1. UK Economic Outlook: Covid-19 leaves inflation in its wake

By Cyrille Lenoël, Rory Macqueen, Paul Mortimer-Lee, Urvish Patel and Kemar Whyte[1]

Economic background and overview of the forecast

Economic background

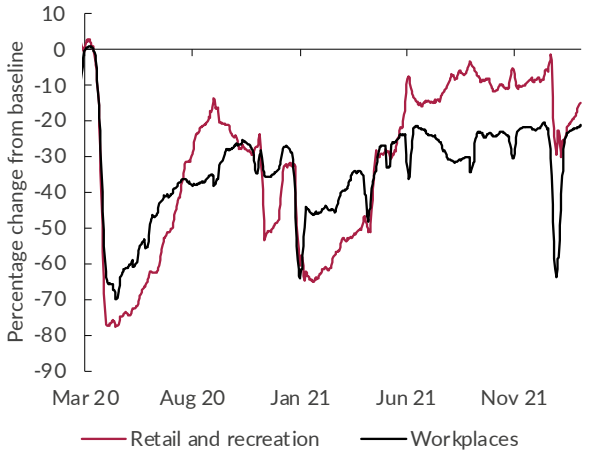
Emerging (again) from the shadow of Covid-19

The UK economy has recovered its pre-pandemic level, we appear to be at or close to full employment, and inflation is rising. But with a workforce several hundred thousand below trend, and with the effects of Brexit not yet fully behind us, the UK economy now faces the challenge of adjusting to and engaging with the post-Covid world.

Tighter monetary and looser fiscal policy required

The Bank of England's commencement of a tightening cycle is somewhat belated but welcome and should now be seen through and combined with a fiscal loosening at March's Budget. The latter could take the form of a delay to the rise in National Insurance contributions or a relaxing of spending plans in the light of higher inflation than forecast at the Spending Review. Greater welfare transfers may also be needed to cushion low-earning households' incomes.

Figure 1.1 Google Mobility data



Source: Google, NIESR calculations

Baseline is median value for the day of the week Jan 3 – Feb 6 – 2020. Seven-day rolling average.

Wages will determine whether inflation or incomes take the strain

The labour market response to higher inflation will define what kind of economic adjustment 2022 brings. A large wage response could have grim implications for underlying inflation in which case the Bank of England's Monetary Policy Committee (MPC) will be faced with the choice of hiking quickly and causing a recession or tolerating a prolonged inflation overshoot. But if wages fail to respond significantly, recession could result from lower real consumer outlays alongside fiscal tightening. These gross imbalances of policy make a negative shock a significant risk, with both considerably weaker demand and higher inflation distinct possibilities.

Omicron paused recovery in late 2021

Since our Autumn Outlook the spread of the Omicron variant of Covid-19 has tipped the UK economy from robust growth in November 2021 to likely negative month-on-month growth in December 2021 and potentially January 2022. NIESR's latest GDP tracker nowcast is for output growth in the final quarter of 2021 of 1.2 per cent, followed by 0.6 per cent in the first quarter of 2022.

Omicron's economic impact is not only likely to be smaller than that of the Delta variant a year earlier but also is manifesting in different ways. While earlier waves of Covid-19 principally acted to constrain demand through voluntary or mandated social distancing, the faster spread of Omicron has significantly affected labour supply due to illness and isolation, while the impact on demand has been smaller than previously. The Office for National Statistics' Opinions and Lifestyle Survey recorded around 60 per cent of working adults in Great Britain travelling to work in the second half of December and early January, compared with 70 per cent in November.

Retail and hospitality resilience

Google Mobility data on retail and recreation (see Figure 1.1) has returned progressively closer to its pre-Covid level, with each lockdown having a smaller effect than the previous Late December and January saw a fall from 90 per cent of pre-Covid levels to 70 per cent: a smaller drop than during the first national lockdown (from 100 per cent to 20 per cent) or the second (from 70 per cent to 35 per cent).

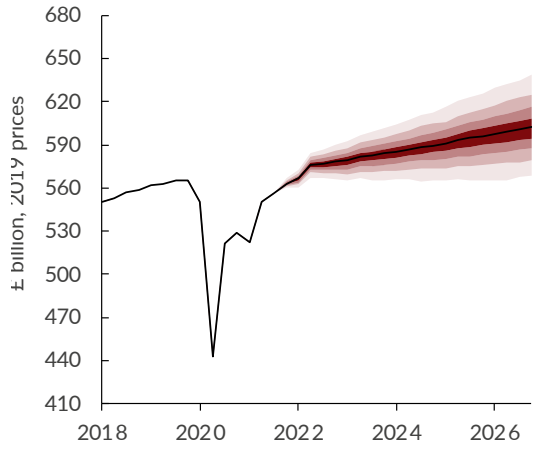
Retail sales fell 3.5 per cent on a seasonally adjusted basis in December: partly due to Christmas shopping having been

1 The authors are grateful to Jagjit Chadha and Barry Naisbitt for helpful comments and to Amber Rivett for preparing the charts and the database underlying the forecast. The forecast was completed on 24th January 2022; more recent data are 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 Rory Macqueen (enquiries@niesr.ac.uk).

https://doi.org/10.1017/nie.2022.16 Published online by Cambridge University Press

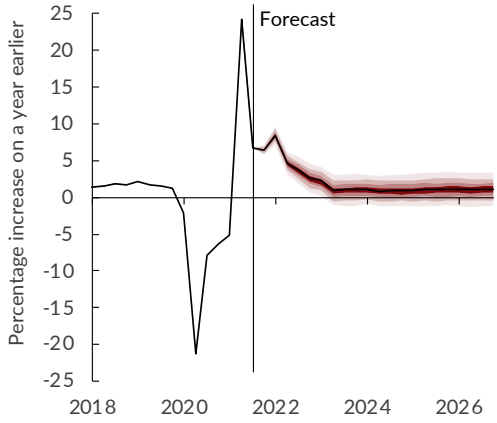
brought forward to November, partly due to Covid-19 cases and the imposition of Plan B restrictions. In mid-January, non-seasonally adjusted spending on credit and debit cards was down 26 per cent from the same point in December and 16 per cent from November. The GfK consumer confidence indicator took a turn for the worse in the last quarter of 2021 and fell further, to -19, in January, reflecting households' concerns about rising inflation and its effect on real incomes. In each case the economic effects of Omicron appear negative but smaller than those of Delta.

Figure 1.2 Quarterly UK GDP



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 in any particular year will lie within any given shaded area in the chart. There is a 20 per cent chance that GDP will lie outside the shaded area of the fan chart.

Figure 1.3 Quarterly UK GDP (growth rate)



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.

Supply conditions may now be easing

Supply chain disruptions dominated headwinds to growth and increased inflationary pressures in the autumn, but these disruptions may have eased. November's monthly GDP data recorded the fastest growth rates of output since March for manufacturing and construction. The Federal Reserve Bank of New York's Global Supply Chain Pressure index has eased, and the IHS Markit Manufacturing Suppliers' Delivery Times index reached its best level for a year in December 2021.

NIESR nowcasting models suggest slow growth, high inflation and rising wages at the start of 2022

NIESR's January CPI tracker found trimmed mean inflation – excluding 5 per cent of the highest and lowest price changes – rising to 4 per cent, suggesting that price rises are spreading, with rises highest in London and lowest in Northern Ireland. Twelve per cent of goods and services prices increased in November alone. Our January wage tracker forecast average earnings to rise from the 4.2 per cent recorded in the three months to November to 5.6 per cent in the first quarter of 2022, thanks to rises in pay settlements, starting salaries and bonuses. The combination of lower growth, lower real wages and higher inflation suggests the possibility of a terms of trade shock (see 'Trade', page 20, and Box A on page 7).

Markets remain subdued, expecting higher interest rates

UK stocks have regained pre-Covid levels and began 2022 relatively strongly but growth has slowed, as on other major international indices. The yield on 10-year gilts has continued its unsteady rise from around 0.1 per cent in the early months of the pandemic and is now around the level – slightly above 1.2 per cent – seen in early 2019.

Overview of the forecast

Higher inflation dominating headlines in 2022

We expect GDP to grow by 4.8 per cent in 2022 and 1.3 per cent in 2023, close to our Autumn Economic Outlook forecast (see Figures 1.2 and 1.3). We expect consumption and investment to grow at similar rates year-on-year, and the main change since the autumn is that inflation is expected to be even higher and the MPC is expected to react more strongly. Interest rates are now forecast to rise more quickly, with four rises expected in 2022 and Bank Rate reaching 1.5 per cent by the third quarter of 2023.

Despite rising interest rates, consumer price inflation is forecast to average 5.9 per cent in 2022, declining from a peak in the second quarter of 7.0 per cent to 4.7 per cent by the end of the year. If temporary, this inflation may facilitate some important relative price shifts.

Despite a tight labour market, real wages to fall

As a result, real wages are forecast to be lower in 2022 than in 2021. Despite unemployment falling further, to average 3.9 per cent in 2022, average earnings are forecast to increase by 4.8 per cent: 1.1 per cent below CPI inflation. Personal disposable incomes are forecast to

https://doi.org/10.1017/nie.2022.16 Published online by Cambridge University Press

Box A: Improved trade balance with the European Union raises challenging Brexit questions[1]

By Paul Mortimer-Lee

Summary

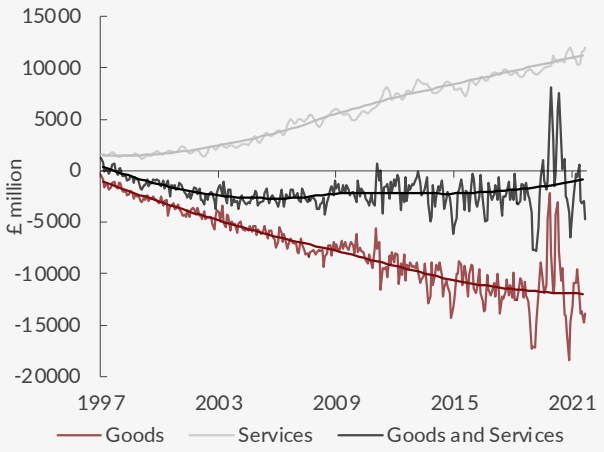
There has been a significant improvement in the UK's net trade performance with the European Union (EU) since the 2016 Brexit vote. The previous negative trend in the real net trade balance with EU has not only stopped but is improving. The gap between recent numbers and the previous trend in the trade balance with the EU is equivalent to just over 2 per cent of GDP. A plausible reason for these developments is that the Brexit vote led to a sharp sterling depreciation, making the UK significantly more competitive while crimping domestic demand. However, Covid-19 and a dramatic drop in the EU's overall trade balance are also likely important influences.

Introduction

Most analysis ahead of Brexit predicted a substantial hit to the economy (Erken et al., 2018; Hantzsche et al., 2018). Much recent comment claims a negative effect (Giles, 2021) and the Office for Budget Responsibility (OBR) recently opined that it expected GDP to be 4 per cent lower than otherwise because of Brexit. The Centre for European Reform (CER) said that "isolating the Brexit effect suggests a drop of 11 to 16per cent in the amount of UK trade" (Springford, 2021). Worse trade performance was at the heart of most of the pre-Brexit gloomy predictions about its economic impact.

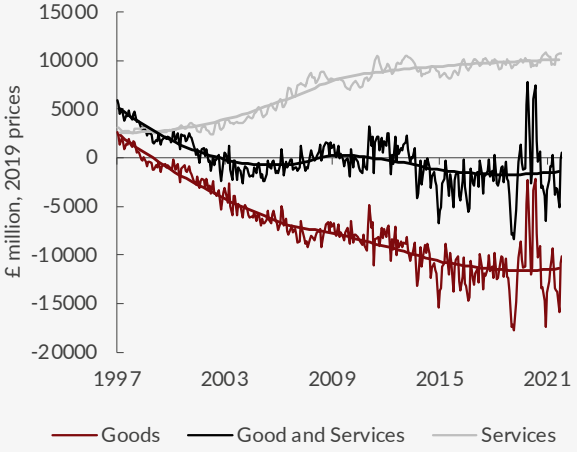
However, poorer trade numbers have failed to materialise. The trade position with the EU has improved substantially since 2016. This raises the question of whether analysts have been looking in the right place when searching for economic losses due to Brexit.

