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The IFS Green Budget

October 2021

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The IFS Green Budget: October 2021

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Foreword from Citi

We are delighted to be collaborating again with the IFS on the production of the Green Budget. The IFS continues to shine a critical and objective light on the key issues facing the UK public finances. IFS reports are essential reading for policymakers, investors and corporate leaders alike as we all seek to chart the path forward through the latter stages of a pandemic which has left UK public borrowing at record peacetime levels. The UK economy continues to grapple with the economic impacts of Brexit, while healthcare, social care and the need to address climate change create substantial additional public policy challenges.

Citi's economists have provided two chapters for this year's Green Budget. The first looks at the global economic outlook. The pandemic is not over globally, and continues to pose future risks, but economies are now more resilient and vaccination campaigns have reduced the likelihood of significant future lockdowns. As policymakers seek to turn the initial rebound into a fuller recovery, supply constraints will continue to impinge on growth. Together with other transitory factors, these point to higher inflation rates for some time – though inflation risks remain two-way. After such a deep recession, the risk of financial turbulence remains high, and so central banks will proceed only cautiously to an exit from their extraordinary pandemic-era support.

Our second chapter reviews the UK economy where we have witnessed a sharp but incomplete rebound. But while activity has rebounded quickly, and at a faster rate than we initially expected at the start of 2021, a profound economic adjustment looms on the horizon. Much will depend on the labour market. While some specific labour shortages are likely to persist, we expect aggregate wage pressures to prove relatively subdued. Likewise, while inflation remains a major concern, with CPI forecast to peak at 4.6% year-on-year in April 2022, the drivers here seem relatively transitory. The focus for policy should be on securing a complete recovery – but if inflation expectations shift up, policy must still react.

I would like to thank Christian Schulz and Benjamin Nabarro from Citi's European Economics team for their work in compiling the global and UK chapters, respectively. I would also like to thank the IFS for the opportunity to collaborate again on the Green Budget.

Andrew Pitt
Global Head of Research
Citi Institutional Clients Group

Foreword from the Nuffield Foundation

Since 1982, the Green Budget has provided a comprehensive and independent assessment of the state of the public finances ahead of the Chancellor's Budget and Spending Review. Its meticulous analysis secures the foundations for a more transparent, evidence-based public conversation about how the government may respond to the post-pandemic economic and social challenges currently facing the UK and it enables the government's own account to be held up to scrutiny.

The COVID-19 pandemic has uncovered and exacerbated existing inequalities and accelerated a debate in the UK around equity and public value. The role, responsibilities and capacity of the State, at national, devolved and regional levels, have been brought into sharper focus. The context for this year's Green Budget is dominated by the uncertainties and challenges posed by the COVID-19 recovery, Brexit and the transition to net zero. As the Chancellor prepares to set out plans for the UK economy over the next three years, the Green Budget not only sets out the key economic challenges faced by the Treasury, but also highlights the impact of policy choices, the trade-offs inherent in the basic principles of good policymaking, and presents the case for a coherent spending policy that can benefit both UK businesses and households.

The comprehensive nature of the Green Budget is another of its strengths. It tackles the systemic challenges relating to the labour market, green taxes, health and social care, and local government spending choices. This aids public understanding of the interrelationships between different areas of economic policy, as well as demonstrating why such challenges are important. In its framing of the economic outlook, the IFS shows that ultimately, the questions to be addressed are about people's well-being, individually and collectively, in a time of economic uncertainty. These issues are central to the Nuffield Foundation's work to advance social well-being and to understand the foundations and pathways to a more just and inclusive society. We are pleased to provide continued support to the Green Budget and thank the IFS and Citi for providing such a timely and, as always, authoritative report.

Tim Gardam
Chief Executive
Nuffield Foundation

Preface

Welcome to the IFS 2021 Green Budget.

For the first time in three years, this will be a Green Budget that is actually followed by an autumn Budget. That is not to say the recent past has been short of announcements for us to analyse. Indeed, the past few years – and in particular the past 18 months – have seen a dizzying number of tax and spending announcements, many of which were made outside of the usual Budget and Spending Review process.

Perhaps unsurprisingly, large parts of this year's Green Budget are again taken up by the economic and fiscal consequences of COVID-19. Although the picture is much improved on last year, and there are indeed some grounds for cautious optimism, the pandemic has thrown up enormous challenges for the public finances. In the near term, the focus should be on securing the recovery – which remains incomplete and contorted by huge sectoral and regional imbalances in supply and demand. A key part of that will be providing targeted support to the labour market following the recent end to the furlough scheme. But at some point, the focus will need to shift towards putting the public finances on a more sustainable footing.

The Chancellor has, of course, made some moves in this direction: the UK tax take is set to reach its highest sustained level in peacetime. While tax rises may have been announced under the cover of the pandemic, they have far more to do with the consequences of an ageing population and pressures on health and care spending. These demographic pressures are only set to grow, and point to a need for future tax rises, not tax cuts.

On top of those pre-existing demographic pressures, the NHS has been put under enormous strain by the challenges of COVID-19, and the pandemic will leave a challenging legacy for the health service. Dealing with that legacy – the most visible sign of which is a growing waiting list for hospital care – could require substantial sums in the years ahead. Other services, too, have been hit hard by the pandemic: local government is a case in point. But an ever-growing health budget means that despite public services funding growing overall, the outlook for some others – local government included – looks rather tough. The forthcoming Spending Review could therefore prove to be a tricky one. We address all of these issues in depth in this year's Green Budget.

Ahead of the COP26 summit in Glasgow this year, we also grapple with the important role of tax policy in the UK's transition to net zero emissions. Meeting the government's ambitious net zero target was always going to pose challenges, but the fiendish complexity and striking inconsistency of current UK climate policy risk making it more costly than it needs to be. If we are serious about getting to net zero, it is high time for long-needed reforms.

We are delighted to continue our collaboration with Citi, now in its fourth year. We are grateful both for their financial support for the Green Budget and for their chapters on the global economic outlook and on the (many) challenges facing the UK economy. Both provide vital context for the rest of the Green Budget's analysis.

We are also very grateful to the Nuffield Foundation for the funding it has provided to support the Green Budget. Our most important aim for the Green Budget is to influence policy and inform the public debate. It is particularly appropriate, then, that it should be supported by the Nuffield Foundation, for which these are also central aims.

The continuing support that the Economic and Social Research Council (ESRC) provides for our ongoing research work via the Centre for the Microeconomic Analysis of Public Policy at IFS (ES/T014334/1) underpins all our analysis in this volume and is gratefully acknowledged.

Some analysis of Hospital Episode Statistics was carried out at the Dr Foster Unit at Imperial College London, which is funded through a research grant from Dr Foster Intelligence (a wholly owned subsidiary of Telstra Health). This work uses data provided by patients and collected by the NHS as part of its care and support. The views expressed in this publication are those of the authors and not necessarily those of the National Health Service (NHS). The authors have approval from the Secretary of State and the Health Research Authority under Regulation 5 of the Health Service (Control of Patient Information) Regulations 2002 to hold confidential data and analyse them for research purposes (CAG ref 15/CAG/0005). They have approval to use them for research and measuring quality of delivery of healthcare, including for this analysis, from the London – South East Ethics Committee (REC ref 20/LO/0611). Data from the Labour Force Survey (2004–21) are available from the UK Data Service, as is the Living Costs and Food Survey. This work uses research data sets that may not exactly reproduce National Statistics aggregates. The data owners and suppliers bear no responsibility for the interpretation of the data in this book.

As with all IFS publications, the views expressed are those of the named chapter authors and not of the institute – which has no corporate views – or of the funders of the research.

Paul Johnson
Director, Institute for Fiscal Studies

Citi Research

Citi Research focuses on delivering the highest quality company, sector, economic and geographic insights to our clients globally. The unit includes equity and fixed income research, economic and market analysis and product-specific analysis to help individual and institutional clients navigate a complex global marketplace. Citi Research is committed to maintaining the highest level of independence and objectivity in its proprietary products and insights.

Citi Bank

Citi, the leading global bank, has approximately 200 million customer accounts and does business in more than 160 countries and jurisdictions. Citi provides consumers, corporations, governments and institutions with a broad range of financial products and services, including consumer banking and credit, corporate and investment banking, securities brokerage, transaction services, and wealth management.

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The Nuffield Foundation

The Nuffield Foundation is an independent charitable trust with a mission to advance social well-being. It funds research that informs social policy, primarily in Education, Welfare, and Justice. It also funds student programmes that provide opportunities for young people to develop skills in quantitative and scientific methods. The Nuffield Foundation is the founder and co-funder of the Nuffield Council on Bioethics, the Ada Lovelace Institute and the Nuffield Family Justice Observatory.

The Foundation has funded this project, but the views expressed are those of the authors and not necessarily the Foundation.

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1. Global economic outlook: from rebound to recovery

Christian Schulz (Citi)

Key findings

1 **The pandemic is not over, but economies are now more resilient.** Some vulnerable areas such as international travel will remain well below normal for some time. However, vaccination campaigns have reduced the likelihood of future lockdowns. **As households and companies adjust, the link between mobility and economic activity is weaker.**

2 **The rebound can become a recovery.** Globally, households and companies have built up reserves, which they could use to spend and invest. But savings could also end up inflating asset prices rather than boosting the real economy. Governments should think carefully about policy levers that might encourage these reserves to be put to productive use.

3 **For the rest of 2021, supply constraints will continue to impinge on growth.** In an optimistic scenario, shortages merely delay the recovery and trigger additional investment in the meantime. In a pessimistic scenario, lower profits put a further dent in firms' balance sheets and weigh on growth for longer.

4 **Supply–demand mismatch, rebuilding profit margins, hot real-estate markets, sensitive price expectations and the green transition all point to higher inflation rates for some time.** However, globally there is still a lot of slack visible in labour market data, which suggests that there remains both upside and downside inflation risk.

5 **The risk of a major fiscal tightening, as happened after the 2008−09 crisis, is low.** Governments will phase out the extraordinary support provided during the pandemic over the coming months. However, deficits will stay higher

than pre-pandemic as many governments step up public investment. Longer-term though, the debate about the need, or otherwise, to bring public debt down is likely to return.

6 **Financing conditions are likely to stay benign.** After such a deep recession, the risk of financial turbulence is high. However, central banks will proceed cautiously towards the exit from their extraordinary monetary support during the pandemic.

1.1 Introduction

The pandemic was worse than expected a year ago, but the economic resilience greater

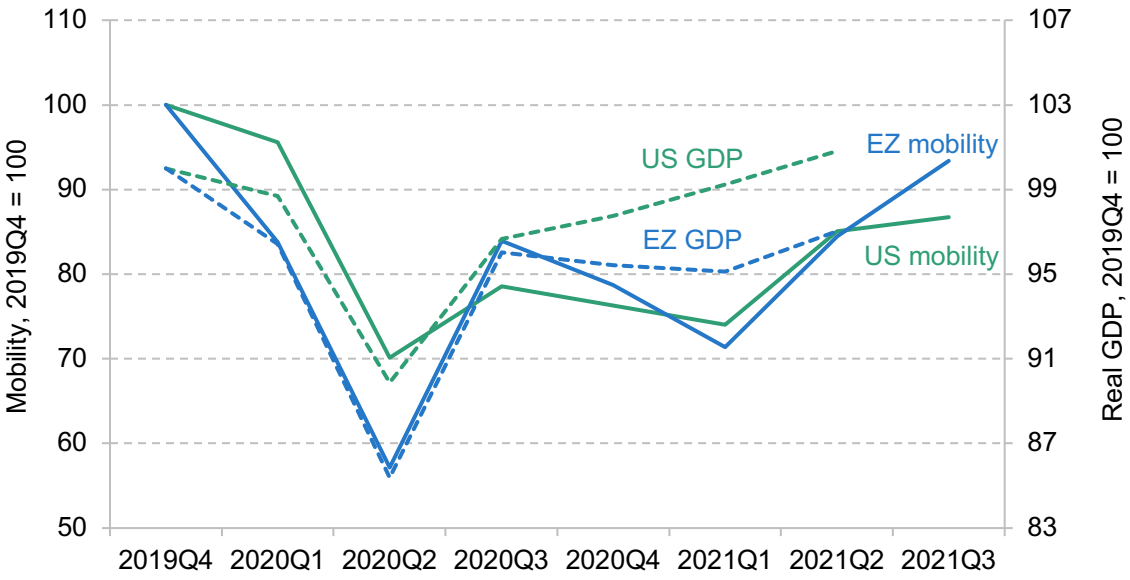
Preparations for this year's Green Budget fell into summer months when, in large parts of Europe, the impact of the pandemic seems to have faded and hopes for a near-complete recovery are high. That was similar last year. However, the epidemiological outlook in the 2020 Green Budget proved to be overly optimistic. The number of confirmed global cases rose from 30 million at the time to more than 200 million at the end of August 2021, with around 5 million new cases globally every week. The number of casualties rose from 1 million to more than 4 million. The risk of new waves of the pandemic remains real this year as well.

Despite the pandemic following a far more severe course than we had assumed last year, our GDP forecasts actually proved to be slightly pessimistic. In 2020, global real GDP at current exchange rates shrank by 3.5%, less than the 3.9% drop we had feared. In advanced economies, the initial plunge in output in the second quarter of 2020 was revised somewhat lower as more data became available. One notable exception was the UK where growth in 2020 was slightly lower than we had forecast. In addition, the subsequent rebound was often a bit steeper than expected. In emerging markets, activity also fell a bit less than forecast. In some poorer countries, reducing mobility, whether government mandated or voluntary, was not feasible as the income losses could not be compensated. Here economic activity proved more resilient, but health outcomes were arguably worse. Others, such as China, managed to keep the virus under control and were able to restore a greater degree of normality domestically than in the West.

Around the world, households and firms have adapted to life with the virus. The Winter 2020−21 lockdowns were often formally as tough as those in Spring 2020, yet mobility rates were far more resilient. And in addition, the correlation between people's mobility and economic activity as measured by GDP broke down (see Figure 1.1). In the early stages of the pandemic, GDP and mobility moved almost in lockstep. But in the US, quarterly real GDP rose to exceed

pre-pandemic levels by in 2021Q2, while mobility as measured by Google android phones' locations was still 15% below the pre-pandemic benchmark. In Europe, too, economic activity has recovered more quickly than mobility figures. Manufacturing and logistics were largely unaffected by the second round of lockdowns, while office work functioned remotely.

Figure 1.1. Google mobility and real GDP: US and Eurozone (2019Q4 = 100)



Note: Average mobility across retail/entertainment, groceries, transit and workplace. Eurozone (EZ) = France, Germany, Italy and Spain.

Source: Google, Citi Research.

Despite ongoing risks from the pandemic, we are now more optimistic for 2021 and 2022 than we were in last year's Green Budget (Table 1.1). We are projecting 5.8% growth globally for 2021, up from 5.4% in last year's Green Budget. Together with the better-than-expected performance in 2020, these upward revisions raise our forecast 2021 GDP level by a whole percentage point compared with our forecast last year. For 2022, we are also expecting growth to be a percentage point higher than we did last year (4.4% instead of 3.1%).

In the remainder of this chapter, we explain the main drivers of these more optimistic forecasts. Section 1.2 discusses downside risks from the pandemic over the next 12 months. Section 1.3 considers the build-up of savings during the pandemic, and the potential for these to fuel a self-sustained recovery if put to productive uses in the real economy rather than financial assets. Section 1.4 discusses the mismatch between supply and demand, and the extent to which supply constraints might be expected to taper growth momentum in the short term. Section 1.5 considers the outlook for inflation and Section 1.6 the outlook for global fiscal policy. Section 1.7 looks at the potential for central banks to tighten policy over the forecast period. Section 1.8 concludes.

Table 1.1. GDP forecast: Green Budget 2020 versus Green Budget 2021

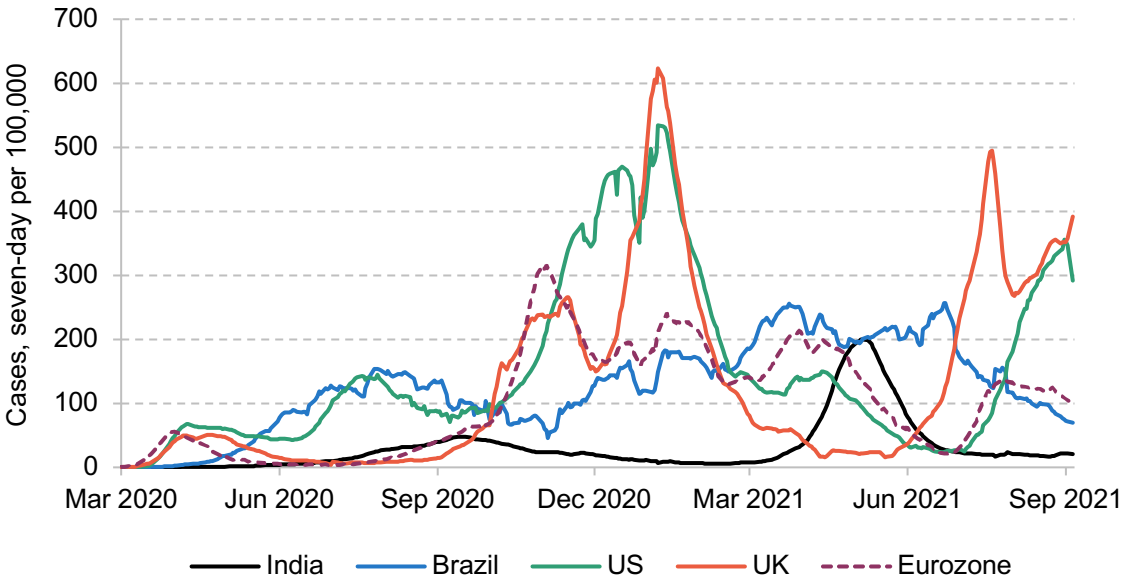
Real GDP growth (YY %)	2020		2021		2022		2023		2024		2025	
	Green Budget 2020	Latest	Green Budget 2020	Latest	Green Budget 2020	Latest	Green Budget 2020	Latest	Green Budget 2020	Latest	Green Budget 2020	Latest
World	–3.9	–3.5	5.4	5.8	3.1	4.4	2.9	3.1	2.9	3.0	-	2.9
Advanced economies	–5.2	–4.8	4.8	5.1	2.0	4.0	1.8	2.1	1.7	1.8	-	1.7
US	–3.6	–3.4	5.1	5.8	1.6	3.8	1.8	1.8	1.8	1.8	-	1.8
Japan	–5.5	–4.6	2.1	2.2	1.0	3.7	0.7	1.5	0.7	0.7	-	0.7
Eurozone	–6.7	–6.5	5.6	5.2	2.5	4.7	1.9	2.6	1.9	2.1	-	1.8
UK	–9.5	–9.8	5.1	6.6	3.4	4.7	2.3	2.4	1.3	1.3	-	1.5
Emerging markets	–2.2	–1.7	6.2	6.6	4.5	4.9	4.4	4.4	4.4	4.3	-	4.2
China	2.4	2.3	8.2	8.2	5.5	5.5	5.3	5.3	5.1	5.1	-	4.9
India	–8.0	–7.3	8.9	9.5	6.7	9.0	7.0	6.1	7.1	6.3	-	6.2
Brazil	–6.5	–4.1	3.0	5.1	2.0	1.5	2.0	1.5	2.0	1.5	-	1.5

Source: IFS Green Budget 2020; Citi Research Forecasts as of 22 September 2021.

1.2 The pandemic still poses global risks

There is no doubt that the pandemic will remain an important economic factor over the coming year. New infections remain at very high levels in most parts of the world (see Figure 1.2). Remaining uncertainty about the effectiveness of vaccines and vaccination campaigns, as well as potentially new variants of the coronavirus, could still trigger further government-imposed restrictions on people's mobility and economic activity. And even where governments do not take action, people may voluntarily adjust their behaviour in ways that reduce economic activity.

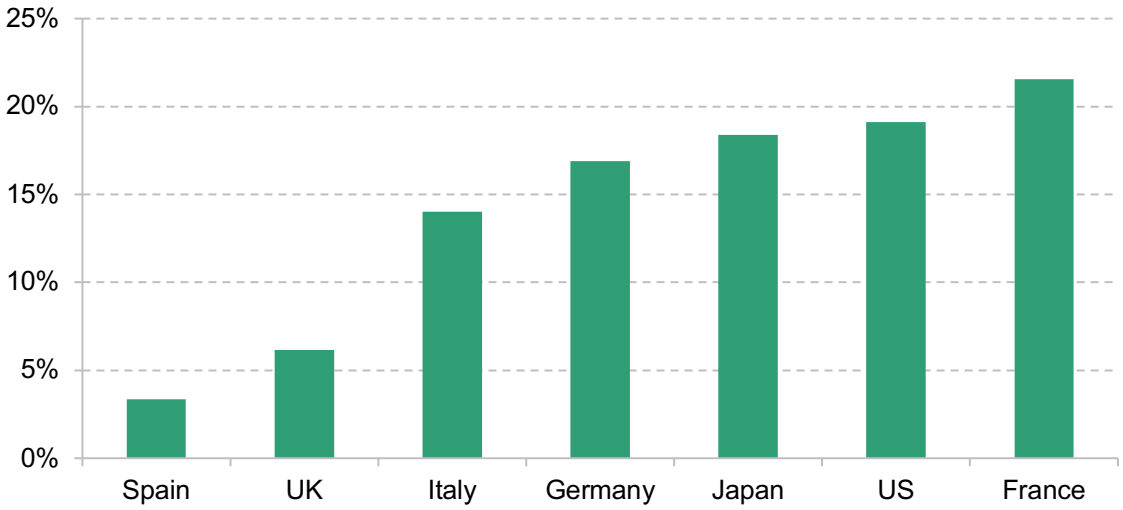
Figure 1.2. Seven-day COVID-19 incidence per 100k persons: US, UK, Eurozone, India and Brazil



Source: Johns Hopkins University and Citi Research.

The current sense of returning towards something like normality this summer, a period when restrictions have been relaxed and mobility has recovered, could prove deceptive. Overall vaccination rates may look similar, but they have different skews across age groups, which means they are not similar where it counts most, among the most vulnerable. Between leading countries such as Spain and the UK, where around 95% of the over 60/65-year-olds are fully vaccinated, and laggards such as the US and France with around 80%, there are wide gaps (Figure 1.3). In very intense outbreaks, these gaps are wide enough to mark the difference between an overwhelming of hospital capacity or not. The resilience of the health system, the authorities and the economy may yet be tested again in many countries.

Figure 1.3. Rate of unvaccinated people among older demographics (%)



Note: As of late August 2021.

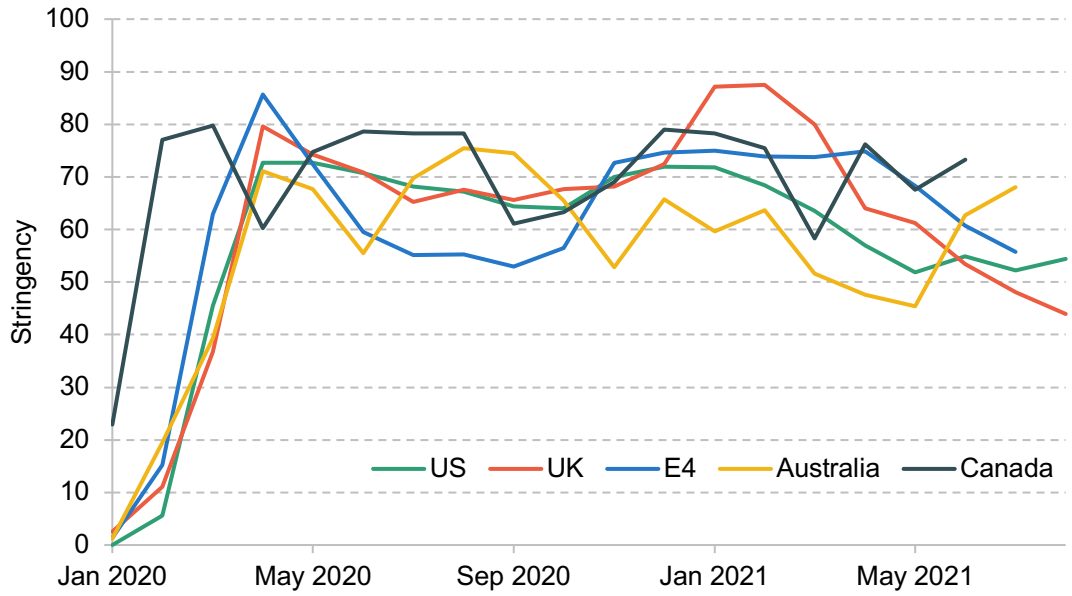
Source: US CDC (>65-year-olds); Spain, Italy, France ECDC (>60-year-olds); Germany RKI (>60-year-olds); UK NHS (>65-year-olds); Japan Cabinet Office (>65-year-olds); Citi Research.

Other parts of the world have entirely different problems as vaccination rates are much lower. In large parts of the emerging world, this is a problem of resources, in terms of both vaccine procurement and logistics. With only limited support from the state, people largely continue to work even while caseloads are high, but without protection from a vaccine or effective test-and-trace programmes. That leads to an overwhelming of poorly resourced health systems and many fatalities, often unrecorded, but it limits the measurable economic damage in the short term.

In more advanced economies in Asia Pacific (such as China or Australia), authorities succeeded in keeping case numbers persistently low for many months. This limited the economic damage. However, the low tolerance for new outbreaks, paired with slow or less effective vaccination campaigns, means that authorities will react to even relatively small outbreaks with fairly draconian measures. For example, Australia, which enjoyed much lighter restrictions than Europe and North America from October 2020 to May 2021, was suffering much tighter restrictions over the summer of 2021 (see Figure 1.4), according to Oxford University's COVID-19 Government Response Tracker.

Given the widely differing strategies and health outcomes, cross-border travel continues to be highly restricted even in economies where domestic restrictions have largely been lifted. Air travel data highlight that international air travel remains 70% below pre-pandemic levels (Figure 1.5) even though overall air travel is 'just' 50% below and large domestic markets such as China and the US are nearly back to pre-crisis levels or even above.

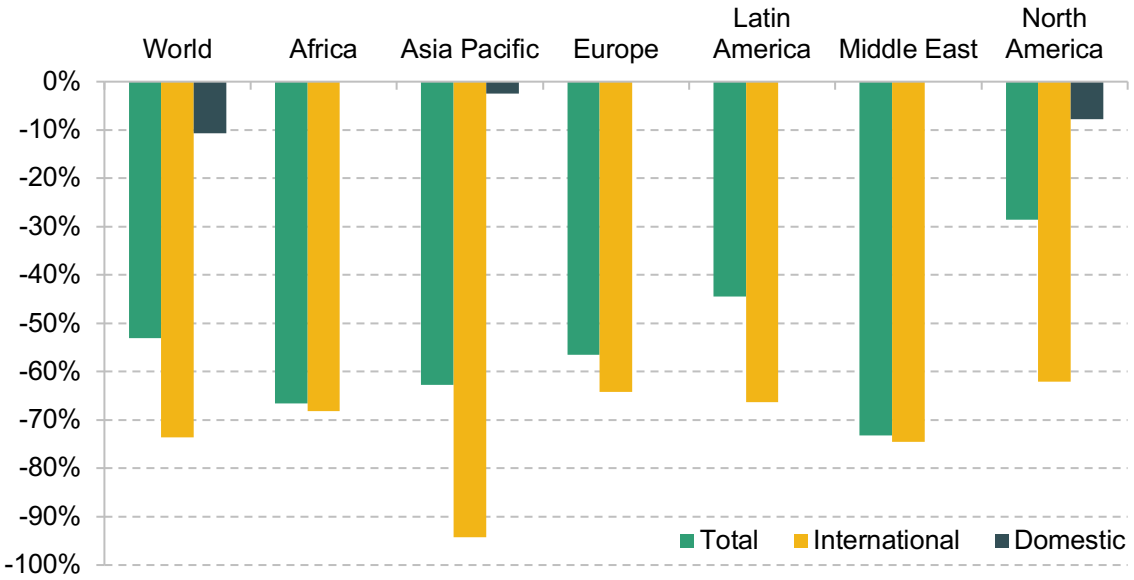
Figure 1.4. Oxford University's COVID-19 Government Response Tracker stringency index



Note: E4 = France, Germany, Italy, Spain.

Source: Oxford University and Citi Research.

Figure 1.5. Global air travel (% change from 2019 baseline)



Note: July 2021 (except Africa – June 2021).

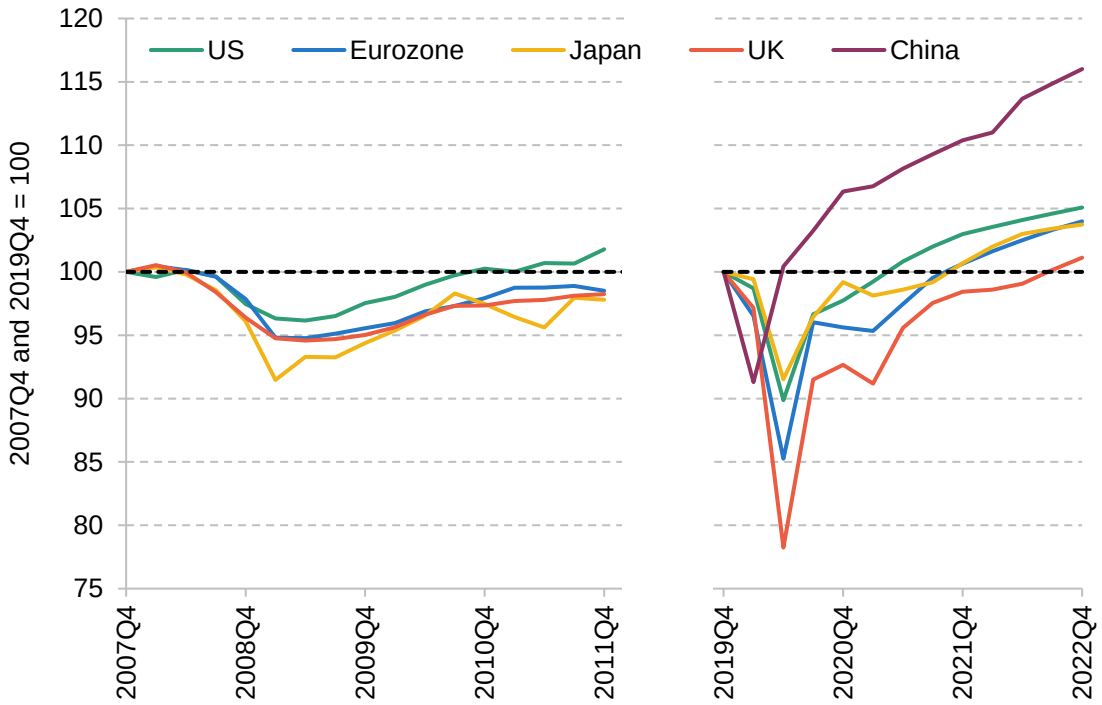
Source: IATA and Citi Research.

In sum, new waves of the pandemic around the world are likely to continue to affect economic behaviour. Some vulnerable areas such as international travel are likely to remain far away from normal over the next year. However, vaccination campaigns have reduced the likelihood of new lockdowns and economic adjustment means that the link between people's mobility and social interaction and measured economic activity is weaker than before. Hence the pandemic still poses downside risks to the global economy, but of a lower amplitude.

1.3 The economic allure of lockdown savings

At the time of writing this Green Budget, the global economy is growing at historically strong rates. Most western governments have considerably relaxed health measures in recent months as new infections receded and vaccination campaigns progressed. People in most countries felt more comfortable returning to workplaces, public transport and recreational activities. Pent-up consumer and investment demand is kicking in and global trade has recovered to pre-pandemic levels years more quickly than after the 2008−09 recession. China reached pre-pandemic levels of output in 2020Q2, and the US followed one year later in 2021Q2. Most other advanced economies will probably follow later this year or, for example in the case of the UK, in 2022 (see Figure 1.6). It took the world less than half the time to recover to pre-crisis levels than after the 2008 crisis.

Figure 1.6. Real GDP in selected economies: 2008–09 recession and COVID-19 pandemic compared (2019Q4 and 2007Q4 = 100)



Source: ONS, Eurostat, BEA, CAO, CNBS and Citi Research.

Figure 1.7. Cumulative change in gross household saving in selected economies, as a percentage of 2019 disposable income, 2020Q1–2021Q2

Note: Gross saving, as opposed to net saving, does not deduct consumption of fixed capital (depreciation). All percentages denote the change relative to 2019 average levels as a % of 2019 total disposable income, i.e. we do not adjust for different pre-pandemic trends.

Source: Eurostat, Bundesbank, INSEE, ONS, ISTAT, BEA, ABS and Citi Research.

