3780	795
2021	202	106	76	383	10.1	24.4	3808	819
2022	*212*	*108*	*78*	*398*	*9.6*	*23.8*	*3851*	*844*
2023	*213*	*107*	*85*	*405*	*11.1*	*24.5*	*3893*	*874*
2024	*216*	*106*	*87*	*408*	*11.6*	*23.8*	*3935*	*904*
2025	*216*	*105*	*87*	*409*	*11.5*	*23.3*	*3974*	*932*
2026	*219*	*105*	*88*	*412*	*11.4*	*23.2*	*4013*	*960*
Percentage changes								
2016/2015	5.5	6.0	0.6	4.7			1.6	2.1
2017/2016	0.8	9.6	3.0	3.3			3.6	-6.2
2018/2017	-2.0	7.6	-5.0	-0.1			1.6	2.2
2019/2018	0.9	-2.6	4.5	0.5			1.4	2.4
2020/2019	-11.5	-12.4	1.6	-9.5			0.2	2.7
2021/2020	0.8	13.5	10.3	5.9			0.7	3.0
2022/2021	*5.0*	*1.7*	*3.7*	*3.8*			*1.1*	*3.1*
2023/2022	*0.8*	*-0.5*	*8.1*	*1.9*			*1.1*	*3.5*
2024/2023	*1.0*	*-0.9*	*2.3*	*0.8*			*1.1*	*3.4*
2025/2024	*0.4*	*-0.7*	*0.7*	*0.2*			*1.0*	*3.2*
2026/2025	*1.0*	*-0.3*	*0.8*	*0.6*			*1.0*	*2.9*

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]					
2016	26771	31744	1633	33377	41062	97.8	4.9
2017	27065	32057	1476	33533	41169	98.9	4.4
2018	27494	32439	1380	33819	41260	99.6	4.1
2019	27652	32799	1306	34105	41344	100.0	3.8
2020	27770	32529	1550	34079	41351	101.4	4.6
2021	27987	32366	1519	33885	41295	102.4	4.5
2022	*28208*	*32698*	*1502*	*34200*	*41363*	*101.9*	*4.4*
2023	*28146*	*32637*	*1744*	*34381*	*41472*	*102.2*	*5.1*
2024	*28429*	*32929*	*1623*	*34552*	*41585*	*102.2*	*4.7*
2025	*28674*	*33183*	*1537*	*34720*	*41688*	*102.6*	*4.4*
2026	*28937*	*33452*	*1421*	*34873*	*41768*	*103.2*	*4.1*
Percentage changes							
2016/2015	1.0	1.5	-8.3	0.9	0.4	1.0	
2017/2016	1.1	1.0	-9.6	0.5	0.3	1.1	
2018/2017	1.6	1.2	-6.5	0.9	0.2	0.7	
2019/2018	0.6	1.1	-5.4	0.8	0.2	0.4	
2020/2019	0.4	-0.8	18.7	-0.1	0.0	1.4	
2021/2020	0.8	-0.5	-2.0	-0.6	-0.1	1.0	
2022/2021	*0.8*	*1.0*	*-1.1*	*0.9*	*0.2*	*-0.5*	
2023/2022	*-0.2*	*-0.2*	*16.1*	*0.5*	*0.3*	*0.3*	
2024/2023	*1.0*	*0.9*	*-7.0*	*0.5*	*0.3*	*0.0*	
2025/2024	*0.9*	*0.8*	*-5.3*	*0.5*	*0.2*	*0.3*	
2026/2025	*0.9*	*0.8*	*-7.5*	*0.4*	*0.2*	*0.6*	

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)

		2019–20	2020–21	2021–22	2022–23	2023–24	2024–25	2025–26	2026–27
Current receipts:	Taxes on income	484.4	495.8	*553.0*	*542.0*	*605.0*	*633.8*	*660.9*	*689.1*
	Taxes on expenditure	280.0	143.7	*254.9*	*324.9*	*345.5*	*353.5*	*362.8*	*376.2*
	Other current receipts	65.3	153.4	*99.8*	*116.6*	*122.1*	*124.9*	*128.1*	*132.8*
	Total	829.7	792.9	*907.7*	*983.6*	*1072.6*	*1112.2*	*1151.8*	*1198.1*
	(as a % of GDP)	36.7	37.0	*38.1*	*37.7*	*39.3*	*39.8*	*40.2*	*40.3*
Current expenditure:	Goods and services	429.3	499.6	*512.1*	*527.7*	*539.1*	*555.5*	*575.4*	*599.6*
	Net social benefits paid	241.9	262.9	*260.8*	*263.3*	*288.1*	*305.3*	*317.7*	*329.3*
	Debt interest	52.9	41.9	*68.6*	*75.1*	*75.8*	*75.8*	*76.0*	*76.3*
	Other current expenditure	66.2	182.8	*92.7*	*75.8*	*79.2*	*80.9*	*82.7*	*85.2*
	Total	790.4	987.2	*934.2*	*941.9*	*982.1*	*1017.5*	*1051.7*	*1090.4*
	(as a % of GDP)	35.0	46.0	*39.2*	*36.1*	*36.0*	*36.4*	*36.7*	*36.7*
Depreciation		52.4	53.4	*55.1*	*59.6*	*62.4*	*63.9*	*65.5*	*67.9*
Surplus on public sector current budget[a]		-13.1	-247.8	*-81.6*	*-18.0*	*28.1*	*30.8*	*34.6*	*39.8*
(as a % of GDP)		-0.6	-11.8	*-3.4*	*-0.7*	*1.0*	*1.1*	*1.2*	*1.3*
Gross investment		90.5	121.7	*112.4*	*113.3*	*123.7*	*128.1*	*132.6*	*137.8*
Net investment		38.1	68.2	*57.3*	*53.7*	*61.3*	*64.2*	*67.1*	*69.9*
(as a % of GDP)		1.7	3.2	*2.4*	*2.1*	*2.2*	*2.3*	*2.3*	*2.4*
Total managed expenditure		880.9	1108.9	*1046.6*	*1055.3*	*1105.8*	*1145.6*	*1184.3*	*1228.2*
(as a % of GDP)		39.0	51.7	*43.9*	*40.4*	*40.5*	*41.0*	*41.3*	*41.4*
Public sector net borrowing		51.2	316.0	*138.9*	*71.7*	*33.2*	*33.4*	*32.5*	*30.1*
(as a % of GDP)		2.3	14.7	*5.8*	*2.7*	*1.2*	*1.2*	*1.1*	*1.0*
Public sector net debt (% of GDP)		83.9	95.1	*93.7*	*90.2*	*89.4*	*87.9*	*83.9*	*80.9*
GDP deflator at market prices (2019=100)		100.7	106.4	*106.2*	*114.6*	*118.7*	*120.4*	*122.0*	*124.5*
Money GDP (£ billion)		2259	2145	*2385*	*2609*	*2731*	*2794*	*2867*	*2970*