Figure A1 UK Nominal Trade Balances: World



Source: ONS; NIESR

Figure A2 UK Real Trade Balances: World



Source: ONS; NIESR

Analysis

Figure A1 looks at the UK nominal trade balance, split between services and goods. The longer run trends are for an increasing surplus on services offset by a trend increase in the goods deficit, delivering a more or less consistently stable deficit. However, that balance has improved over recent years. In 2015 and 2016, the overall trade balance was in deficit by £30 billion and £33billion, respectively. In 2017 and 2018, the deficit was slightly

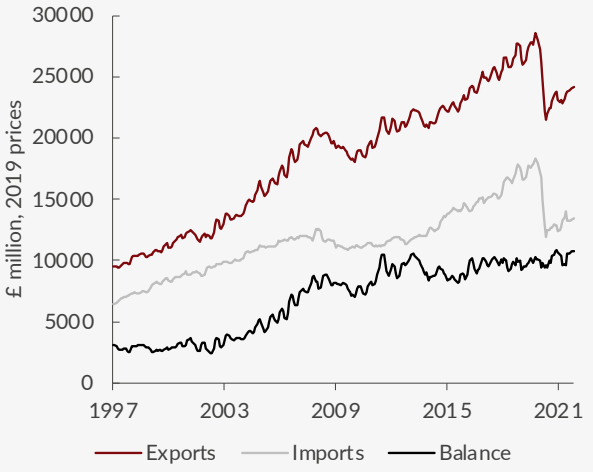
1 I would like to thank Jagjit Chadha, Rory Macqueen, Issam Samiri and Manuel Tong for valuable comments and Amber Rivett and Patricia Sánchez Juanino for research assistance.

https://doi.org/10.1017/nie.2022.16 Published online by Cambridge University Press

smaller, at £26 billion and £28 billion, with a fall to under £21 billion in 2019. In 2020, the year of Brexit and Covid-19, there was a surplus of £3 billion, and in the first eleven months of 2021 a deficit re-emerged, running at an annual rate of £21 billion. In 2020 and 2021 taken together, the trade balance looks likely to average a deficit of £10 billion a year, compared with a deficit three times as large before Brexit.

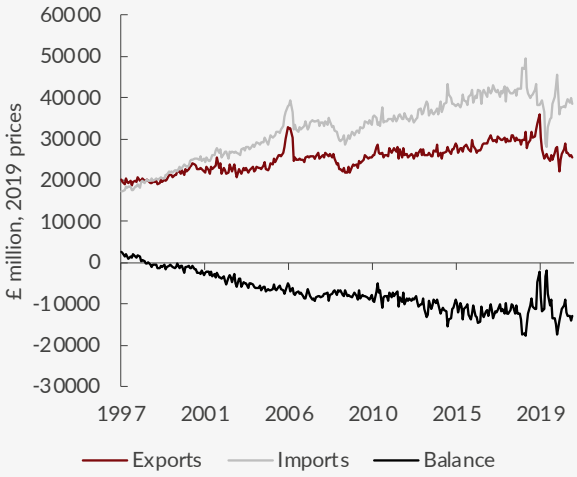
Figure A2 presents a very similar picture when the data are in real terms (2019 prices), except that all the trends look flatter – the services surplus is on a much flatter improving trend than in nominal terms. Since 2020, services volumes have stepped down on each side of the external accounts, leaving the balance unchanged (Figure A3).

Figure A3 UK Real Services Trade: World



Source: ONS; NIESR

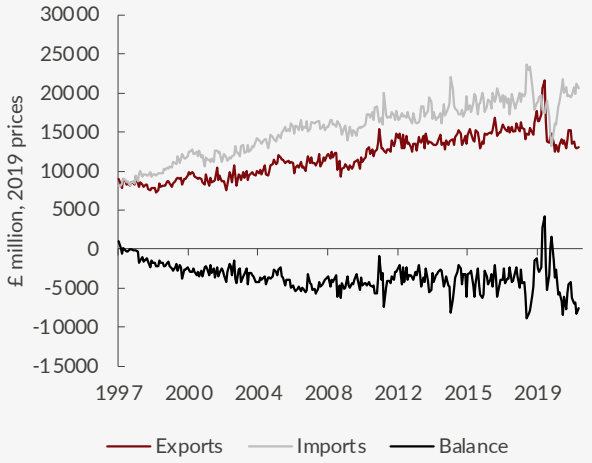
Figure A4 UK Real Goods Trade: World



Source: ONS; NIESR

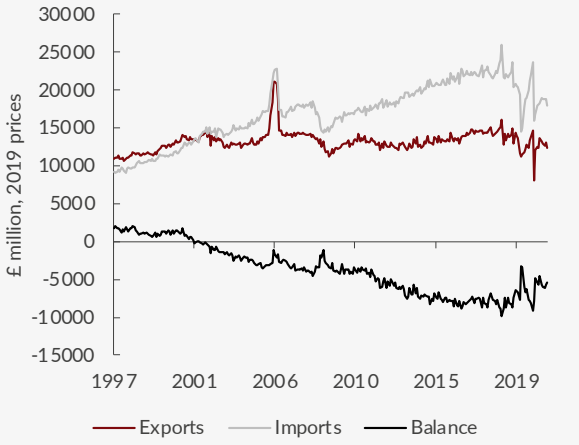
It is, of course, changes in net trade on the external accounts that affect growth, not the gross flows, which is why looking at the sum of imports and exports is grossly misleading as a guide to how Brexit may have affected the economy. This is especially the case as Covid-19 has impacted global value chains, notably transactions in the automotive sector, which is important on both sides of the UK's external accounts.

Figure A5 UK Real Goods Trade: Non-EU



Source: ONS; NIESR

Figure A6 UK Real Goods Trade: EU



Source: ONS; NIES

Figure A4 shows more volatility in goods, but again a broadly offsetting shrinkage since 2020 in both imports and exports.

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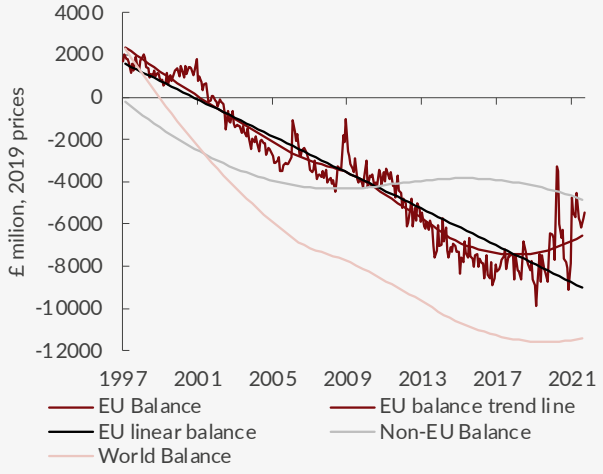
All the flows have fallen since 2019, with imports from the non-EU recovering best (Figure A5) and imports from the EU suffering the most sustained fall (Figure A6).

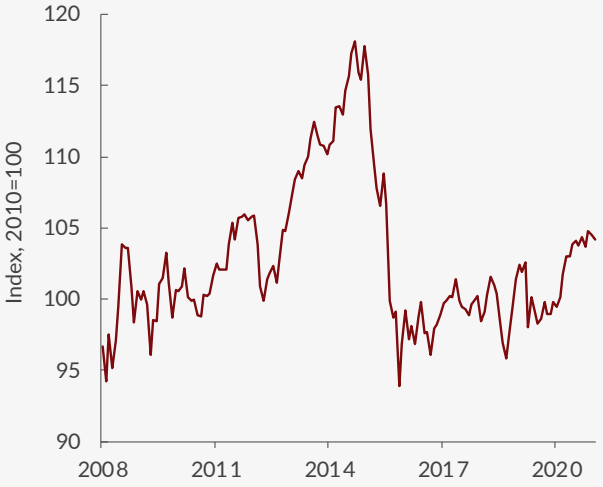
Figure A7 shows that the pre-2016 downward trend in the EU balance has turned. While the recent improvement may be due to Covid-19, the improvement started in 2016, and may well stem from the sharp improvement in UK competitiveness following sterling's fall on the Brexit vote (Figure A8).

Figure A7 Trends in Real Goods Balance



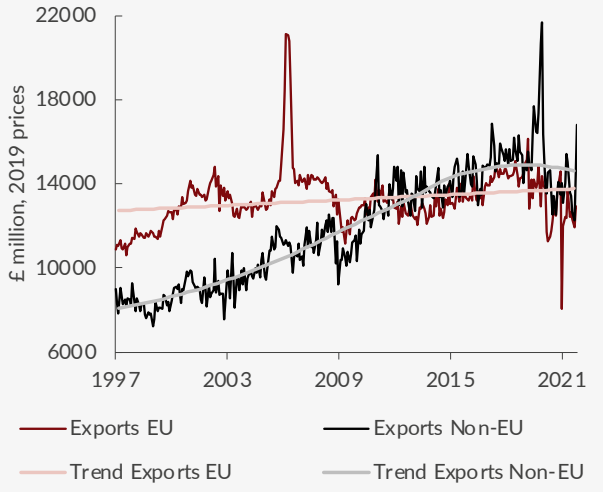
Source: ONS; NIESR

Figure A8 UK Real Effective Exchange Rate (2010 = 100)



Source: Federal Reserve Bank of St. Louis; NIESR

Figure A9 UK Real Exports



Source: ONS; NIESR

Figure A9 shows that Covid-19 flattened the previous upward trend in non-EU exports. However, the flat trend in exports to the EU has not turned down as the damage from Brexit argument would have suggested. Exports to the EU appear to have fared no worse than exports to the non-EU, contradicting hypotheses about a negative effect from Brexit so far. Having said that, the trade figures will have been affected by uncertainty over Brexit, including anticipatory inventory building around the end of the transition period.

Conclusions

The evidence in actual UK trade data shows that the net goods trade position of the UK with the EU, which was deteriorating this century, flattened off following the Brexit vote in 2016 and began to improve even before Covid-19 reduced trade volumes and muddied the statistical waters. The facts challenge claims of an adverse net trade effect from Brexit so far.

However, Covid-19 has distorted trade flows severely, so any conclusions are necessarily tentative. For example, analysing UK net trade performance with the EU shows that a good part of the improvement since 2020 was in machinery and transport equipment (Figure A10). We know that motor vehicle manufacturing was adversely affected by chip shortages and, therefore, so was trade in motor vehicles. Thus, some of the improving trend in the net trade position with the EU since 2020 is probably attributable to Covid-19, making it tough to separate Brexit from Covid -19effects. Having said that, the trade trend began to turn significantly prior to the pandemic.

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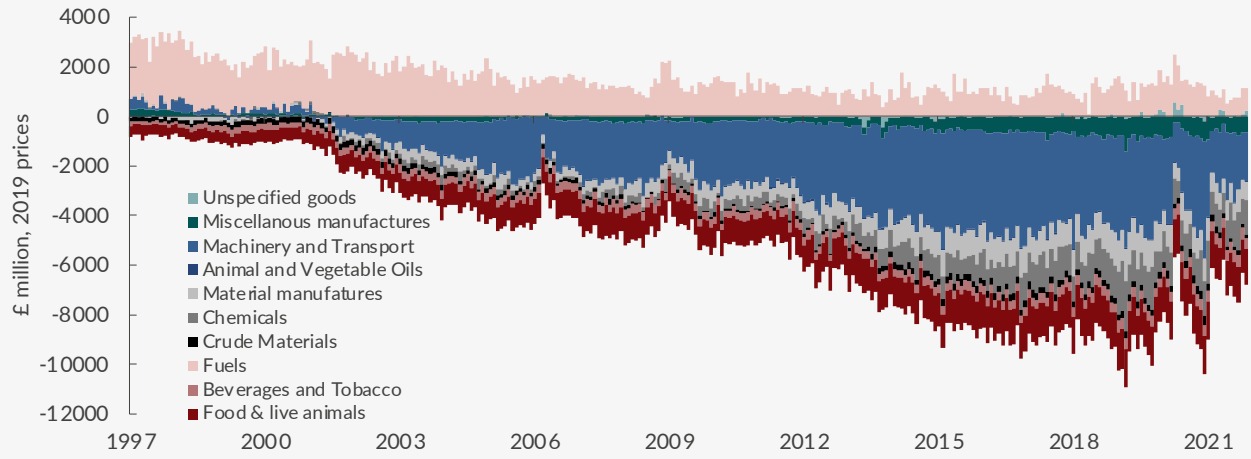
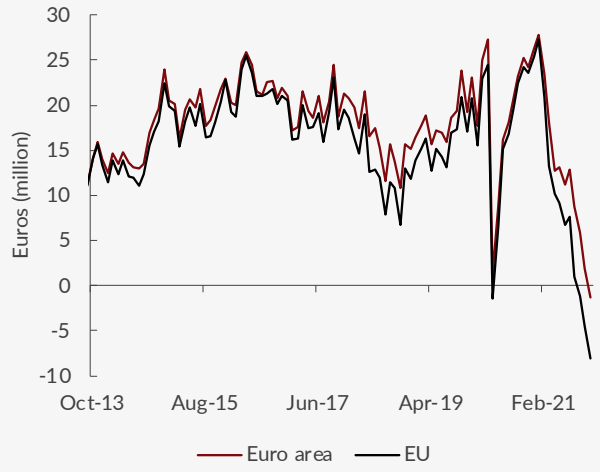
Figure A10 UK Real Balance of Goods Trade: EU



Source: ONS; NIESR

The analysis thus far has taken a UK perspective, but a trade balance is two-way. It is not solely with the UK that the EU's goods trade balance has been deteriorating, but with the world. Figure A11 shows that this fall in the balance has been dramatic, with the massive EU trade surplus evaporating since Covid-19 hit, which raises a further set of questions as to why this has happened, and making conclusions over the effects of Brexit more uncertain.

Figure A11 UK Real Balance of Goods Trade: EU



Source: Eurostat; **NIESR**

Our analysis of the developments in UK/EU trade raises a slew of questions and challenges many previous assertions about the adverse effects of Brexit on UK trade. Definitive answers are not in the data because Covid-19 and the vanishing EU trade surplus with the world are major influences on the UK/EU trade balance in addition to Brexit.