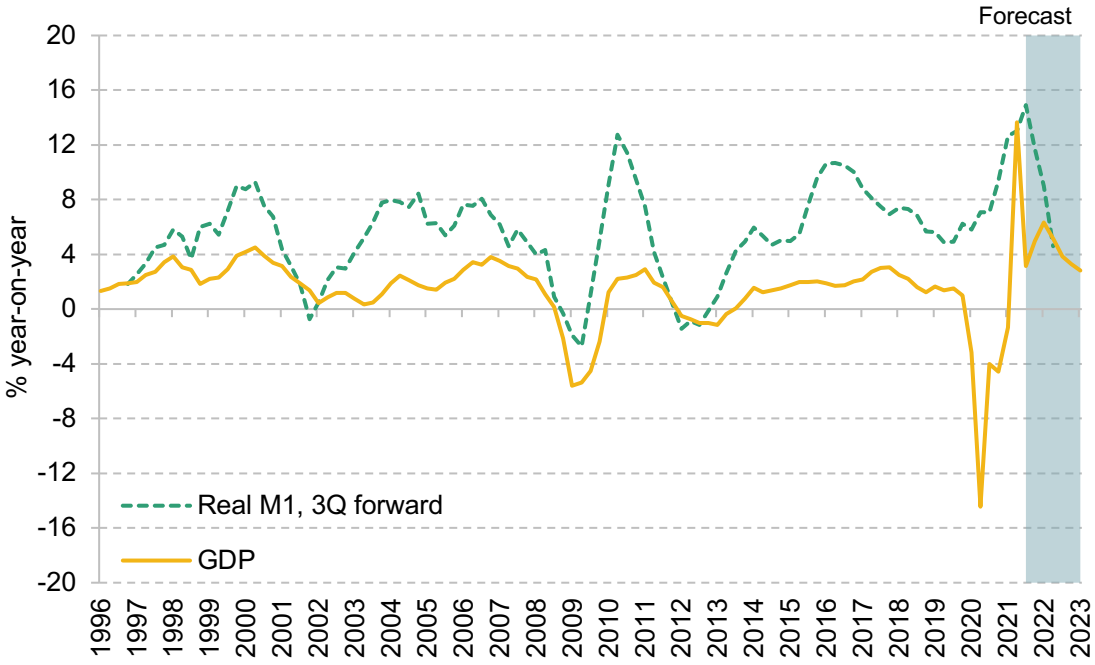
The key driver of both downturn and rebound was and is private consumption. Where shops and restaurants were closed and travel heavily restricted during lockdowns, households' spending opportunities vanished. While some of the spending was diverted to home office equipment, food orders or movie streaming, aggregate consumer spending fell sharply and is now returning to normal.

At the same time as consumer spending plunged, government support schemes such as furloughing, beefed-up unemployment benefits, and grants for the self-employed and business owners secured incomes. This led to large increases in overall household saving across advanced economies (Figure 1.7). However, there are striking differences in the sources of saving: while in the UK and continental Europe households were broadly able to maintain their disposable incomes at 2019 levels, spending plunged, resulting in cumulative household saving which amounts to 8–9% of the 2019 disposable income in continental Europe and even 13% in the UK. US and Australian households were able to save as much as their UK counterparts, but a much smaller part was achieved by actually cutting spending. Most occurred because income went up.

Not just households but also the corporate sector accumulated reserves during the crisis out of an abundance of caution. However, unlike households, the counterpart of companies' accumulation

of reserves was a surge in borrowing at the start of the pandemic. That suggests that rather than higher incomes or lower spending, liquidity hoarding was the driver, often in government-subsidised and guaranteed bank loan schemes. Those firms which survive the pandemic now have to decide whether to return it to lenders, or whether to invest. Traditionally, in some economies, businesses' accumulation of deposits tends to lead economic activity by around three quarters and currently points to strong growth well into 2022. Figure 1.8 shows this for the Eurozone: faster year-on-year growth in deposits (as measured by real-terms M1) is associated with faster year-on-year GDP growth three quarters later. In other economies such as the US or the UK, this relationship is not as stable, but nonetheless plausible in these circumstances.

Figure 1.8. Real M1 (3Q forward) versus GDP growth (YY %): Eurozone



Note: Real M1 = growth rate of short-term deposits of households, firms, governments and 'other financial institutions' (i.e. non-banks), adjusted for consumer price inflation.

Source: Eurostat, ECB and Citi Research.

If households and firms deploy their excess reserves to spend and invest, chances would be good that the losses in consumption and investment during the pandemic can be recovered swiftly. In particular in Europe, households have forgone a lot of spending which they may now want to make up for. That would reduce scarring and could snowball into a self-sustained recovery. It could even push trend growth above pre-pandemic levels, which would make the additional public debt burden, which is the other side of the reserve build-up (see Section 1.6), easier to carry.

However, there are also reasons to be cautious on the chances that these reserves will be deployed for more consumption and investment. For firms, the unusual accumulation via

borrowing suggests a high chance that they will simply be unwound via repaying loans. And for household savings, which in Europe were accumulated almost entirely by cutting spending, those who spent most disproportionately saved the most. Most of the savings therefore accrued to wealthier households with a low propensity to consume (Citi Research, 2021). Of course, there may be scope for some extra, delayed spending, but since social spending (restaurants, theatres, travel) was cut the most, it will be difficult to recover it all. That is different in the US, where savings were accumulated mainly via generous unemployment benefits and checks, which accrued to all households evenly.

So in Europe especially, instead of going on more extensive travel or buying bigger cars, households may invest excess savings in financial assets and real estate, driving up asset prices rather than real economic activity. Likewise, companies may return excess reserves to their creditors or shareholders, or engage in mergers and acquisitions rather than invest. Putting the excess savings, which were ultimately taxpayer funded, to a productive use is one of the key challenges for economic policymaking in the post-COVID era.

Policies to encourage such an outcome could include redistribution towards where the propensity to spend is the highest – for example, by raising taxes on wealth, inheritances or profits to fund public investment, as the current administration is trying to in the US and the IMF is recommending (International Monetary Fund, 2021). It could also be policies that encourage spending, such as steeper depreciation schedules for investment in tax law, or temporary VAT cuts, or policies that discourage saving, such as strengthening welfare nets. Low interest rates should discourage saving, too. Conversely, policies that encourage saving could be counterproductive. These include incentives to invest in real estate or financial assets or tax cuts for those with higher incomes and wealth.

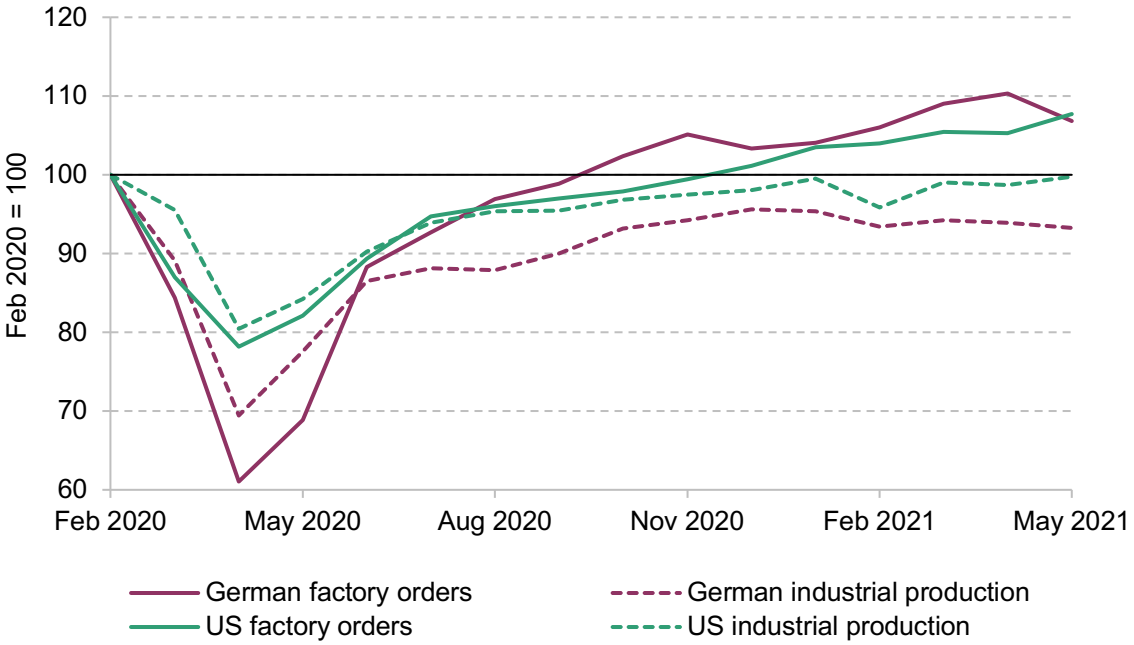
We stress that all of these policies could have unwanted side effects. For example, low interest rates could be ineffective if savers simply respond by saving into riskier products. There is some evidence that negative interest rates even encourage rather than discourage saving if households have certain saving targets, such as a particular retirement income, which is harder to reach with low interest rates. The optimal mix of policies will differ from economy to economy depending on the starting point. In economies with strong welfare systems but high debt, Ricardian effects could be strong, so strengthening fiscal sustainability by cutting back future state spending may be more effective in reducing private sector savings.

In sum, there is a chance that the rebound in activity post-lockdowns can morph into a genuine, self-sustained recovery. Households and companies have built up reserves which they can use to spend and invest. Even higher trend growth than before the pandemic is possible, if savings flow into the real economy rather than financial assets. Governments should carefully consider policies that could make this desirable outcome more likely.

1.4 Hitting supply constraints

Demand is evidently returning, especially in global goods trade. Trade volumes recovered to pre-crisis levels years faster than after the global financial crisis. Factory orders in the US and Germany have been running at 10% above pre-pandemic levels for nearly a year now as demand rotated away from services to goods (see Figure 1.9). However, the post-COVID rebound would have been a lot stronger and faster if supply had been more able to keep up with demand. There is by now pervasive evidence in the data that supply constraints are holding back activity and snowballing into fading confidence. This is easily visible, for example, in the widening gap between factory orders and production in the US and Germany (Figure 1.9).

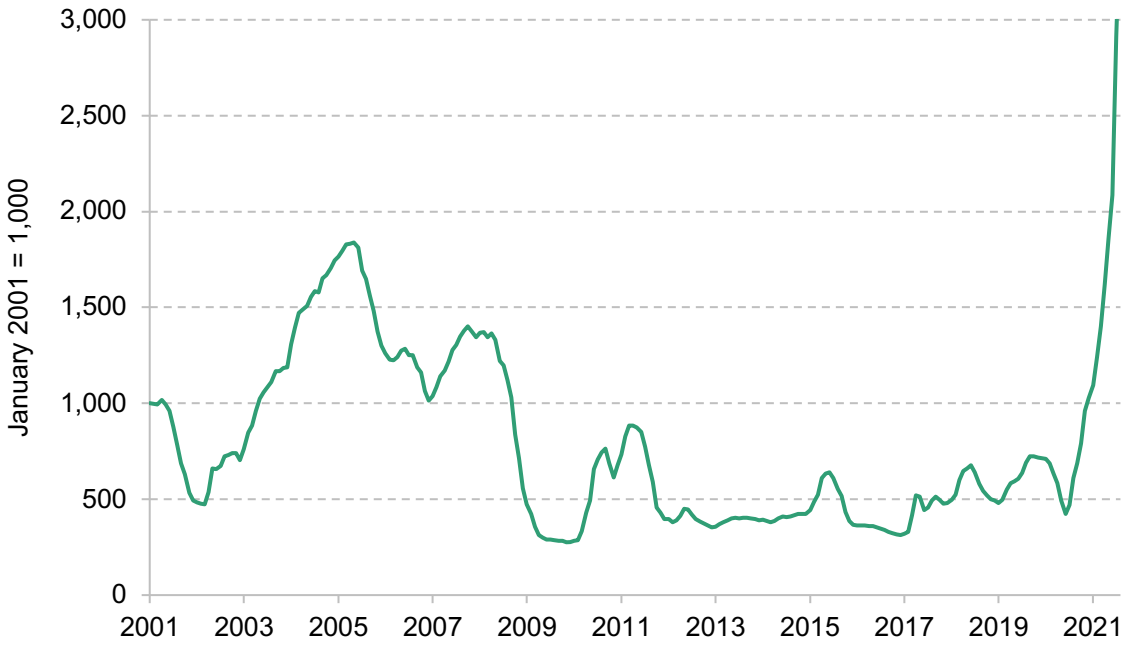
Figure 1.9. Factory orders and manufacturing output: US and Germany (real terms, February 2020 = 100)



Source: Destatis, Census Bureau, Federal Reserve and Citi Research.

Shortages of specific products, such as certain semiconductor components for cars, pose particular problems, as do directly pandemic-related disruptions, such as port closures. Disruptions and capacity shortages in global shipping are visible in the extraordinary rise in container freight rates (Figure 1.10), which have risen fivefold since early 2020 and are now double the previous high seen this millennium, in 2005.

Figure 1.10. Harper Petersen freight rates (January 2001 = 1,000)

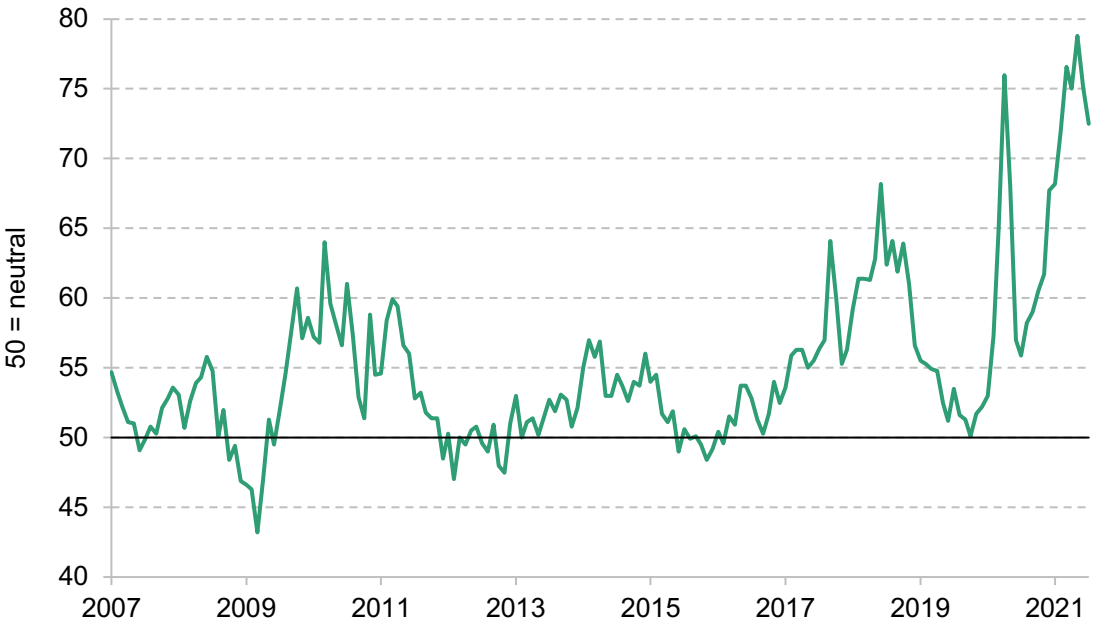


Source: Harper Petersen and Citi Research.

But it is not just the direct impact of the pandemic (such as containers in the wrong places, ports in lockdowns and computer chip manufacturers switching production from car supplies to consumer electronics during the lockdown) which explain the massive supply chain disruptions. Global manufacturing had already entered the pandemic in a state of recession and years of capacity reduction, following China's slowdown, US trade wars and Brexit. Capacity was probably below normal demand already and would have required new investment. This capacity repair was further delayed by the pandemic. As a result, global manufacturing and logistics are being hit by a double whammy of sharp spikes in demand paired with reduced capacity.

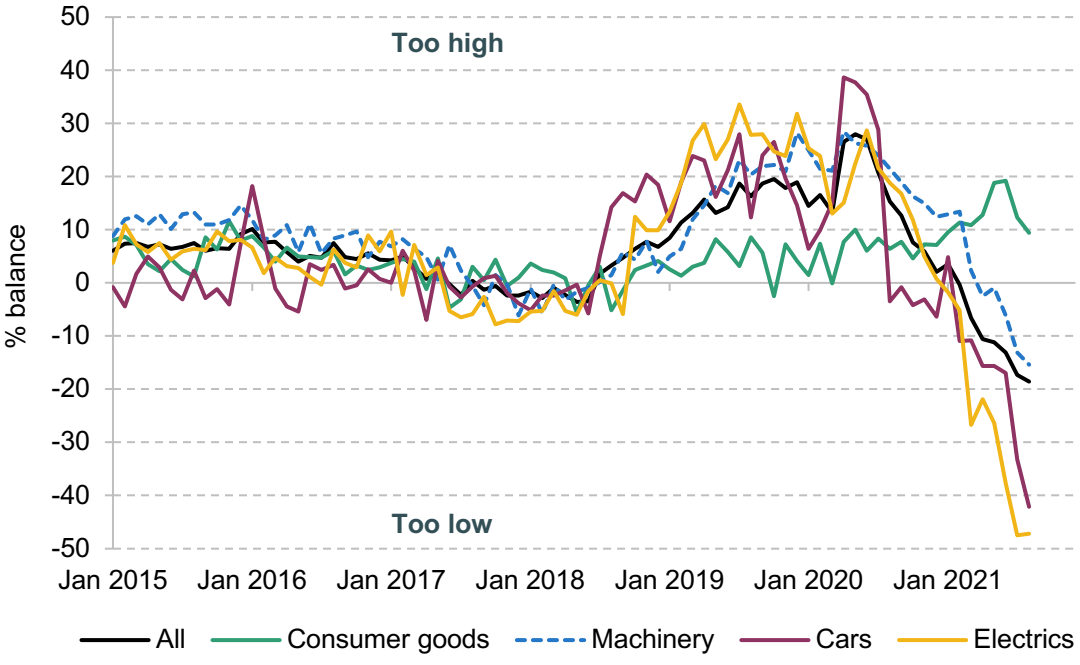
Supply shortages and supply chain disruptions show, for example, in lengthening supplier lead times in global purchasing manager surveys. In the US (Figure 1.11) and elsewhere, delays in delivery are spreading at a record pace. Another sign of supply–demand mismatch is in the depletion of manufacturers' inventories of finished goods, which are at all-time lows (see Figure 1.12 for the German example). A recent survey of German manufacturing firms by the Ifo Institute found that in response to unreliable supply chains, especially smaller and medium-sized firms are increasing warehousing at every step of the supply chain, which aggravates the shortages in the build-up phase (Flach et al., 2021). This affects production, and contributes to the struggles of supply to keep pace with rising demand.

Figure 1.11. ISM manufacturing supplier lead times: US (50 = neutral)



Source: ISM and Citi Research.

Figure 1.12. Manufacturers' assessment of finished goods inventories: Germany (% balance)



Source: Ifo and Citi Research.

Unfortunately, this supply–demand mismatch looks set to continue for some time. Many global manufacturing firms are currently advising that production levels are unlikely to advance much beyond those achieved in the first half of the year, due to the supply shortages. Significant improvements will only be possible in 2022. On the one hand, this creates downside risks with ripple effects to other parts of the economy. On the other hand, companies will have to invest in capacity, resilient supply chains and restocked inventories, which should support a strong global manufacturing and trade upswing for several years.

In sum, in the second half of this year, supply constraints in manufacturing are likely to taper the growth momentum. In an optimistic scenario, this merely delays the recovery and triggers additional investment in the meantime. In a negative scenario, lower profits leave a sustained mark in firms' balance sheets and weigh on growth for a longer period.

1.5 Inflation is overshooting

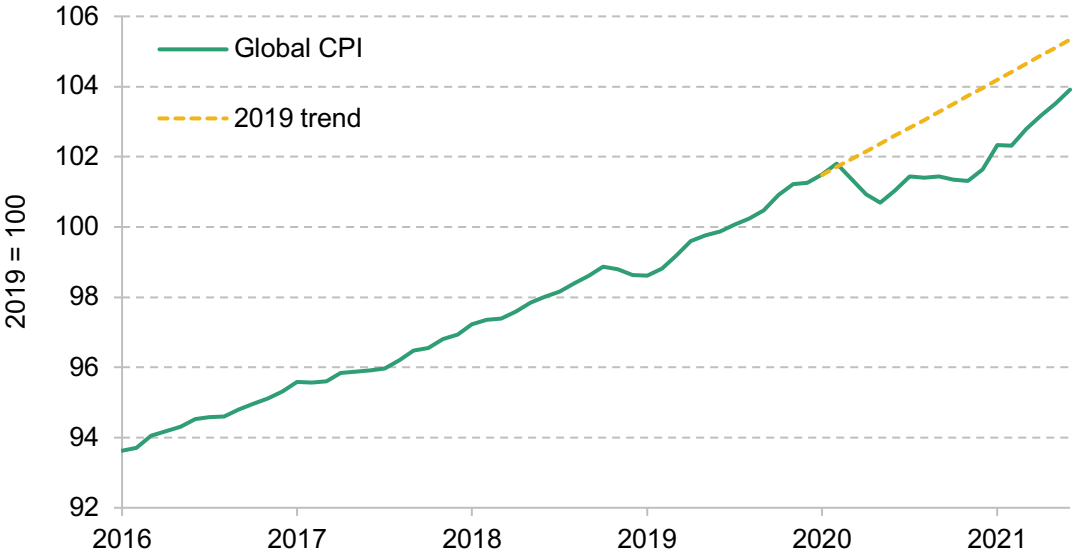
In the meantime, inflation is making headlines, with prices rising at rates that are high by the subdued standards of this millennium (so far). Consumer price inflation is above 5% in the US and above 3% in the Eurozone and the UK. To a large degree, these high rates reflect base effects (that is, the mere fact that many prices were exceptionally low last year) and price normalisation, as well as the above-mentioned temporary supply shortages. Price normalisation still potentially has a long way to go. Globally, consumer prices remain about 2% below where they would have been at this stage had the pre-pandemic trend continued (Figure 1.13).

High inflation is usually not a prime concern following a deep recession. A legacy of high unemployment and broader slack in the economy tends to take time to be absorbed and instead weighs on wages and thus prices in the meantime. In principle, this is no different after the COVID crisis, although the rise in unemployment is so far somewhat concealed. If we combine those who became unemployed, those who remain on government furlough programmes and those who left the labour market altogether since the start of the pandemic, 'shadow' unemployment rates in the summer of 2021 are still between 2 (Spain) and 13 percentage points (UK) above their December 2019 levels in major western industrialised economies (Figure 1.14).

We expect these measures of slack to come down quickly over the coming months if the pandemic remains broadly under control. Indeed, in some economies and some sectors, there are signs of labour shortages as the economy reopens. In the US and the UK, for example, overall vacancies not just recovered but jumped more than 30% above pre-pandemic levels this summer (Figure 1.15), even though especially the latter still has a far smaller economy than before the pandemic. In continental Europe, there are fewer reports of shortages, but vacancies have also

returned to pre-pandemic levels. Clearly, stronger wage growth due to shortages would constitute an upside risk to inflation.

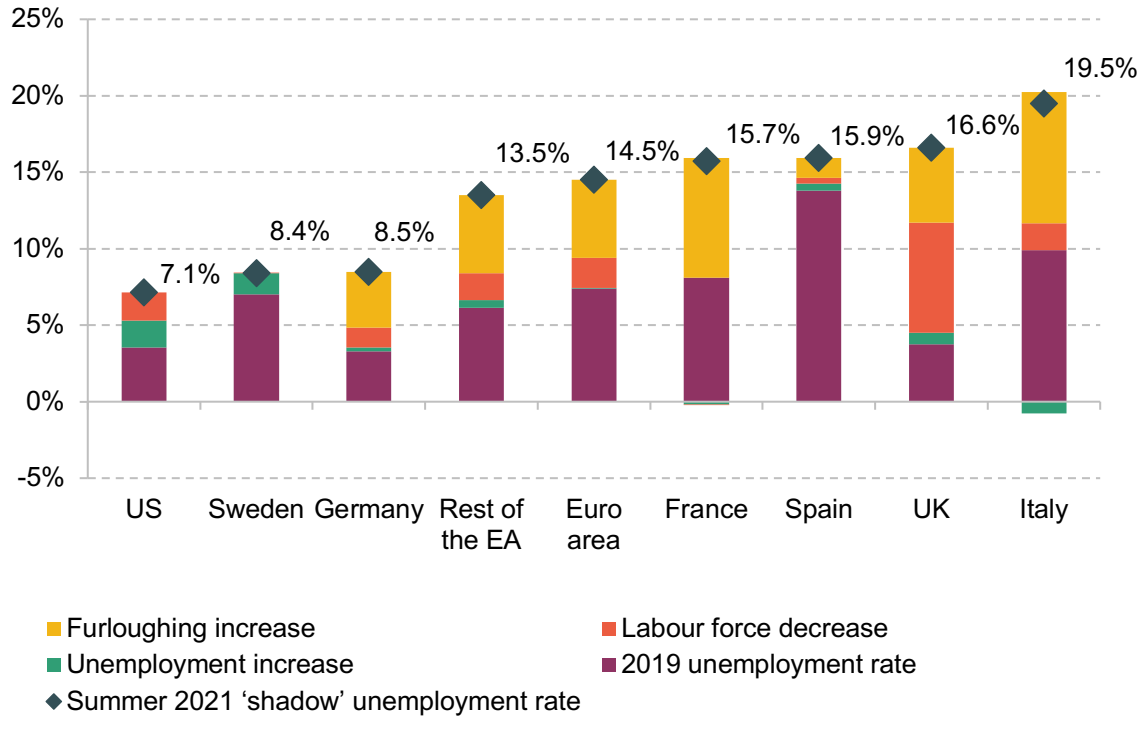
Figure 1.13. Consumer price index: US, Eurozone and China (seasonally adjusted, 2019 = 100)



Note: US, Eurozone and China each weighted 33%.

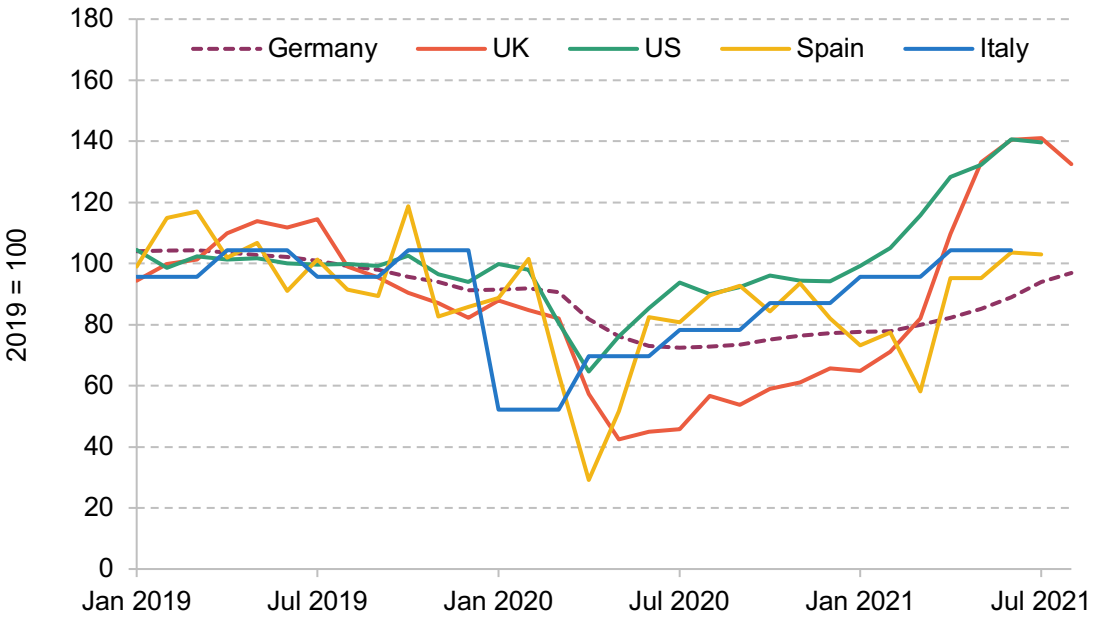
Source: ECB, BLS, CNBS/H and Citi Research.

Figure 1.14. 'Shadow' unemployment rates, Summer 2021



Source: US BLS, ONS, Eurostat and Citi Research.

Figure 1.15. Job vacancy indices (2019 = 100)



Source: German labour agency, UK ONS, US BLS, Spain SEPE, Italy ISTAT.

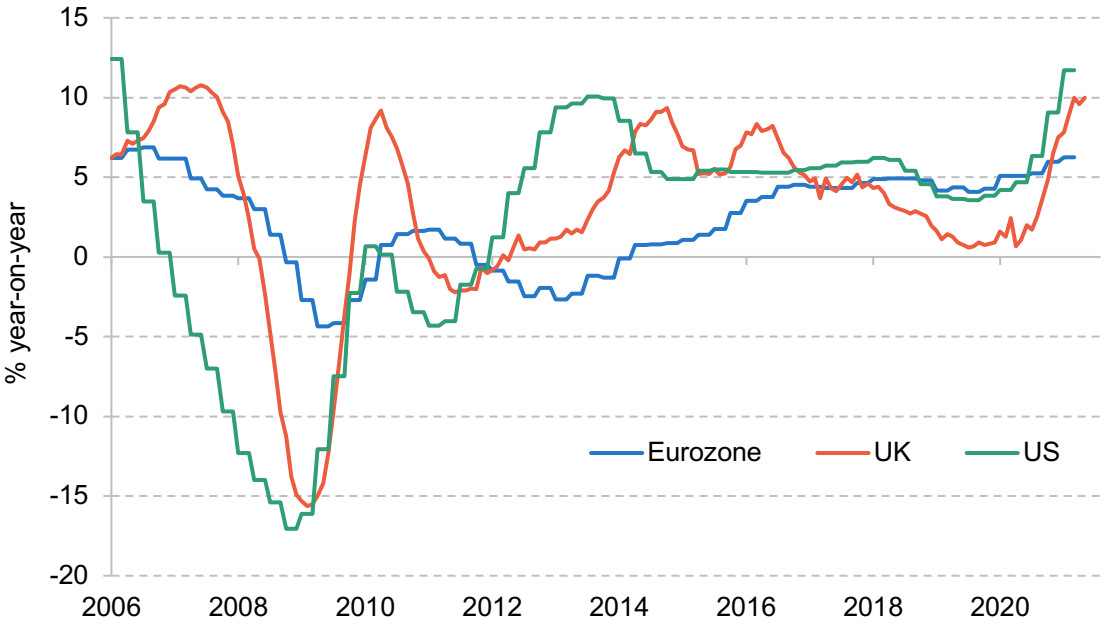
A full absorption of all the 'unemployed' workers is likely to take time as long as economies operate below pre-crisis levels overall and due to economic reconfiguration, especially in economies with less flexible labour markets, such as in continental Europe. In the US and the UK, there are signs of vacancies levelling off as labour market support programmes are wound down and workers return to the labour market. We expect furloughing to fade and participation to recover (indeed, the breakthrough for teleworking during the pandemic has a huge potential to increase labour supply globally and to do to western services what globalisation has done to its goods production). With economies still below pre-crisis trends, formal unemployment is likely to rise or to not come down further. This should weigh on wage growth for some time.

Even if the labour market does not generate sustained wage pressure, we cannot rule out that the COVID crisis will leave a less disinflationary environment than 'normal' recessions, mainly because it was such an asymmetric shock to supply. This implies quite different risks at least in the short term and conceivably also in the long term. Relative to our fairly subdued inflation forecasts, these risks are probably skewed to the upside for a number of reasons:

- **Unlike in 2008–09, house price growth has surged during the pandemic** (Figure 1.16) which could feed back into higher consumer prices. This reflects a number of factors such as fiscal support (e.g. UK stamp duty holiday), low interest rates, people seeking more space due to teleworking and increased savings (see Section 1.3) and is likely to continue for a

while. Higher house prices affect some inflation measures directly and others indirectly – for example, via costs for associated goods and services.

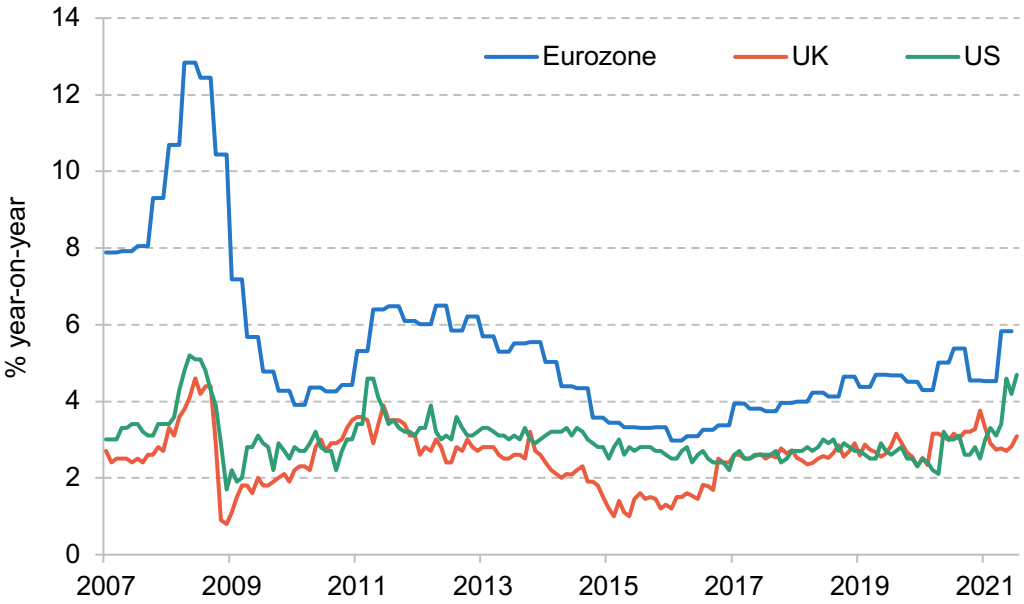
Figure 1.16. House prices: US, UK and Eurozone (YY %)



Note: All dwellings.