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	
2016	4.5	4.3	8.1	11.1	-0.1	2.4	12.5	17.8	5.3	2.5	-2.1
2017	3.3	4.7	10.3	11.0	1.0	2.5	14.6	18.2	3.6	1.2	-0.2
2018	3.2	4.6	9.6	10.9	1.2	2.5	14.1	18.0	3.9	1.3	-0.8
2019	3.1	4.5	10.9	10.7	1.2	2.7	15.2	17.9	2.7	0.5	0.3
2020	10.1	4.2	12.4	9.4	-8.3	3.0	14.2	16.7	2.5	1.4	-1.9
2021	7.3	4.5	11.9	9.9	-4.2	3.0	14.9	17.5	2.6	0.5	-0.4
2022	*2.3*	*4.4*	*11.4*	*9.5*	*0.6*	*2.9*	*14.4*	*16.7*	*2.4*	*1.1*	*-0.6*
2023	*0.9*	*4.2*	*8.7*	*9.3*	*2.4*	*3.1*	*12.1*	*16.6*	*4.5*	*3.0*	*-2.8*
2024	*2.1*	*4.2*	*7.0*	*9.4*	*2.9*	*3.2*	*12.1*	*16.8*	*4.7*	*3.3*	*-2.9*
2025	*3.0*	*4.2*	*6.3*	*9.5*	*3.0*	*3.2*	*12.3*	*16.9*	*4.6*	*3.2*	*-2.6*
2026	*3.7*	*4.1*	*5.9*	*9.6*	*3.1*	*3.2*	*12.7*	*16.9*	*4.3*	*3.0*	*-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)

	2020	2021	2022	2023	2024	2025	2026	2027–31
GDP (market prices)	-9.3	7.4	3.5	0.8	0.9	1.1	1.5	1.7
Average earnings	2.5	5.1	5.4	4.9	3.1	2.8	3.3	3.8
GDP deflator (market prices)	5.3	0.1	6.9	5.0	1.6	1.2	1.9	2.4
Consumer Prices Index	0.8	2.6	7.8	5.2	1.4	1.0	1.7	2.2
Per capita GDP	-9.7	6.9	3.2	0.4	0.6	0.8	1.1	1.4
Whole economy productivity[a]	1.4	1.0	-0.5	0.3	0.0	0.3	0.6	1.2
Labour input[b]	-10.6	6.4	4.0	0.3	0.9	0.8	0.8	0.4
ILO Unemployment rate (%)	4.6	4.5	4.4	5.1	4.7	4.4	4.1	3.6
Current account (% of GDP)	-2.5	-2.6	-2.4	-4.5	-4.7	-4.6	-4.3	-3.9
Total managed expenditure (% of GDP)	51.7	43.9	40.4	40.5	41.0	41.3	41.4	41.9
Public sector net borrowing (% of GDP)	14.7	5.8	2.7	1.2	1.2	1.1	1.0	1.6
Public sector net debt (% GDP)	95.1	93.7	90.2	89.4	87.9	83.9	80.9	73.9
Effective exchange rate (2017=100)	102.1	106.9	108.2	107.5	106.6	106.1	105.6	104.6
Bank Rate (%)	0.2	0.1	1.3	2.4	2.5	2.6	2.6	2.7
10 year interest rates (%)	0.3	0.8	1.7	2.7	2.7	2.8	2.8	2.9

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	-1.3	8.3	-3.6	3.4	2.1	2.7	1.8	1.7	1.5
Mining and quarrying	5	1.3	-19.4	-11.3	-2.8	-7.8	-7.8	-7.8	-7.8
Manufacturing	3.9	3.1	-8.9	7.2	4.5	2.4	1.1	1	0.9
Construction	-2	-0.1	-16.1	12.9	4.9	2.2	0.4	0.3	0.4
Public sector	1.3	2.9	-6.9	11.9	4.1	0.4	0.2	0.7	0.3
Private non-traded services	0.4	1.3	-14.5	8.5	8.2	2.9	1.1	1.1	1
Financial services	-0.5	-1.6	-3.1	1.7	0.8	1.2	0.9	0.9	0.7
Imputed rent	2.3	0.3	0.4	1.1	2	0.7	0.8	1.1	1.4
Private traded services	3.8	2.4	-10.7	8.1	8.3	2.5	1.9	1.9	1.8
Total economy	1.6	1.8	-9.2	7.5	5.4	1.8	1	1.1	1

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).

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