This analysis raises questions of whether trade is the right place for look to find Brexit effects. If the exchange rate moves to offset much of the ex ante Brexit effect on net trade, then the correct place to look ex post is elsewhere. Specifically, it is in the consumer sector where adverse effects of Brexit may be felt. The hypothesis is that a weaker exchange rate due to Brexit has pushed up import costs and raised consumer prices, thereby crimping real incomes. The resultant lower level of consumption reduced import volumes and, together with the improved competitiveness effect noted above, offset the initial adverse net trade effects. More light will be shed on the issue as Covid-19's impact on trade fades during this year, and we will be watching the data closely for clues.

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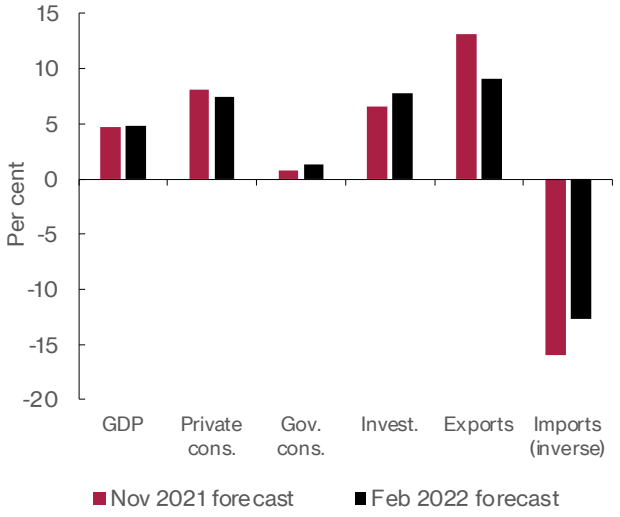
https://doi.org/10.1017/nie.2022.16 Published online by Cambridge University Press

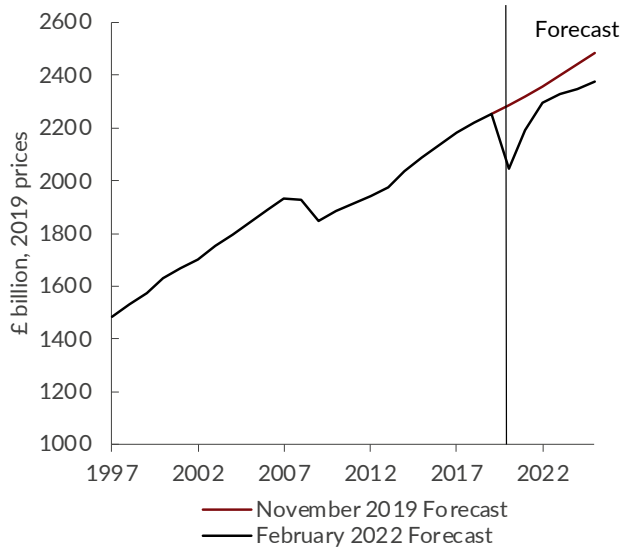
grow by only 1.1 per cent in real terms in 2022 – compared to the 2.3 per cent forecast in the Autumn Outlook – followed by 2.5 per cent in 2023. There exist upside risks to our central case forecast for nominal wage growth and, therefore, even higher inflation.

Figure 1.4 Components of UK GDP growth in 2022



Source: NiGEM database, NIESR forecast

Figure 1.5 NIESR forecasts for UK GDP



Source: NiGEM database, NIESR forecast
Note: see footnote 2 on page 12

Investment expected to finally pick up
Business investment is forecast to increase by 11 per cent in 2022, after an 11 per cent fall in 2020 and near stagnation in 2021. Housing investment recovered more quickly and is forecast to grow just 3.5 per cent in 2022, with house prices rising at a similar rate before growth slows from 2023.

The current account deficit, which shrank when the pandemic hit, is expected to widen to above 3 per cent this year and close to 4 per cent from 2023.

Inflation will put pressure on government spending
Inflation will also erode the value of the mild fiscal loosening announced at the Spending Review in October 2021, to the extent that an upward revision of department spending plans ahead of the general election is considered an upside risk to the central case scenario in our fiscal forecast. In our main case scenario of no increase to nominal department budgets, real government consumption will be squeezed, with an average real-terms increase over the coming years of 2.1 per cent per year, rather than the 3.3 per cent planned in October.

Economic activity

2021 saw household spending recover
GDP is estimated to have been 7.3 per cent higher in 2021 than 2020, a slightly larger rise than in our Autumn Economic Outlook, partly thanks to data revisions by the Office for National Statistics (ONS). Household and government consumption both rose strongly while investment by the housing and government sectors grew by 14 and 11 per cent respectively, but business investment was close to stagnation at 0.5 per cent.

On the latest measures of monthly GDP, services and construction output exceeded their pre-Covid levels by November 2021, with the largest contribution from the health and social care sector, though production remained 2.6 per cent below its peak.

Omicron unlikely to impair 2022 growth much
At the start of 2022 the most significant headwind to growth has been the Omicron variant of Covid-19, discussed above, but we assume that its effects will dissipate by the second quarter.

Our central case forecast for GDP growth of 4.8 per cent year-on-year in 2022 is 0.1 percentage points higher than the forecast in our Autumn Economic Outlook (see Figure 1.4 and Appendix Table A3). Our conditional forecast assumption is that Omicron is not followed by another Covid-19 wave of similar or greater severity: this possibility represents a downside risk to our central case forecast path for GDP.

Long-term growth potential little changed
After 2022 activity is assumed to have exhausted the potential for 'catch-up' growth post-pandemic and thereafter to approach a growth path limited by our underlying assumptions about the UK economy. In the case of potential GDP, this is driven by an annual labour productivity growth rate expected to be around 0.5 per cent following the signing of the Trade and Co-operation Agreement with the European Union.

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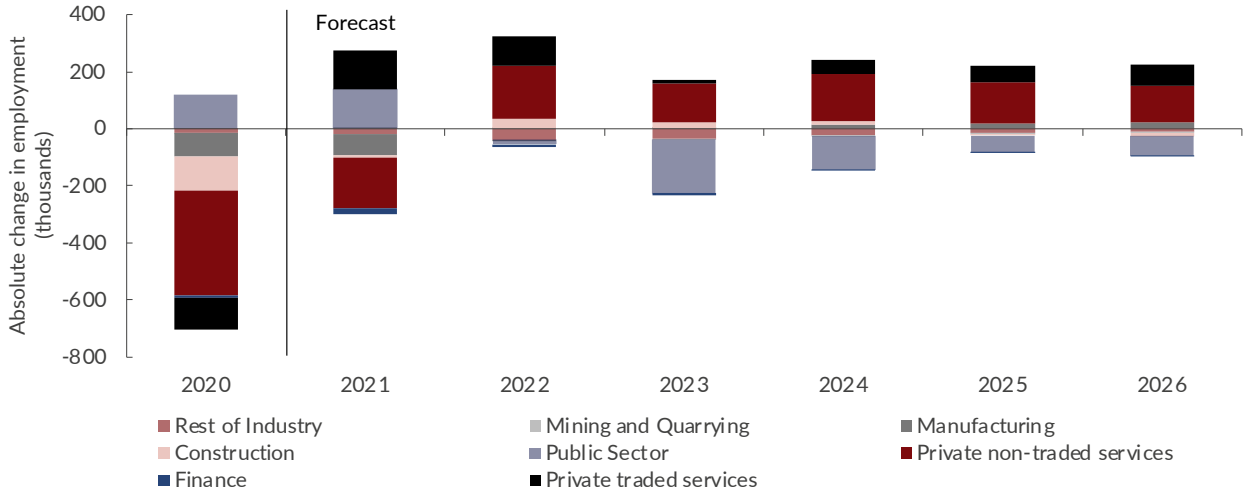
Figure 1.6 Employment change by sector



Source: NiSEM database, NIESR forecast

Covid-19 and Brexit look set to leave the economy 4 per cent smaller than was forecast in 2019…
Quarterly GDP is expected to regain its pre-Covid peak in the first quarter of 2022, having done so on a monthly basis in November 2021. Our forecast medium-term trajectory for economic activity is around 4 per cent lower than that forecast in Autumn 2019 (see Figure 1.5): a degree of scarring which includes the negative impacts of both Covid-19 and, the Trade and Co-operation Agreement; these are slightly offset by a loosening of non-Covid fiscal policy.[2]

This equates to a loss of output over 2020 and 2021 approximately equal to £370 billion in 2019 prices: more than £5,500 per person.

…a much smaller scar than that left by the financial crisis
A 4 per cent impairment to UK GDP after five years would be far smaller than that which followed the Global Financial Crisis: in 2012, GDP was around 12 per cent below its 1997-2007 trend. Aside from the personal cost, Covid-19 will have left its mark on the economy in other ways: the unprecedented degree of policy support in the past two years is likely to have contributed to higher interest rates in future than the UK has seen for some time, in nominal terms at least.

The mining and quarrying sector is forecast to recover some of its 2020 and 2021 output losses (see Table A11), growing by 10 per cent in 2022. Strong growth is also anticipated in private non-traded services (7 per cent) and private traded services (5 per cent), both of which saw double-digit falls in 2020 but, unlike construction, which grew by 14 per cent, did not recover much of these losses in 2021.

Brexit fall-out remains a key downside risk
There remain other downside risks to even this unpromising outlook for aggregate growth: the reopening of the protocol governing the trade status of Northern Ireland carries the risk of both direct disruption and unfavourable revisions to other aspects of the Trade and Co-operation Agreement.

The inflationary environment presents dual risks. On the one hand, if the Bank of England attempts an excessively gradualist approach to interest rate rises then there is a risk inflation will remain stubbornly higher for longer than we forecast. On the other hand, a robust response to inflation might require significantly higher rates that could provoke a recession. Geopolitical risks have risen and could disrupt markets, confidence and the global economy.

Households

Hours are down, nominal wages are up
The Omicron wave is not forecast to have a negative impact on employment, but total hours worked, which before Omicron were already below trend, are likely to have been considerably affected at the end of 2021 and start of 2022 due to staff absences. Annual earnings growth is expected to accelerate this year because of higher pay settlements, particularly in the private sector, but with inflation and payroll taxes rising, there will be a painful squeeze on the incomes of those principally dependent on labour income and those in receipt of social security, which in turn will hold back consumption.

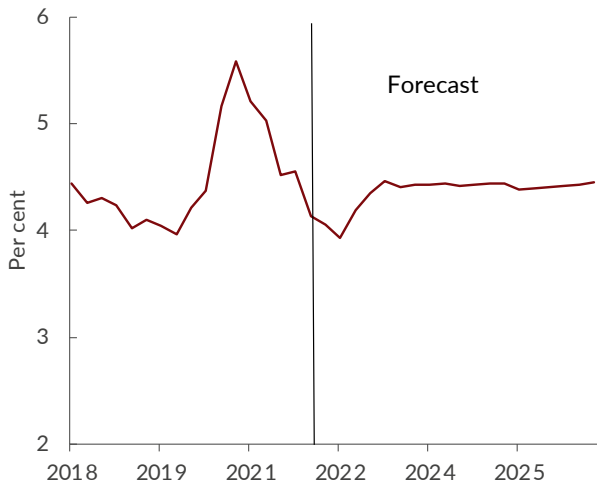
Unemployment down despite the end of furlough
Unemployment continues to edge down towards pre-Covid lows, reaching 4.1 per cent in the three months to November. At the same time, the employment rate remains around 1 percentage point lower than before the pandemic, providing a partial explanation for the fact that hours are 3 per cent below their early-2020 peak. According to the Institute of Employment Studies (IES, 2022) 38 per cent of the change in

2 This excludes the effect of data revisions since November 2019, which served to raise the level of annual GDP pre-pandemic by around 1.5 per cent.

https://doi.org/10.1017/nie.2022.16 Published online by Cambridge University Press

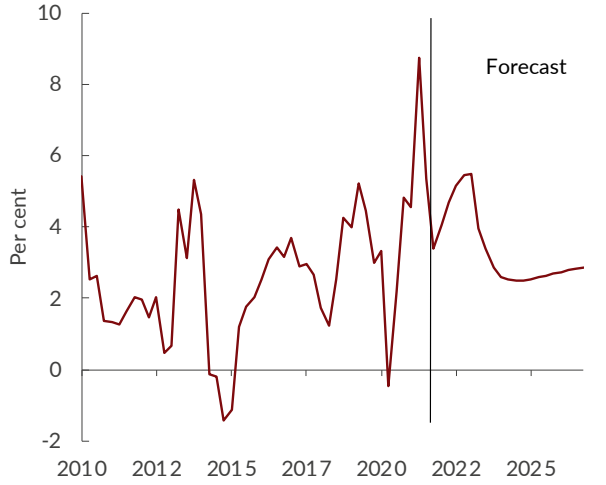
labour market activity can be attributed to a smaller population (lower net migration and demographic changes, potentially including excess deaths) but the majority is explained by greater inactivity, particularly among older workers.

Figure 1.7 Unemployment rate



Source: NiGEM database, NIESR forecast

Figure 1.8 Annual growth in annual earnings



Source: NiGEM database, NIESR forecast

Omicron likely to restrict supply in the short term…
We do not anticipate a short-term impact on employment figures from Omicron, but its effects are likely to appear in sickness records, adding to existing labour shortages. These are principally in transport, retail, hospitality, arts and recreational, and health and social care: at the beginning of January 46,000 NHS staff were off sick per day compared with 12,000 daily at the beginning of December. Some rail operators reported almost 10 per cent staff absences, and some restaurants had only 50 per cent of their workforce. The ONS estimated that 3 per cent of the workforce were not working in late December due to Covid-19: the highest level since estimates began.