Source: BIS and Citi Research.

Figure 1.17. Households' one-year inflation expectations: US, UK and Eurozone



Source: University of Michigan, EU Commission, YouGov and Citi Research.

- **Inflation expectations could perpetuate the current surge.** Periods of high inflation, even if driven by temporary factors, can perpetuate themselves if households and companies revise up their inflation expectations. In the US and to a lesser degree in Europe, households' short-term inflation expectations have been rising sharply, driven by higher observed inflation (Figure 1.17). While short-term inflation expectations tend to lag actual inflation, they do lead to wage growth, so the rise could have an effect on wage demands as well as firms' perceived pricing power. Both could lead to permanently stronger price dynamics. However, so far there is less evidence of rising long-term inflation expectations. We also note that purchasing intentions remain subdued in the UK and German GfK consumer confidence surveys, which we would not expect if households expected the current price hikes to persist.

- **The green transition could drive up many prices.** A major event, with potentially important economic and inflationary consequences, will be the COP26 meeting in Glasgow in November. A summer of extreme weather events globally has once again made clear the challenge the world is facing in slowing climate change and the potential costs if it fails to achieve this. In our view, the pandemic has helped bring the vulnerability of the world to environmental challenges up the agenda, which will now benefit the fight against climate change. However, to ensure that it can continue to prosper in the long run, the global economy will have to internalise the damage current activity is doing to future prospects. The EU Commission has warned, for example, that its 27 member states will have to invest an extra 2% of GDP every year until 2030 to cut greenhouse gas emissions by 40% compared with 1990. This extra spending will need to be offset by higher taxes and cuts elsewhere. We expect higher carbon prices and other indirect taxes to play a major role in reducing emissions. Already, Europe's traded carbon price, which only applies to manufacturing, power companies and airlines, has doubled during the pandemic (Figure 1.18), reflecting high demand but also anticipation of future cuts in supply. Germany this year extended carbon pricing to the energy sector, introducing a €25 per tonne price in January which increased overall CPI inflation by 0.3–0.5 percentage points and is scheduled to rise to €55 by 2025 (and probably earlier if the Greens take office following the recent election). The EU is currently considering a carbon border adjustment tax, which would increase the price of imported goods from non-compliant countries (for a discussion in a UK context, see Chapter 8). We can expect carbon pricing to play a major role in the global response to the climate crisis and directly drive up consumer prices. (Carbon pricing and other issues around green taxes in a UK context are discussed in Chapter 8.)

Figure 1.18. EU Emissions Trading System carbon price (euros per tonne)

Note: Shows European Climate Exchange over-the-counter (OTC) spot price for 1 metric tonne of CO_2 emissions.

Source: Bloomberg and Citi Research.

To a degree, higher inflation is welcome in advanced economies. Where central banks have been struggling to fight off deflation threats, higher inflation expectations increase the effectiveness of their policy tools by lowering real rates for any level of nominal rates. However, the tipping point from welcome higher inflation to an unwelcome challenge to macro-stability could come earlier than people expect. Inflation is a tax on consumption which hits hardest those households which consume the most relative to their incomes, i.e. poorer people. Central banks may react with higher interest rates, which would cut the recovery short.

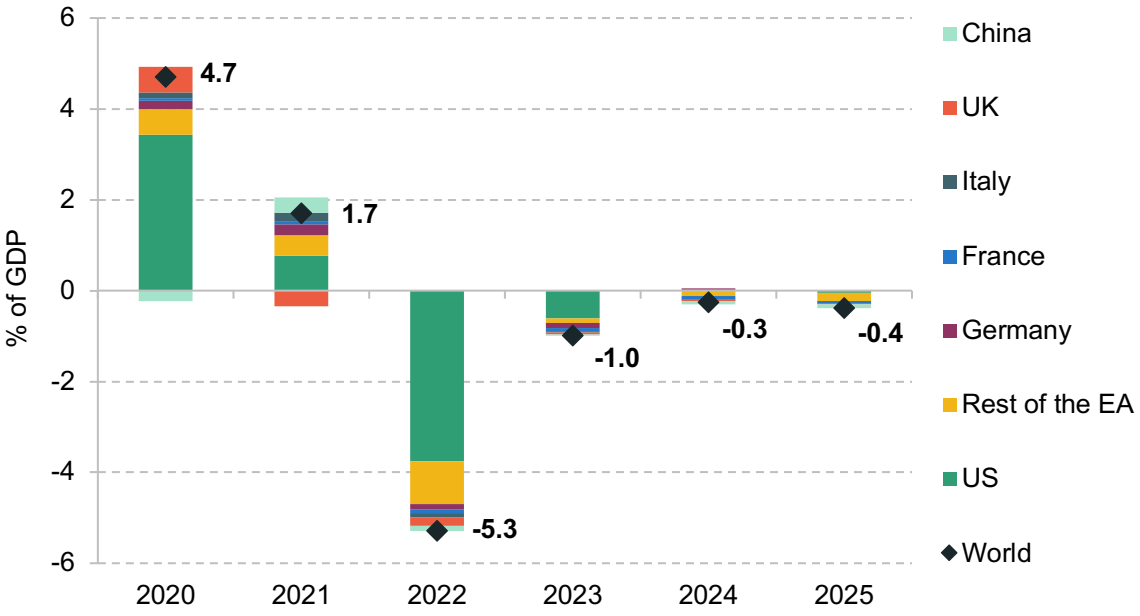
In sum, supply–demand mismatch, rebuilding profit margins, hot real-estate markets, sensitive price expectations and the green transition all point to higher inflation rates for some time. However, as long as economies have not returned to pre-crisis trend levels of output, and labour supply rebounds as furlough programmes end and people return from inactivity, the probability of too-low inflation remains just as high as that of too-high inflation.

1.6 The other side of the coin: how will governments repair their balance sheets?

The coming 12 months are likely to be marked by a shift in fiscal policy in many, but not all, economies. In 2021, most governments are still generously supporting businesses and workers affected by the public health measures introduced in response to COVID-19. In fact, fiscal support on aggregate across advanced economies has become even more generous. Budget deficits have remained at similar levels to 2020 despite the rebound in GDP, which means in structural terms they have even widened and provided tailwind to economies.

However, many governments are planning to phase out support measures such as furloughing schemes, topped-up unemployment benefits and grants to business as official health restrictions end. In addition, health expenditure is expected to recede as vaccination campaigns slow and hospitals are no longer overwhelmed. As governments prepare their 2022 budgets, they are generally aiming at much lower budget deficits. On our forecasts, the global fiscal impulse (i.e. the change in government deficits adjusted for the cyclical change) will be deeply negative in all major economies in 2022 (see Figure 1.19).

Figure 1.19. Change in structural fiscal balance (% of world GDP) for selected economies



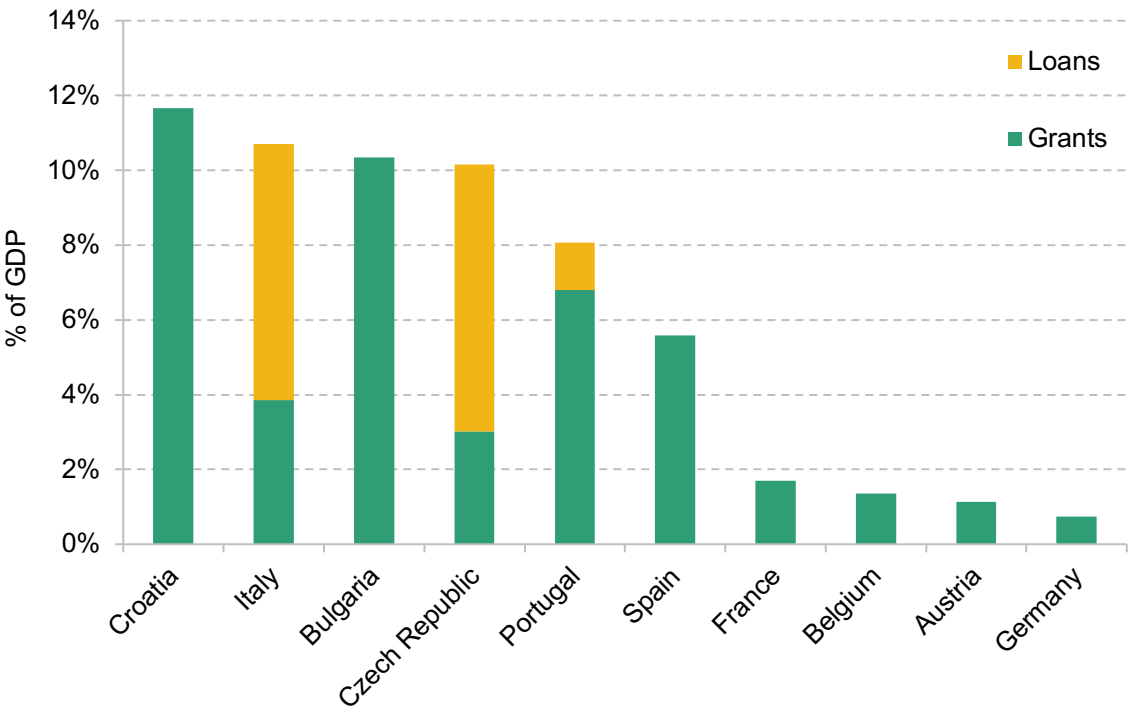
Note: Change in the general government budget deficit, adjusted for the change in the output gap (with a factor of 0.5).

Source: IMF and Citi Research.

Despite this shift, the return to more balanced budgets is unlikely to be as abrupt as it was in most economies after the 2008−09 financial crisis. Deficits will remain larger than pre-pandemic although we expect output gaps to vanish. In Europe and in the US, the fiscal focus is shifting from consumptive government expenditure to public investment and strengthening the welfare state. Fiscal largesse is helped by the fact that, despite central banks' policy normalisation discussions, government borrowing costs continue to trend lower, especially in real terms. The US government borrows for 10 years at 1.5% (40bp less than in late 2019), the UK at 1%, Italy at 0.8%, Japan and France at 0.1% and Germany still at –0.2% at the end of September 2021. Such low interest rates make large debt piles more easily sustainable than in the past and invite politicians to use the extra wiggle room.

Many western governments are making use of these low borrowing costs to ramp up public investment, not only as a cyclical macro-stabilisation tool, but also to close a perceived structural public infrastructure gap.

Figure 1.20. EU recovery fund allocations (% of GDP)



Note: The Recovery and Resilience Facility is the main component of the NextGenerationEU package. It contains €312.5 billion in grants, which all countries are drawing, and €360 billion in subsidised loans, which only some countries are drawing (2018 euros).

Source: EU Commission, member states' recovery and resilience plans, and Citi Research.

The EU has started disbursements from its €750 billion (in 2018 euros) NextGenerationEU facility. This not only increases EU-level expenditure by two-thirds over the current 2021–27 budget cycle, but for the first time allows the EU to borrow and thus use the budget as an intertemporal macro-stabiliser. Around 40% of the funds is to be allocated to the green transition and at least a further 20% to digitalisation. Key beneficiaries of the fund will be poorer EU member states in the south and east of the bloc (such as Croatia and Italy – see Figure 1.20), who will also have to implement significant economic reforms as a precondition to receiving the money. In many of the 27 member states, EU-funded investment will be accompanied by national initiatives.

In the US, the Biden administration and the Democrats are trying to push through a $1 trillion (0.5% of GDP) infrastructure investment package over 10 years ($550 billion in new spending) through both houses of Congress. Chances of it passing eventually are high with significant bipartisan support. However, a larger battle could loom for a $3.5 trillion (1.8% of GDP) social spending package later this year.

Compared with the aftermath of the 2008−09 financial crisis, the narrative in the markets and in global economic and financial institutions regarding public debt has changed. After the financial crisis, large government debt was seen as a risk to financial stability and thus an impediment to economic confidence and growth. Now, global institutions such as the IMF or OECD see a lack of public spending and investment as a key threat to growth.[1] Especially with central banks at the lower bound of their policy space, fiscal policy has a greater role in macro-stabilisation than in the past. For the coming years, that reduces the risk of a repeat of the years of austerity which weighed on global growth between 2011 and 2014. Instead of taxpayers (via tax hikes) or recipients of public services and transfers (via austerity), it seems most likely that the cost of the pandemic will ultimately be borne by government creditors (via low interest rates over a very long period of time). This is sometime referred to as ‘financial repression’ but is in the current context arguably the most efficient solution to restore the economies’ aggregate balance sheet without too much damage to growth.

However, the pendulum could swing back fast, at least in some economies, when fiscal rules come back into focus. In the US, the debt ceiling requires Congress to discuss the level of public debt periodically. In particular, if the Republicans regain control of one of the two chambers of Congress in the 2022 mid-term elections, this could become a focal point for fiscal retrenchment as it did in 2011. In the EU, the Stability & Growth Pact will kick back probably in 2023 and require governments to reduce deficits below 3% and debt levels below 60%. Even stricter fiscal rules also exist at the national level in some Eurozone member states such as Germany.

[1] See, for example, International Monetary Fund (2021).

Switzerland is another country where the constitution will oblige the government to 'pay back' the extra debt accumulated during the crisis. Chapter 4 discusses some options for new fiscal rules in the UK.

It should be stressed that such considerations are likely to be even more dominant in emerging markets, where institutions do not command the same trust and credibility as in advanced economies. There, de-anchored fiscal policy can disrupt domestic financial stability more easily and trigger balance of payments crises. For example, in China, where the recovery is arguably most advanced, the government has already stepped on the brakes in order to preserve financial stability.

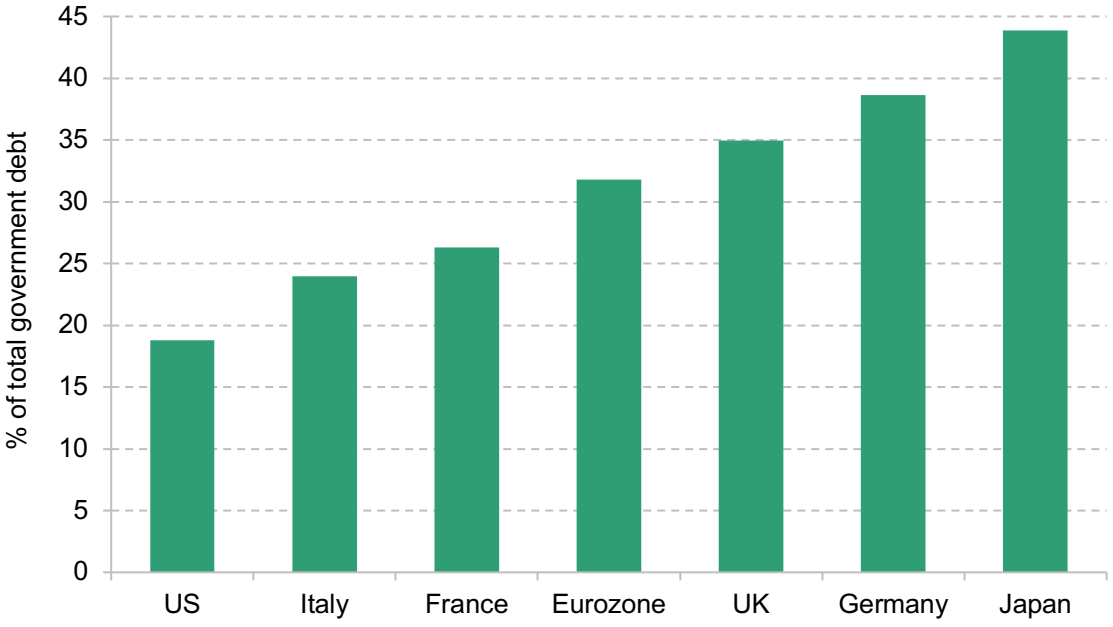
In sum, the risk of a fiscal backlash as after the 2008−09 crisis is low. The extraordinary support during the pandemic will be largely phased out over the coming months. However, deficits will stay higher than pre-pandemic as governments step up public investment. Longer-term though, the debate about fiscal anchoring is likely to return in Europe and the US, while emerging markets' fiscal space is more limited anyway.

1.7 Can central banks tighten policy?

Among some central bankers, there is unease about high levels of government debt. With their short electoral cycles, governments have an incentive to pursue inflationary policies. After decades of interest rates falling from cycle to cycle, the fact that nominal interest rates can be higher than the nominal growth rates, and that this would make it more challenging to keep debt sustainable, has faded from memory. One concern is that the effective duration of government debt has fallen, making debt more sensitive to changes in short-term, central-bank-controlled interest rates. Indeed, central banks now own a large part of outstanding government bonds in the advanced world (see Figure 1.21, and also Chapter 3). They have thus converted long-dated government debt into variable-interest-rate short-term overdrafts. That could make public balance sheets vulnerable to interest rate hikes – and indeed will do unless interest rate raises are accompanied by improvements in the outlook for government receipts.

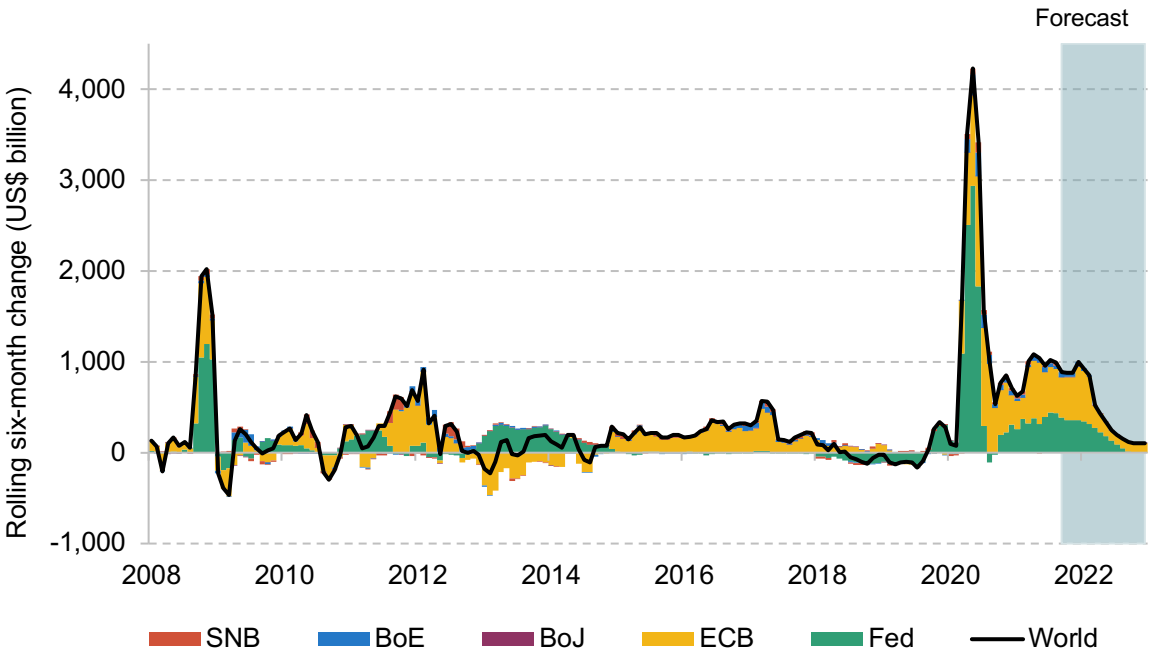
Some central bankers are worried they will come under political pressure in some circumstances not to hike interest rates in order to keep government borrowing costs low, i.e. 'fiscal dominance'. That may influence their thinking about when and how to withdraw monetary stimulus, to avoid getting into that situation.

Figure 1.21. Central bank's share of sovereign bonds outstanding: US, Japan, Eurozone and UK



Source: National statistical offices, ECB, Fed, BoJ, BoE and Citi Research.

Figure 1.22. Rolling six-month change in central bank balance sheets (US$ billion)



Note: Quantitative easing.

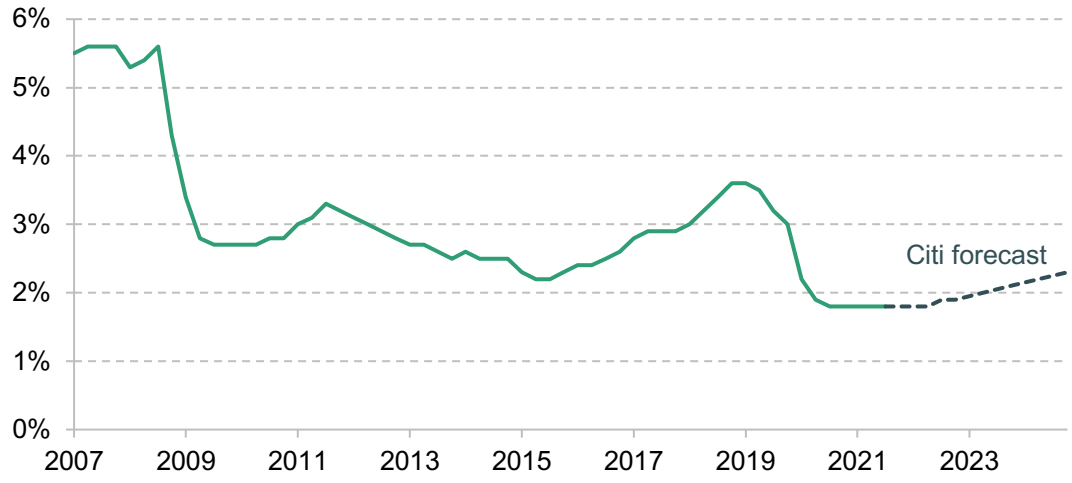
Source: Fed, ECB, BoJ, BoE, SNB and Citi Research.

Regardless of the fiscal connection, the coming 12 months will see some withdrawal of monetary support. Initially, this will mostly be subsiding QE (quantitative easing) flows from the Fed, the Bank of England and the European Central Bank (ECB). We expect the Fed to start tapering purchases by $15 billion per month from December, the Bank of England to stop net purchases altogether by the end of the year and the ECB to complete its Pandemic Emergency Purchase Programme by March 2022 and then only continue with the much smaller pre-pandemic Asset Purchase Programme. While the Bank of Japan with its yield curve control and the Swiss SNB with its foreign exchange interventions might still add some liquidity, from the fourth quarter of 2022 we should not expect much from the large central banks any more (Figure 1.22).

Global short-term interest rates will probably take a little longer to move. Some smaller central banks, such as New Zealand's RBNZ and Norway's Norges Bank, will soon start or have already started hiking rates. The Bank of England may be next (current Citi expectation for lift-off is February 2022). However, the US Federal Reserve looks unlikely to join them before the end of 2022. The Bank of Japan and the European Central Bank will not be in a position to hike in the near future. In emerging markets, many central banks are expected to start hiking gradually from this autumn, but this is likely to be offset by some prominent cuts and unlikely to have much bearing on global financial conditions. Figure 1.23 shows, for instance, that the global central bank policy rate is not expected to rise until the end of next year, and then only gradually over the forecast horizon.

In sum, most central banks will proceed very cautiously towards the exit from their extraordinary monetary support during the pandemic. Global interest rates will hardly move from their extremely low levels until the end of next year. Still, the risk of financial turbulence is non-negligible, especially as central banks taper asset purchases over the coming months.

Figure 1.23. Global central bank policy rate (%, US$ GDP-weighted)



Source: Haver Analytics, IMF and Citi Research.

1.8 Conclusion

The post-lockdown rebound momentum is past its peak. Global supply shortages and other bottlenecks will slow growth and boost inflation for the rest of the year. Recurring waves of the pandemic pose downside risks, although the amplitude of their economic impact should be a lot smaller due to vaccination programmes and economic adjustment. However, once the supply shortages are addressed, there is still a lot of pent-up demand to be met, which should support further growth globally. The vaccination laggards should be catching up. The reserves households and companies have accumulated during the pandemic have the potential to lift spending and investment above pre-pandemic levels for some time. A lot will depend on whether these reserves are diverted into the real economy instead of financial assets and real estate. This is something that governments could assist with: by encouraging spending (by reducing taxes on consumption, for example) and by discouraging saving (for example, by providing stronger social security nets).

Base effects and supply–demand mismatch during reopening have driven inflation to high levels by the standards of recent years. While there are some risks that what should be a temporary spike becomes more permanent, we see at least as much risk that slack in the economy – in the worst case compounded by premature withdrawal of policy support – drives inflation rates below central bank targets again. Still, a turning point has been reached as governments' and central banks' extraordinary economic support during the pandemic comes to an end. Budget deficits will likely remain above pre-pandemic levels and central banks will tread very carefully before raising interest rates. Overall, we expect global growth to be strong this year and next and revert to pre-pandemic trend levels thereafter.

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2. UK economic outlook: the future isn't what it used to be

Ben Nabarro (Citi)

Key findings

1 **The UK economy is in the midst of a sharp – but incomplete and wildly imbalanced – recovery.** A better public health outlook, easing restrictions and the extension of fiscal support have all underpinned a faster economic reopening in recent months than was anticipated at the start of the year. However, **the UK economy still remains one large recession short of its pre-COVID trajectory. The rebound also remains compositionally narrow –and contorted by sectoral and regional imbalances**: demand is exceeding supply in some (widely publicised) areas of the economy but lagging it in many others.

2 From here, we expect accumulated household savings to provide only a limited boost to growth. As government support is wound down, firms and households will also feel income effects of the shortfall in activity in aggregate for the first time. We expect **a combination of lingering public health concerns, income losses and supply impairments all to drive a further fading of growth momentum over the winter**. In our view, a sustained and complete economic recovery remains far from secure.

3 **A profound economic adjustment looms.** Economic activity during the pandemic has been characterised by astounding asymmetries. While some of these effects have eased as the economy has reopened, many appear increasingly persistent. **Household consumption remains 10% down in social categories, for instance**. Firms in transport and storage expect sales to be around 5% higher in the long term as a result of the pandemic, but hospitality firms expect them to be 4% lower. **Many firms now seem to be**

expecting and preparing for a different economy in the years ahead, pointing to a protracted period of reconfiguration**.**

4 **Brexit will compound the challenge.** Adjustment before 2020 seems to have been put off as a result of continued EU market access and the weakness in Sterling. New-found frictions have added to supply disruption in recent months. **Early evidence also now points to the beginning of a period of acute structural change within UK trade.** Among goods, we expect the pivot away from EU suppliers and clients to accelerate. Services remain a more notable concern. Professional services exports into the EU have lagged in particular in recent years: exports of professional services to the EU were around 30% of the total in 2021Q1 versus 44% in 2016Q1. We expect these effects to worsen in the years ahead, meaning a likely net drop in overall UK services exports.

5 **The labour market is the lynchpin of the recovery.** While demand has already reconfigured sharply during the pandemic, fiscal support has precluded similar adjustments within the labour market. Sales have shifted across sectors at a much faster rate than has employment, with cumulative excess job reallocation since 2020Q2 24% below the equivalent figure for sales. **The result has been an increasingly 'contorted' recovery.** From here, we expect some of these pressures to begin to unwind. Vacancies should ease back as hiring associated with the economic reopening is completed. Adjustment should now accelerate, with the end of furlough and easing uncertainty facilitating a broader recovery in labour mobility. Our forecasts see **unemployment increasing to 5.5% in 2022Q1 as furlough unwinds and more return to the labour force**. This may fall back only slowly in the years ahead with matching issues, a capital-intensive recovery and an increase in the effective tax burden on labour from next April all likely to mean **the labour market lags rather than leads the recovery**.

6 **Recent wage growth has primarily reflected sector-specific labour shortages, rather than economy-wide wage pressures.** Record demand in sectors such as transport and food processing have driven sectoral wage settlements well into the double digits. However, **overall pay settlements remain broadly in line with their pre-pandemic range**. For now, we continue to think some of these pockets of upward pressure will ease back as supply improves – but **a relative revaluation of skills now seems likely**. With output forecast to lag the pre-pandemic growth path on a persistent basis, we might expect an emergence of additional labour market slack and lower wages in the

years ahead. We expect real household disposable income growth to fall by 0.1% in 2022−23 as living costs increase.

7 **Inflation is set to increase sharply in the second half of 2021**, with annual CPI forecast to peak at 4.6% in April 2022. **For now, the drivers here seem transitory.** Energy and base effects are likely to push up inflation, as are trade disruptions and imported inflation. These effects could prove sticky, but should ultimately dissipate. The larger risk remains a more persistent domestically driven price surge. For now, the risks here remain more contained. **Accelerating inflation is currently being driven by just a handful of primarily imported goods, with services inflation, in particular, more subdued.** We also do not expect the labour market to prove sufficiently tight in aggregate to drive up costs on a more persistent basis. **Elevated unit labour costs instead seem more likely to drive job losses rather than wage pressures.**

8 **However, inflation expectations are more of a concern.** If these begin to shift up, firms may be willing to accept higher wages and offer higher prices – creating the **potential for a genuine wage price spiral**. Going into the pandemic, inflation expectations were at rather than below target levels – in contrast with both the US and Eurozone. Upwards pressures across firms, households and financial markets are increasingly evident, and acute labour shortages might heighten the risks. However, as transitory inflation likely gives way to disinflation, upside risks in the coming months may also shift to the downside in the medium term. The latter could prove even more difficult to combat.

9 With the economy likely to reconfigure over the coming 18 months, the link between the speed and ultimate scale of the recovery is greater than normal. **A faster recovery could see COVID-related scarring (i.e. the permanent economic damage done by the pandemic) limited to just 1–1.5% of GDP, versus 3% under the OBR's March 2021 scenario.** A slower recovery could mean larger hysteresis effects and greater permanent losses. Brexit will, in our view, continue to weigh on UK capacity. Combined with our assessment of COVID-19 impacts, this means that **we expect the economy to be 2½% smaller in 2024−25 than under the OBR's pre-pandemic (March 2020) forecast.**

10 **Continued policy support may yet be necessary to secure a complete economic recovery.** A simultaneous recovery in both supply and demand

provides a basis for policy to 'lean loose'. In this environment, **supply is likely to be more responsive to demand conditions than normal**, meaning capacity is likely a little greater than perhaps suggested in official data. Arresting momentum in the recovery could also risk a larger permanent output loss, given the stronger link between scarring and the speed of the recovery. In the near term, higher inflation expectations create a risk that may subsequently require concrete action to contain. But, for now, we think policy should err on the side of providing more rather than less support.

11 With monetary policy space also heavily constrained, **policy must now plan for fiscal capacity to play a greater role in macroeconomic stabilisation**. This is likely key if policy is to be able to respond effectively in crises to come.

2.1 Introduction

The UK's economic recovery from the COVID-19 pandemic has proven rapid but so far incomplete. After a sharp rebound as the economy reopened, output stalled around 3.5% short of 2019Q4 in July, and roughly 6% short of its pre-pandemic trajectory. With COVID-19 still likely to weigh directly on economic activity over the winter, we expect the recent loss of momentum to prove, at least partially, persistent. We expect output in Q4 to remain around 4% short of its pre-pandemic path – equivalent to a large recession. With fiscal support winding down, this implies a more challenging period for firms and households ahead.

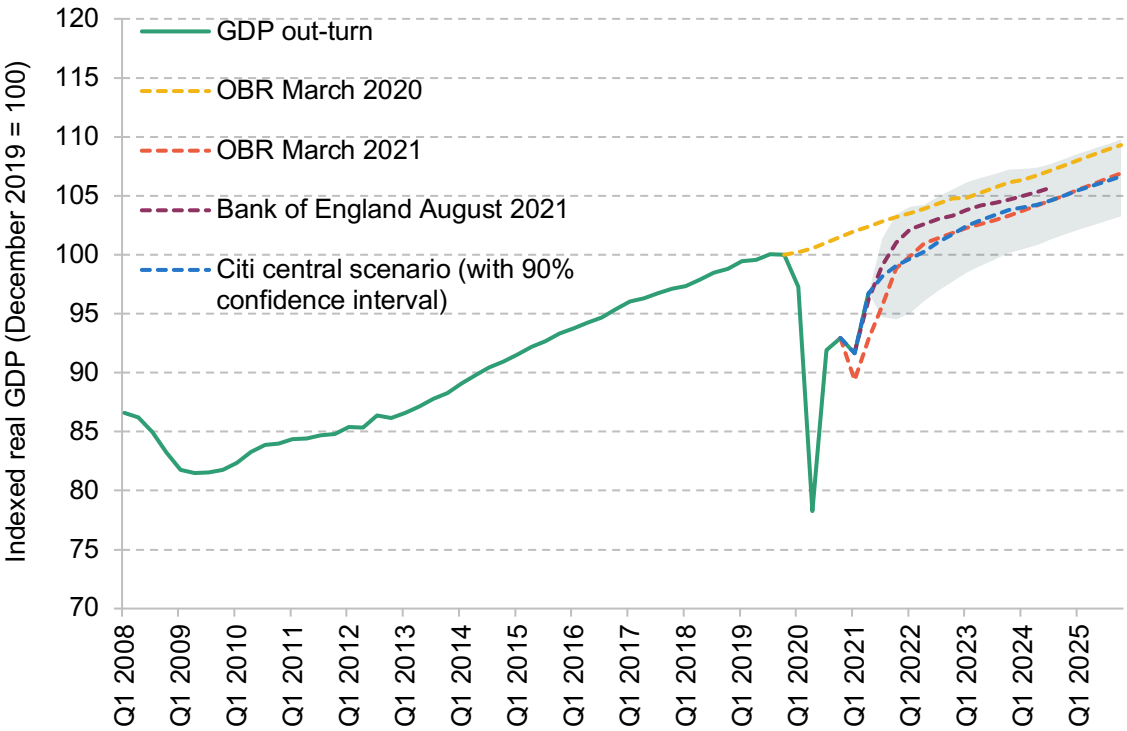
The medium-term economic recovery is likely to hinge on adjustment. Both Brexit and COVID constitute sudden, large and likely persistent structural shocks. In some areas, insolvencies and write-downs are likely as support is wound down. In others, strong sectoral growth is also likely to meet imperfect supply – driving bottlenecks and shortages. Already, we have seen some dramatic changes in the structure of demand through the rebound. This has driven some inflationary pressures as the supply side of the economy has been held in place. We expect this to change in the months ahead, with supply likely to recover as income support is wound down. For now, this suggests looming inflationary pressures in the second half of 2021 should begin to ease back. The key risk here is inflation expectations – if these shift up, there will be a meaningful risk higher inflation could become entrenched.

Our forecast sees real GDP growing by 6.9% in 2021 and 4.4% in 2022. While near record rates, these numbers would still suggest a persistent shortfall in activity compared with its pre-COVID trajectory, with output only exceeding its pre-COVID level in 2022Q2. In our central forecast, which assumes a £15 billion annual fiscal loosening beyond what is currently planned (unlike the central forecast in Chapter 3, which assumes no such loosening), GDP in 2024−25 is set to

be below 1.4% lower in nominal terms than under the Office for Budget Responsibility (OBR)'s pre-pandemic (March 2020) forecast. In real terms, it is set to be 2.5% lower (Figure 2.1) – a little more optimistic than the OBR in March, but more pessimistic than the Bank of England's most recent forecast (by 1.0% in 2023–24). Uncertainty here remains enormous, with output exceeding its pre-COVID level, and remaining well below, both within a 90% probability distribution. Under our baseline forecast, we anticipate a cumulative GDP loss of just under £600 billion because of the pandemic between 2020 and 2025.

Below, we begin in Section 2.2 by discussing the near-term outlook for economic activity. We then turn to some of the medium-term challenges for the recovery (Section 2.3), the outlook for the labour market (Section 2.4) and inflation (Section 2.5). Section 2.6 looks at the potential long-term economic legacy of COVID-19. Section 2.7 concludes and discusses the implications for policy.

Figure 2.1. Real gross domestic product (GDP), 2008–25



Note: Shaded area reflects a 90% confidence interval. OBR and Bank of England series are indexed to the most recent iteration of the Quarterly National Accounts, using the last quarter available when the forecast was made.

Source: ONS, Bank of England, OBR and Citi Research.

2.2 Near-term activity

The economic recovery from COVID-19 we think is best considered as a four-episode process: (1) lockdown adjustment; (2) a reopening 'rebound'; (3) lingering caution; and (4) medium-term adjustment.

The UK economy certainly rebounded strongly in the first half of 2021 as restrictions were eased and the UK moved from stage 1 to stage 2 – growing 5.5% in Q2 (in real terms). However, GDP remained 3.3% below its pre-pandemic (2019Q4) level[1] in July and 5.5% below its pre-pandemic trajectory – close to the peak-to-trough fall during the Great Financial Crisis (–5.9%). While we expect some further catch-up over the forecast horizon, COVID will continue to weigh directly on economic activity over the winter – compounding a marked slowdown in economic momentum. Below, we begin by discussing the drivers of the rebound the UK has observed in the first half of 2021, before moving on to discuss the lingering effects of the pandemic and the risks as income support is wound down.

A faster rebound

Output in the first half of 2021 surprised us, as well as the UK's official forecasters (the OBR and Bank of England (BoE)), to the upside, with two primary reasons for this better-than-expected performance.

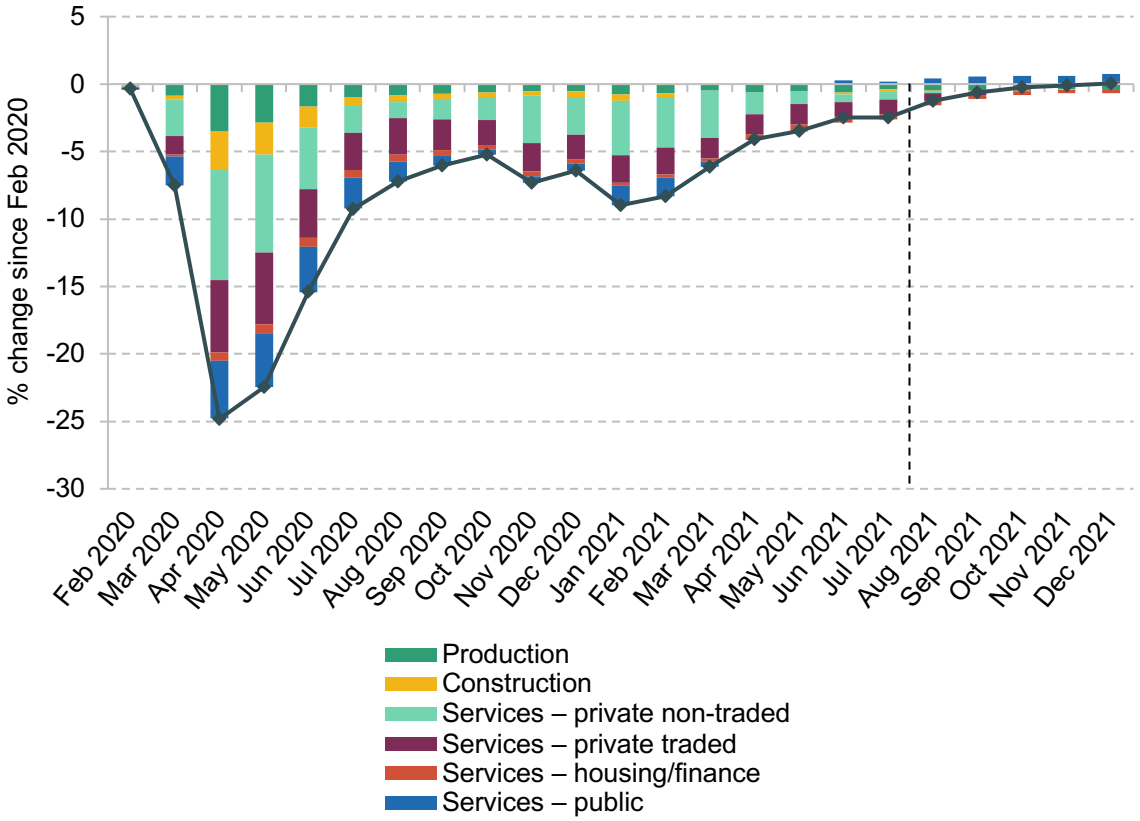
First, output fell by less than expected in the first quarter of 2021. We had expected output to fall by roughly 5% quarter-on-quarter as a result of strict nationwide lockdown measures announced on 4 January; the BoE and OBR expected reductions of around 4%. However, output actually fell by just 1.4% – with activity 21% higher in January 2021 than in April 2020 despite broadly comparable restrictions. Improvement here reflected cumulative economic adjustment to life under lockdown.[2] Improvements at the start of 2021 particularly reflected strong performance in non-consumer-facing sectors that have traditionally *supplied* consumer-facing services, but have adjusted to supply other sectors,[3] and a smaller fall in public sector output than in the first lockdown in 2020 – particularly among health services. While welcome, it also perhaps suggests fewer benefits to come as the economy reopens.

1 This figure is adjusted for the 1ppt wedge between monthly and quarterly GDP to reflect changes in the tax burden. These have generally pulled GDP down compared with its pre-COVID level, over and above the movements in gross value added (GVA) (Saunders, 2021).

2 During 'lockdown one', many firms – especially in manufacturing and construction – adapted to new COVID requirements. Over the winter, further adjustment primarily reflected innovations within consumer-facing sectors as restrictions coincided with the height of the Christmas shopping season.

3 The severity of the GDP hit from the first lockdown reflected the 'downstream' character of consumer services – and their intensive use of output produced elsewhere. For a discussion on these characteristics, see Haskel (2021a).

Figure 2.2. Monthly gross value added versus pre-pandemic levels (% change relative to February 2020)



Note: The vertical line indicates the point at which out-turn data end and the forecast begins.

Source: ONS.

Second, the subsequent rebound in economic activity through Q2 also proved unexpectedly fast. Rapid disbursement of the vaccines combined with surprisingly high efficacy has allowed a more rapid easing of restrictions than expected at the start of 2021. This has been accompanied by buoyant household and business confidence,[4] with the extension of fiscal support on 3 March also likely providing some support. However, growth has remained narrow: private and public consumption drove 6.1 percentage points (ppt) of the 5.5% GDP growth in Q2, with trade and investment weighing in the opposite direction. That suggests that this is not yet moving to a full cyclical pick-up. Alongside a faster reopening, some of the second-order effects of the (narrow)

[4] GfK unemployment expectations, for example, fell back to pre COVID levels between January and April. Personal financial expectations have reached new post-GFC records while the services PMI suggested the highest level of business optimism for the coming 12 months through Q2 since 2006. Source: IHS Markit PMI and GfK.

recovery also seem to have percolated through to suppliers more quickly.[5] This is primarily the result of low inventories, but also implies fewer 'reopening' dividends to come.

Importantly, we do not think these data yet imply a more complete or sustained recovery. Instead, the upside surprise seems indicative of a faster realisation of many of the 'easy' gains associated with economic reopening. A rough analogy could be that economic output tends to be greater on a Monday than a Sunday. We may have reached Monday a little sooner than we expected, but this should not be taken to imply a better week ahead.

Learning to live with COVID-19

The UK's post-COVID recovery has moved from stage 2 (a reopening rebound) to stage 3 (lingering caution) in recent months. The initial boost associated with the economic reopening has faded sharply. GDP growth fell to a snail's pace (0.1% MM) in July. While some re-acceleration is likely through August and September, the faster economic data have rolled over, indicating much weaker growth in the months ahead. In sectors such as manufacturing and construction, record growth in work backlogs suggests binding supply constraints. These should fade through the second half of 2021. In services though, the picture seems to have been more balanced – with both supply and demand beginning to fade.[6] From here, we expect elevated COVID cases to continue weighing on the recovery – sapping momentum over the winter.

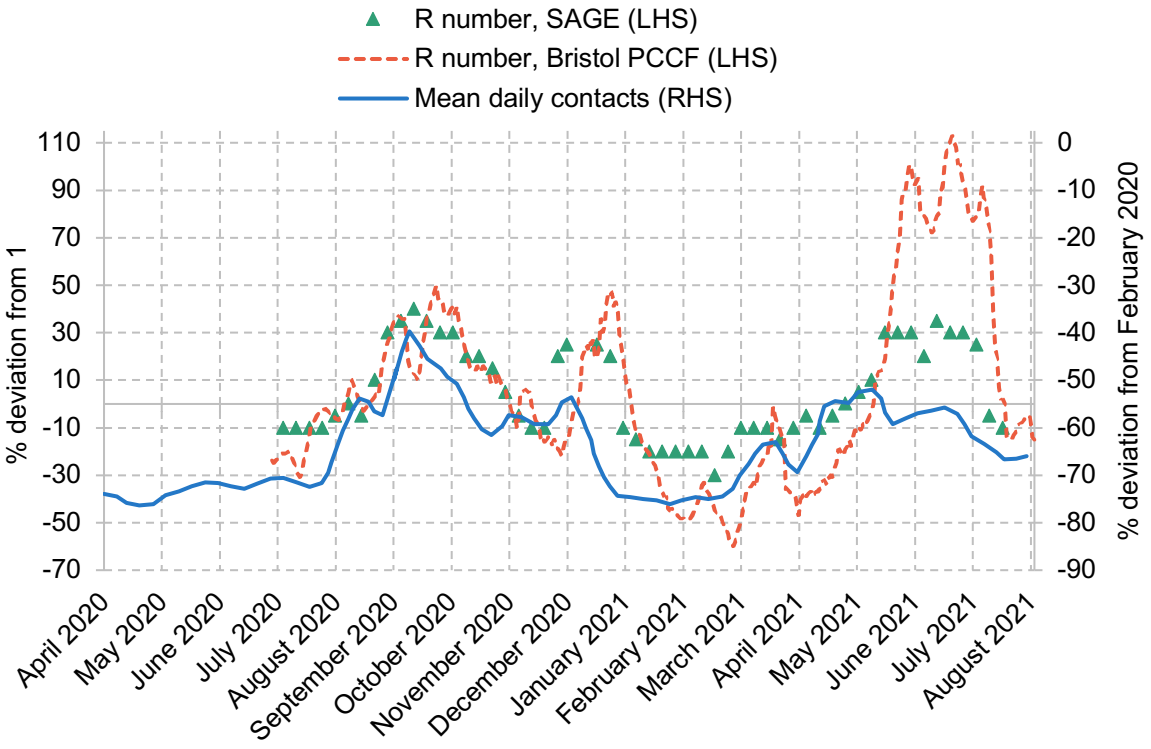
The direct economic consequences of the pandemic depend on three factors: (1) the spread of the virus; (2) the impact of associated non-pharmaceutical interventions; and (3) the response of private (and public) economic actors. We condition our baseline forecasts on the assumption widespread lockdowns are avoided through the rest of 2021 and beyond – though this will remain a risk (see Box 2.1). However, evidence from 2020 suggests that the virus can continue to have a notable impact via its impact on sentiment and activity. We expect these effects to continue to weigh.

There are two points worth noting here.

[5] The services Purchasing Managers' Index (PMI) exceeded levels in 2020Q3 throughout 2021Q2. These 'diffusion indices' measure the breadth of sequential growth rather than the overall scale of the rebound. The fact these exceeded their 2020Q3 level even when growth was much lower suggests to us a more widespread improvement – suggesting these effects percolated through value chains to a greater degree. Source: IHS Markit PMI.

[6] For example, the services PMI survey for August pointed to fading growth in outstanding work as well as output and new work. By contrast, the manufacturing and construction PMIs have continued to note an accelerating accumulation of new work, even as output has fallen back.

Figure 2.3. Average daily contacts (% deviation from February 2020) and virus reproduction rate (R number, % deviation from 1), 2020−21



Source: Bristol PCCF, CoMiX, SAGE.

First, the more contagious Delta variant means that vaccines alone will likely remain insufficient to keep case numbers contained if social and economic conditions normalise.[7] The 'r0' rate – the reproduction rate of the virus absent any immunity and or behavioural adjustments – is now estimated to be between 5 and 9 according to the US Centers for Disease Control and Prevention (CDC, 2021). Recent Public Health England estimates imply a number of around 7 (Public Health England, 2021). This would – absent any behavioural adjustments – imply around 85% of the population need 'blocking immunity' to keep case numbers contained. However, recent data on the vaccines suggest that at best these offer only around 80% blocking immunity (SAGE, 2021b). Natural immunity seems in general a little weaker. In other words, even if you vaccinated an entire population, there could be enough 'breakthrough' infections to mean that even this may not be sufficient to keep case numbers contained. Indeed, the widespread vaccination evident in the UK to date seems to have been sufficient only to offset the impact of more transmissible variants; the underlying relationship between social contact, and the reproduction rate of the virus and case numbers otherwise seems broadly intact (see Figure 2.3).

[7] If daily contact rates were to return to around 10, compared with their current range of 3–5, several SAGE scientists have previously argued that this would likely lead to a spike in cases that is sufficiently large to put the NHS under severe pressure (SAGE, 2021a).

This points to a continued risk of an increase in cases in the months ahead – though rates of severe disease should continue to fall back.

Second, current evidence suggests high case numbers will continue to drive a cautious response among consumers and firms, weighing on the recovery. In last year's Green Budget, we noted a large portion of adverse economic impacts of the pandemic seem to have been the result of voluntary social distancing rather than the restrictions themselves (for a summary, see Bricongne and Meunier (2021)). These effects were repeated in September and then again in December and January of last year, with mobility and consumption falling back as case numbers once again accelerated (Van Roye and Orlik, 2020). While individual fears of contracting the disease have fallen at the start of 2021, most survey data continue to point to lingering caution – even with the vaccines.[8]

These effects could dissipate as individuals once again become more used to higher rates of social contact. However, more likely we think is that some uncertainty will continue to weigh. For one, the link between cases and hospitalisations has been attenuated by the vaccines, but not eliminated – with the 'hospitalisation rate' now around 3% compared with 8% over the 2020/1 winter.[9] Further, we think there remain some key health concerns that are unlikely to be resolved over the coming months. There remains substantial uncertainty about the long-term consequences of contracting COVID-19 ('long COVID'), for example (ZOE COVID Study, 2021). There is also substantial uncertainty regarding the long-term cognitive impact of the virus (Hampshire, 2021; AAIC, 2021). Recent studies have suggested growing doubt about the durability of the protection offered by vaccines (Pouwels et al., 2021); and while vaccination programmes are likely to reduce the risk of future lockdowns in the UK, this is not true globally. This chimes with the view of the Bank of England, which in August revised its modelling to reflect its assumption that the virus is likely to weigh directly on economic activity for longer (Bank of England, 2021f) – though we suspect views here remain somewhat optimistic.

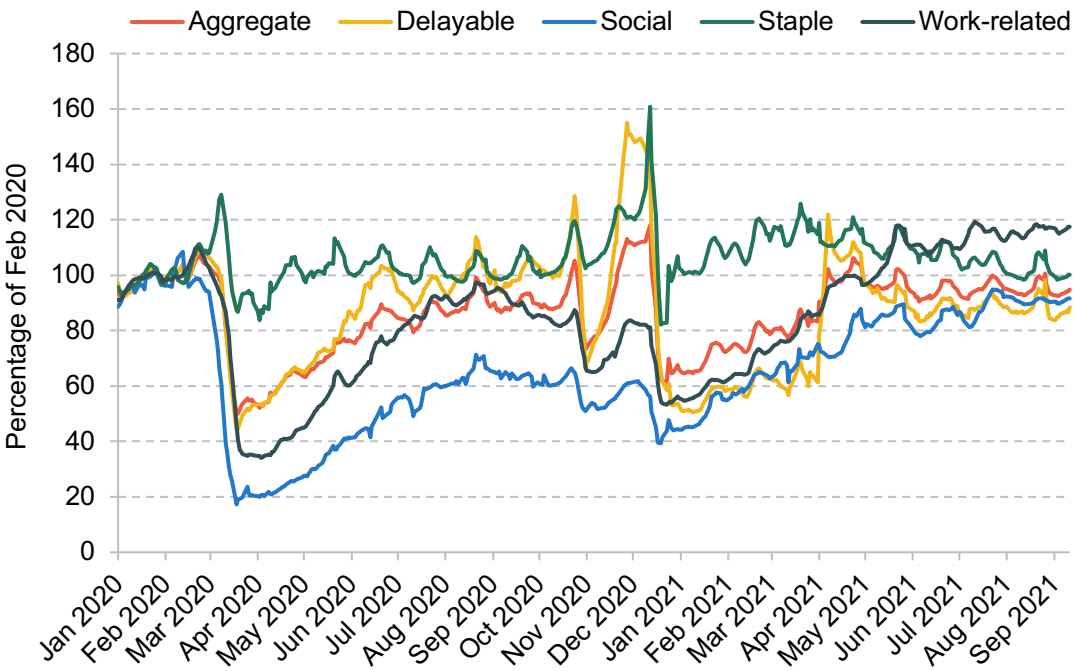
The implication of the arguments above is that full economic normalisation is still some months away. Instead, either some lingering caution limits economic activity (and case numbers), or more economic activity and associated increases in cases will still weigh on sentiment and drive

[8] The latest YouGov data continue to show 42% of the UK population remain concerned about catching COVID – compared with 49% in the summer of 2020. ONS data also show 49% of adults remain worried about the impact of COVID, versus 60–64% in the summer of 2020, with nearly 20% also reportedly uncomfortable leaving their homes. Polling released by YouGov in July also suggested 70% of those who went clubbing before the pandemic are uneasy about doing so now and 42% are uneasy about returning to the pub. While the vaccines have attenuated some of these concerns, they have not yet been eliminated. Instead, Bank of England survey data from early June suggested that a net balance of 15.6% of households still planned to spend less as a result of virus concerns, compared with only 6.5% who planned to spend more overall. (See YouGov (2021), Nolsoe (2021) and ONS (2021).)

[9] Calculated by dividing the number of confirmed cases by the number of hospital admissions 10 days later – metric set out by SPI-M-O (2021).

an accelerating behavioural response. Some of these effects already came to the fore in July, as consumer spending began to ease back as COVID cases accelerated (see Figure 2.4). The vaccines should still mean that we can do more and that we might be able to avoid resorting to harsh lockdowns. But lingering caution is still likely to have a notable effect.

Figure 2.4. CHAPS household spending, 2020–21 (February 2020 = 100)



Note: CHAPS is Clearing House Automated Payments System.

Source: ONS, Bank of England.

The duration of these effects remains subject to considerable uncertainty. Historically, influenza pandemics have tended to be two- to three-year events (Goss, 2021), though this is primarily as the virus has mutated into a less severe form. In the case of COVID, this risked proving a somewhat protracted process. However, with widespread vaccination and new treatments (including an oral anti-viral), we think this remains a reasonable guide for the UK. A majority of households and firms expect it will take over a year until life returns to normal[10] – though the number worried about the impact of COVID day-to-day is also falling. Firms are a little more optimistic, with the median expectation of the Bank's Decision Maker Panel survey suggesting COVID-related uncertainty to be resolved by June 2022. We err on the optimistic side,

[10] ONS Opinions and Lifestyle Survey, https://www.ons.gov.uk/peoplepopulationandcommunity/healthandsocialcare/healthandwellbeing/datasets/coronavirusandthesocialimpactsongreatbritaindata; Bank of England Decision Maker Panel Survey, August, https://www.bankofengland.co.uk/decision-maker-panel/2021/august-2021.

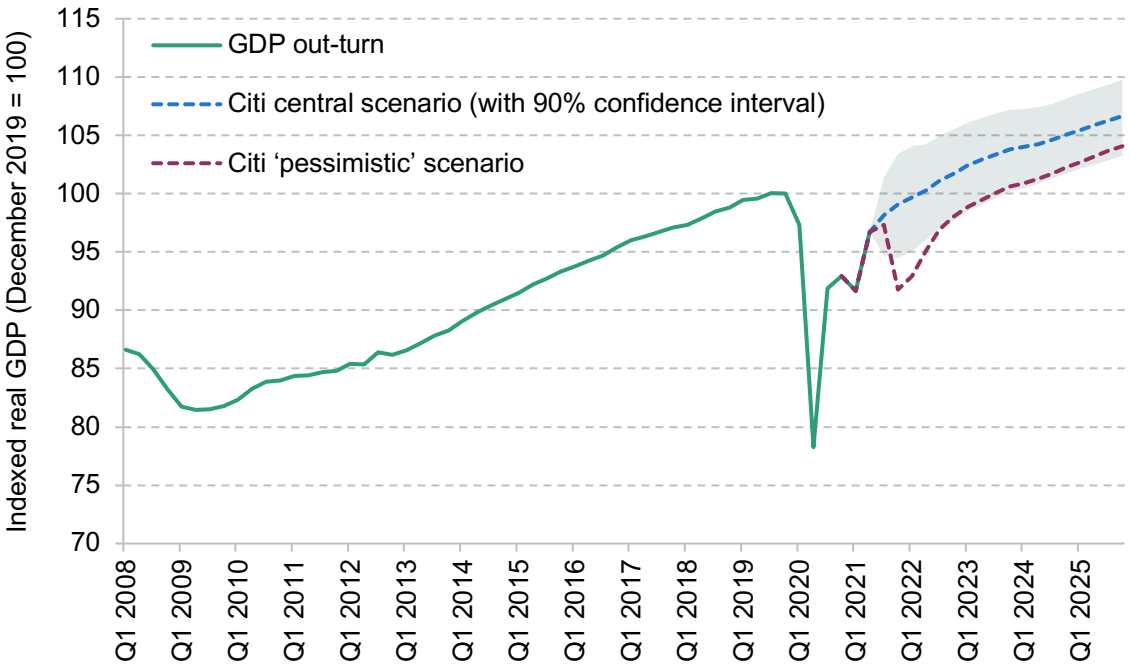
conditioning our forecasts on the assumption that these direct effects dissipate fully through the spring and early summer of 2022.

Under our central forecast (shown in Figure 2.5), we expect real GDP growth to slow sharply over the coming quarters as a result of these effects, with quarter-on-quarter growth of 1.5% in Q3, 0.9% in Q4 and 0.6% in the first quarter of 2022. This would still imply a 4% gap to the pre-pandemic growth trajectory in 2022Q1. The future path of the pandemic is of course unknown, and this could turn out to be overly optimistic. A downside scenario, based on more pessimistic assumptions over the future course of the virus, is discussed in Box 2.1.

Box 2.1. 'Pessimistic' economic scenario: a winter lockdown

Given the continued global spread of the virus, our downside scenario is based on the emergence of a vaccine-resistant strain and the re-imposition of strict lockdown restrictions in Q4. The conditioning assumptions would be: (1) a three-month lockdown in Q4, similar in severity to that in 2021Q1; (2) return of furlough; (3) additional quantitative easing (QE); (4) the return of the Bounce Back Loan Scheme (BBLS); and (5) a more gradual recovery as mRNA vaccines are once again adapted to manage the impact of this new variant, though the risk of further such mutations would likely remain.

Figure 2.5. Real GDP in central and 'pessimistic' scenarios, 2008–25



Source: ONS, Citi.

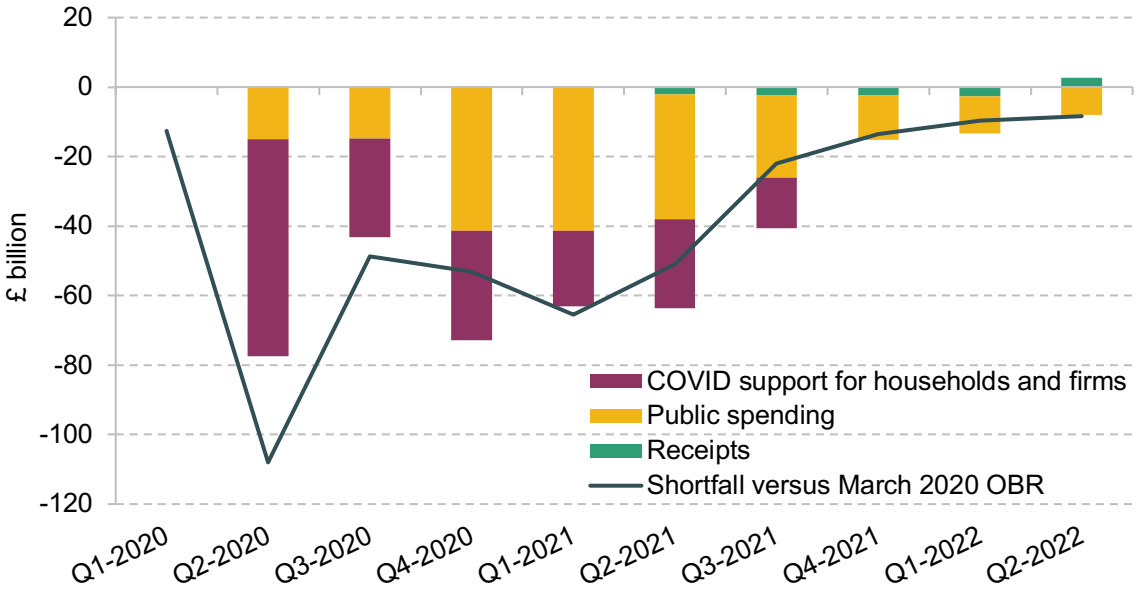
Broadly, we would expect a sharp fall in output given the scale of the rebound in Q2 and Q3 of 2021. However, the level of output would still likely prove a little higher than in Q1 – reflecting ongoing economic adjustment. Firm failures may be greater given balance sheet impairments to date. The subsequent recovery may therefore prove somewhat slower – with a larger increase in unemployment. We expect labour market hysteresis effects (i.e. lasting adverse impacts on productivity and employment) would likely be greater. Following one vaccine escape event, the risk of further such episodes would likely be seen as greater. This would likely drive a more protracted period of elevated uncertainty – weighing on investment. This would also increase the risk of more extensive economic reconfiguration, as changes in practice became more embedded. Scarring, in this scenario, would therefore likely be larger, with more permanent damage to the UK's capital base. (See Figure 2.5.)

Winding down support

The UK authorities have deployed fiscal policy at an unprecedented (peacetime) scale – adding £371 billion in additional discretionary fiscal support for 2020−21 and 2021−22 (see Chapter 3). While this has not protected every household or firm from losses, it has largely been sufficient across the whole economy to plug the hole in private income resulting from the pandemic. This can be seen in Figure 2.6: the support provided via COVID-19 income support and other public spending has more or less matched the shortfall in private incomes. This does not mean every household or firm has seen their income replaced. But in aggregate it has acted as a firewall between the pandemic-induced drop in economic activity and private incomes. This has played an important role in insulating sentiment and activity.

This supportive matrix is also now being wound down. The furlough scheme expired at the end of September. Other measures, such as reduced VAT rates on hospitality and recreational services, are also now being tapered away. The precise scale of some of these reductions will depend on the extent of any further fiscal support announced in the Budget. But absent another lockdown, any additional measures seem more likely to be focused on public services spending – offering a less immediate backstop to private income. From Q4, aggregate incomes now look set to internalise at least some of the economic losses associated with the shortfall in activity for the first time since the start of the pandemic.

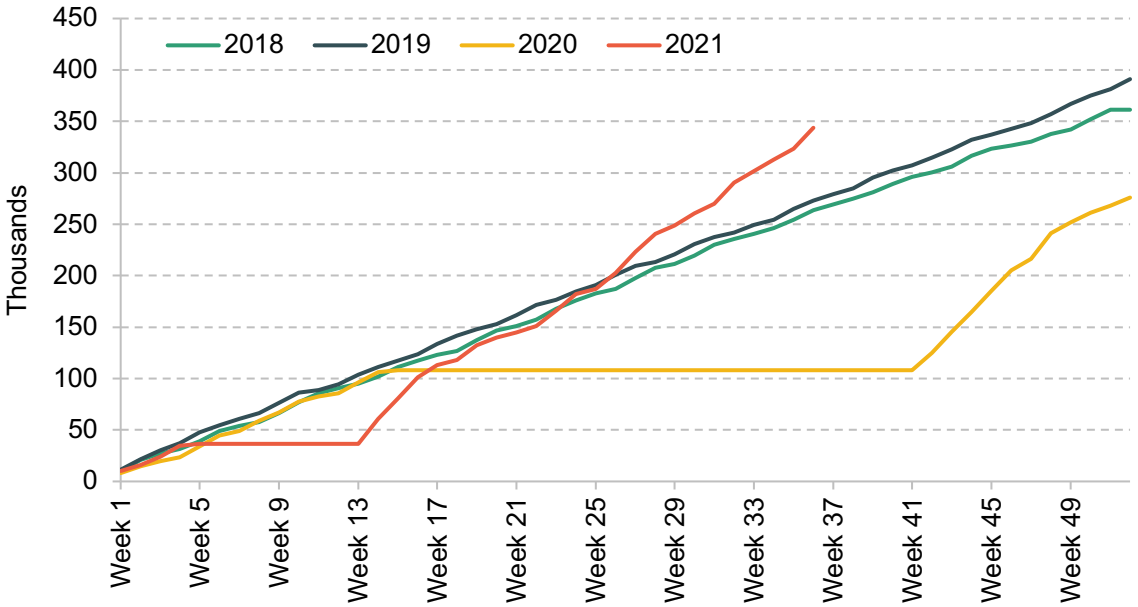
Figure 2.6. Private income shortfall versus discretionary COVID-19 support



Note: Private income shortfall is estimated using nominal GDP minus public consumption and investment. The shortfall compares this level versus OBR forecasts from March 2020. Fiscal Profile is estimated using monthly spending profiles combined with announced discretionary support since the March 2020 Budget (including the exceptional measures announced in the March 2020 Budget). Absolute fiscal support to private incomes is likely to have been greater given the additional impact of 'automatic stabilisers'.

Source: ONS, OBR.