In our central case forecast scenario, total employment (including self-employment) grows by around half a million to 32.9 million in 2022, exceeding pre-pandemic levels, with employment in private non-traded services (+186,000) and private-traded services (+101,000) contributing most and continuing to add employment across the medium-term (see Figure 1.6).

…but unemployment remains around pre-Covid levels afterwards
We forecast the unemployment rate to fall further in 2022, to 3.9 per cent, rising thereafter to settle around 4.2 per cent across the forecast horizon, as growth slows and interest rates rise (see Figure 1.7). This outlook reflects our assumption that the participation rate returns slowly to pre-pandemic levels in 2023. There remains a downside risk to forecast growth and employment that scarring instead proves more persistent.

Earnings growth to accelerate in the private sector
Growth in average weekly earnings including bonuses decelerated in the three months to November 2021 to 4.2 per cent compared to a year earlier, down from 8.8 per cent in the three months to June 2021, as base and compositional effects disappeared. Private sector earnings grew by 4.5 per cent in the three months to November 2021, and the NIESR monthly wage tracker in January forecasts this to increase to 5.6 per cent the first quarter of 2022 thanks to higher pay settlements.

Vacancies have reached record levels, especially for some low-paid occupations…
We forecast average earnings to grow by nearly 5 per cent in 2022 overall, slowing gradually towards 2.5-3 per cent as inflation comes down across the forecast horizon (Figure 1.8). One downside risk is that pay awards in 2022 are more seriously constrained by rising company overheads including higher employer National Insurance contributions.

Household incomes growth to slow this year
Real household income growth was flattered during 2021 by the return to work of many people previously on the Coronavirus Job Retention Scheme (discussed in Box B on page 14). We forecast growth in aggregate real personal disposable income to ease to 1.1 per cent this year, after 1.8 per cent growth in 2021 (see Appendix Table A5). Continued positive growth masks highly varied distributional impacts for different households (see Chapter 2). With inflation forecast to peak in the second quarter of 2022, and higher employee National Insurance contributions scheduled from April, there will be a significant squeeze on the real incomes of those who are principally dependent on labour income. The squeeze on household incomes will be slightly mitigated by the

https://doi.org/10.1017/nie.2022.16 Published online by Cambridge University Press

Box B: A Targeted Furlough Scheme to help the economy in downturns

By Christoph Görtz, Danny McGowan and Paul Mortimer-Lee[1,2]

Proposal

The Coronavirus Job Retention Scheme (CJRS) is an important success story of the Covid-19 pandemic in the UK. The policy supported household finances by guarding employees from redundancy while also relaxing businesses' financial constraints by lowering their wage bills. However, it is often overlooked that the CJRS was vital in making possible national lockdowns during 2020 and 2021, thereby curtailing the spread of the disease. For a future lockdown to be feasible would require the simultaneous reintroduction of a furlough scheme (Görtz et al., 2021) and there may be applications of a version of this scheme in any future economic downturn. In principle, this could be an automatic stabiliser that complements other fiscal policy responses to a downturn. Germany and Switzerland have long-standing furlough schemes that were successfully deployed during the great recession and have remained in place since. Evidence shows these schemes help firms reorganise their operations during episodes of severe financial distress and that they tend to recover without capital and jobs being destroyed through bankruptcy. These are targeted schemes such that only affected sectors would be eligible. Ultimately, this is a question for politicians who would need to decide whether public finances are able to bear the scheme's cost.

While further measures may not be required to contain Omicron, given its lower level of severity, new more virulent mutations may emerge, and the government should be ready with suitable measures if that occurs. Even in the absence of lockdown measures, firms and workers in certain industries are more severely affected by a high incidence of Covid-19 as people change their consumption habits and reorient their lifestyle choices towards those activities involving less contact with others to avoid infection. Government communications advising 'working from home' also contribute to these behavioural changes. The adjustment in household behaviour to different levels of infection risk has been widely observed during previous waves of the pandemic due to its importance for the aggregate economy, it is an integral part of the transmission mechanism in virtually any macroeconomic-epidemiological model (see e.g. Eichenbaum et al., 2021).

Impact of CJRS

Employers in hospitality, tourism, and sectors where social distancing is difficult to implement are more adversely affected by high Covid-19 caseloads through falling custom and lost revenue. Ultimately, this puts pressure on jobs in these industries that is felt to a lesser extent elsewhere in the economy. Indeed, sectors that rely on online delivery and can remotely deliver services may benefit from a wave of infection as demand increases. The CJRS was used by 1.3 million employers and supported 11.7 million jobs. At the peak in May 2020, it applied to 8.9 million jobs. Implemented in a hurry, it was a hugely expensive blanket scheme, costing almost £70 billion (not including the cost of the Self Employment Income Support Scheme). ONS data show that 27 per cent of businesses experienced a decline in turnover compared to normal expectations during the pandemic. While not all of these firms experienced the 15 per cent turnover decline that we outline, this suggests that, conservatively, the targeted scheme would have saved a minimum of £51.1 billion compared to the universal CJRS.

Our assessment is that it did not need to be so all-encompassing since the take up rates were so variable. Figure B1 shows how much take-up rates varied by industry across regions. Some industries were far more affected than others, with Food and Accommodation, Arts and Entertainment and Other Services sectors having take-up rates in June last year of about 20 per cent, double that in other sectors. In some sectors, regional take-up rates showed considerable variation. Designing a furlough policy that supports firms and employees through the pandemic should therefore be targeted towards certain firms, as is the case in other countries, rather than broad based and free of eligibility criteria as the CJRS was during previous lockdowns.

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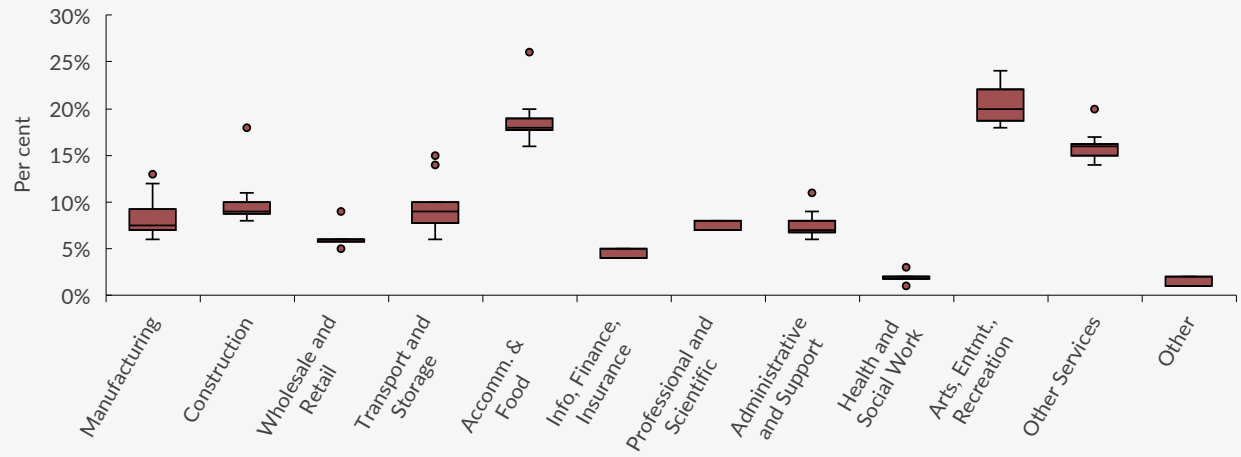
2 The authors would like to thank Jagjit Chadha and Rory Macqueen for valuable comments and Amber Rivett for research assistance.

https://doi.org/10.1017/nie.2022.16 Published online by Cambridge University Press

Figure B1 Furlough Take-up Rates by Industry; Regional Spread, June 2021



Source: ONS

Targeted Furlough Scheme

We suggest introducing a new policy tool, the Targeted Furlough Scheme, as a response to the challenges that lie ahead during the pandemic. This scheme incorporates the successful elements of the CJRS. Research shows the UK government's 80 per cent contribution to a furloughed worker's monthly wage up to a limit of £2,500 each month was effective in minimizing the incidence of household financial distress at low cost to taxpayers (Görtz et al., 2021). The CJRS avoided widespread household default due to mass unemployment and relaxed firms' financial constraints during lockdowns. It also helped to revive economic growth following the lifting of lockdown measures as retained employer-employee links allow firms to quickly reactivate their operations without having to incur time and monetary costs of hiring new workers.

However, the CJRS was effectively available to all firms as employers could self-assess whether their finances had been detrimentally affected by the pandemic. The lack of eligibility requirements and compliance monitoring exposes public finances, and taxpayers, to potentially high costs as firms that experience non-Covid-19 related financial difficulties may use the scheme. A further unintended consequence is that zombie firms remain active rather than closing down, thus preventing the reallocation of resourcesto more productive firms and reducing UK productivity growth (Gemmell et al., 2016). Media reports also highlight instances of workers being asked to commit furlough fraud by their employer demanding they continue working while furloughed (McCullough, 2020). This raises questions about working conditions.

While the scheme's detailed design had some flaws, the timing of the scheme could have been optimised. This is important as the CJRS is a heavy burden for public finances. When the CJRS ended on September 30 last year, there were 1.16 million people on the scheme, working for 410,000 employers. However, when the scheme ended, there was no noticeable increase in unemployment questioning whether the scheme could have been ended earlier than September without severely impacting unemployment. At the end of October, 16 per cent of businesses who were still trading reported that they had employees on furlough when CJRS ended. Two-thirds of those businesses' employees went back to work on full hours and only 3 per cent were made redundant. When the scheme ended, 28 per cent of the jobs on furlough, or 328,000 employments, had been continuously on furlough since March 2020. The lack of a noticeable unemployment response to furlough indicates that the scheme was prolonged unnecessarily, inflating its cost. What was needed was a targeted approach, giving businesses support when they needed it, but not providing artificial aid to businesses who would likely have failed in the absence of Covid-19.

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The Targeted Furlough Scheme we propose contains eligibility and compliance monitoring measures. For example, as is the case in other countries, firms would have to be able to demonstrate, by reference to annual and management accounts and bank statements that an employee's work has been stopped by Covid-19, and that turnover had fallen by at least 15 per cent because of pandemic-related reasons, to access the scheme. With large numbers of firms applying, self-assessment with a risk-based ex post assessment of eligibility might be adopted. These features would ensure support is targeted towards businesses in hard-hit sectors, ensuring that taxpayers' money is used prudently while also limiting competitive distortions. This approach has been widely used abroad, e.g., in Ireland, France, Canada, Australia and Sweden. In Ireland firms were only eligible to place employees on furlough if they experienced a 25 per cent fall in turnover and were unable to pay normal wages and outgoings. Sweden explicitly made eligibility conditional on a company suffering from 'temporary and significant financial difficulties due to Covid-19. A combination of the Irish and Swedish criteria seems also suitable for a Targeted Furlough Scheme for the UK.

The CJRS was very successful in shielding most of the workforce from being in financial distress. The absence of the scheme would have resulted in a sharp rise in unemployment. GDP in April and May 2020 was almost 25 per cent lower than in the final two months of 2019, which could have translated into a rise in the unemployment rate of up to 8 percentage points on the basis of previous relationships (though without lockdown, the fall in GDP could have been smaller). Many firms would have ceased trading, leaving permanent labour-market scarring. In those circumstances, lockdowns would have been very difficult to introduce and enforce. When redesigning a furlough scheme for the UK, it must be noted though that particularly for those with below median incomes and without a university degree, being furloughed during 2020 and 2021 implied a substantially heightened risk of being in severe financial difficulties (Görtz et al., 2021). For those at the poverty line, even the smallest adverse income shocks mean struggling to pay bills. Over 80 per cent of furloughed individuals earning minimum wages were in severe financial difficulties during furlough resulting in late bill and housing payments. Household default is not costless for our society and implies severe hardship for the affected families. A Targeted Furlough Scheme for the UK should shield those at the poverty line from income shocks. This can for example be achieved by providing a 100 per cent government contribution to wages of furloughed individuals employed at minimum wage. This additional 20 per cent government contribution for those individuals would have cost the taxpayer less than 1 per cent of the total spending on the CJRS during 2020 and 2021. Alternatively, one could also introduce a mandatory 20 per cent employer contribution for furloughed individuals at minimum wage that complements the 80 per cent wage payments covered by the government.

The suggested Targeted Furlough Scheme reaches those firms and their employees in financial difficulties during a severe time of the pandemic. It builds on the success of the UK CJRS during previous lockdowns. Germany and Switzerland have shown that a well-targeted furlough scheme can be an effective policy tool also outside of lockdowns – these countries used it very effectively to dampen the economic effects of the 2007 Financial Crisis. Outside a national lockdown, the CJRS in its current form seems a less desirable policy instrument as it lacks elements such as eligibility restrictions and compliance monitoring. However, the Targeted Furlough Scheme may provide a complement to other automatic stabilizers.