Figure 2.7. Cumulative insolvencies (thousands), 2018–21



Source: Companies House.

In many respects, the decision to wind down pandemic income support is welcome. These measures are largely supply rather than demand policies – supporting the existing economy but preventing reconfiguration. Continuing with the same approach risks weighing on supply when changes in structure now seem destined to happen (as we discuss below). However, this is unlikely to prove painless. Output is likely to remain somewhat weak in many areas. The income effects of the shortfall in activity will, for the first time in the pandemic, be effectively internalised by households and businesses, rather than being replaced by government support. Already, insolvencies have accelerated above their 2019 level in the first half of 2021 – having lagged in 2020 (see Figure 2.7). More seem likely over the coming months. Data from Begbies Traynor, for example, suggested 650,000 firms remain in significant financial distress in Q2 (Begbies Traynor, 2021). Important restrictions on insolvency proceedings – such as limits on winding-up petitions – will also be removed from the end of Q3 (for discussion, see Williams (2021)).

The question is how this may now feed back into the economic recovery. Until now, incomes have been protected while only a subset of the pre-COVID economy has been in demand. Dialling down some of this support is now likely to encourage reconfiguration and free up capacity. However, the loss of income and the increase in firm insolvencies also risk weighing on demand. The risk of simultaneous moves in both supply and demand means that the balance of the recovery – which currently appears relatively tight – risks shifting quickly. The relatively large share of firm liabilities accrued during the pandemic that are owed to other firms increases the risks here – as firm failures could weaken other firms' balance sheets as well as sentiment (see Section 2.3).

We expect any lingering weakness to remain highly sectorally asymmetric. As support is wound down, this poses two more specific risks:

- **Effective demand failure.** If liquidity is sufficiently disrupted, a growing share of firms and households could face binding credit constraints (Woodford, 2020).
- **Supply chain propagation.** A highly asymmetric reduction in output can drive an outsized impact on demand when production in more affected areas of the economy heavily complements that in others. In this case, the shutdown of a sector also drives wider reductions in demand (Baqaee and Farhi, 2020a).

So far, high levels of income replacement have kept both risks at bay. The potential for something like an effective demand failure also now seems relatively low – credit conditions are likely to remain relatively easy and future swings in output more moderate.

However, when areas not affected by COVID-19 concerns are poor substitutes for those that are, the supply chain propagation can still mean an outsized reduction in output. These effects can

weigh on consumer demand overall if they are thought to be temporary (Guerrieri et al., 2020). Similar effects can also compound the hit to output via supply chains. Disruption in one part of the economy – if a complement for others – can spill over onto other sectors and end up having an amplified effect on overall output (Baqaee and Farhi, 2020a).

The supply chain propagation in particular may still have a role to play in the months ahead. These sectoral linkage effects seem to have played a greater role in UK economic cycles than previously thought. Recent research suggests these dynamics have proven common in the United States (Cesa-Bianchi and Ferrero, 2021; Baqaee and Farhi, 2020a, 2020b). Applying the same methodology[11] to the UK, we find evidence of similar effects between 1997 and 2019. Both aggregate demand and supply shocks have rarely been composed of uniform moves across all sectors. Supply shocks (driving output down but inflation up) have actually tended to depress prices in around 38% of sectors – more than the 33% implied by US data. Weak supply, for many sectors, has actually tended to mean weak demand for a period.

These sectoral linkage effects have already played an important role so far during the pandemic (Haskel, 2021a). To the degree public health concerns remain, these have tended to weigh most heavily on 'downstream sectors' that use intermediate inputs intensively. Continued weakness among consumer services in particular therefore risks driving an outsized demand reaction. Many of the supply disruptions that also seem to be increasingly disrupting production – especially in areas such as road haulage and manufacturing (Kucuk et al., 2021) – also risk similar effects. For the time being, we assume these dynamics to be a downside risk.

Summary

Taken together, these factors suggest the strong rebound in Q2 should not be taken as indicative of a robust medium-term recovery. A better public health outlook, easing restrictions and the extension of fiscal support have delivered a faster economic reopening than we had initially expected at the start of 2021. But a resurgence of COVID-19 already appears to be arresting some of this momentum, and a marked gap in output is still likely to persist as income support is wound down. Withdrawing pandemic-era support – while sensible – will not come without risk.

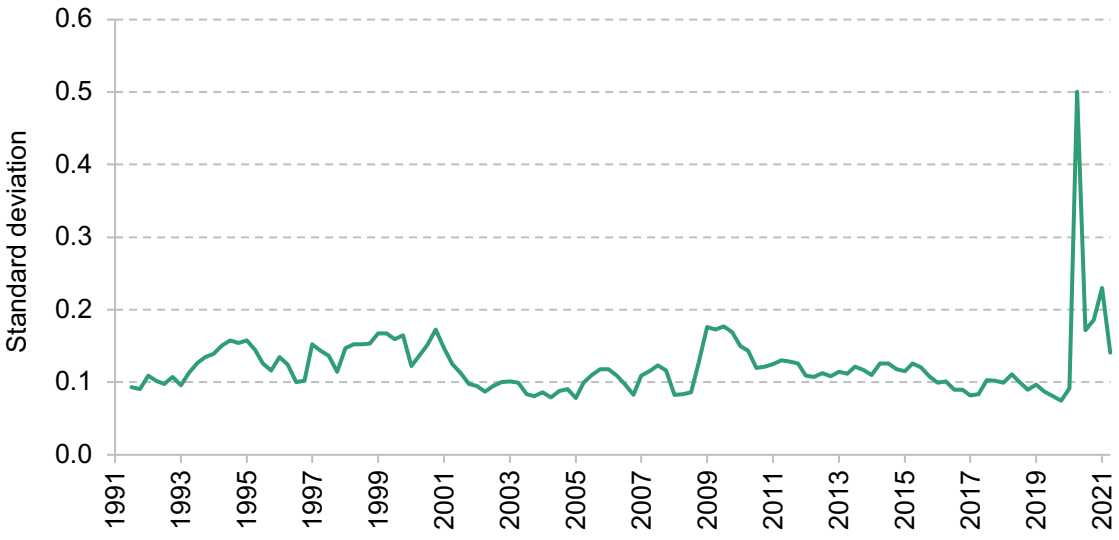
[11] Structural shocks are identified using the same statistical approach as in Uhlig (2005). Variables included are real GDP and sectoral deflators. These shocks are then used as regressors within sector-specific models to see whether output and inflation have generally moved in line with aggregate changes, or contradicted them.

2.3 Emerging headwinds: why the recovery may not yet be secure

COVID-19, like previous pandemics (Keogh-Brown and Smith, 2008), has had highly uneven economic effects. Economic performance has varied dramatically across sectors and regions. This can be seen in Figure 2.8, which shows a measure of sectoral dispersion in changes in economic production (as measured by gross valued added, or GVA). A higher value indicates a greater degree of dispersion across sectors. During 2020, this measure jumped to a level far above anything seen over the 30 years previously, as some sectors shut down entirely while some others were largely unaffected. Some of the most acute asymmetries have eased as the economy has rebounded, but only partially.

We expect lasting changes in the composition of final demand and the way in which firms plan to deliver it. Dispersion in firms' sales expectations for the 12 months ahead is still around 50% above levels seen pre-pandemic (Bank of England, 2021d). The impact of COVID on firms' long-term growth expectations also varies sharply. We expect this will complicate the recovery, with lasting economic reconfiguration likely to occur alongside a bumper unwind of pandemic-era support, and a more protracted set of economic challenges. Below, we begin by discussing four specific challenges for the economic recovery, before turning to the implications for the labour market and inflation in Sections 2.4 and 2.5 respectively.

Figure 2.8. Sectoral dispersion: standard deviation of sectoral change in gross value added



Note: This measure of sectoral dispersion is based on changes in the share of total output comprised of a given SIC two-digit industry. This measures the change in a given sector's share of total output over an eight-quarter period, and then takes the standard deviation of the resulting changes. The implication is that if the economy has remained compositionally identical to that eight quarters previous, this measure should read zero.

Source: Vlieghe (2020); ONS.

Why household saving is unlikely to save the day

Household consumption is central to the UK recovery. Having rebounded strongly as the economy has reopened, optimism has grown that a speedy unwind of the £200 billion (9.8% of annual GDP) in excess household savings accumulated during the pandemic may now turbocharge the recovery. We remain sceptical. There are four factors to consider here.

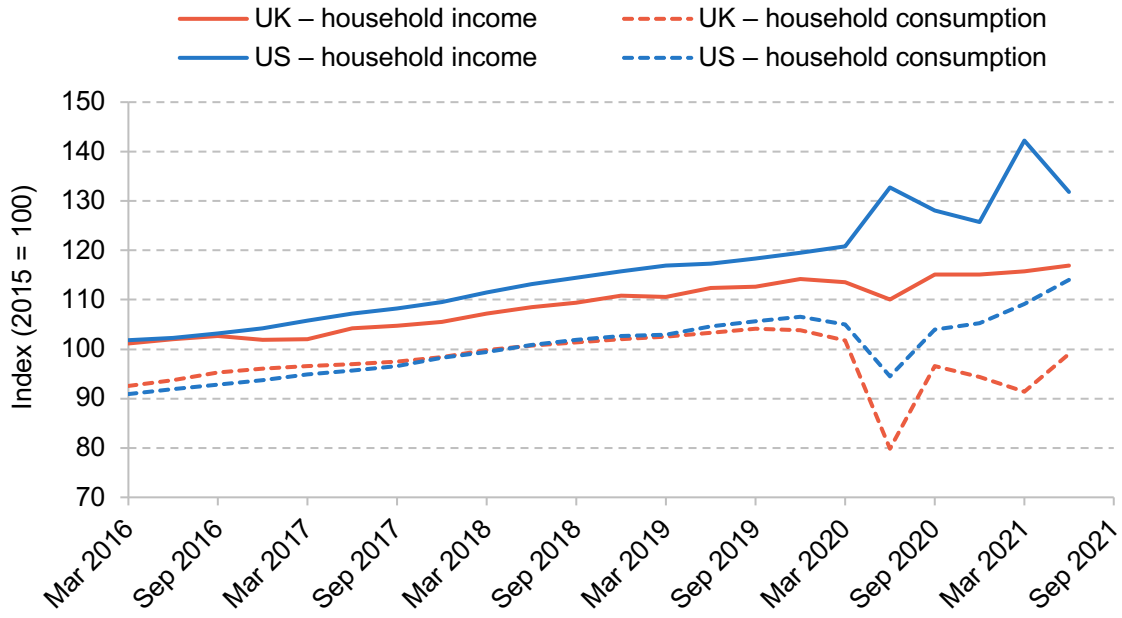
The first is the degree to which elevated saving to date reflects households' anticipation of a better public health environment ahead. Potentially the strongest argument for a large near-term boost is if excess household saving reflected a deferred demand effect – with households holding onto income in anticipation of the end of the pandemic (akin to waiting for a VAT cut). These effects – we suspect – have likely been limited by the disproportionate impact of the pandemic on services. Consumption here is harder to substitute across time.[12] Indeed (aggregate demand) downturns driven by durable goods have tended to result in stronger recoveries than services- or non-durables-driven equivalents. In the first case, there is 'pent-up' demand to be made up (Beraja and Wolf, 2021); in the latter case, there is not. In the second half of 2020, as household expectations for the resolution of COVID-19 were gradually pushed back, consumers instead seemed to rotate towards consumer durables and away from services. This boosted output then, but implies a more limited deferred demand boost now and in future (Broadbent, 2020a).

The second question concerns the degree to which accumulated savings reflect a shock to income or a boost to wealth. In the case where more of the boost to saving is perceived as an income shock, one would usually expect more of the boost to saving to be unwound relatively quickly, with 20–25% of accumulated savings unwound over a three-year period, five times the equivalent figure for wealth (around 5%).[13] It is harder to be definitive on this question, with the answer likely to hinge on household perceptions. Circumstances are unprecedented and conceptually ambiguous. But at least on a cross-national basis, the UK's prospects may be somewhat weaker here. In the US, for example, more of the saving reflected a genuine increase in income. In the UK, it is more a story of reduced spending (see Figure 2.9). We think this makes it more likely that UK savings are thought of as a shock to wealth.

[12] We can observe this from differences across household consumption components in response to the 2008 cut in VAT. This tended to boost durables consumption, while services spending in particular actually fell. Similar effects have been observed elsewhere – see Buettner and Madzharova (2021).

[13] These are indicative Citi Research estimates based on a permanent income hypothesis, and our own estimate of the UK Euler equation. Estimates for a wealth shock are similar to those produced for the US – see Christelis et al. (2015). For the impact of an income shock, we use a conventional Euler equation framework similar to that used by the Bank of England in COMPASS. This would suggest between 5% and 20% of a transitory income boost would be spent – similar to results from Kaplan and Violante (2009). However, real-world evidence has suggested a larger effect – with studies by Shapiro and Slemrod (1995, 2003) suggesting between 22% and 40% of those receiving the temporary tax rebate in 1992 spent it. We think 25% over a three-year horizon is a reasonable if slightly optimistic conclusion, given the greater share of higher-income households to whom the majority of the additional funds have been accrued.

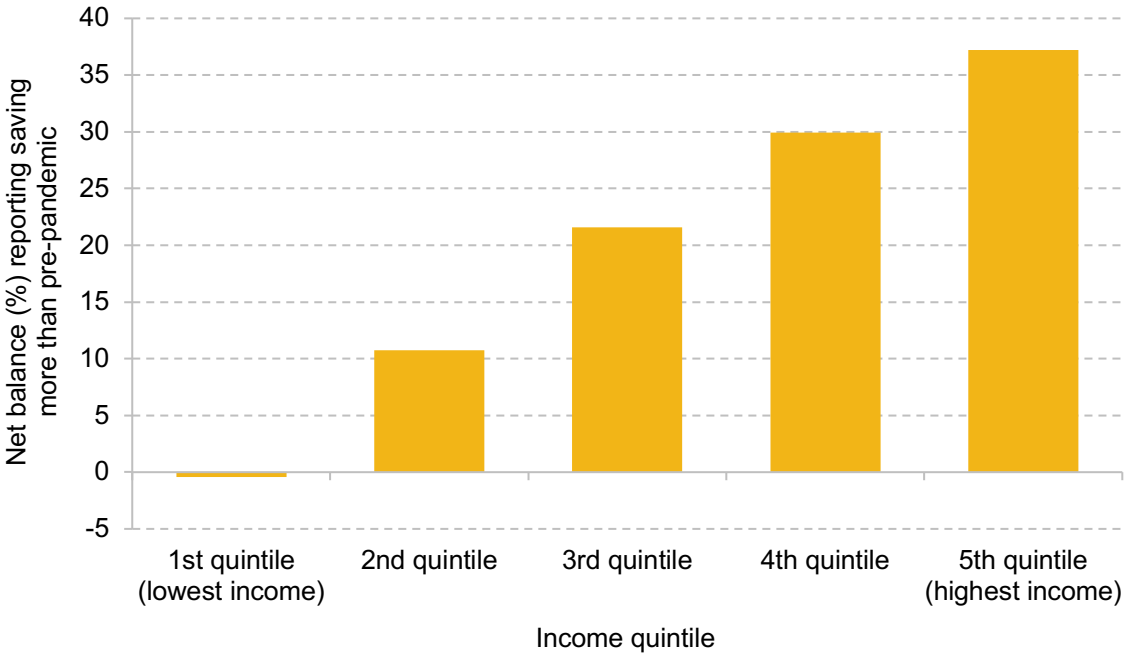
Figure 2.9. Household disposable income and consumption in the UK and US (index, gross disposable income, 2015 = 100)



Note: Series are indexed to gross disposable income in 2015.

Source: ONS, BEA, Vlieghe (2021).

Figure 2.10. Household saving by income decile (% net balance), 2020–21



Note: Measure refers to the net percentage of households reportedly saving more versus those saving less across each income quintile, comparing the first half of 2021 with the period before the pandemic.

Source: Bank of England NMG Consulting, Franklin et al. (2021).

Third, with saving disproportionately driven by reduced rates of social consumption, associated savings have largely accrued to higher-income households (Figure 2.10). This reduces the overall marginal propensity to consume. A regressive distribution also implies a smaller share of these savings have been accrued by liquidity-constrained households. In contrast, in the US, the increase in saving has been largest amongst lower earners (see, for example, Farrel et al. (2020)), suggesting a larger boost in consumption to come.

Last, rapid policy normalisation may also now prove a headwind to significant dissaving. The increase in household saving during the pandemic mirrors increases in public borrowing. In a world of strict Ricardian equivalence, one would expect the near-term economic boost to be zero. In reality, these effects are rarely comprehensive (Rohn, 2010). But when policymakers signal a near-term tightening very soon after the initial shock, we think these dynamics could have an important role to play.[14] Both the UK monetary and fiscal authorities have signalled a rapid policy normalisation in the years ahead. The implication of both steps is to increase the average debt burden that households and firms fear may now fall due inside their planning horizon, increasing the incentive to save.

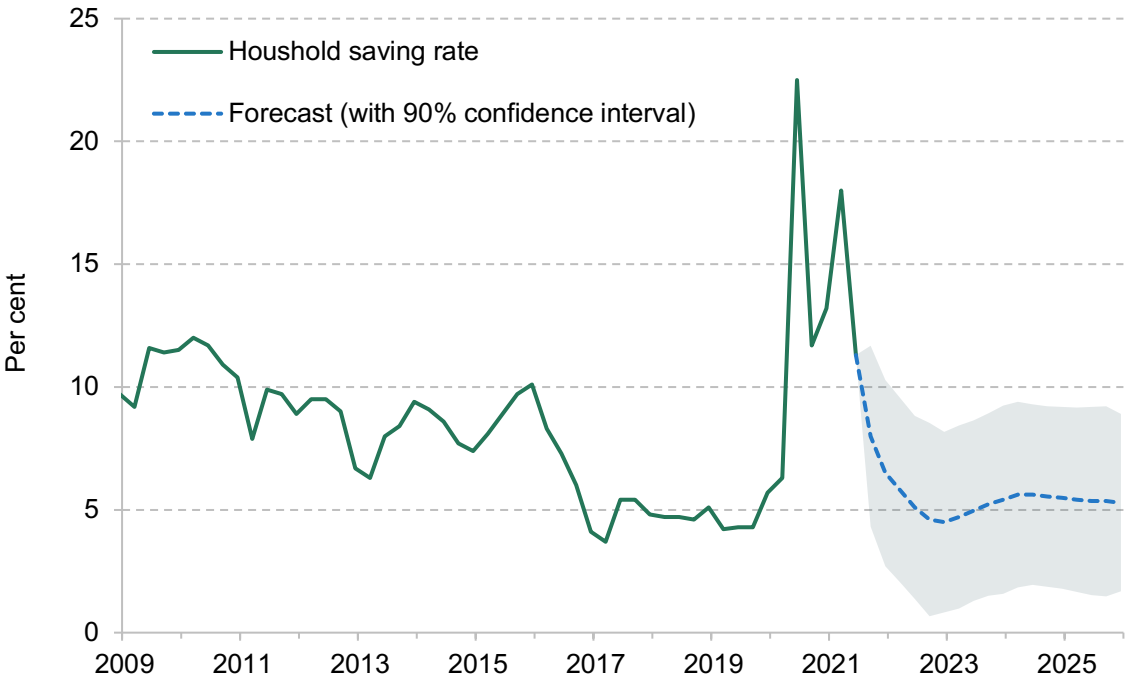
Given all this, in our central forecast we expect 8% of accumulated saving during the pandemic to be spent over the coming three years (the Bank of England (2021g) estimates 10%). The rest will likely find its way into the UK housing market. The rebound here has been large, but thus far unaccompanied by a large increase in mortgage lending – reflecting we think a higher rate of deposit funding (Bank of England, 2021c). Consumption is still likely to drive the recovery, contributing just under 3ppt of total growth in 2021 and a further 4.4ppt in 2022. However, this primarily reflects savings rates falling back to their equilibrium level.

For the medium term, the bigger question is likely to be where this new equilibrium household saving rate settles. The Bank NMG survey suggests many still expected to spend less, rather than more, going forward.[15] Broadly, we expect some lingering caution to mean the household saving rate stabilises at a level slightly higher than before the pandemic, but still below long-run averages (Figure 2.11). It is worth noting that these lingering precautionary effects are likely to be significantly less than if income support during the pandemic had been absent – with 'consumption scarring' limited by extensive income support (Malmendier and Shen, 2018).

[14] One exception is Ascari et al. (2010), who show that under certain demographic assumptions Ricardian equivalence can also become unstuck. See also Woodford and Xie (2020).

[15] Results from July suggest a net balance of 30% planned to spend less, 9ppt of which was the result of virus concerns (Bank of England, 2021f).

Figure 2.11. Household saving rate (%), 2009–25



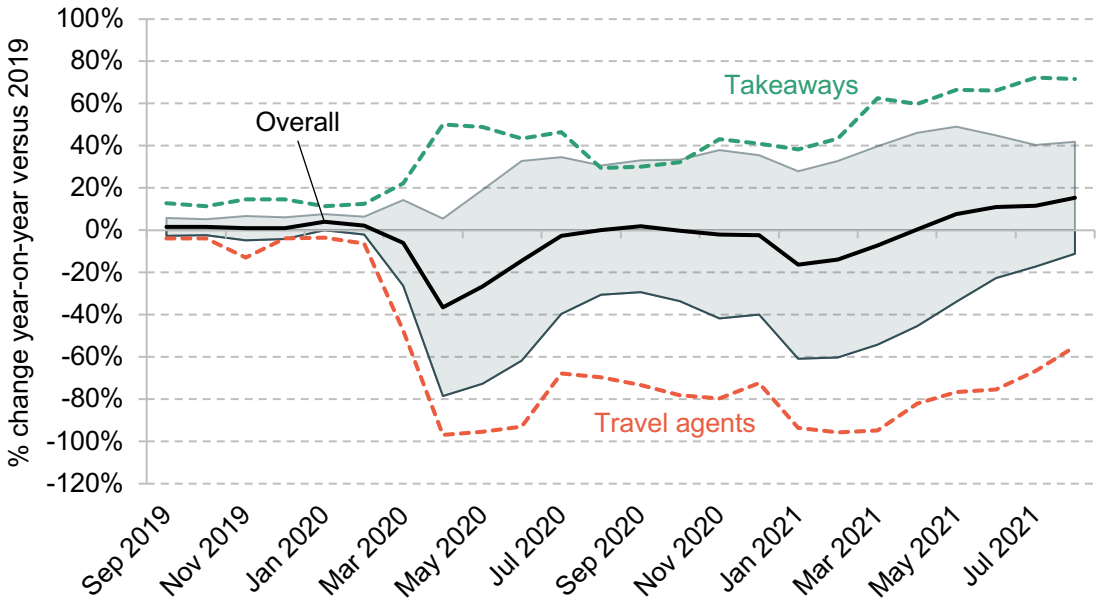
Source: ONS.

Is the UK economy reconfiguring?

Is the UK economy converging on its pre-pandemic state or transitioning to a 'new normal'? We think the latter is more likely. Persistent direct pandemic effects increase the risk of more lasting shifts, especially as support is wound down. The initial rebound from the pandemic has also proven highly asymmetric, suggesting lasting changes to come.

As we noted above, the initial rebound from the easing of pandemic-related restrictions has been driven largely by a recovery in household consumption. Demand here recovered sharply in the second quarter of 2021, growing by 7.2%. However, asymmetries that had characterised household consumption earlier in the pandemic seem to have persisted. Non-durable goods consumption in 2021Q2, for example, remained 4.9% above levels in 2019Q4. In contrast, discretionary services appeared to have lagged 2019Q4 levels by 31%, essential services by 9%. This is perhaps unsurprising with the economy only partly reopened, but timelier data continue to suggest lasting differences, after the point when restrictions have been lifted. For example, the CHAPS card spending data continue to point to weaker social spending, with these data still roughly 10% below February 2020 levels in mid August 2021 despite supportive seasonal effects (see Figure 2.4). The Barclaycard data show similar changes, with dispersion in consumption growth falling marginally as the economy has reopened (Figure 2.12). Both still suggest sectoral dispersion at record levels.

Figure 2.12. Barclaycard household consumption (% change year-on-year versus 2019)



Note: Vertical axis shows spending in a given category versus the level in the same month of 2019. Shaded area shows total ±1 standard deviation across consumption categories.

Source: Barclaycard.

How much of this is virus driven and temporary, and what could prove more persistent? Over the coming months, we expect pandemic-related fears to continue to weigh on travel and some hospitality spending – in the latter case after a strong summer rebound. Seasonal effects here are also likely to be extenuated by virus concerns – adding to dispersion. However, we also expect some compositional shifts to outlive the direct impact of the pandemic. More persistent changes around working from home in particular imply lasting reductions in some areas of services spending. The latest Bank Decision Maker Panel survey suggests firms expect persistent increases in home working following the pandemic – with the average number of days per week increasing from 0.5 before the pandemic to an expected 1.2 in the long term.[16] Commuter transport services accounted for roughly 3.5% of total spending before the pandemic[17] – with some clothing spending also likely related to commuting. We expect spending in these areas to emerge permanently smaller. Similar shifts could be compounded by a more persistent rotation

[16] This is calculated by taking the share of firms expecting home working for different numbers of days of the week. Data are based on Bank of England (2021b).

[17] This figure is derived by taking household spending on the purchase and operation of personal vehicles, and spending on rail and road transport services, and discounting each by the share of journeys that are completed for commuting purposes. Household consumption data are taken from the ONS. Rail transport use data are taken from the Office of Rail and Road passenger rail usage statistics – which suggest around 50% of all rail journeys are related to commuting. Vehicle spending is discounted by the share of commuting journeys measured via the National Travel Survey.

to online retail too. Footfall here has lagged at around 80% of pre-pandemic levels since the April reopening, with the share of online retail sales also increasing from 19% before the pandemic to 26% in July according to the ONS retail sales index.

As well as changes in the sectoral composition of the UK economy, a geographic shift seems likely too. The recovery in mobility and footfall has been uneven: retail and recreational visits in Cornwall are between 55 and 90% above normal levels, while in Greater London they are 30% below.[18] Some of this may be reversed as more conventional commuting patterns, students and international tourism return. But some other evidence we think points to more-lasting changes. In 2020 there was a 12% increase in the number of inner London residents moving to elsewhere in the UK, for example.[19] Evidence from the housing market points to a potentially more durable shift – with these decisions costly to reverse. The sharp rebound in housing transactions in the second half of 2020 has been highly asymmetric – favouring larger homes outside of city centres in particular (Partridge, 2021). Data from e.surv, for instance, show sharp divergences between house price growth in inner versus outer London, with house prices falling 6% in the year to April 2020 in the former, but growing 7.4% in the latter (e.surv Chartered Surveyors, 2021). Halifax data outside of London suggest a similar story, with house price growth since March 2020 18% lower in city centres compared with surrounding areas.[20] Data on demand for public services seem to suggest a permanent shift away from city centres, with applications for primary school places in particular down 6.7%, 9.5% and 6.8% respectively in central London, Birmingham and Bristol for the academic year 2021–22 (Staton, 2021). All of these trends could of course reverse, but some changes in where (as well as what) households demand seem likely.

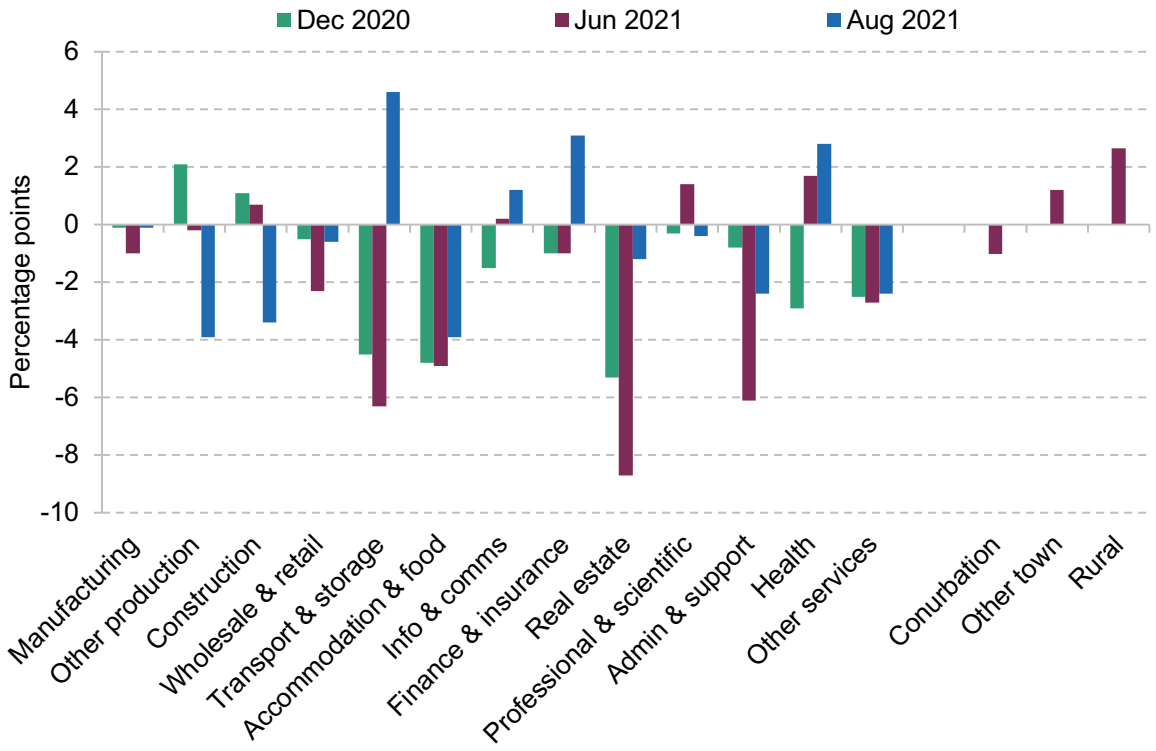
Looking from a firm perspective, the Bank of England Decision Maker Panel survey also showed considerable dispersion in firms' expectations for long-term sales. Some sectors (e.g. finance, transport and storage) expect to emerge larger in the longer term because of the pandemic. Others, such as hospitality and administrative support, expect to be smaller. Output is also expected to be marginally lower in the longer term in the largest urban centres (–1.0ppt), but 2.6ppt higher in rural areas (Figure 2.13).

[18] Source: Google community mobility reports.

[19] Between 2013 and 2019 on average 88,000 people moved from one area of inner London to another, while another 100,000 moved to outer London and 90,000 moved elsewhere in the UK. During 2020, these figures shifted, with small reductions in the number moving to other parts of either central or outer London, but a 12% increase in the number moving elsewhere in the UK (ONS Internal Migration Statistics, 2020).

[20] Source: https://www.ft.com/content/5968d25e-f2d8-4e1d-900e-18067459c7a0?shareType=nongift.

Figure 2.13. Expected long-term impact of COVID on sales

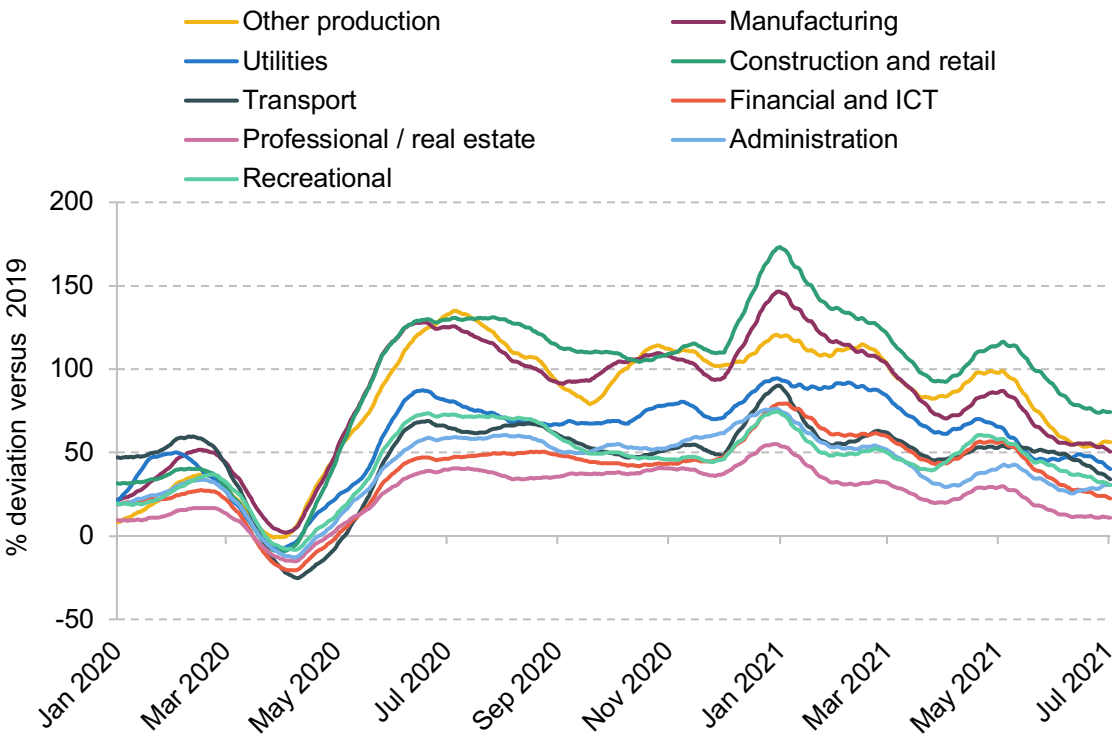


Source: Bank of England Decision Maker Panel Survey, Broadbent (2021).