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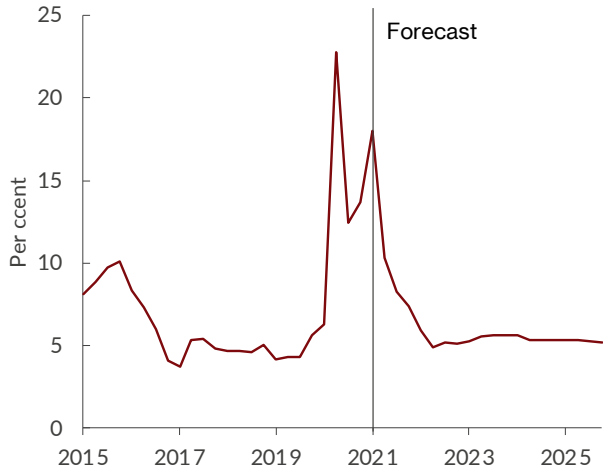
government's 'Energy Bills Rebate', announced after our forecast was finalised, but any effect will be relatively small and comes largely at the expense of future years' incomes.

Inflation set to eat into households' real consumption

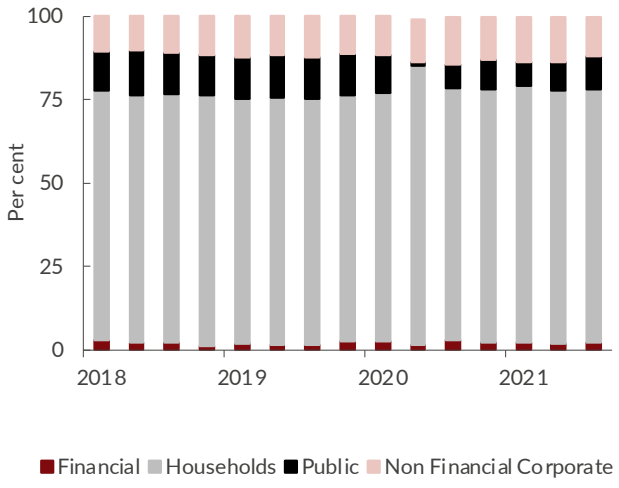
Omicron is forecast to have a temporary negative impact on consumer spending in the first quarter of 2022, but household consumption is expected to grow by 7.5 per cent in 2022 and around 2 per cent annually thereafter. Upside risks include greater consumer confidence and a quicker return to pre-pandemic normal activities, while higher inflation, a higher savings rate and renewed virus waves constitute major downside risks.

Figure 1.9 Household savings rate



Source: NiGEM database, NIESR forecast

Figure 1.10 Shares of national income



Source: ONS, NIESR calculations

House prices forecast to slow considerably

Our expectations of further interest rate rises this year and next year will dramatically slow recent growth in house prices. We forecast annual house price growth to ease from 10 per cent in 2021 to around 3 per cent in 2022.

Savings rate expected to normalise

After the assumed end of the Omicron wave, we forecast the savings rate to return to between 5 and 6 per cent (see Figure 1.9), close to its post-referendum level. Lower consumer confidence, more disruptive pandemic waves and higher inflation than expected constitute upside risks.

Firms

Balance sheets protected at the expense of investment

The pandemic has resulted in a significant improvement in the financial position of the UK corporate sector as a whole. Recessions generally see firms' finances worsen, but the Covid-19 recession was different, largely because of a huge expansion in the government's fiscal deficit and defensive behaviour: cutting investment and, in 2020, dividends.

Figure 1.10 shows the distribution of Gross National Income (GNI). Pre-Covid, about three-quarters accrued to households, with the remainder evenly split between the corporate sector and government. When the pandemic arrived, the household share shot up to 83 per cent in the second quarter of 2020, the corporate share rose by a percentage point and the government share plunged close to zero. Since then, government has clawed some, but not all, of the way back to pre-Covid levels, but corporates and households are still claiming a larger share of GNI than before the pandemic.

Firms and businesses moved strongly towards net saving as government did the reverse

The full financial position of the various sectors, their surpluses and deficits, depends on their expenditure as well as income. Financial surpluses and deficits registered dramatic shifts, shown in Figure 1.11. In the four years pre-Covid, the corporate and household sectors were in small deficit for most of the time, with, effectively, the overseas sector financing the UK government deficit. The response of both parts of the UK private sector to Covid-19 was to slash expenditure while government increased its outlays despite lower income.

The corporate sector moved into surplus in the second quarter of 2020, as did the household sector on a dramatically larger scale. The central government's net borrowing increased almost twelve-fold from its 2019 quarterly average to £123 billion that quarter: a staggering 25 per cent of GDP – about equal to the previous eleven quarters put together, with a central government deficit exceeded in only two full years in Britain's prior history.

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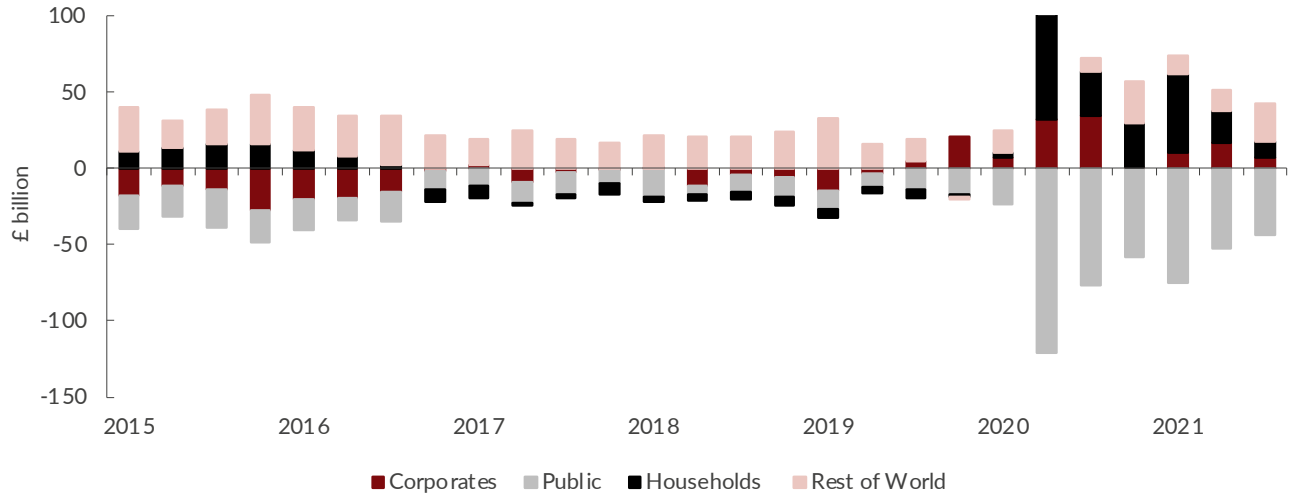
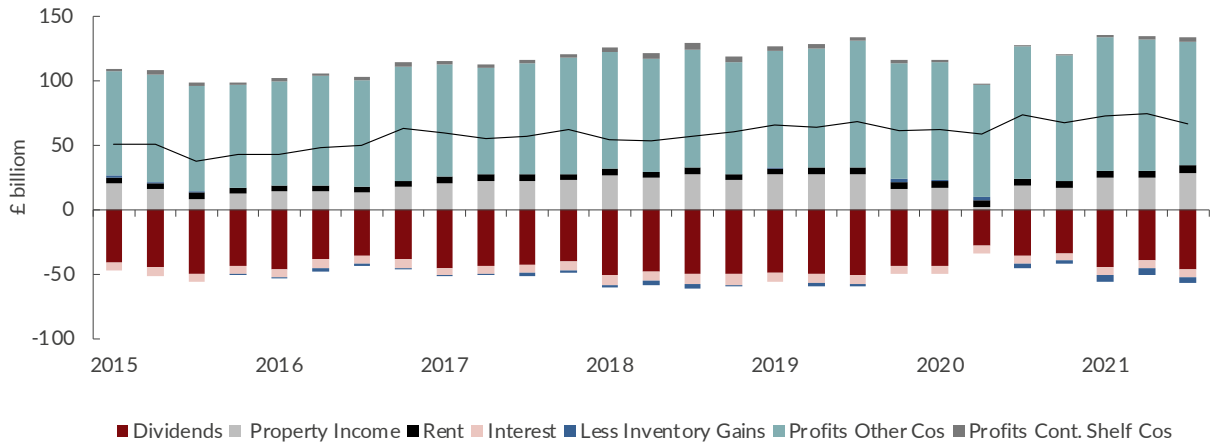
Figure 1.11 Sectoral net lending (+)/borrowing(-)



Source: ONS, NIESR calculations

Figure 1.12 Non-financial corporates: primary income account



Source: ONS, NIESR calculations

Corporate profits have risen during the pandemic…

It is not surprising that the household sector should benefit from a Bank of England-supported government deficit on such a huge scale, but the corporate sector also gained. Profits of non-oil corporates were virtually flat between 2019 and 2020 and have risen since to about 6 per cent above that level. Given the surge in prices in 2021, it is perhaps surprising that profits were not even higher, testifying to increased costs and lower output faced by many companies. In response to the pandemic, corporates slashed dividend payments and, while their property income fell, the balance of primary incomes improved (the line in Figure 1.12 and the light blue bars in Figure 1.13). While there was little change in 2020 compared with 2019, by early 2021, nonfinancial corporates' balance of primary income was £7-10 billion better per quarter than in the first half of 2019.

…thanks to cutting back on their capital investment

Figure 1.13 shows that the nonfinancial corporate balance, which registered a deficit of £29 billion in 2018 and virtual balance in 2019, moved into a surplus of £40 billion in 2020. The main driver for this was a sharp reduction in capital spending due to uncertainty and reduced final demand from consumers and exports, aided by the modest increase in primary incomes.

Since 2020, capital spending has started to recover, but by the third quarter of 2021 was still about 10 per cent below its pre-Covid level, so, together with a reduced balance of primary income, the corporate balance has deteriorated, with the surplus in the third quarter of 2021, around £4 billion, about the same as the average in the last two quarters of 2019.

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Cost pressures lie ahead

With the best of the growth bounce from Covid-19 behind us, and inflation soaring, firms are expected to experience cost pressures in the form of higher wage demands. Payroll taxes will rise from April and, with likely consumer resistance to these costs being passed on, it seems likely that profit growth will be low, and probably negative.

Figure 1.13 Non-financial corporates: secondary income distribution

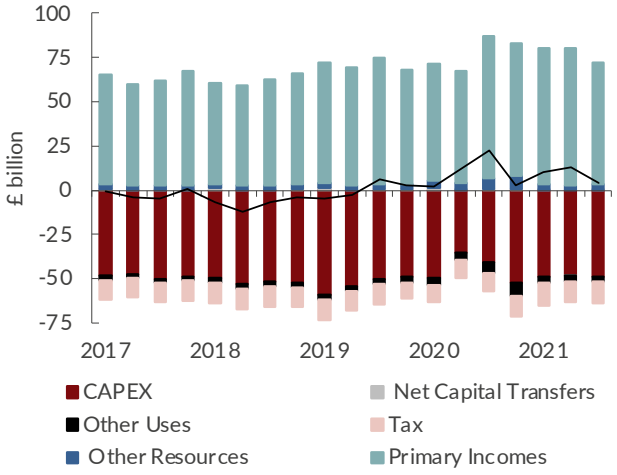
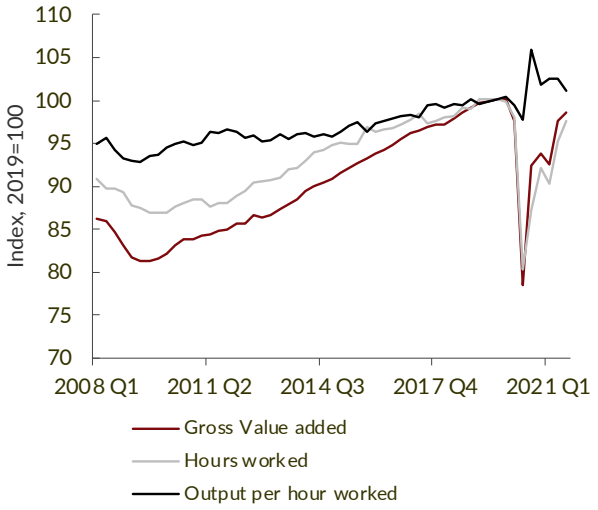


Figure 1.14 Output, hours and output per hours



Source: ONS, NIESR calculations

Corporates as a whole have benefited financially from the increased government deficit but that is now being cut (see 'Fiscal' on page 21), and, while most of the cost will fall on the household sector, corporate finances are also likely to deteriorate. Moreover, since the sectoral impact of Covid-19 has been very diverse, some corporates will still be suffering, e.g. in face-to-face services, while others are doing better.

Businesses expected to return to investment after little movement in 2021

Against this financial background, and with firms knowing that a corporate tax increase is due in 2023, it is not surprising that investment by the business sector has been lacklustre. While supply chain shortages look to be starting to ease (see 'Trade' on page 20), progress has not been rapid. With protected corporate balance sheets and generalised labour shortages, business investment is forecast to grow by 11 per cent in 2022 after almost no growth in 2021 (see Appendix Table A6). This bounce-back does not herald the start of a long boom, however, and the private capital stock returns to growth of around 1.5 per cent annually, compared with over 3 per cent in the public sector.