Firm formations also suggest many are now preparing for a different economy. Historically these have proven a reliable indicator of future economic cycles, with increases in firm creation a signal of improving hiring and investment (Bishop et al., 2009). This time, the appropriate interpretation is likely different. While overall firm foundations have been very strong – between 60% and 120% above their 2019 level – these have been highly uneven – with a Herfindahl–Hirschman index across different sectors suggesting a sharp jump in sectoral concentration since the start of the pandemic. They have also been falling sharply in recent months as the economy has reopened.

Rather than reflecting an improving overall picture, we think these changes more reflect changes in economic structure. In recent months, firm formation has been strongest in sectors such as construction, wholesale, retail and manufacturing, and weaker in consumer services for instance. Looking within the headline sector groups also shows substantial changes. For example, firm registrations in the wholesale and retail sector were around 120% above March 2019 levels in March 2021. However, registrations in 'retail sale via mail order' were up 365% in March 2021 versus March 2019 (Duncan et al., 2021). There were similar jumps in sports equipment and pet care businesses. These formations could of course reflect temporary changes in demand rather than more lasting ones. But this would require firm failures now to be concentrated in the same subsectors that led formation and, for now at least, these data are suggesting the opposite.

Figure 2.14. Growth in firm formation by sector, 2020–21



Note: Daily data taken from Companies House. Code used to collate adjusted from ukfirmcreation.com.

Source: Companies House, ukfirmcreation.com, Duncan et al. (2021).

Does Brexit still pose a risk to the recovery?

COVID is not the only structural shock buffeting the UK economy. The rapid transition to the Trade and Cooperation Agreement poses some important additional challenges. Both shocks have compounded one another in terms of their short-run adverse effect on trade. Flows with the EU have fallen, but are unlikely to rebound sharply as conditions normalise – instead, there are signs that further adjustment to the post-Brexit trading relationship, delayed by the pandemic, is now beginning to crystallise.

Twin shocks to trade

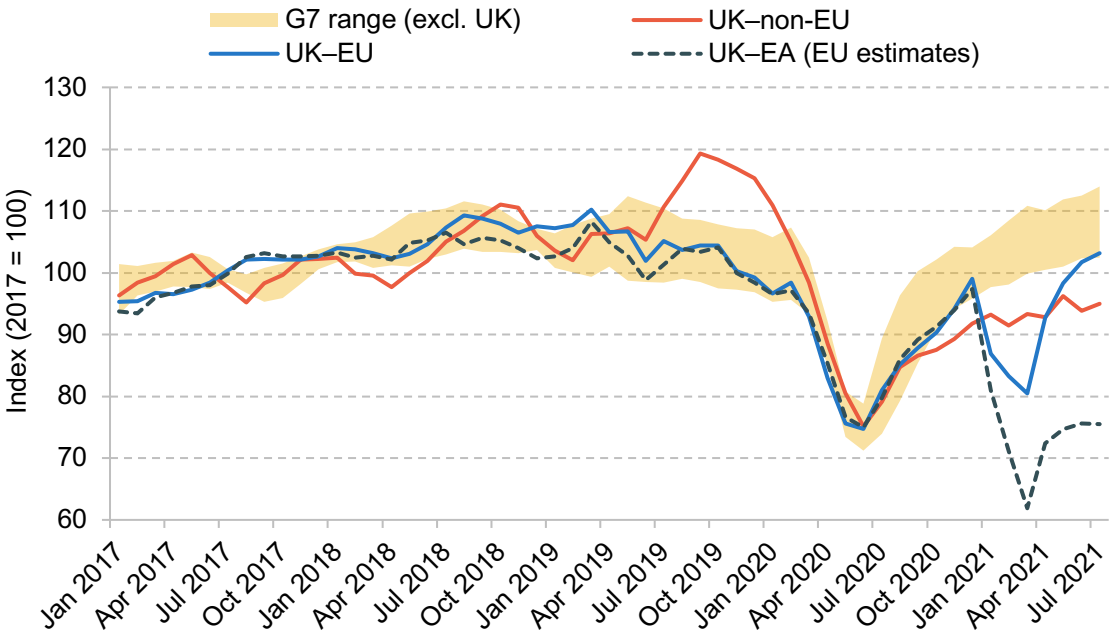
Brexit and COVID have resulted in record trade disruption over the past 18 months.[21] Both imports and exports fell by around 25% between December 2019 and April 2020 as COVID first spread globally. In the months that followed, total UK trade also lagged the recovery in aggregate activity. Services remain the key weak spot – with imports and exports here 21% and

[21] To the degree both effects have compounded supply-side disruption, both effects may also have worsened the demand response – increasing the incentive for consumers and firms to stockpile.

34% below their December 2019 levels, respectively, in July 2021. Goods trade also fell in 2020Q2, but was then bolstered by a strong global recovery and a further round of inventory building in the run-up to the end of the transition period in December 2020. As in the run-up to previous deadlines, these effects boosted UK imports more than exports. But both subsequently fell sharply at the beginning of this year as the inventory cycle reversed.

Goods exports with both EU and non-EU countries have recovered since. However, both lag international comparisons (see Figure 2.15). Research conducted by the UK Trade Policy Observatory, which employs synthetic control methods similar to those in the 2019 Green Budget (Nabarro and Schulz, 2019), suggests that UK exports to the EU remained 14% below a counterfactual scenario in which the UK remained in the EU, with imports 25% down (Tamberi, 2021). At the end of August, 57.4% and 66.6% of trading firms experienced challenges with exporting and importing respectively – the highest at any point since the start of 2021 (Business Impact of COVID-19 Survey, wave 39). Of those firms continuing to report exporting challenges, these effects are primarily attributed to the combined disruptive impact of Brexit and COVID, rather than one alone (Figure 2.16).

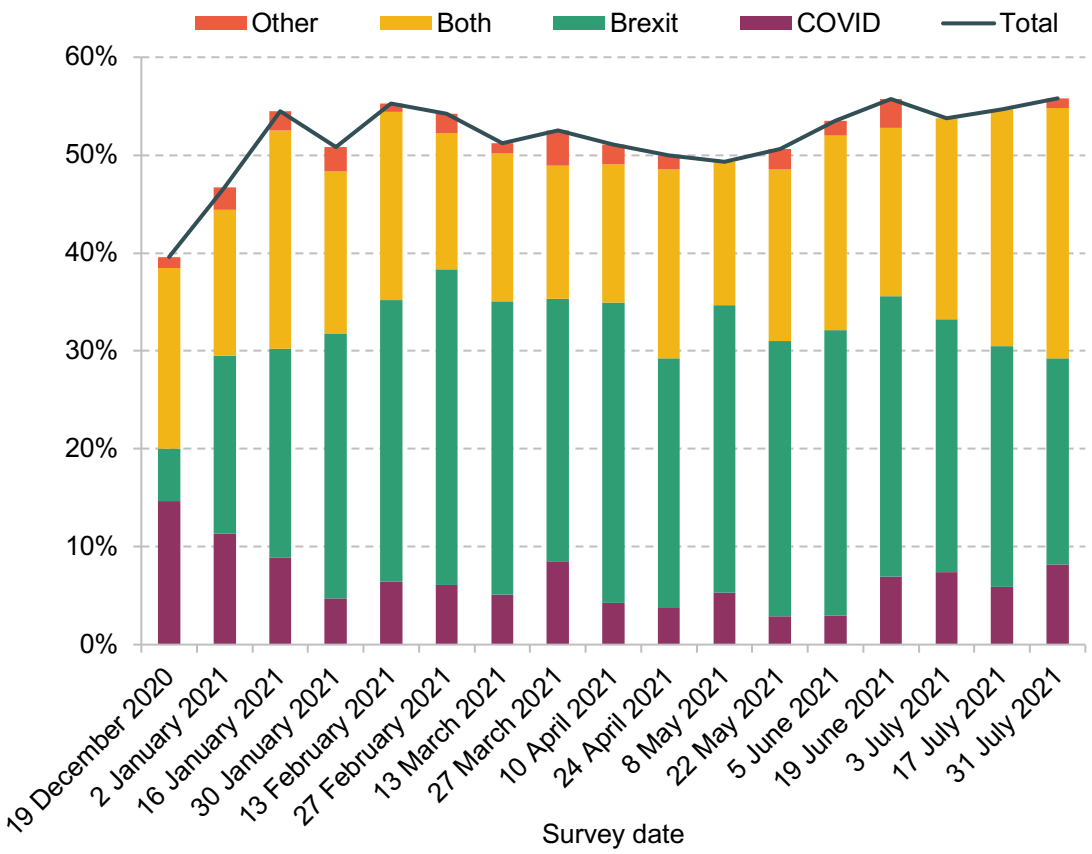
Figure 2.15. G7 goods exports (indexed, 2017 = 100)



Note: Measure is a three-month moving average of nominal goods exports. G7 countries included are Italy, Japan, Canada, United States, France and Germany. EA is euro area.

Source: Various national statistical authorities and the ONS.

Figure 2.16. Share of firms reporting exporting challenges, by reason



Note: Firms included are those that have not permanently closed and have traded in the last 12 months.

Source: ONS's Business Impact of COVID-19 Survey.

Will UK trade bounce back?

We expect UK goods trade to continue to recover as more immediate disruptions dissipate. But while Brexit stockpiling has weighed on trade at the beginning of 2021, the scale of these effects appears to have been somewhat smaller than in the run-up to previous Brexit deadlines, with COVID-related disruptions at the end of 2020 complicating firm preparations.[22] Easing disruption on the COVID side should allow a broader improvement. However, the implication of the lower inventory build in late 2020 is that there are likely now fewer upside specific risks to UK–EU trade in the months ahead.

Instead, we think the UK's goods trade with the EU will underperform further as conditions normalise. Eurostat data show a weaker recovery in UK goods exports to the euro area than the

[22] A relatively large number of firms warned of low levels of preparedness right up until the final weeks. For example, the Bank of England Decision Maker Panel Survey from December 2020 still showed only 4.9% of firms claiming they were fully prepared, with 19.4% of firms saying they were only partially prepared. The PMI data for December also showed a sharp increase in inventories, but a notable deterioration in supply chain efficacy.

ONS data (Hughes, 2021). This is because the EU uses a 'country of origin' methodology to account for changes in trade. This assigns imports based on the country that produced the majority of the value added. Trade with the UK moved to this basis after the UK left the customs union at the start of 2021. UK exports are instead still accounted for on a 'country of dispatch' basis – meaning that regardless of where a given item has been produced, an item dispatched from the UK to the EU is still accounted for in UK trade. Higher UK estimates reflect flows of goods produced elsewhere in the world into the EU via the UK. Post Brexit, these flows are more likely to be uneconomical. In this respect, UK trade is likely to have benefited from COVID-related disruption – with changes likely forestalled. As conditions normalise, we expect UK trade estimates to converge on their EU equivalents.

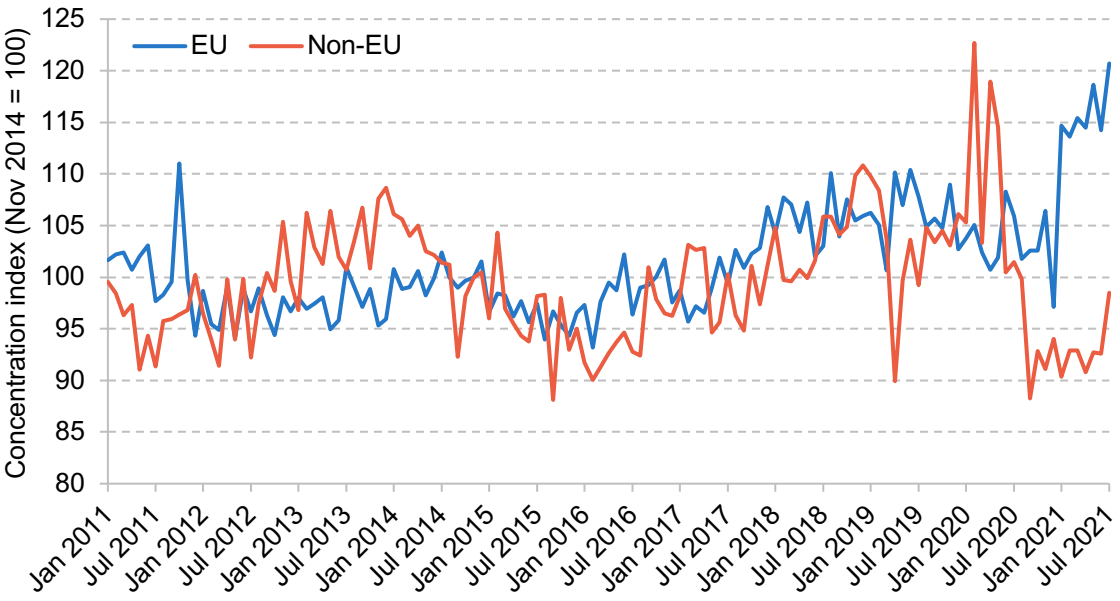
Adjustments here are likely on the economic recovery in the years ahead. As we noted in last year's Green Budget, economic adjustment to Brexit was likely still largely to come at the beginning of 2021 (Nabarro, 2020b). The 20% sterling depreciation in 2016 – without any of the actual frictions this reflected – created a strong incentive to keep activity in the UK. As in the case of other recent trade divergences, this had forestalled adjustment (Bank of England, 2018). Some activity that has been sustained since 2016 is now likely to be written off.

We think there are signs that the predicted costs of Brexit are now beginning to crystallise. The Trade and Cooperation Agreement, while securing zero tariffs, has done little beyond – adding around 8ppt in tariff-equivalent costs to UK–EU goods trade on a long-term basis (Nabarro, 2020a). The persistence of these effects changes the way firms react compared with the largely transitory impact of the pandemic (Koecklin, 2021). The latter generally drives broad reductions in trade volumes, but not sharp changes in composition as firms try to hold onto market footholds in light of better times ahead.[23] When disruptions are seen as more permanent, firms may choose to exit certain markets – concentrating only in the most profitable areas. In recent months, there has been a sharp jump in goods concentration for UK exports to the EU, but not in goods exports to the rest of the world (see Figure 2.17). Data from the ONS's Business Impact of COVID-19 Survey (BICS) also point to lasting changes in the destination of UK trade, with just under 2% of firms reporting every fortnight that they were pivoting away from exporting to the EU since the start of 2021 with no similar moves evident in non-EU trade.[24] The Bank of England's Agents survey and the PMI surveys also point to EU consumers pivoting away from UK suppliers.

[23] The UK has historically learnt the hard way that market exit in international trade can result in long-term losses. For example, this was a notable feature of the UK's post-WW1 experience – see Findlay and O'Rourke (2007).

[24] These effects also seem to have been more concentrated among smaller firms – with a larger shift among firms that employ fewer than 50 people (BICS, wave 37).

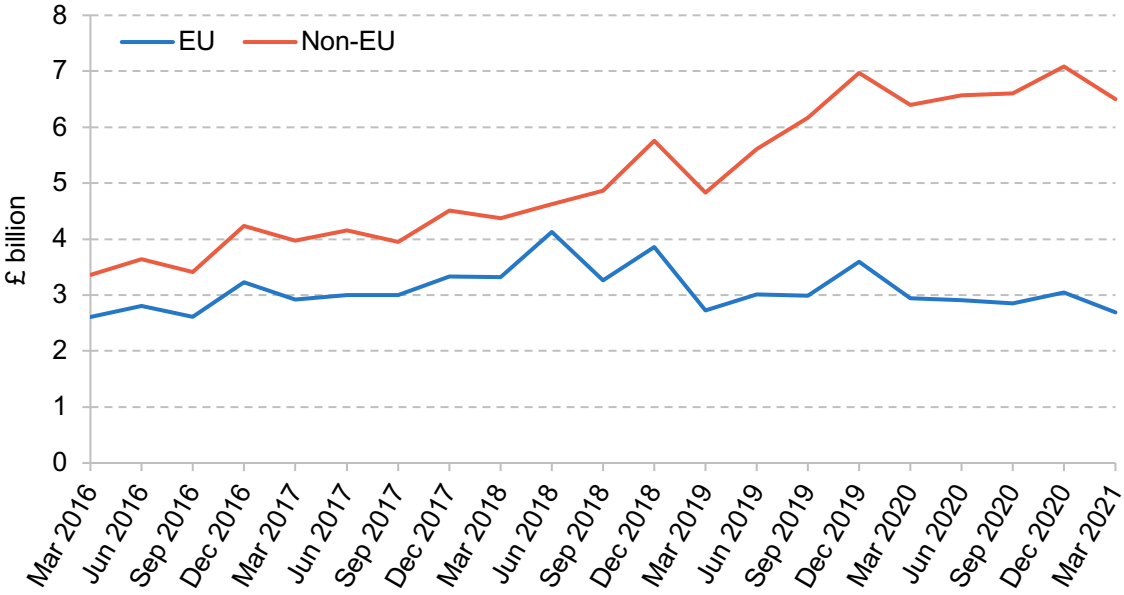
Figure 2.17. UK goods export concentration, EU and non-EU (index, November 2014 = 100)



Note: Concentration is measured here using a Herfindahl–Hirschman index across items exported to both the EU and non-EU countries.

Source: ONS.

Figure 2.18. Exports of legal, accounting, management consulting and public relations services



Source: ONS.

From here, services are the key area of concern. These have fallen sharply during the pandemic, with total services exports down 23% in 2021Q2 compared with December 2019 and imports also down 36%. The primary driver here has been COVID. This has weighed on services exports whose provision depends on the movement of people.[25] These effects continued to weigh into August, with exports either reduced or precluded for 90% of trading education providers and 70% of travel providers according to BICS wave 37 data. These data should recover as COVID-related fears ease through 2022 – though potentially not to their pre-pandemic level.

The bigger issue, in our view, is business and financial services. Output here has generally been more robust during the pandemic, as many exports of this type are sold remotely. But growth has also diverged between the EU and the rest of the world – with the latter much stronger. For example, while insurance exports to countries outside of the EU increased by just under 20% between 2019Q1 and 2021Q1, equivalent exports to the EU fell by 4.8%. Financial services show a similar pattern, with export growth 4ppt lower within the EU than outside, as do professional services, where exports to the EU fell 1.3% between 2019Q1 and 2020Q1, but grew by 35% outside of the EU (see Figure 2.18). Among legal, accounting, management consulting and public relations services, if exports to the EU had grown in line with their non-EU equivalents – as was largely the case before the 2016 referendum – UK exports to the EU in these sectors would be around double their current levels.

As we noted in 2018, the UK economy has honed a strong international position as an exporter of high-value-added business and financial services in recent decades (Schulz, 2018). Here, the Trade and Cooperation Agreement offered little support. Many firms here are now having to deal not only with new EU rules, but indeed different member state rules (having previously sold services under 'country of origin' provisions) (Borchert and Morita-Jaeger, 2021). Weaker access is also now paired with fewer medium-term assurances. The dispute resolution mechanism in particular allows both sides to reimpose tariffs unilaterally subject to an ex-post review after 30 days. The UK has also mooted diverging with EU rules in a diverse range of areas, from the regulation of personal data to capital requirements for insurers (Smith et al., 2021). This increases the risk of further frictions in the years ahead. The specialised and differentiated character of many business services means such uncertainty weighs more heavily on competitiveness than elsewhere.

What does this mean for trade and the recovery?

We expect trade to lag rather than lead growth in the years ahead. A relatively sharp recovery in imports is likely as domestic demand recovers. But for UK exports, we expect additional

[25] By this, we mean so-called mode 2 (consumption abroad) and mode 4 (foreign travel) – such as travel and construction services.

frictions under the Trade and Cooperation Agreement to pose a larger ongoing challenge. Most estimates for the trade–cost elasticity (i.e. the responsiveness of trade flows to changes in trade costs) suggest a value of between 4 and 6 (Simonovska and Waugh, 2011; Eaton and Kortum, 2004). Given the disproportionate exposure of highly specialised services, we think it is reasonable to assume a value in the middle of this range, but also costs that accumulate more slowly – with a high share of sunk costs likely taking many years to unwind. We assume a value of around 5, but with three-quarters of the impact falling within our four-year forecast horizon. Around a third of the total impact we think is also reflected in UK trade underperformance since the beginning of 2019. By the end of 2025, we expect trade to be around 8% below the level implied by pre-Brexit trade elasticities (and around 12% below its level in the absence of any change in the UK–EU relationship).

For now, some of these Brexit impacts may have been masked by the scale of income support provided during the pandemic. Looking at furlough rates across manufacturers, for example, there seems to be a positive correlation between the furlough rates at the end of May, and the scale of exports to the EU. As these changes begin to feed through in the second half of the year, we expect this to slow the recovery – with the UK's tradable sector likely to lag in growth terms through 2022 and 2023.

In the years ahead, Brexit poses important questions concerning both growth but also economic resilience. In recent years, a common narrative has been that trade adds to macroeconomic volatility as countries become more sectorally specialised (Goldin and Mariathasan, 2014). While this is certainly a risk, trade can also provide an important stabilising force by reducing economic exposure to country-specific shocks – essentially allowing a greater degree of cross-country diversification. Generally, the UK seems to have done relatively well in this regard (Caselli et al., 2020). Trade with the EU has likely been instrumental here. Brexit may therefore not only mean lower growth, but also greater macroeconomic volatility, with trade potentially doing less to offset the impact of domestic shocks. This sits alongside other more specific questions concerning food and energy security and the durability of capital inflows.

Are balance sheets strong enough to sustain an uneven recovery?

Cash was king during the financial crisis. Firms that secured liquidity invested more through the crisis, and won enduring increases in market share thereafter (Joseph et al., 2019). The COVID-19 pandemic is different. Greater systemic financial resilience and extensive monetary and fiscal support have ensured liquidity in recent months. During the first three months of the pandemic, large and small UK firms secured £33 billion and £20 billion in new lending from UK banks. In the months since, small firms continued to borrow heavily, drawing on a further £24.4 billion in net bank lending. Government guarantees have played a key role here. These were used sparingly during the Great Financial Crisis: total lending under the 'Enterprise Finance

Guarantee' totalled just £1.8 billion. Government-backed lending during the pandemic has totalled just under £80 billion.

With debt swelling as aggregate incomes have fallen, the key question now is solvency. Here, damage on the private side is likely now less severe than might have been feared. Usually during a downturn, firms first use up their own cash reserves and then move to access (more expensive) external financing. However, during the pandemic, borrowing costs were kept low and corporate deposits actually increased in tandem – leaving the aggregate balance sheet position unchanged. Where (especially large) firms have also been able to secure new equity, this now leaves many with stronger balance sheets.

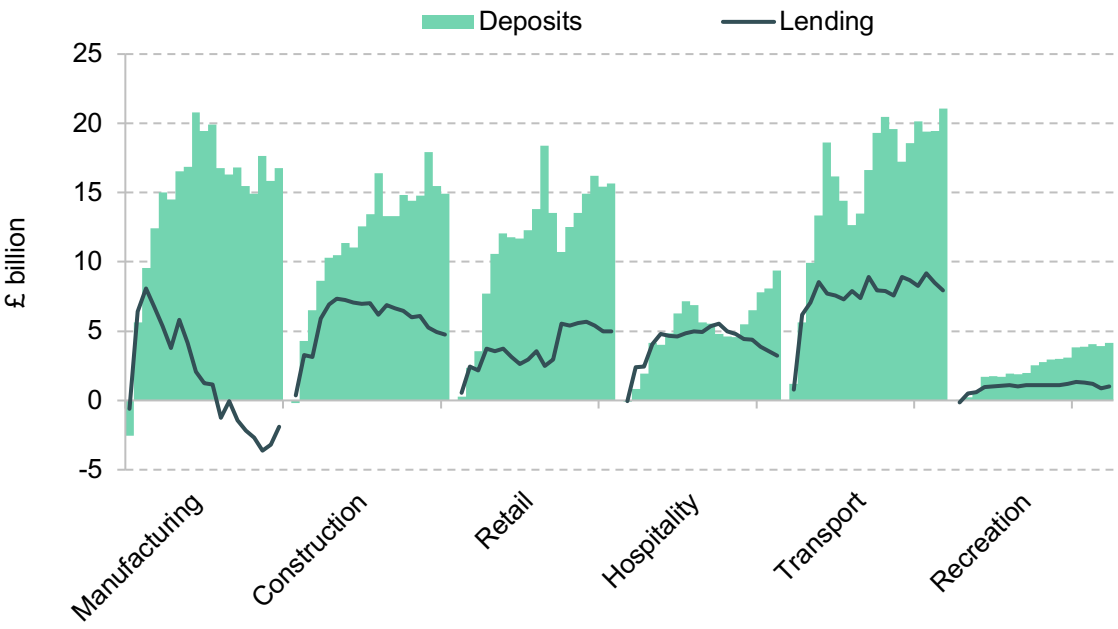
The key concern now is the distribution, rather scale, of corporate debt, in our view. While benign in aggregate, balance sheet developments vary sharply across sectors and firms. For example, bank lending has now actually fallen to below its level at the start of the pandemic in manufacturing (Figure 2.19). But in sectors such as hospitality and construction, net lending remains elevated. Concerns remain higher here, especially among smaller firms. Bank of England data show that around 4ppt more small and medium-sized firms in sectors such as hospitality and transport were in financial distress in January 2021 than in 2020 (Bank of England, 2021c). ONS BICS data suggest more small firms fear falling into difficulties too.[26] The Bank of England Credit Conditions and Agents surveys also suggest growing expectations of write-downs among smaller firms in more challenged sectors (and a commensurate tightening of lending conditions).

For now, we do not expect these challenges to weigh heavily on investment in the very near term. While business investment remained 12.7% below its 2019Q4 level in Q2, intentions have since recovered sharply. Bank of England Agent investment intentions have rebounded to their highest level since 2007 in July, while the Accenture / IHS Markit business outlook survey reported the strongest capital expenditure plans in six years. Reconfiguration in the years ahead implies a wave of investment to facilitate structural changes in the UK's capital base. The composition of investment intentions points to similar shifts. Consumer services firms, for example, exhibit record divergences between investment intentions for IT equipment (which remain relatively strong), and land and buildings (which are relatively weak) (CBI Service Sector Survey). Bank Decision Maker Panel and Agent survey data point to similar changes, with firms planning to spend more on digital infrastructure, but less on physical stores and offices. Sectors more adversely affected by the pandemic still plan to invest less too.[27]

[26] ONS BICS data show 10–15% of firms with less than 50 employees still believe they are at least at moderate risk of insolvency, compared with 5–10% among their larger counterparts.

[27] The Bank of England Agents survey from Q3 noted firms adversely affected by COVID continued to restrict investment to 'essential repair and maintenance'.

Figure 2.19. Net bank lending and deposits by sector since the start of the pandemic (£ billion), 2020–21



Source: Bank of England.

However, these adjustments do not yet imply a strong medium-term investment recovery in our view, with investment also likely enjoying a temporary boost associated with the '130% super deduction'. Instead, if a more persistent upswing is to come, this will depend first on the strength of firm balance sheets and second on the robustness of the recovery.

With respect to the first, the important question is less whether balance sheets are strong *now*, but whether they prove strong enough in the years ahead in the face of accumulating headwinds. Reconfiguration implies write-offs – potentially adding to firm user cost of capital. Losses within commercial real estate pose particular risks here – with losses sometimes feeding into greater caution within the financial sector itself (Di Tella, 2012). Increased working capital could also weigh on investment as supply chains shift. Traditionally, such effects have tended to weigh more heavily when balance sheets are initially weak (Benford and Burrows, 2013). For now, we expect balance sheets to prove sufficiently robust to manage these challenges.

Persistently strong investment will also depend on speed of recovery. Here the outlook is a little weaker. On the one hand, sectoral changes imply a relatively capital-intensive recovery overall – potentially providing some support.[28] On the other, growing insolvencies, combined with balance sheet impairments, could act to weigh on sentiment and add to corporate risk premiums.

[28] The August 2021 Bank of England Decision Maker Panel Survey, for example, shows that many firms expect employment to fall by more than sales and investment.

Key here is likely to be the speed at which the economy can reconfigure. On balance, we continue to think this will take time, weighing on demand and investment incentives in the medium term. In recent years, larger firms in particular have tended to use stronger balance sheets to finance financial rather than real investment. This remains a significant risk in the years ahead if the recovery proves protracted.

2.4 Back to the future: the challenges facing the UK labour market

The labour market sits at the centre of the UK's post-COVID economic recovery. Furlough has thus far arrested the usual recessionary dynamics of lower output, falling employment and depressed household incomes. The question now is whether these can be avoided as the economy reopens and fiscal support is wound down (challenges around the end of the furlough scheme are covered in further detail in Chapter 9). If so, this could mean a complete and self-sustaining recovery. We examine such an 'upside' scenario in Box 2.2. But if unemployment were to increase now, this may still imply a period of subdued output and precautionary behaviour. We continue to see downside risks here as we move into 2022.

Labour market data are currently difficult to interpret. On the one hand, UK employment remains just under 716,000 below its pre-pandemic peak, while estimates suggest that a further 1.2–1.3 million workers remain either fully or partially supported by furlough at the beginning of September.[29] On the other hand, vacancies are now at record levels. There are also growing reports of labour shortages and evidence of emerging wage pressures. We place more emphasis on a cautious interpretation for now. In particular, we think labour demand and wage pressures currently reflect the effects of a rapid but uneven economic rebound, rather than exhausted labour capacity. With the composition of the UK labour market also changing sharply, furlough has also weighed temporarily on aggregate supply. As both effects fade, we expect a margin of spare capacity to still emerge – with unemployment increasing to 5.5% by 2022Q1 and wage growth falling back.

The key challenge here remains economic reconfiguration. This suggests a bumpier unwind of income support in the near term. It also suggests an increase in equilibrium unemployment as available workers prove a poor match for those areas seeking to expand. In contrast to the Great

[29] These data are based on the September HMRC release of sectoral furlough rates (https://www.gov.uk/government/statistics/coronavirus-job-retention-scheme-statistics-9-september-2021). We have updated these data to the start of September by indexing these sectoral furlough numbers to the more timely BICS data on furlough rates by sector (https://www.ons.gov.uk/economy/economicoutputandproductivity/output/datasets/businessinsightsandimpactontheukeconomy). These data suggest only a moderate fall between late July and early September.

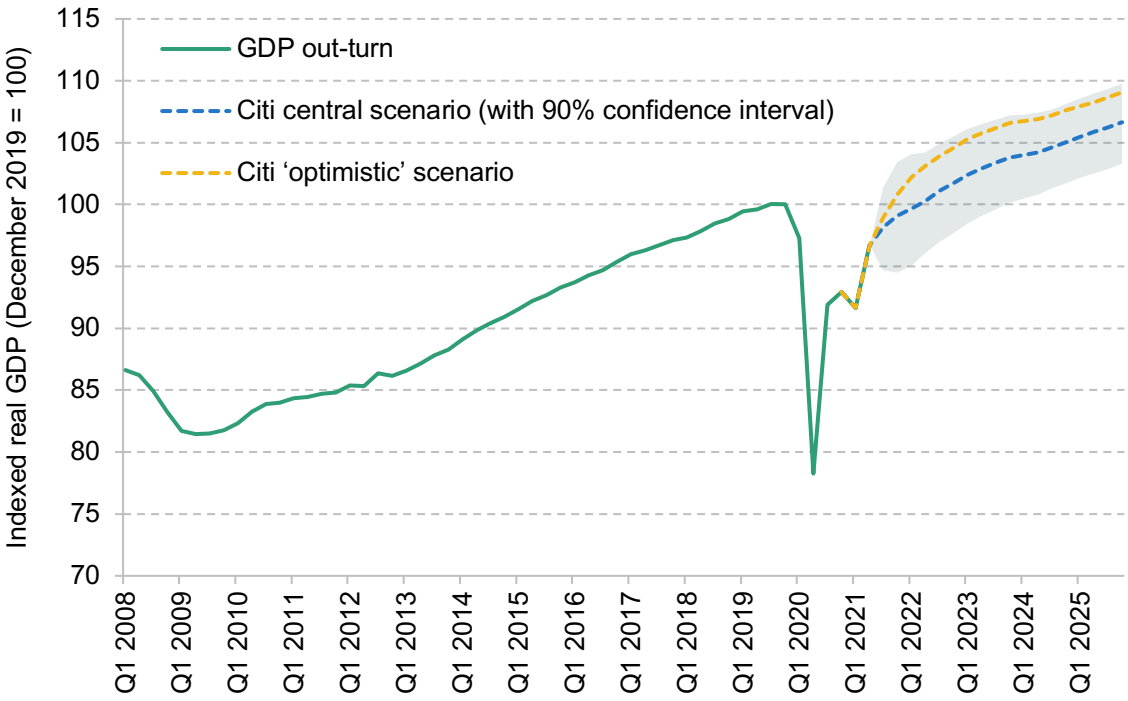
Financial Crisis, we think the recovery from COVID-19 is also likely to prove relatively capital intensive, with the labour market lagging rather than leading the recovery. This would suggest subdued wage pressures over the coming years as labour demand softens and supply gradually recovers. Some matching issues and changes may generate some localised offsetting wage pressures, but we think these effects are unlikely to drive sustained aggregate wage growth.