Productivity

Data have been affected by composition effects

While productivity, defined as output per hour worked, was 1.1 per cent above its 2019 level in the third quarter of 2021, it fell 1.4 per cent compared with the second quarter of the year (Figure 1.14). The pattern over the last couple of years reflects the differential impacts Covid-19 has had on employment, average hours worked and therefore on productivity. Shifts in the composition of the workforce have emerged as lower-paid, lower productivity workers (often in face-to face employment), in whom employers have invested less in firm-specific human capital, have been more likely to be laid off and then rehired as activity recovers; this is one reason why hourly productivity rose and then has fallen back as more people have returned to work. The same effect has taken place on a sectoral basis, with low-productivity sectors including hospitality among those worst affected by Covid-19.

Productivity gains from Covid-19 still elusive

It is not clear how productivity trends will emerge from the pandemic; on the one hand, there is a greater incentive to reduce reliance on techniques that involve face-to face contact, so investment in information technology may rise, as suggested by feedback at the NIESR Business Conditions Forum.[3] On the other hand, uncertainty about rates of return on investment have increased, concerns about future profits are likely to mount if inflation continues to rise, and with it wages. At the moment, there is little to suggest a substantial shift in the trend rate of growth of hourly productivity of about 0.5 per year (see Appendix Table A7). However, there are concerns about a step shift down in productivity in a large sector of UK employment.

3 See www.niesr.ac.uk/publication-type/business-conditions-forums

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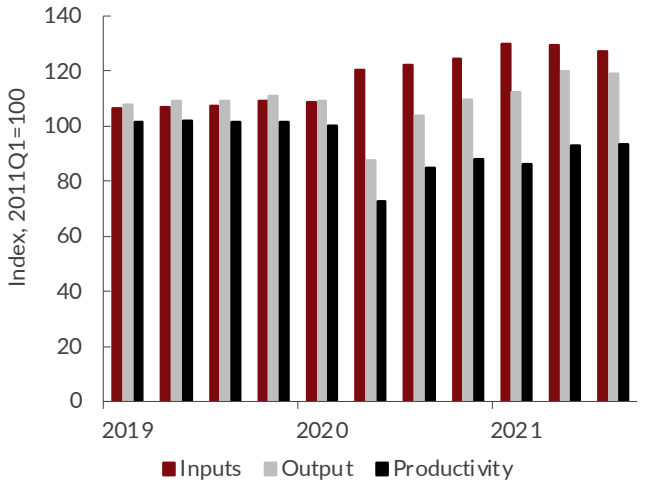
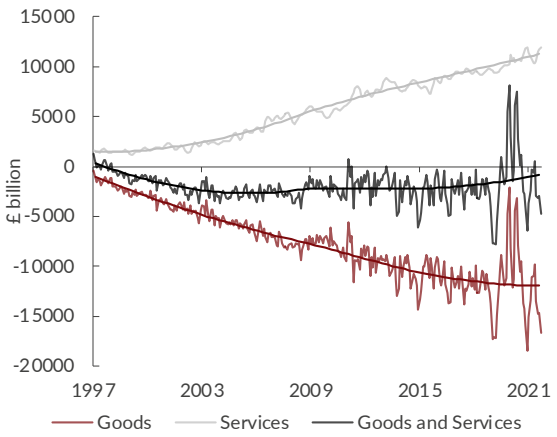
Figure 1.15 Public sector productivity



Source: ONS, NIESR calculations

In the public sector, productivity has fallen dramatically, with inputs rising by 19 per cent since 2019 and output by only around half that (Figure 1.15). Some of this is likely to reflect measurement issues, with online teaching deemed significantly less productive than face-to-face, but in the long run steps need to be taken to at least recapture productivity losses if higher taxes are not to be required for the same level of public services.

Figure 1.16 UK nominal trade balances: world



Source: ONS, NIESR calculations

Trade

Covid-19 appears to have caused little shift in long-term trends in external balances

The trade accounts have been heavily distorted by shocks to both volumes and prices arising from the Covid-19 pandemic, but the overall picture has been of little change in either the goods or services balances (Figure 1.16) trends. Both balance of payments registered small surpluses in October and November after a run of sizeable deficits, with the main contributor being a significant fall in imports of goods, which fell from an average of over £15 billion a month in the third quarter of 2021 to only about £11½ billion in each of October and November. Most of the fall was in imports from outside the European Union (EU), though imports from the EU also fell.

In nominal terms the overall trade balance has been fairly flat, with a steadily increasing surplus in services outpacing a rising deficit in goods; the trend is flattening off, largely due to an improving trade balance with the EU, analysed more fully in Box A. The picture in real terms (Figure 1.17) is slightly different, with a flat trend in the surplus in services and a flat trend in the deficit on goods. The improvement in the nominal balance is therefore largely attributable to a continuation of the long-established upward trend in the terms of trade (the ratio of export prices to import prices).

There has been significant short-term divergence in the terms of trade for goods and services…

Since the start of the pandemic, the trend in overall terms of trade has remained unchanged, but the terms of trade in services improved sharply and in goods deteriorated abruptly. These reflect changes in composition, which we would expect to unwind, perhaps unevenly, as the effects of the pandemic fade over the forecast period.

…as well as short-term disruption to trade flows

The largest single export commodity from the UK in 2020, accounting for 7 per cent of goods exports, was cars. The largest single import commodity, comprising 6 per cent of goods imports, was also cars. Supply shortages of components, including microchips, have been prominent in the car industry, sharply reducing the volumes of both imports and exports: in 2020, import and exports of machinery and transport equipment both fell by about 20 per cent year-on-year and have yet to recover. Given that the UK was running deficits on machinery and transport equipment of about £45 billion annually in the years prior to the pandemic, this reduction in volume by a similar percentage has improved the current account balance: in 2021, the deficit on machinery and transport equipment was about £29 billion a year, an improvement over two years of over three-quarters of a percentage point of GDP.

Supply chain problems may be past their worst

The New York Fed's new Global Supply Chain Pressures Index shows tentative signs that supply chain pressures may be levelling off, though it remains more than four standard deviations above its past average (see Figure 1.18). We assume that supply chain pressures will ease progressively over 2022, with normal levels being reached by mid-2023.

Given distortions to the trade figures that are evident globally as well as in the UK, it is not possible to isolate a separate Brexit effect on trade. Data show an improvement in the UK's real net trade balance with the EU since 2016 (Figure 1.19): this may be due in part to the sharp fall in the exchange rate of sterling after the Brexit vote, which improved competitiveness and, by raising import prices, reduced consumption. Compared with the previously deteriorating trend in the trade balance with the EU, the reduced real goods deficit is equivalent to almost 2 per cent of GDP.

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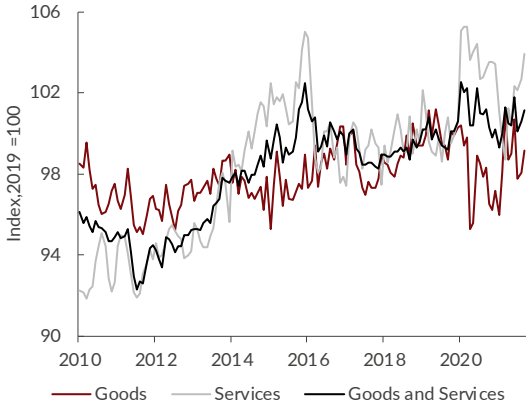
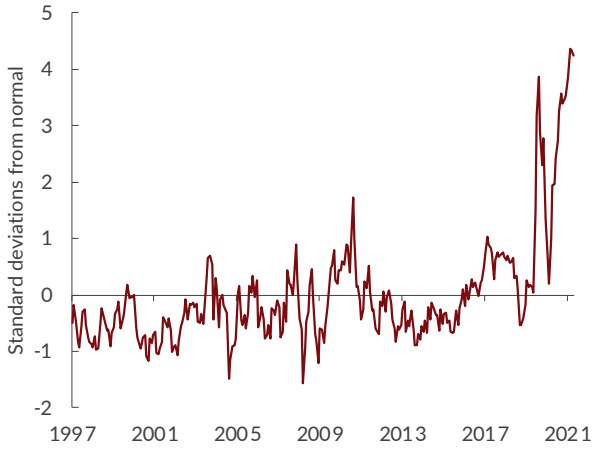
Figure 1.17 UK terms of trade



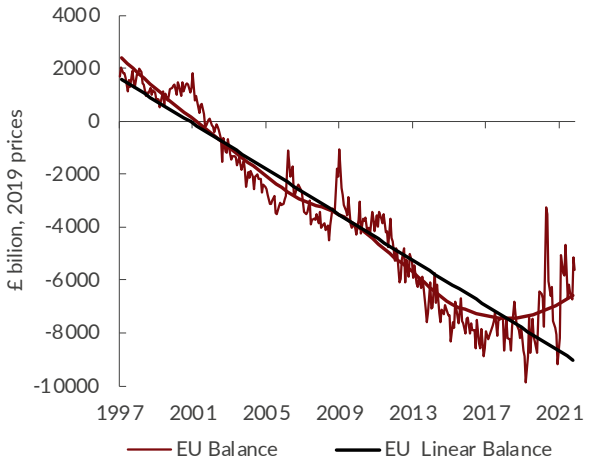
Source: ONS, NIESR calculations

Figure 1.18 New York Fed global supply chain pressure index



Source: Federal Reserve Bank of New York

Figure 1.19 Trend in UK real goods balance with the European Union



Source: ONS, NIESR calculations

Trade is forecast to continue normalisation in 2022

We forecast UK exports to grow in 2022 and 2023 by 9 per cent and 6 per cent respectively, after falling by 14 per cent in 2020 and 1 per cent in 2021 (see Appendix Table A4). Import growth is forecast at 13 per cent in 2022 and 7 per cent in 2023, after a fall of 16 per cent in 2020 and growth of 4 per cent in 2021.

We forecast that the trade deficit, 0.2 per cent of GDP in 2020 and 1.4 per cent in 2021, increases to 2.4 per cent of GDP in 2022 and 2.9 per cent in 2023, as a result of the unwinding of Covid-19 effects. These appear to have depressed imports more than exports, potentially because shipping capacity shortages affected the UK, as an island, more than countries which rely less on sea transport for trade. With UK interest rates forecast to rise in step with the US until mid-2023, and ahead of those in the Eurozone, we expect no difficulty in financing an increased yet modest deficit on the current account throughout the forecast period.

Fiscal policy

Growth offsets higher interest rate costs

Cumulative borrowing has continued to come in lower than anticipated by official projections in the current fiscal year, largely thanks to higher-than-expected tax receipts, which the Office for Budget Responsibility (OBR) attributes to a strong labour market. This has offset higher-than-forecast expenditure, including £5 billion more on debt interest payments in fiscal year 2021-22 up to December than forecast.

While changes in traded gilt rates affect only newly-issued debt, rising short-term interest rates also translate immediately into a deterioration in the fiscal forecast, thanks to the large share of government debt held by the Bank of England's Asset Purchase Facility (created through quantitative easing). As discussed in previous Outlooks (see Macqueen, 2021), this does not a present a problem for the Government provided that higher interest rates are intended to offset faster growth which results in higher tax receipts: this has been the case so far in 2021-22, though may not be over the coming fiscal year.

Difficult decisions ahead for the public finances

Government debt took a rapid upward turn when the pandemic began and was reported to be 96 per cent of GDP at the end of December 2021. The Budget and Spending Review, which took place shortly before our Autumn Economic Outlook was published, incorporated improved fiscal forecasts and saw the Chancellor 'bank' around half of windfall.

With government department budgets set in cash terms now until 2025, the forecast for real growth in government consumption is made worse by our higher forecast path for inflation (see 'Inflation and monetary policy'). If the OBR follows NIESR in revising up price level forecasts for the coming years, their Economic and Fiscal Outlook

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published in March may show much less generous real terms spending plans than announced at the Spending Review 2021 (see Figure 1.20). With monetary policy playing its role in tackling inflation, there is scope for looser fiscal policy to mitigate inflation's effects: this could take the form of delaying the introduction of higher National Insurance contributions scheduled for April (see Mortimer-Lee, 2021) or by revising spending plans upwards. By planning too much fiscal consolidation the government has risked harming household finances but also delaying much needed normalisation of monetary policy.

Fiscal risks skewed to upside

With most government spending going on salaries, this will translate into several years of falling real wages for public sector employees. Maintaining this position by sticking to unrevised departmental expenditure limits may prove impossible, especially with a general election taking place in or before 2024, so it represents a significant upside risk to the fiscal forecast in the medium term.

With these relatively tight departmental spending plans assumed to hold in our main case forecast scenario, we forecast the deficit to fall to 7 per cent of GDP in fiscal year 2021-22, then 4 per cent in 2022-23 and 3 per cent in 2023-24 (Figure 1.21 and Appendix Table A8). While the current budget is in surplus from 2024-25, the overall deficit does not close in the forecast period, thanks to the step up in public investment since 2020-21. Debt is expected to have peaked as a share of GDP at 96 per cent of GDP in 2020-21, falling to 93 per cent in 2021-22 and 2022-23, then below 90 per cent from 2025-26 after the Term Funding Scheme is unwound (Figure 1.22). The government's 'Energy Bills Rebate' was announced after our forecast was finalised, and its fiscal consequences will be made clear at the Budget, but with most support in the form of loans we do not expect it to materially affect our medium-term forecast.