We begin below by discussing developments in the UK labour market during the pandemic so far, before then turning to the dynamics of the recent rebound and some of the medium-term challenges for both employment and wage growth.

Box 2.2. 'Optimistic' economic scenario: complete labour market recovery

The main upside scenario we envisage is one in which demand recovers in a manner that is both stronger and more compositionally similar to that before the pandemic – for example, if COVID-19-related fears dissipate more quickly. This could mean a smoother end of the furlough scheme, with more workers reabsorbed by their original jobs. We expect this would also mean resilient household sentiment, and stronger overall levels of demand. In this scenario, we think growth would likely be stronger in the second half of 2021 and through 2022 and 2023, with lower employment and fewer compositional changes meaning both a faster recovery and less damage to medium term capacity (see Figure 2.20).

Figure 2.20. Real GDP in central and 'optimistic' scenarios, 2008–25

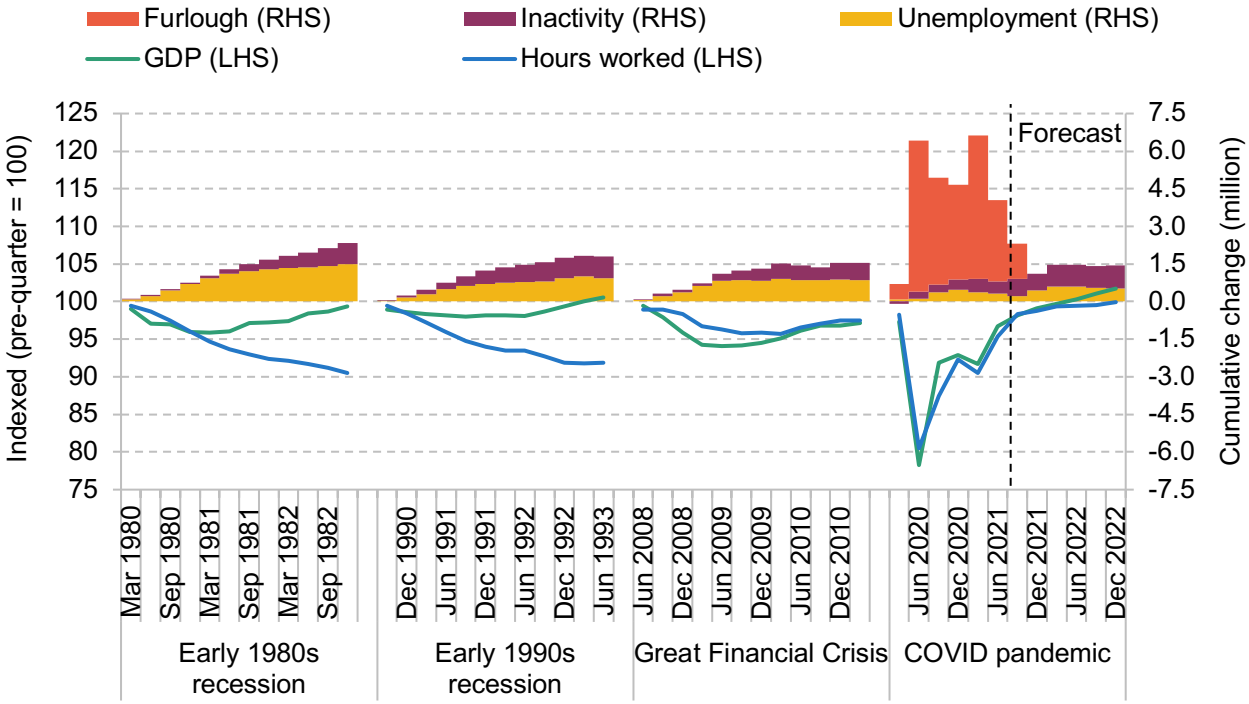


Source: ONS and Citi Research.

The story so far

The UK labour market has so far been effectively cushioned through the pandemic. Over the past 12 months, the conventional relationship between GDP and hours worked has remained broadly intact. However, both the Coronavirus Job Retention Scheme (CJRS) and the Self-Employment Income Support Scheme (SEISS) have broken the associated link to unemployment. Hence, while hours worked fell by 19.5% between 2019Q4 and 2020Q2, LFS unemployment increased by just 117,000. This compares with a 1.5% reduction in hours worked in the second half of 2008 and an increase in unemployment of 323,000 (Figure 2.21).

Figure 2.21. Changes in GDP, hours worked, unemployment and inactivity in recent UK recessions



Source: ONS, HMRC.

Furlough has instead transformed reductions in hours into an increase in numbers 'temporarily away from work'. These increased from 2.5 million in 2019 to just under 9 million in 2020Q2. At its peak, HMRC data suggest the CJRS supported as many as 37% of all private sector employees, with SEISS also cumulatively supporting 2.7 million workers through the pandemic. A standard Okun coefficient (which captures the relationship between unemployment and GDP) of 0.4[30] would have implied unemployment hitting 14% in 2020Q2 in the absence of policy

[30] Haskel, 2021b.

support, with around 3.4 million more people unemployed: similar (proportionately) to changes in the United States (see Chapter 1).

In a typical recession, reductions in output drive employment, income and confidence lower – propagating the economic weakness. Furlough has arrested this adverse feedback loop. First, both the CJRS and SEISS have instead protected household incomes. Second, both have also meant more workers have remained attached to their current employer, facilitating a sharper rebound in supply. Regardless of the ongoing challenges, this has likely prevented a far larger increase in scarring that would have been likely if support had not been forthcoming. If – as we think – unemployment peaks at just 5.5% in 2022Q1, this will be a notable policy achievement.

However, substantial slack has still opened up. Unemployment, marginal attachment and the number of involuntary part-time workers were still 269,000, 59,000 and 105,000 above their pre-pandemic levels, respectively, in the three months to July. Our preferred augmented measure of labour market slack[31] remains 1.1ppt above its 2019 trough, but has fallen back somewhat in recent months. Weekly labour force survey data at the end of June also show 2.1 million still working fewer hours than usual as a result of the pandemic, with net additional desired hours still back into consistent positive territory for the first time since 2017. While headline unemployment has also been relatively contained, there has been a larger fall in employment. During the first 12 months of the Great Financial Crisis (GFC), for example, employment fell by 635,000. During the current crisis, despite furlough, the fall has totalled 831,000 – with employment in the three months to July still 716,000 below pre-pandemic levels. This has meant the largest drop in participation rates (–0.8ppt) since the early 1990s. Some of this has likely been recovered and utilised – with PAYE RTI payrolls adding a further 240,000 jobs in August since the latest Labour Force Survey (LFS) data. However, this still only brings payrolled employees back to broadly in line with the previous equivalent LFS data from July, not above.

We do not expect reductions in participation to prove permanent. Reductions in employment have thus far have been focused among the youngest and oldest workers. Among younger workers, many have moved into education (+316,000 since the start of the pandemic). We expect many of these effects to reverse in the years ahead. There is greater uncertainty surrounding the older group. On the one hand, work by IFS researchers suggests more now plan to retire later, with savings marginally drawn down (Crawford and Karjalainen, 2020). Among employees aged 60 and above who were made redundant, 58% were economically inactive 6 months later during the pandemic, compared with 38% before COVID-19 (see Chapter 9), suggesting that the path back into work may not be smooth. This chimes with historical experience where older workers have tended to take longer to return to both the labour force and

[31] This measure combines conventional unemployment with those who are either marginally attached or are involuntarily working only part time. This is similar to the 'U-6' measure of broad unemployment used in the US.

employment following redundancy.[32] Time out of the labour force has also tended to mean larger earnings impairments for older workers (HM Treasury, 2000). Strong house prices and a higher proportion of owner-occupiers increase the risk to participation.[33]

However, downside risks here are balanced with upside ones elsewhere. In particular, there has been a sharp fall in the number of women who are economically inactive owing to home care responsibilities during the pandemic. Similarly, there seems to have been an improvement in participation rates among groups that have previously identified as sick. In part, both effects may reflect a smaller inflow into these categories, with affected workers instead self-selecting into furlough (Adams-Prassl et al., 2020). However, flexible working arrangements could underpin a more persistent increase here. By cutting commuting time, this may also drive an increase in net desired hours.

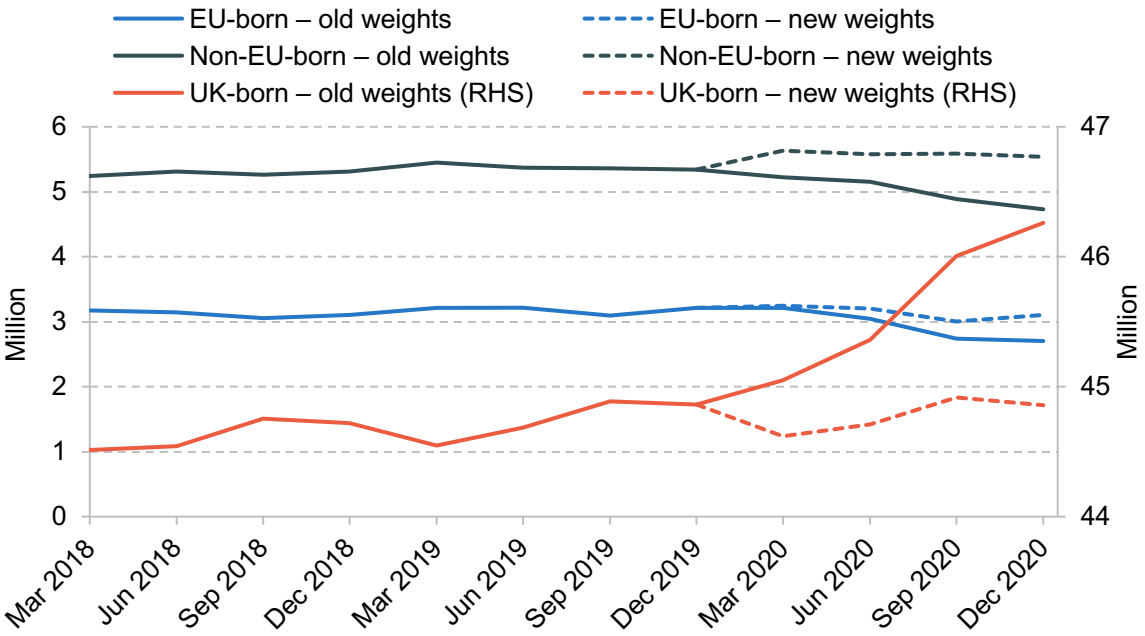
Reductions in the working population are also likely less than initially feared. The suspension of the International Passenger Survey during the pandemic created substantial uncertainty here. O'Connor and Portes (2021) initially estimated as many as 1.3 million immigrants may have left the country as a result of the pandemic. For now, the reality suggests that fewer have left than these early estimates had suggested. Looking just at existing respondents, the actual losses during the early period of the pandemic seem to have been around 500,000 (Thwaites, 2021; Sumption, 2021). In the months since, the ONS (2021) has complemented previous survey data with PAYE tax records which now suggest the number of foreign-born in the UK has actually increased marginally, with moves in EU and non-EU migrants offsetting one another (Figure 2.22). On balance, we err towards thinking net losses here should be relatively limited. There have also now been 5.6 million immigration applications from EU nationals – versus 6.8 million EU nationals who were issued with National Insurance cards cumulatively between 2000 and 2019. We think this implies a relatively large share of EU nationals are likely to retain the option to work in the UK if they wish, even if they are not necessarily here now.[34] We currently expect a permanent net loss of between 100,000–200,000 EU nationals owing to the pandemic.

[32] Between 2008 and 2020, 74% of 16- to 29-year-olds and 72% of 30- to 49-year-olds had returned to employment two quarters after becoming unemployed, compared with 62% of those aged 50+ (Cominetti, 2021). Similar dynamics have been observed elsewhere – for the US, see Johnson and Butrica (2012).

[33] Historically, higher levels of household mortgage debt have tended to mean households increase their labour supply in the face of an income shock, rather than reducing it. They have also tended to mean some households increase their labour supply in the face of an increase in interest rates (Bunn et al., 2021).

[34] These and other differences between population estimates and the EU Settlement Scheme applications are discussed by Lindop (2021).

Figure 2.22. Measures of LFS population subgroups (million), 2018–20



Note: New weights are those updated by the ONS to make use of information from the HM Revenue and Customs (HMRC) Real Time Information (RTI) system.

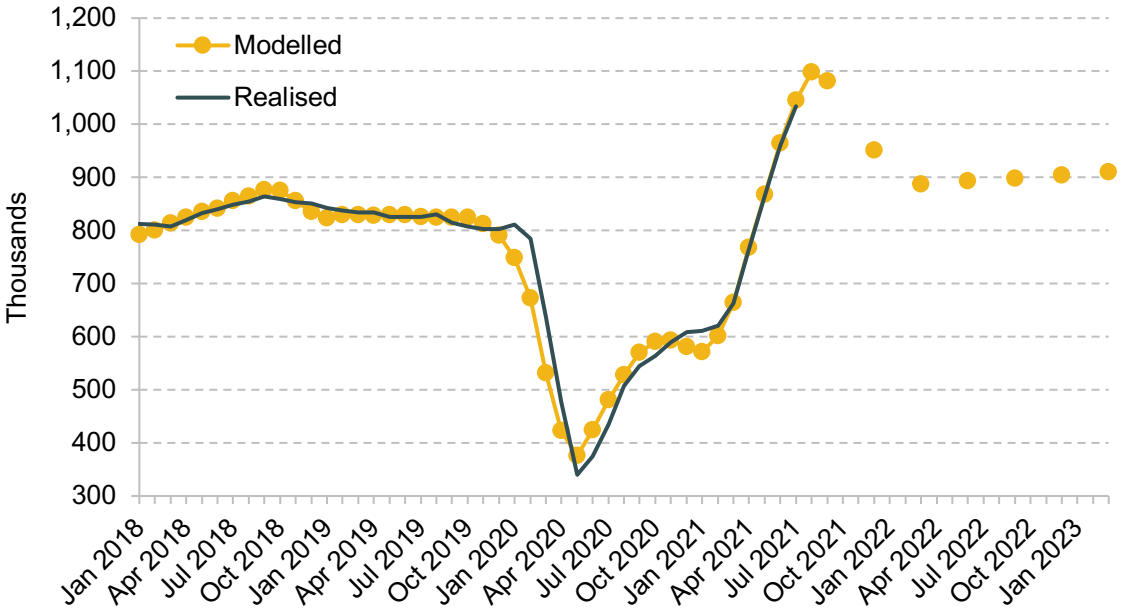
Source: ONS.

The implication of both of these arguments is that permanent reductions in labour supply as a result of the pandemic for now appear contained. There is substantial uncertainty here, not least because of the challenges the ONS has faced in collecting labour market data in recent months. However, these risk understating labour market slack as much as overstating capacity. It has proved difficult – for example – to collect responses from renting households, including many of the younger workers who have been most adversely affected by the pandemic (ONS, 2020; Cribb et al., 2021). This may have also been an initial factor in the underestimation of the migrant population – with the ONS struggling to find new responses from this group.

A contorted rebound

Labour demand rebounded strongly as the economy reopened. In January, total vacancies stood at just 611,000 – 25% below pre-pandemic levels. In the months since, these have recovered to 953,000 in the second quarter of 2021 – more than 10% above their 2019 peak. Vacancies in the three months to August show total job openings exceeding 1 million for the first time on record, with timelier data suggesting continued strength in the first two months of Q3 (Figure 2.23). The KPMG–REC survey for August, for example, showed the second-highest level of labour demand on record (the highest was in July). The Adzuna and indeed.com data have also been broadly stable at 30% above pre-pandemic levels in recent weeks.

Figure 2.23. Vacancies (thousands), 2018–23



Note: Figures shown are a three-month centred moving average.

Source: Citi Research, ONS, Adzuna.

Vacancies have traditionally been a relatively good guide to labour market prospects in the UK. A 'search and matching' model would – on current trends – imply a gradual erosion in unemployment as job matching exceeded job separations. Just as in the Bank of England's current forecast, unemployment would have likely peaked. In fact, according to the post-GFC Beveridge curve, this would suggest UK unemployment should gradually converge on levels as low as 3–3.5%.

In current circumstances, however, we think such thinking is likely misleading. First, current levels of labour demand are likely to prove only temporary. Vacancies reflect the rate of economic growth and the degree of labour market 'churn.' The economic rebound in the first half of the year has seen many firms scrambling to rebuild capacity simultaneously. This, we think, has driven a transitory spike in job openings. One important factor here has likely been the surge in firm formation we noted above. With the economy still heavily disrupted over the winter, we think many have only begun to trade in more recent months.[35] With as much as 35%

[35] New VAT reporters only began to pick up from the end of the first quarter of 2021. In recent weeks, these have begun to ease back. Data reported at https://www.ons.gov.uk/economy/economicoutputandproductivity/output/bulletins/economicactivityandsocialchangeintheukrealtimeindicators/30september2021. For discussion on the moves in the series, see Nabarro (2021b).

of all job creation in normal times driven by firm foundation, we think this has given labour demand a specific one-off boost.

The key question here is whether the overall scale of this 'one-off' demand boost is sufficient to exhaust spare capacity. Traditional signs of labour market tightness have increased in recent months. Bank of England Agents series of recruitment difficulties are currently 1.7 standard deviations above their long-run mean, the KPMG–REC labour availability index is 1.5 below. For now, we think these data reflect the *rate* at which demand has recovered, rather than the scale. When many are seeking to hire simultaneously, this invariably places the labour market under immediate pressure. However, this does not necessarily mean a tight labour market on a persistent basis.

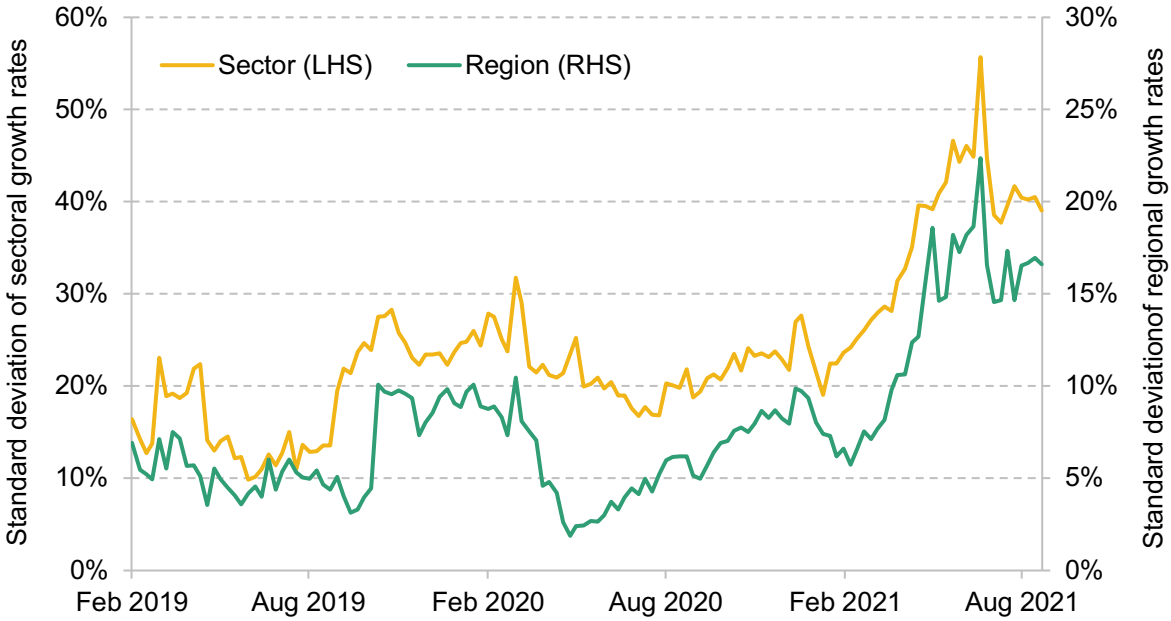
Instead, looking first in aggregate, the recent surge in labour demand does not yet seem sufficient alone to exhaust labour market slack. Based on the gap between current output and its pre-pandemic trajectory, we think 'underlying' vacancy levels are likely a little closer to 600,000. This is the level of vacancies that would ordinarily be associated with this level of economic activity – abstracting away from the low initial employment level and the impact of elevated sectoral shifts.[36] The fact there are currently around 1 million vacancies would therefore suggest there are around 400,000 additional jobs that now need to be filled on a 'one-off' basis. Even looking just at readily available labour slack (before furlough), numbers here remain largely sufficient. Roughly 350,000 people are now newly unemployed or marginally attached. There is also evidence that many workers beyond the scope of the furlough scheme are continuing to work fewer hours than they would ideally like to – with around 2 million still working fewer hours owing to the pandemic in the last weeks of July. These vacancies could be filled (on aggregate, at least) without necessitating a very tight labour market. For now, jobs are still being filled at a record rate.

Of course, if labour demand were to prove persistently stronger, this could underpin a tight labour market. But prospects here do not appear particularly strong. Activity growth has begun to slow. On a structural basis, vacancies may shift up compared with pre-pandemic levels owing to the shift towards lower-cost online advertising,[37] and a move away from self-employment. However, neither of these factors would mean a more complete recovery in employment. Instead, we expect underlying labour demand to fall back – with vacancies expected to fall to around 900,000 in 2021Q4.

[36] These data are derived by taking the shortfall in GDP compared with its pre-pandemic trajectory, using an Okun law to translate this into a level of unemployment and then using a Beveridge curve to translate this into a level of vacancies. We use an Okun coefficient of 0.4 for this calculation, and the pre-COVID, post-GFC Beveridge curve.

[37] This may encourage so-called 'fishing' where firms speculatively put out job adverts but searching intensity is actually relatively low. This pushes out the Beveridge curve. See Gavazza, Mongey and Violante (2016).

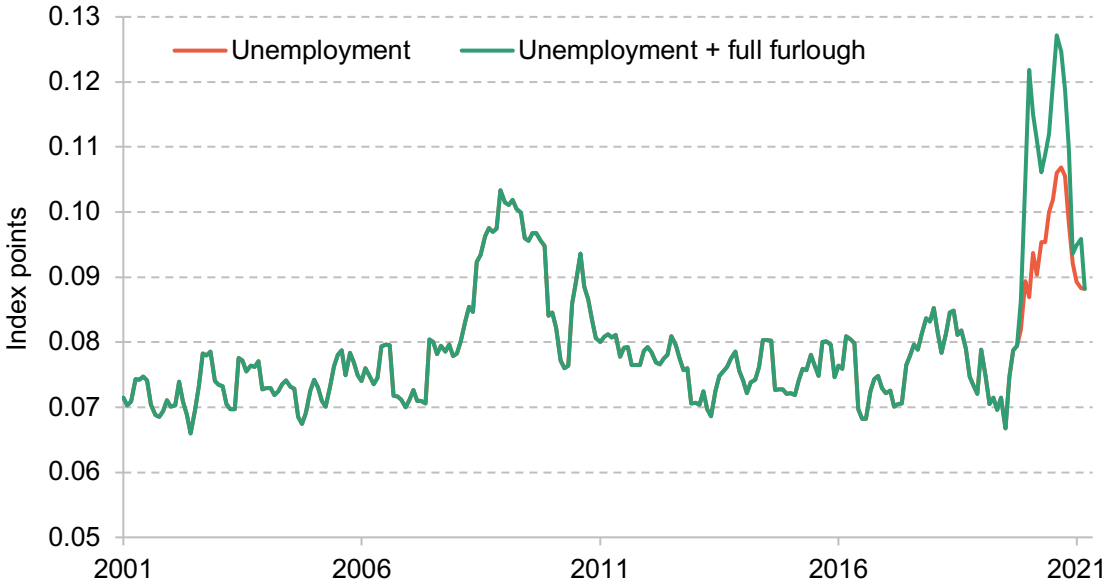
Figure 2.24. Firm and sectoral dispersion in annual vacancy growth, 2019–21



Note: Figures denote the standard deviation of 24-month rolling growth rates across SIC industry categories and regions.

Source: Adzuna, ONS.

Figure 2.25. Index of labour market 'mismatch', 2001–21



Note: Mismatch index based on comparing the relative sectoral shares of vacancies versus those either recently unemployed, or still furloughed. Based on the work of Sahin et al. (2014).

Source: ONS, HMRC, Sahin et al. (2014).

Of course, these aggregate comparisons abstract from whether additional labour market slack is a good match for the jobs that are emerging. And here we think there are greater challenges. As the composition of output has shifted, labour demand has followed. Timelier data suggest a rapid increase in dispersion in sectoral and regional labour demand (see Figure 2.24), indicative of an uneven recovery. Recent work by IFS researchers suggests that while aggregate vacancies have recovered to pre-pandemic levels, for a quarter of workers available job opportunities remain more than 10% down (Costa Dias et al., 2021). This helps to explain how vacancies have recovered so strongly in recent months, even as furlough rates have remained elevated. Sectoral discrepancies between labour demand (measured via vacancies) and labour market slack (unemployment and furlough) have remained at record levels in recent months – if falling somewhat through the rebound (see Figure 2.25).

We expect matching challenges to cast a persistent shadow over the medium-term recovery (see below). However, some of the most acute issues here may also ease relatively quickly. Job searching should recover as mobility improves and uncertainty falls. Similarly, acute 'crowding' effects that have thus far been weighing on job matching rates should also begin to dissipate. These, we think, are likely to have been notable in recent months. With many moving to slightly different roles, this has made skills matching more resource intensive. The implication is it can be harder for the labour market to manage a particularly large surge of demand at any one time.[38]

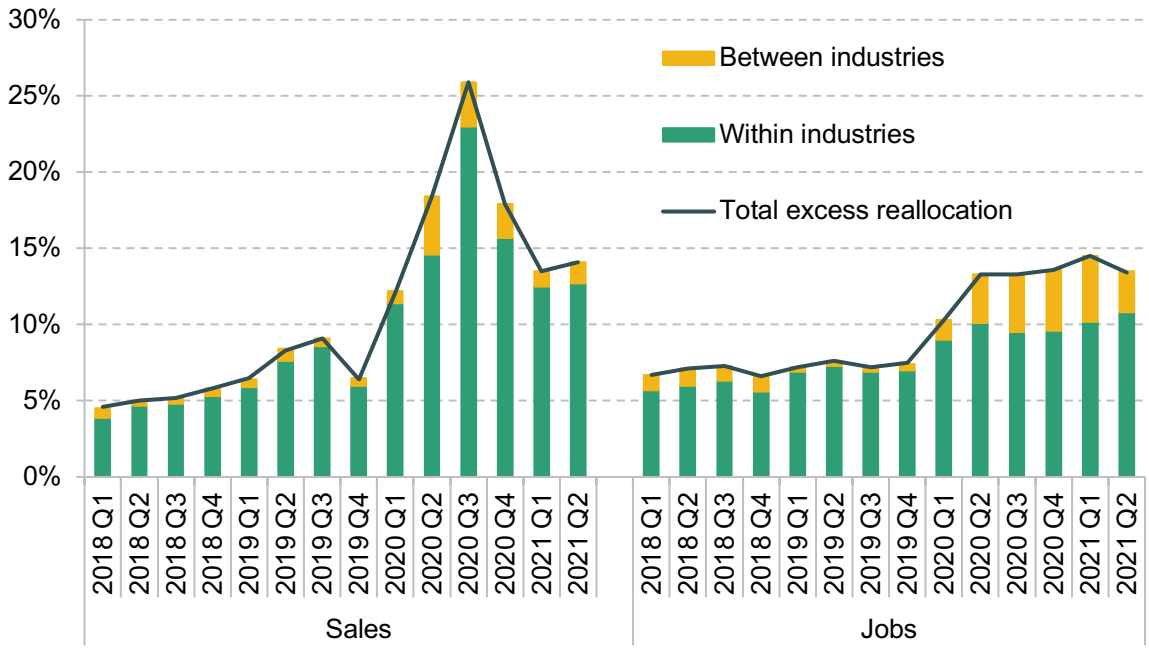
The unwind of furlough support may also play an important role here. Furlough numbers have proven persistently stubborn in recent months, with the latest data suggesting as many as 1.3 million workers remained on either full or partial furlough at the start of September – significantly above Bank of England estimates from August.[39] With the furlough scheme supporting many unviable pre-pandemic jobs, this has deprived new and growing areas of the economy of capacity. Our interpretation of the data suggests the unwind of this support will therefore facilitate a recovery in labour supply. In recent months, the share of LFS workers looking for a second job has fallen rather than increased – suggesting that many of these workers had not yet found gainful employment elsewhere.[40] As long as demand remains weak – especially in those most affected subsectors – sustained reabsorption of these workers into their previous jobs seems unlikely. Instead we expect more redundancies.

[38] Usually, search and matching models assume constant returns to scale. Blanchard et al. (1989) do not find evidence for persistent departures from such an assumption. However, in current circumstances, we think there are good reasons to temporarily assume diminishing returns, at least for a period.

[39] The Bank of England (2021f) has assumed just 500,000 workers were either partly or fully supported by furlough on average through Q3.

[40] Previous survey data have also suggested a relatively high 60% of furloughed workers have actually been working some hours for their employer during the first lockdown, though this has likely fallen since. See Adams-Prassl et al. (2020).

Figure 2.26. Three-year sales and employment 'excess' reallocation, 2018–21



Note: Excess reallocation is the amount of cross-firm sales and job reallocation in excess of what is required by aggregate changes. This is calculated in a similar fashion to Davis and Haltiwanger (1992).

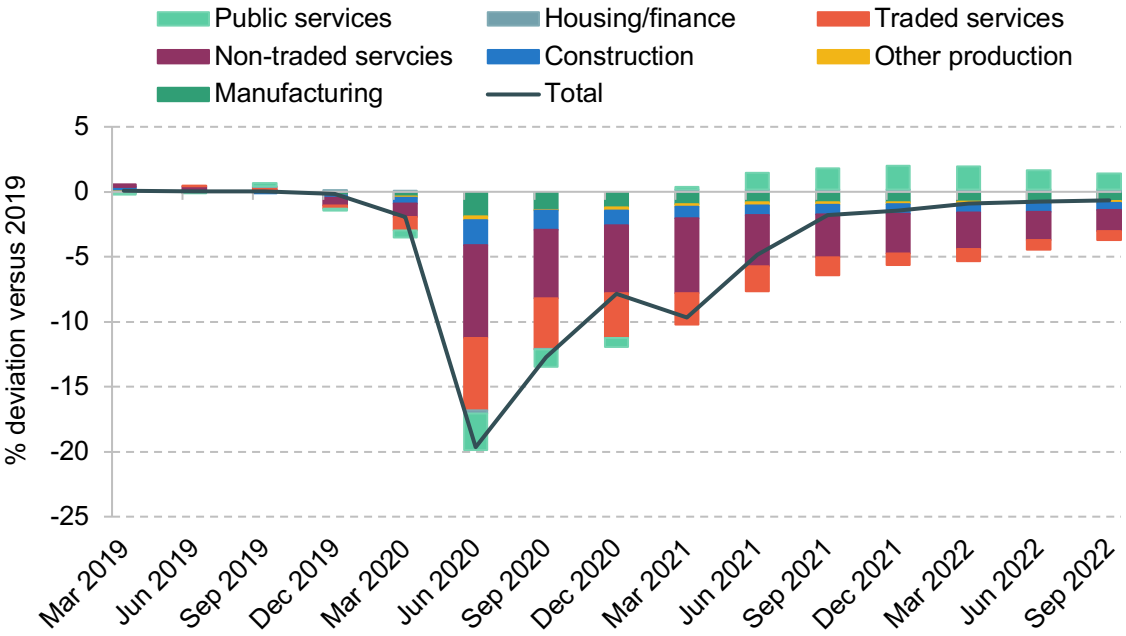
Source: Bank of England.

Reconfiguration in sales has progressed strongly in recent months. Changes in the labour market have proven more protracted as fiscal support has kept pre-COVID capacities in place (see Figure 2.26). The implication has been a heavily contorted rebound. With the latter now winding down, we expect labour market reconfiguration to catch up. Our forecasts assume the unwind of furlough will drive around 500,000 job losses and 200,000–250,000 in additional unemployment. Some of these effects may not all occur immediately. With labour market conditions starting relatively tight, financing accommodative, and demand uncertain, some firms may decide to hold onto staff initially and push to expand their market share – only refocusing on profitability after several months. But a gradual increase is still likely – we expect unemployment to increase to 5.5% in 2022Q1 (1.9 million). Alongside furlough, this assumes around 325,000 to return to the labour market over the next six months, with the rest of the reduction in the economically active population spread evenly over 2022 and 2023. Importantly, as labour market conditions begin to normalise, we think many of the sector-specific bottlenecks that have thus far choked the recovery should now begin to ease.