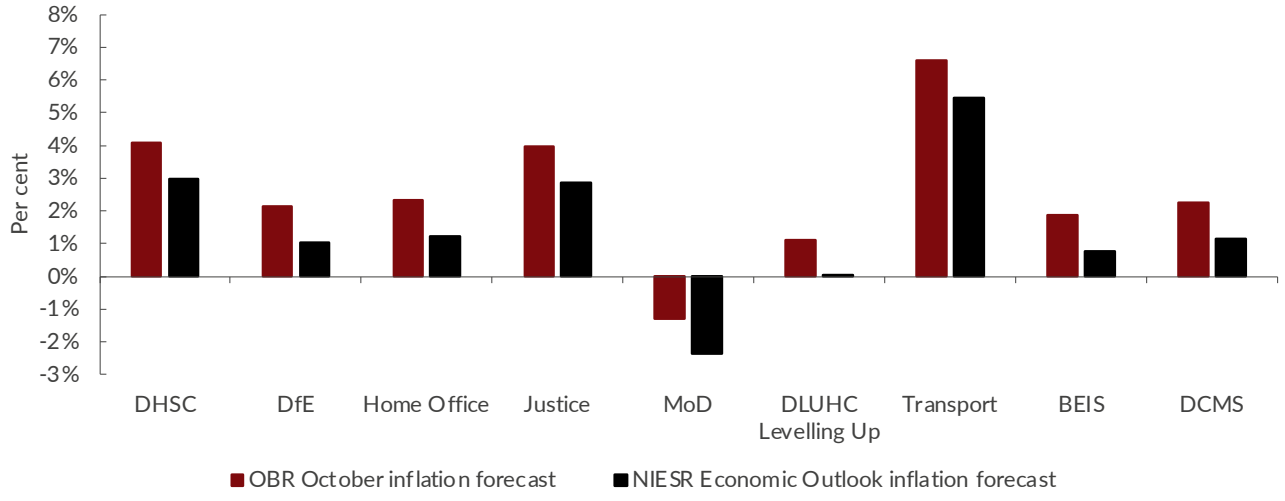
Inflation and monetary policy

Inflation accelerated due to rebound in domestic demand and global supply bottlenecks

Consumer price index inflation has rapidly increased from 0.4 per cent in February 2021 to 5.4 per cent in December 2021. Because this increase only began in March 2021, the annual inflation rate underestimates the scale of the recent acceleration in inflation. Figure 1.23 shows annualised CPI inflation over the last 3, 6, 9 and 12 months, reaching an annualised rate of 10 per cent in the last three months.

This acceleration in inflation comes from a rebound in domestic demand and global supply bottlenecks that have pushed up the prices of commodities, shipping, and some intermediary products. The largest contributors to the acceleration in annual inflation in December were transport (1.6 percentage points), housing, water, electricity, gas and other fuels (1 percentage point) and restaurants and hotels (0.5 percentage point). Surging gas prices, international shipping prices and other traded goods prices are all feeding into a rapid increase in the cost of living that reduces households' purchasing power (Figure 1.24).

Figure 1.20 Average annual increase in department resource budgets 2021-22 to 2024-25 adjusted for inflation



Source: HMT, OBR, NiGEM, NIESR calculations

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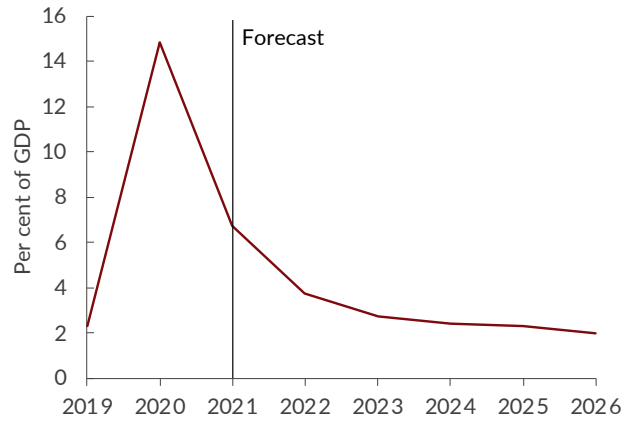
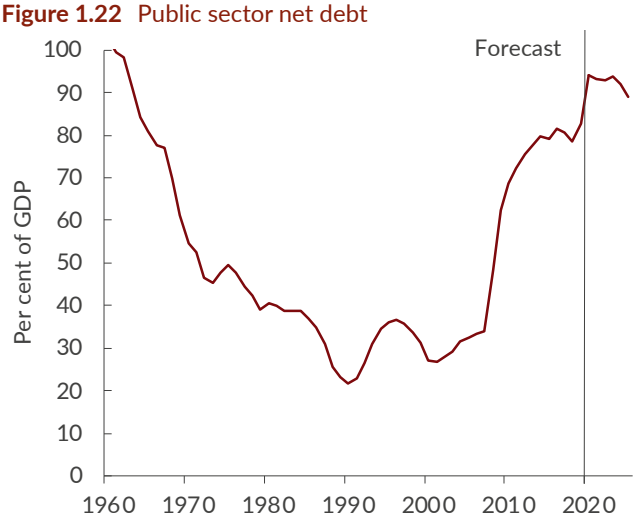
Goods inflation faster than services inflation
Splitting the consumption basket between goods and services shows that goods price inflation is faster than services price inflation, at 6.9 per cent compared to 3.4 per cent in December 2021. While goods inflation is generally more volatile, this also reflects a change in consumption behaviour during the pandemic where people have increased their spending on goods compared to services, both in the UK and elsewhere, leading to global goods demand outstripping supply.

Figure 1.21 Public sector net borrowing



Source: NiGEM database, NIESR forecast

Figure 1.22 Public sector net debt



Source: NiGEM database, NIESR forecast

Inflation to peak at 7 per cent in the second quarter
We forecast consumer price index CPI inflation to reach 7 per cent in April 2022 after the Office of Gas and Electricity Markets (Ofgem) rise in price cap comes into effect and the temporary cut in VAT for restaurants and hotels is reversed. Higher wholesale energy prices impact inflation with a lag because of price caps updated twice a year by Ofgem, whose new cap will increase the cost of electricity and gas for households (see Box C on page 24). The recent rise in inflation is increasingly broad-based and we expect inflation to stay above the Bank of England target of 2 per cent for another two years (see Appendix Table A2).

After the spring, inflation should decline for several reasons. Slower growth should allow supply bottlenecks to ease, as supply catches up with demand. Some temporary drivers of inflation like higher energy prices and transport costs are likely to reduce. But one lesson of the inflation overshoot in 2011 is that getting back to 2 per cent after a spike can take a long time, and it may be more difficult now than a decade ago, given that there is lower unemployment and more excess liquidity, growth in foreign markets (in particular the Eurozone) is faster, the banking system has not been damaged, and fiscal and monetary policy have thus far been more accommodative. Additionally, globalisation forces have waned, and Brexit means a more limited labour supply. Our central case scenario is for consumer price index inflation close to 6 per cent in 2022, decreasing to slightly above 3 per cent in 2023 and returning to 2 per cent in 2024 (see Figure 1.25). Inflation measured by the retail price index peaks at 9 per cent this year, falling to 6 per cent in 2023 and within half a point of 3 per cent thereafter.

Inflation expectations risk de-anchoring
There is a danger that sustained, substantial price increases and higher pay settlements in response to the increase in inflation may raise inflation expectations and fuel further increases via nominal wage growth and input costs. The 5-year break-even rate of inflation on government bonds has risen by about half a percentage point since the pandemic started, to 3.7 per cent. The Citi/YouGov poll of household one-year inflation expectations was at 4 per cent in December, while 5-to-10-year expectations rose to 3.8 per cent, the second highest reading since 2013.

A tightening of monetary policy is warranted by conditions
The MPC increased Bank Rate from 0.10 to 0.25 per cent in December 2021, as forecast in our Autumn Economic Outlook. In line with the market curve, we forecast four rate rises in 2022. While the Bank faces an uncomfortable economic background of slower growth and rising inflation, we judge that the risk of high inflation feeding into wage growth and inflation expectations is large enough that the Bank will embark on a tightening cycle until Bank Rate reaches 1.5 per cent in 2023 (see Figure 1.26 and Appendix Table A1). Delaying the rate hike cycle would only worsen the trade-off between lower growth and higher inflation because growth will inevitably decline to its potential growth rate, but the de-anchoring of inflation expectations can be avoided with tighter monetary policy.

https://doi.org/10.1017/nie.2022.16 Published online by Cambridge University Press

Box C: Gas prices and price controls

By Paul Mortimer-Lee and Urvish N Patel[1]

Background

Inflation in the UK has surged to levels not seen since the 1980s and there is a danger of inflation expectations becoming unanchored. Higher interest rates are the conventional response to an upward shock to the price level if this is expected to have second-round effects. However, interest rates take twelve to eighteen months to influence inflation. So, are there other means to influence the outcome sooner? There have been suggestions of price controls in the US (Weber, 2021) and there is pressure in the UK to temper the effects of rises in the price of household gas, including perhaps staggering price increases (Morales and Morrison, 2022). We used our econometric model, NiGEM, to address the issue in the context of Ofgem's recent decision whether to raise the gas price cap by up to 50 per cent for households in April or to stagger it over the future.

Our main findings are:

- If gas prices increase by 50 per cent in one go under rational expectations[2], inflation is expected to peak in the third period following the shock at just over 0.7 percentage points over the base.
- Staggering the price rise under rational expectations reduces this addition to inflation to just over 0.4 percentage point over the base. However, inflation and interest rates stay higher for longer than in the one-shot case.
- If economic agents have adaptive expectations[3] and think the gas price hike has been cancelled, staggering provides the lowest inflation peak at just below 0.3 percentage points over the base, compared with just below 0.6 under a one-shot.
- In the rational expectations case, the peak addition to interest rates, at just below 0.6 percentage points, is slightly higher and later under the two-year staggering than in the other two cases. With adaptive expectations, the peak addition to rates is 0.6 percentage points; in both staggered cases the addition to rates is 0.3 percentage points but is maintained for longer.
- Adaptive expectations result in a cycling of interest rates and inflation, which could be interpreted as a policy mistake, whereas under rational expectations interest rates and inflation move more smoothly.

We have looked at an increase in the gas price cap by Ofgem only from the perspective of inflation. As Chapter 2 details, there are important effects on the income distribution that policy makers must take into account when deciding on the optimum price strategy. Moreover, our simulations consider a permanent price increase. If the price of gas were to fall back at some future date, that is if the increase in the world price of gas were only temporary, the arguments for damping the contemplated price increases near term would be strengthened because it would avoid a cycling in inflation. Note that UK natural gas future prices are higher for delivery in the fourth quarter of 2022 than for April 2022 delivery, though the market prices in significantly lower levels by summer 2023.

Gas and the CPI

Gas currently has a weight of 1.2 per cent in the consumer price index. This is very near the bottom of the range we have seen for gas prices over the last three or four decades, with the highest weight being 3.2 per cent in 2012, and the lowest 1.1 per cent in 2001 and 2004 (see Figure C1).

The wide range for the weights of gas in the CPI reflects it having a very volatile price (Figure C2). In late 2006, prices were about 40 per cent higher than a year earlier, with a 50 per cent annual rise recorded in 2008 Q4.

1 The authors would like to thank Jagjit Chadha and Rory Macqueen for valuable comments and Amber Rivett for research assistance.
2 When economic agents use the best available information in a way that is consistent with our model.
3 When economic agents use past data to predict future outcomes.

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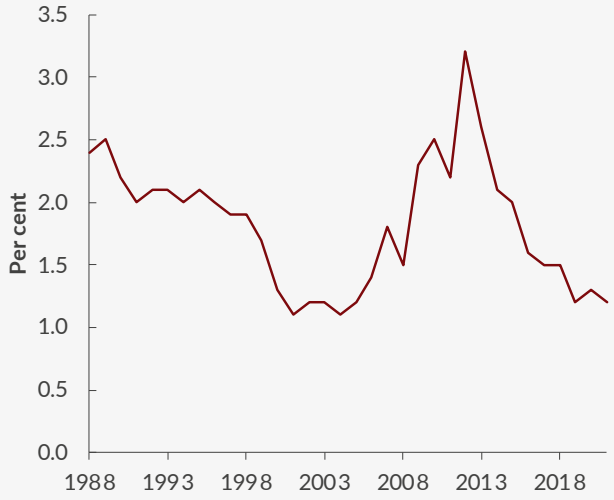
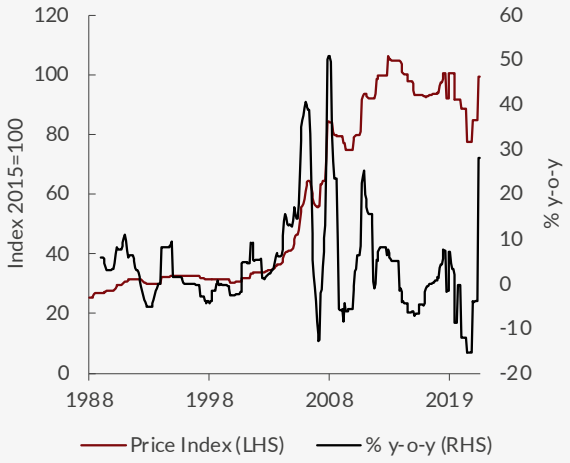
Figure C1 Weight of Gas Prices in CPI (per cent)



Source: ONS

Figure C2 Gas Price (Index, 2015 =100) and Price Change (per cent y-o-y)



Source: ONS

Based on 2015=100, the gas price was 99.4 in December 2021, close to the top of the range, but only 4.6 per cent above the average price of the last ten years. The price in December was marginally below the level in September 2019, prior to the pandemic. With the global demand for energy dropping as Covid-19 hit global GDP, the gas price fell in 2020. As recovery set in, the price of gas to UK households rose by 9.4 per cent in April 2021, though remaining below the level a year earlier. A 17.1 per cent rise in October 2021 took the price back to where it had been before the pandemic. In December, the price of gas in real terms – that is, deflated by all items in the CPI – was 14 per cent below the 2015 base year and about 20 per cent below the peak of the real gas price in 2014. Thus, a 50 per cent rise in gas prices would take them into uncharted territory in real as well as nominal terms.

Analysis

In NIESR's macroeconometric model, the price of gas is permanently increased by 50 per cent under three different scenarios, with each one simulated using rational and then adaptive expectations. In each case, monetary policy is endogenous. The first scenario is of a one-off 50 per cent increase in the price of gas in 2022 Q2. The second and third simulations represent staggering the rise in the price of gas. The former involves two 25 per cent price hikes twelve months apart, and the latter includes four price increases of 12.5 per cent every six months, cumulating to a 50 per cent rise in both cases.

There are three main channels through which higher gas prices may impact the UK economy. First, the direct impact on consumer prices, which reduces real personal disposable incomes. Second, higher consumer prices encourage firms and workers to agree to higher nominal wages, further increasing pressure on firms' production costs and raising inflation as a second-round effect. Third, tighter monetary policy to contain higher domestic inflation reduces domestic demand and leads to an appreciation in the exchange rate, making UK goods less internationally competitive, reducing export demand, and worsening the trade balance while also reducing import prices.

A one-off increase in the price of gas leads to an immediate rise in inflation and triggers a monetary policy tightening; the monetary response is initially stronger under rational expectations than adaptive expectations and returns to base nine periods after the shock. Inflation peaks in the third period following the shock in both cases but under rational expectations the inflation peak is higher at just over 0.7 percentage points above base, compared with under 0.6 percentage points under adaptive expectations (see Figures C3 and C4). This higher addition to inflation under rational expectations is because forward-looking economic agents realise the implications of the shock for future inflation and so start reacting straight away, including in wages. Under adaptive expectations, the inflation response is relatively slower.

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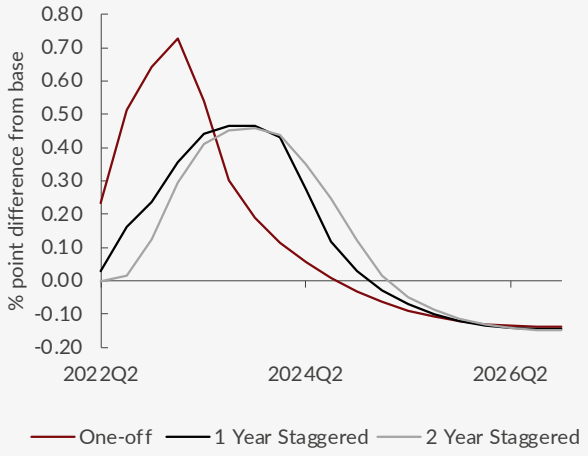
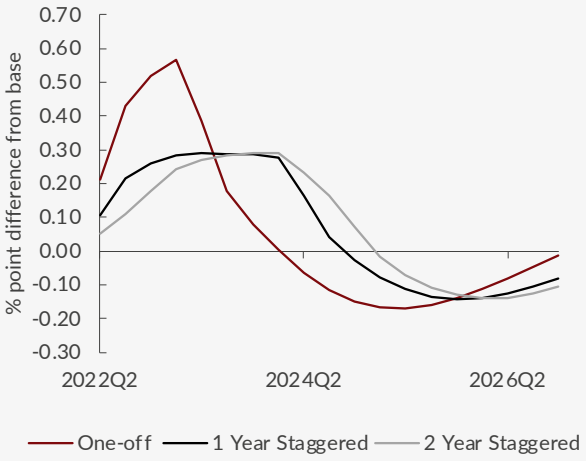
Figure C3 The Impact on Inflation* from Higher Gas Prices Under Rational Expectations



Source: NiGEM simulations
*Note: Based on the growth in the consumer expenditure deflator.

Figure C4 The Impact on Inflation* from Higher Gas Prices Under Adaptive Expectations



Source: NiGEM simulations
*Note: Based on the growth in the consumer expenditure deflator.

While staggering the gas price rise may sound as though it could significantly reduce the inflationary impact of the gas price rise, it lowers the addition to inflation slightly but prolongs the inflationary cycle (see Figures C3 and C4). Inflation returns to base later than in the one-shot price rise: after 10-11 periods. If people know the price increases are delayed and not cancelled, they still behave in an inflationary way – their inflation expectations alter behaviour, including price and wage setting, prior to the delayed price rises. Moreover, interest rates must stay higher for longer to fight the prolonged inflationary cycle, particularly in the case of adaptive expectations, reflecting the more extended inflation cycle. The gains in staggering the price rise accrue only when people are not aware of them coming, which seems unlikely since Ofgem's decision was high-profile.

Conclusion

Price controls in the 1970s were not an effective solution to inflation. Only when monetary policy changed, for example, with Paul Volcker in the US in the 1980s, did inflation come down and stay down. Our simulations suggest another reason – people knew the price increases were delayed, not cancelled, and so behaved in a still inflationary way. In terms of UK household gas prices today, it does make a difference to peak inflation in our simulations whether the price hikes happen straight away or are staggered by Ofgem. The inflation benefits of staggering are greatest if expectations are adaptive, though it is difficult to see that people would fail to see the further price increases coming if Ofgem were to make that announcement. Two other sets of considerations affect the policy decision: the impact on the income distribution and on the environment.

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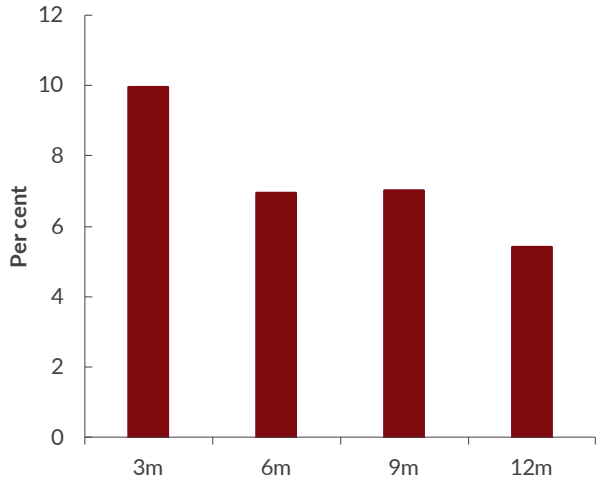
Figure 1.23 Annualised consumer price index inflation over past year



Source: ONS, NIESR calculations

Even with an early tightening of policy, inflation only returns to 2 per cent in 2024

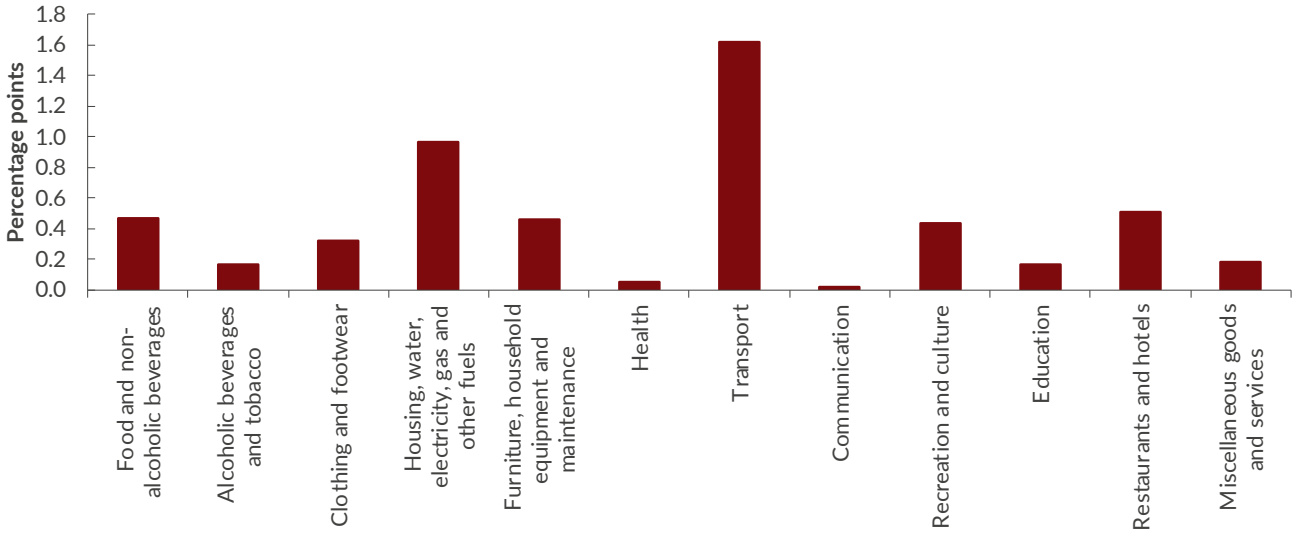
Upside risks to our inflation forecast include more supply-driven increases in prices, wages rising more quickly for longer, and firms seeking to pass on in prices the increases in corporate taxes. Downside risks emanate from shortages easing sooner, lower energy prices, slower wage growth, and weaker demand, possibly due to a more aggressive series of rate hikes. We judge these risks to be broadly balanced.

Reducing the Bank of England balance sheet will be initially achieved passively

In December, the MPC decided to maintain the stock of UK government bond purchases and sterling non-financial investment-grade corporate bond purchases at £875 billion and £20 billion respectively. The MPC announced in August 2021 that it would cease reinvesting the proceeds from its maturing bonds at some stage after rates reach 0.5 per cent. Reducing the balance sheet in this way is a much milder form of tightening monetary conditions than raising rates; it may be an effective signalling mechanism but the quantitative effects are uncertain and it will be a long and possibly not straightforward process (see Lenoël, 2021).

If holdings immediately were reduced only through maturing rather than selling assets (and quantitative easing does not re-start), face value gilt holdings would fall from £760 billion today to around £500 billion in 2026-2027 (Figure 1.27).

Figure 1.24 Contributions to CPI inflation (December)



Source: ONS, NIESR calculations

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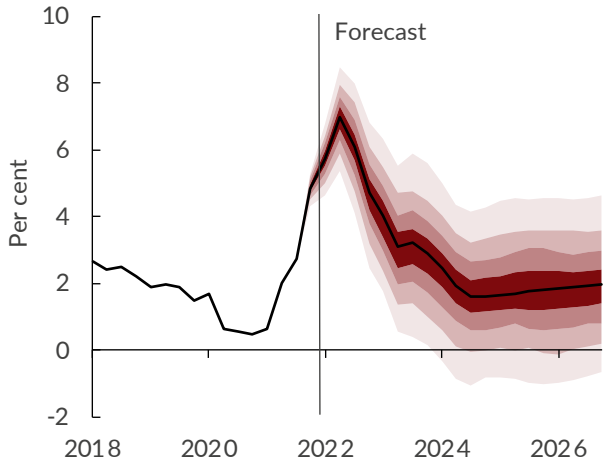
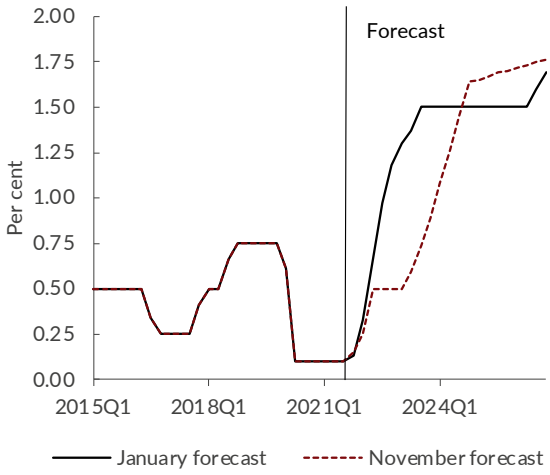
Figure 1.25 Inflation fan chart



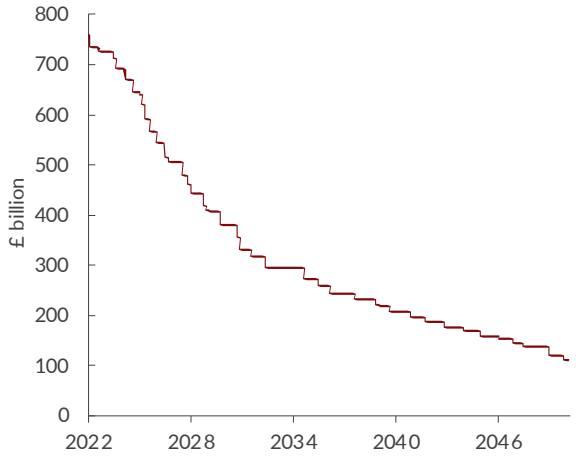
Sources: NiGEM database, NIESR forecast

Figure 1.26 Bank rate



Source: NiGEM database, NIESR forecast

Figure 1.27 Asset Purchase Facility holding of gilts if no further active acquisitions or sales



Source: Bank of England, NIESR calculation

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