The medium-term recovery

Spare capacity freed up at the end of furlough may be eaten up relatively quickly where labour demand remains high – for example, in construction and manufacturing. However, in other areas we expect higher unemployment to prove more persistent.

Figure 2.27. Hours worked by broad sector group (% change from 2019)



Note: Estimates produced using Citi's sectoral labour market model.

Source: ONS.

There are two notable issues here.

First, we expect labour demand is likely to lag rather than lead the recovery from COVID. As we explained above, recent evidence continues to point to lasting changes in the UK's economic structure, with traded services and finance likely to emerge a little smaller while manufacturing and finance may prove a little larger. We expect similar shifts to feed through into the UK labour market, with permanent compositional changes in the number of hours worked (see Figure 2.27). These compositional shifts seem to be biased towards capital-intensive sectors. Bank of England Decision Maker Panel evidence also suggests many firms plan to increase the capital intensity of production. For example, the wholesale and retail sectors now expect employment in the sector to be around 4.8% below what it would have been otherwise as a result of the pandemic, but investment to be 5.7% above. Combining both intra- and inter-sectoral effects, we expect the labour share of income to fall by around 2–2.5ppt compared with its 2019Q4 level, weighing on the labour market recovery.

Changes here risk being compounded by recent changes in UK tax policy. The IR35 ruling is likely to push many self-employed workers into formal employee relationships. While welcome in many respects, this is still likely to mean a 10–15ppt increase in the marginal tax wedge for several hundred thousand workers. The further 2.5ppt increase in the marginal tax 'wedge'

associated with the National Insurance contribution uplift from April 2022 is likely to compound these effects. Both risk intensifying substitution away from labour in the years ahead.

Second, economic reconfiguration increases the risk of more persistent matching issues. We expect these to drive medium-term equilibrium unemployment upwards. While the UK labour market has historically proven relatively flexible, the current crisis seems to be driving reconfiguration along dimensions in which the UK has historically struggled. As we noted above, regional dispersion in vacancies seems to have grown. Historically, this has tended to weigh on job matching rates in the UK (e.g. Barnichon and Figura, 2011; Sandbrook, 2012; Pizzinelli and Speigner, 2017). Shifts in the skill composition of labour demand may also pose challenges. ONS BICS data show 8–9% of firms demanding more advanced digital skills, 10–15% basic digital skills and 15–20% demanding more high-level managerial skills. The rate of 'upskilling' job moves has fallen sharply since 2015 (Nabarro, 2021b).

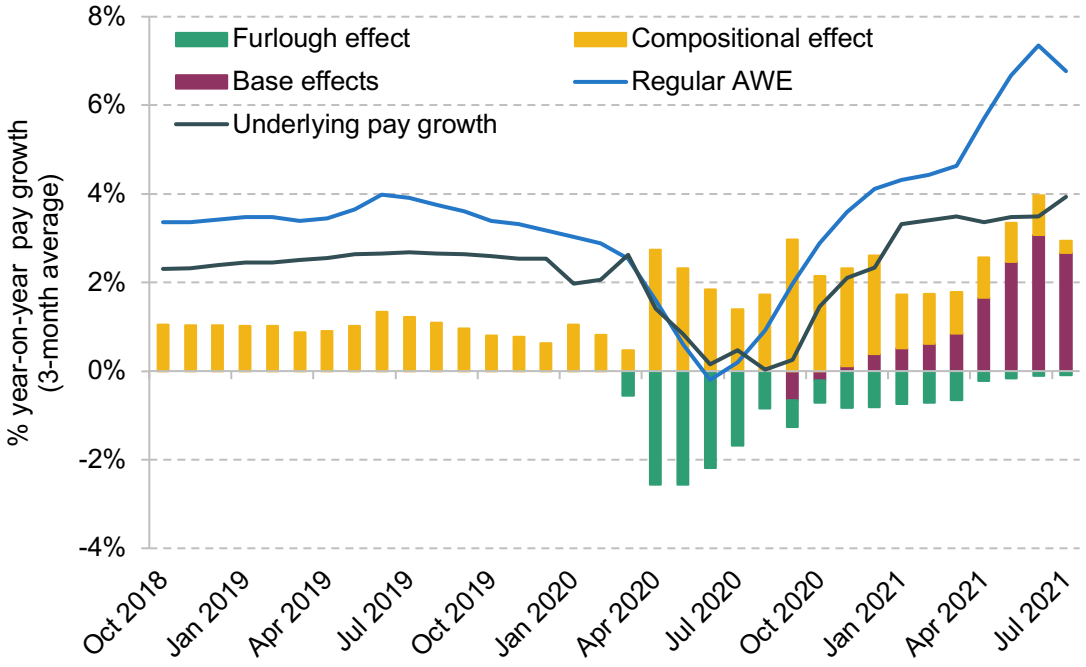
We expect matching challenges to weigh on aggregate supply by roughly 0.3ppt in 2022. We expect these effects to ease back through 2023 and 2024. Policy support to help workers retrain and move could yet alleviate some of these effects.

The outlook for wage growth

An important question for policy is what this might all mean for the balance between labour supply and demand and (subsequently) for wages. While matching issues are likely to weigh on supply, we continue to think labour demand will prove marginally weaker in aggregate. This implies soft wage growth in the years ahead. This aggregate picture may be considerably distorted by heterogeneous wage developments across sectors. In some areas, persistent shortages may drive revaluations of different skills.

The UK wage data have been difficult to interpret since the start of the pandemic. Headline 'average weekly earnings' is compiled by dividing overall wage bills by the number of employees (Athow, 2021). During the first lockdown, these data were heavily depressed by widespread furlough that reduced aggregate wage costs. In the period since, these data have also been affected by a skew in redundancies towards lower-paid workers. This 'compositional effect' became the more preponderant in the second half of 2020, inflating wage growth overall. In the months since, annual growth has also been inflated by statistical base effects owing to furlough-driven weakness in the second quarter of 2020. Abstracting from both, we think underlying pay growth is broadly now back at pre-pandemic levels – around 3.9% per year in nominal terms (Figure 2.28).

Figure 2.28. Measures of pay growth (3M %YY), 2018–21



Note: Compositional effects estimated using age, occupation, education, industry and tenure, following Broadbent (2015). Base effects estimated using two-year rates. Underlying pay growth estimates also employ both median pay PAYE estimates and KPMG–REC survey data. Measure reflects pay growth between average levels over the past three months versus the corresponding three-month period in the previous year. AWE is average weekly earnings.

Source: ONS, HMRC, KPMG–REC, Bank of England and Citi.

There are clear signs of upward wage pressure in some sectors. HGV drivers, skilled construction and higher-paid manufacturing jobs all seem in excess demand. These sectors have generally benefited from COVID-related increases in demand – increases which are expected to persist. They have also been affected by reduced rates of EU immigration. (See Chapter 9.)

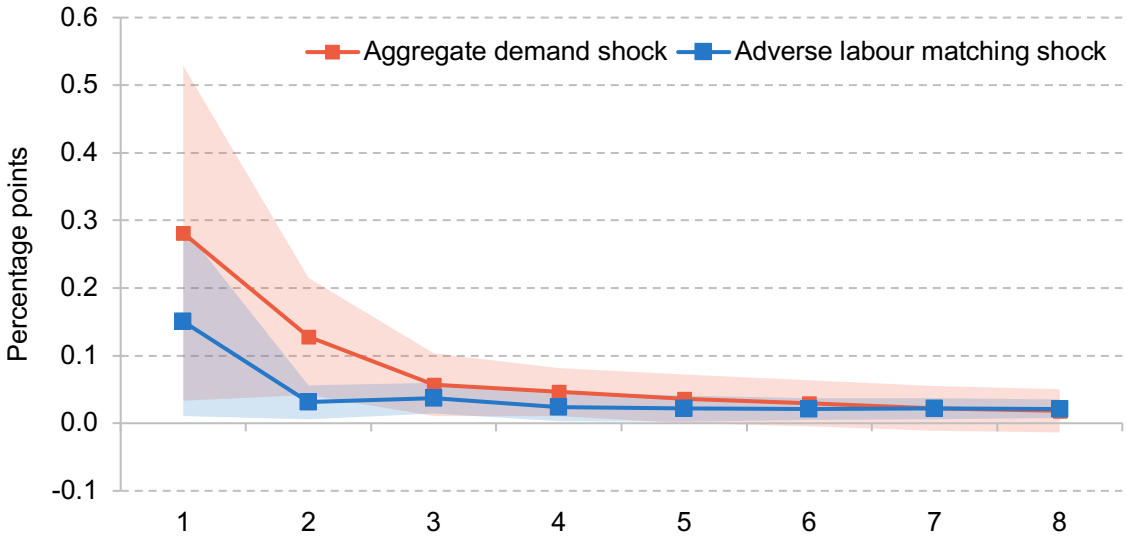
We expect wage growth in many of these areas to remain high over the coming years. Bank of England Agents currently show wage settlements increasing by between 10% and 40% in some of these sectors (Bank of England, 2021a). However, we expect these effects to be offset by growing wage reductions elsewhere in the economy. Data from indeed.com show strong wage growth in some areas is juxtaposed with weakness in white-collar work and some consumer services, for example. While Agents' data suggest some sectors have seen settlements in the double digits, overall these remain just at their pre-pandemic level (around 2–3%).

As adjustment progresses, these disinflationary effects may become more pronounced. In recent months, we think the impact of lower demand on wages has been truncated by a combination of efficiency wage effects (as more people worked from home) and extensive income support. As furlough support is dialled down and firms grapple with lower demand, we expect disinflationary pressure will increasingly come through. Combined, we expect a moderation of

wage pressures into 2022−23, with annual wage growth falling back to 3.2%. Underlying wage pressures, we think, are likely to prove a little weaker than these headline figures would suggest, with a skew in the recovery towards higher-paid and more capital-intensive sectors likely meaning some positive compositional effects.[41]

Moderating growth is likely to feed back into weaker consumption in 2022. Household energy prices are now set to increase by around 35% cumulatively between September 2021 and April 2022. This is likely to weigh on real household disposable income (post utility bills) by between 1ppt and 1.5ppt. With headline CPI inflation also set to accelerate to 4.5% YY through the first half of 2022 (see below), real purchasing power is likely to be eroded. The NICs increase, the cuts to universal credit and the potential for higher mortgage rates all add to the pressure here. Overall, we now expect real annual household disposable income growth (post utility bills) in 2022−23 to contract at a similar rate to 2008−09. Higher household savings could help households smooth through the shock. However, as we noted above, the distribution of savings suggests these will at best offer only a partial offset to households that now risk being most affected (Handscomb, 2021).

Figure 2.29. Impact of positive aggregate demand and adverse labour matching shock on quarterly wage growth (percentage points)



Note: Structural shocks are identified using the statistical approach of Uhlig (2005). Variables included are real GDP, unemployment, wage growth, consumer confidence and CPI inflation. Sign restrictions for positive demand shock are: GDP (+), unemployment (–), wage growth (+) and inflation (+). Sign restrictions for adverse labour supply (matching) shock are: GDP(–), unemployment (+) and wages (+). Sample period is 1991–2019. Shaded areas reflect median estimate ±1 standard error.

Source: ONS and Citi Research.

[41] This is in contrast to the post-GFC period – see Broadbent (2015).

Clearly, uncertainty here is enormous. On the one hand, the economic recovery could prove stronger. Equally, matching issues could be more extensive, adding to equilibrium unemployment and weighing on supply. In both cases, wage growth could prove stronger over the coming 12 months than we currently expect. However, only in the first scenario would we expect these pressures to be more sustained, based on historical experience (see Figure 2.29). In a case of elevated mismatch, higher wages have tended to be only temporary, with increases in unemployment (regardless of the cause) usually weighing on sentiment and demand.

2.5 What are the risks of another 'great inflation'?

The initial pickup in inflation has thus far proven stronger. This reflects a combination of statistical base effects and a sharp bounce in energy commodity prices – both of which should prove temporary. However, changes in the composition of household consumption are also driving inflation higher. In some cases, these have compounded the impact of external supply disruption. In others, challenges reallocating capacity across sectors have resulted in 'convexity' effects – driving unit costs up across the economy.

While these themes have further to run (we expect CPI inflation to peak at 4.6% year on year in April 2022), we still expect inflation to ease back sharply thereafter. Price increases so far have been concentrated in a few specific sectors. In some cases, these reflect some notable but likely transitory bottlenecks. In others, they reflect one-off changes in relative prices. Neither trend yet constitutes a persistent inflation shock. And while unit costs remain elevated, we continue to think this is more likely to be resolved via lower earnings, rather than higher prices.

The key risk in our view remains inflation expectations. In contrast to many other economies, the UK went into the pandemic with inflation expectations at target-consistent levels, rather than below. A period of monetary disorder within living memory also potentially leaves UK inflation expectations a little more vulnerable to upside surprises. For now, the risks here seem large but balanced – with near-term risks of an upward shift balanced against medium-term risks of a disinflationary one. However, in the near term, an upside move will be the risk to watch.

Striking resilience: inflation during the pandemic

Inflation has proven unexpectedly resilient through the pandemic. In 2020Q2, we had expected headline CPI inflation to trough at 0.2% year on year in Q3. The Bank of England was somewhat bolder – expecting inflation to trough at 0.0% year on year in 2021Q1. Instead, inflation troughed at 0.6%, despite a large fall in energy prices and cuts to VAT on hospitality and recreational services. On one measure of 'core' CPI inflation, UK prices are growing faster

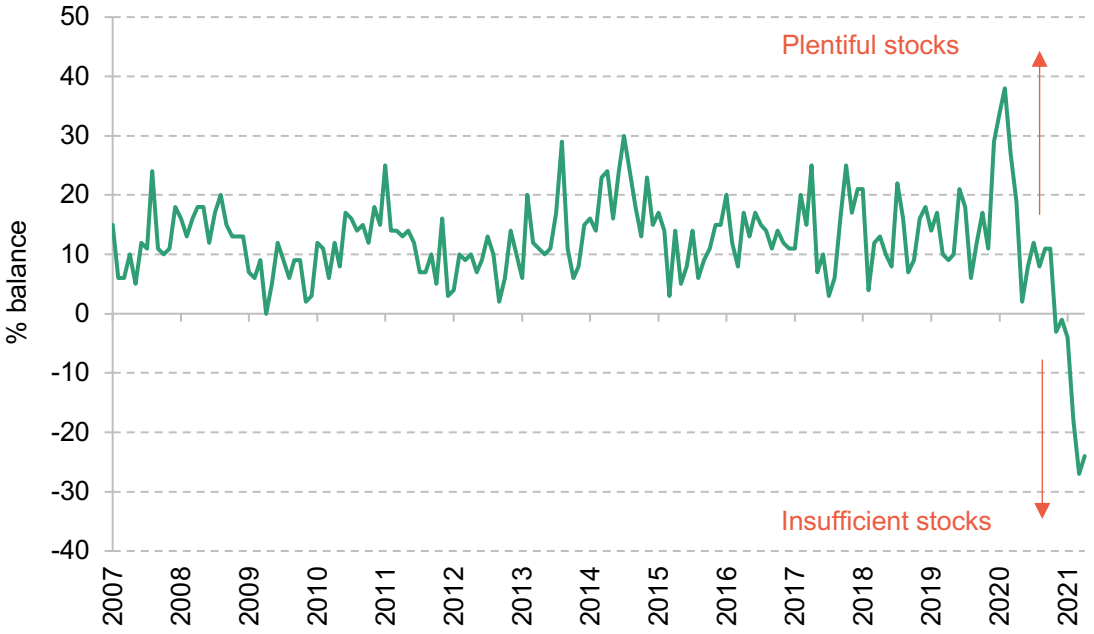
in 2021 than in 2020, and at a faster rate than many other G7 countries despite a larger drop in output – with only US inflation trending higher.

Underlying resilience here reflects three factors.

First, acute changes in the structure of final demand have acted to push up inflation. In a context where reallocation has lagged, production in 'in demand' sectors has quickly come up against diminishing marginal return constraints. Firms in 'out of demand' sectors are also saddled with large fixed capacities. These effects reflect the supply-side impact of rapid reconfiguration in demand, and therefore should ease as factor mobility recovers. But with demand unlikely to return to its pre-pandemic shape, we expect these effects to persist for some months yet.

Second, those areas that have suffered the largest reductions in demand have also generally had depressed incentives to pass these on into prices. This is in contrast to those areas enjoying the largest boost – where a combination of higher costs and strong demand have meant strong 'passthrough'. In part, this reflects structural features of affected sectors. For example, services inflation rates in general have often been less cyclical than equivalents in non-energy industrial goods. However, a particularly large reduction in demand (Linde and Trabandt, 2019), cash concerns (Gilchrist et al., 2017) and high uncertainty (Woodford, 2008) may have all had an additional effect. With demand depressed by health rather than price issues, the usual incentive to cut prices may have simply not applied.

Figure 2.30. CBI Distributed Trends Survey: retail stocks versus demand (% balance), 2007–21



Source: CBI.

Third, trade disruption and associated increases in import costs have also driven inflation higher. Import prices have jumped in recent months. These have fed through into higher CPI more quickly than is usually the case.[42] This may reflect depleted domestic inventory levels within the UK's distribution sector (Figure 2.30). Through the pandemic inflation has been heavily concentrated in areas that have seen higher demand but have also been exposed to external supply disruption. Many of these effects likely have further to run.

Inflation through the rebound: a sharp acceleration

As the UK economy has reopened, headline inflation has accelerated sharply. We currently expect CPI inflation to increase to 4.5% year on year in December – subsequently averaging 4.2% in the first half of 2022. However, inflation is likely to fall back sharply in the period thereafter. And while inflation may be high, we ultimately expect transitory inflation to collapse into disinflation in the period thereafter.

The drivers of inflation here are best split into three: those that are temporary, those that are transitory (but 'sticky') and those that risk proving more persistent.

First, the temporary. A combination of base effects and energy price inflation is likely to continue to add to headline inflation over the coming 12 months. Inflation fell during the early part of the pandemic as a result of widespread energy price reductions and price imputation. We expect the associated base effects to add 0.5ppt in 2021Q4 and 2022Q1. The unwind of the temporary reduction in the VAT rate for hospitality services should also add to inflation over the coming 12 months – with the largest positive effect likely in 2022Q3. Household energy prices are likely to prove the largest near-term boost, however. A new Ofgem price cap from October will likely see household energy prices increase by 12% compared with levels in September. Bankruptcies within the sector may add a further 0.5ppt. Sharp increases on wholesale gas and electricity prices now also imply a further 19% MM increase in April 2022. We expect these effects to drive inflation above 4% year on year for six of the seven months from November 2021 to May 2022 (Figure 2.31).

Second, persistent supply chain disruption is also likely to add to inflation over the coming months. These effects are likely to be transitory, but 'stickier'. We expect non-energy industrial goods inflation to increase as a result – adding 1.2ppt to headline inflation in 2022Q1 versus 2021Q1. The key question is how persistent these impacts prove to be. The key factors here are likely external: (1) the degree to which global production and trade recover over the coming

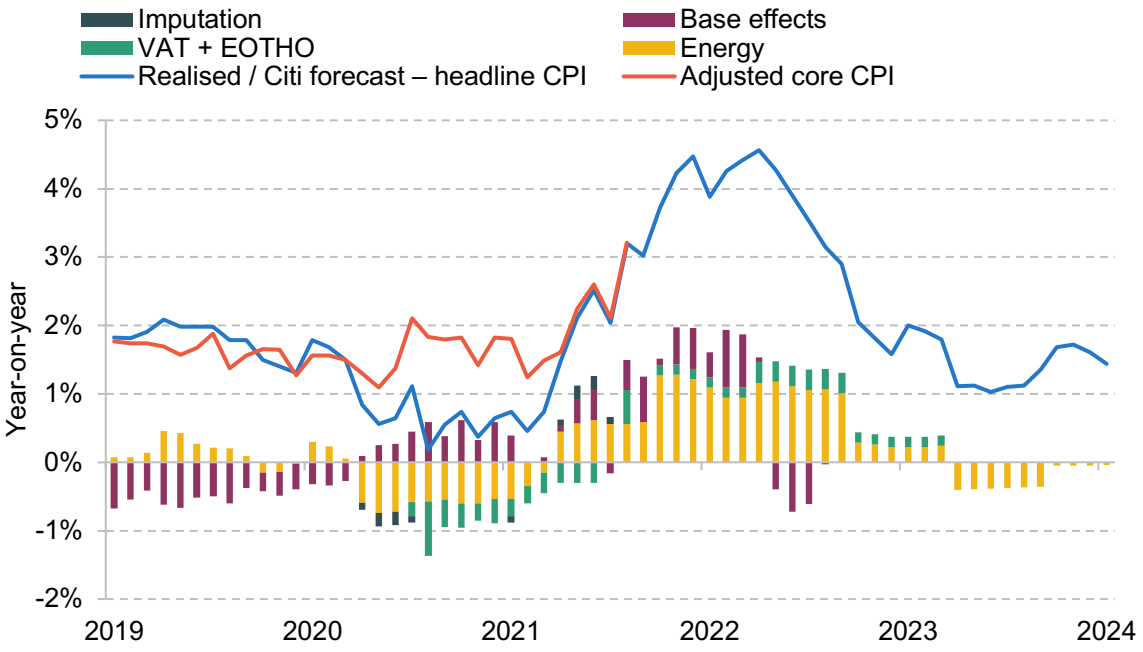
[42] A rough rule of thumb usually suggests a 5% increase in import prices adds 0.8ppt to CPI inflation after four quarters (and 1.6ppt after three years). During the recent crisis, the two seem to have moved with a lag of just a month or two. See Forbes (2015) and Saunders (2021).

winter; (2) the degree to which logistics and manufacturers can alleviate current bottlenecks; and (3) the degree to which global goods demand eases.

We condition our forecasts on the assumption that the global pivot towards durable goods gradually eases back. We also assume global supply chains avoid another widespread shutdown over the winter. The key challenge is likely to be freight, where prices have continued to accelerate in recent months (see Chapter 1). We judge that the passthrough from input into retail prices will be relatively quick, owing to low inventory levels and strong demand. This implies a peak in inflation through the Christmas shopping season. If demand remains strong, some of these pressures could take some time to dissipate. However, we expect the headwinds to household consumption in the first half of next year to mean a sharp peak is accompanied by a relatively sharp fall as cost pressures begin to dissipate (Figure 2.32).

Third and finally, what could drive higher inflation on a more persistent basis? Largely it is these effects that policy has to worry about – with monetary policy only affecting inflation over an 18–24-month horizon.

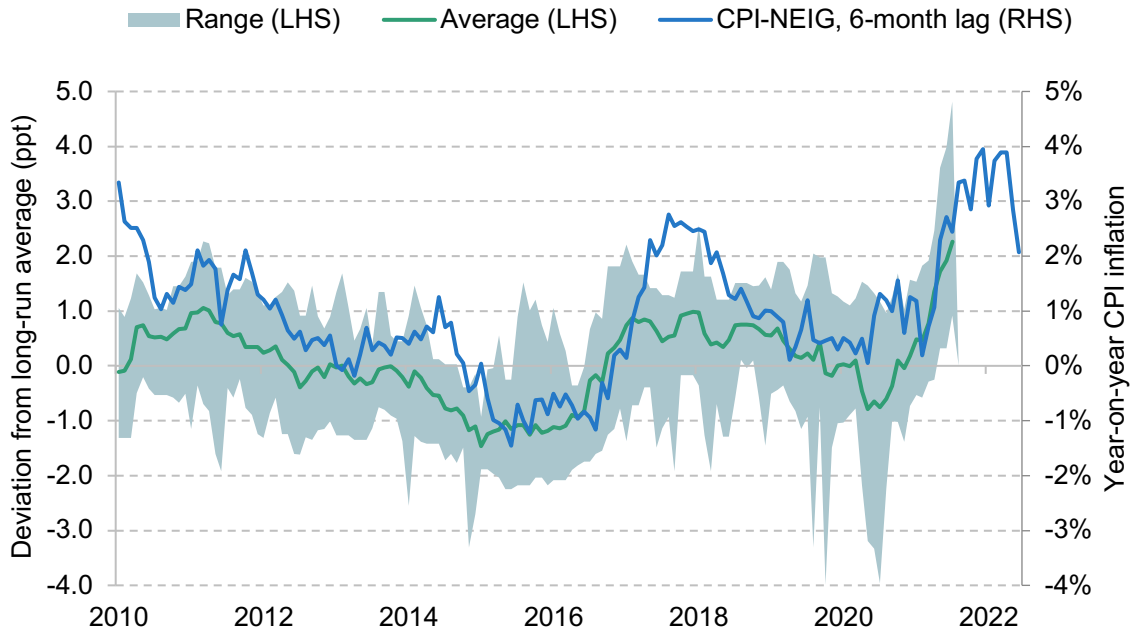
Figure 2.31. CPI inflation (%YY), 2019–24



Note: Adjusted core CPI is CPI excluding energy and food and adjusted for the impact of changes in indirect taxes. EOTHO is Eat Out to Help Out.

Source: ONS, Citi.

Figure 2.32. Indicators of goods price pressures (deviation from long-run average), 2010–22



Note: Measures included: Bank of England Agents, consumer goods prices and imported finished goods; manufacturing PPI; CBI distributed trends stocks and price expectations; BCC price pressure expectations, manufacturing PMI output and input prices; GfK consumer price expectations. CPI-NEIG = Consumer Prices Index (non-energy industrial goods).

Source: BoE, CBI, ONS, BCC, HIS Markit, GfK.

For now, despite the large acceleration in headline inflation, the risks here appear better contained. The recent jump in inflation has been driven largely by a small number of specific and more volatile elements. For example, while aggregate CPIX[43] was 0.7 standard deviations above its long-run average in August, if the index was instead reweighed by 'persistence' (the degree to which inflation now is a good indicator of inflation in the months ahead), inflation is only just back to its long-term average. Core services inflation is still below the threshold identified in 2019 by the Monetary Policy Committee (MPC) as the floor of the target-consistent range (see Figure 2.33). In part, weakness here reflects changes in the composition of consumer demand away from services and towards goods. However, domestically generated inflation pressures still appear contained.

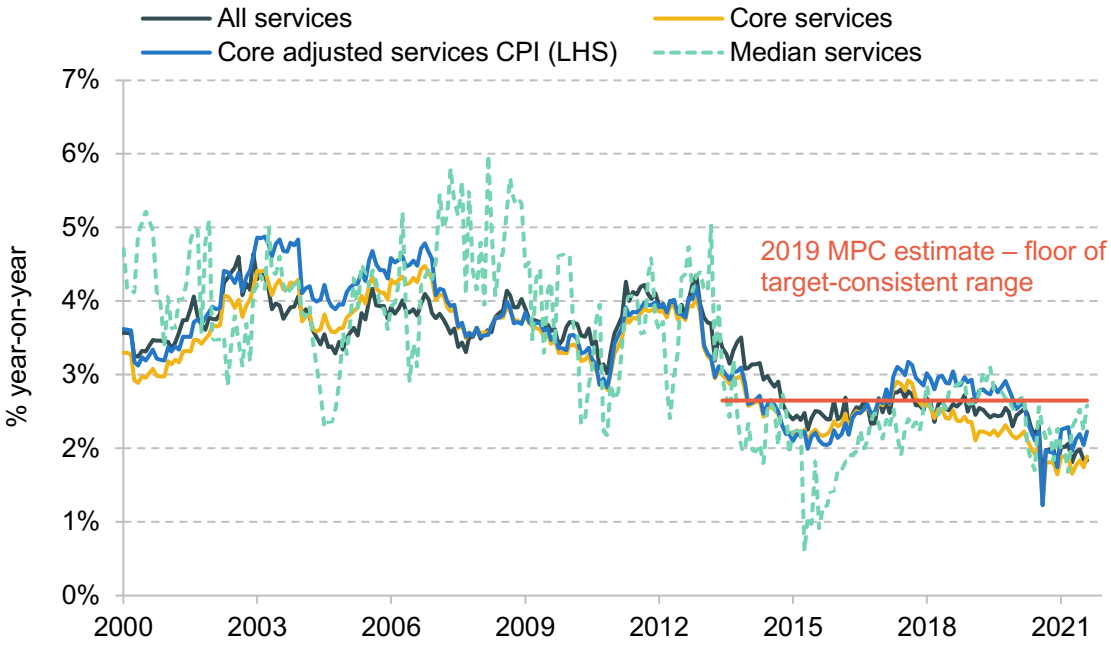
In a context of economic reconfiguration, the balance of risks here will remain difficult to judge through the recovery. Two factors matter. The first is the relative speed at which demand and supply are changing. When demand is changing more rapidly, this tends to weigh on supply and add to unit costs. This has been the pattern so far. For now, we expect the speed of demand reconfiguration to slow, and supply changes in 2021 to accelerate. The second factor is how

[43] CPIX is CPI excluding energy, housing services, education and financial services.

adjustment feeds back into incomes and demand. Reconfiguration does not occur in a vacuum. As we noted above with respect to the labour market, we expect wages to ease back in the months ahead as labour market slack emerges. With lower-income people generally at greater risk, we suspect this will feed through into aggregate demand and price growth.

To the degree domestic inflationary pressures have been evident in recent months, we expect many to ease back. Unit labour costs (labour costs per unit of output) are currently elevated, but for now this seems to be the result of reductions in hours worked, rather than more persistent changes in output. Similarly, to the degree these have increased, these effects seem to be concentrated in sectors that are suffering weaker rather than stronger demand – such as transport. This makes it more likely in our view that higher unit costs are resolved via the shedding of capacity, rather than by an increase in prices. We see the risks as similarly contained when it comes to so-called 'second-round' effects when higher inflation increases wage demands and prices. These effects have traditionally been less profound in the UK in recent decades – with the absence of strong trade unions impeding the ability of workers to 'pass up' prices to their firms. Now, as then, we do not expect increases in consumer prices to drive a much stronger wage outlook (Giani et al., 2021).

Figure 2.33. Trimmed measures of domestic CPI inflation (%YY), 2000–21



Note: Core services inflation excludes education, air transport and package holidays. Core adjusted services is core services inflation also excluding transport insurance and rents. Median services inflation is the median of year-on-year inflation rates across 64 categories included in services inflation. MPC 'floor' derived from January 2020 MPC minutes.

Source: ONS, BoE and Citi Research.

Even if wages do begin to increase on a one-off basis in the months ahead, we expect the passthrough to prices would be limited. This reflects the operation of well-anchored inflation expectations. When firms expect the Bank of England will return inflation to target in a timely manner, their incentive to pass on large price increases is more limited – and high wage demands also tend to encounter greater resistance.

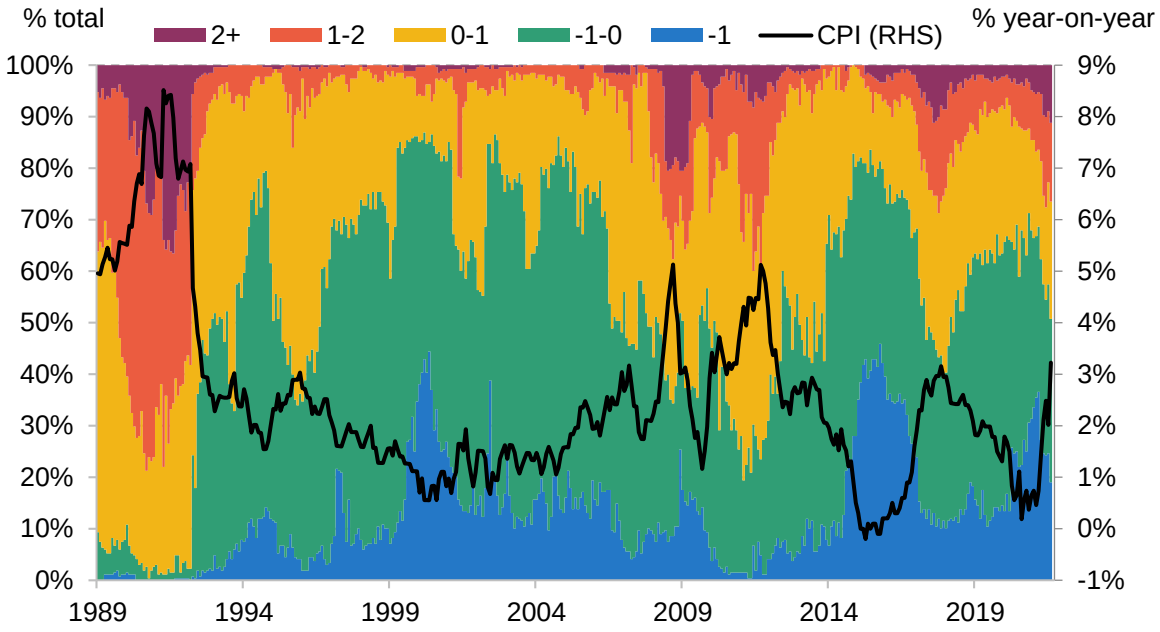
However, if inflation expectations begin to shift up, higher inflation could become more entrenched. This is now the key risk in the UK, especially given the large post-pandemic overhang of household deposits. If inflation expectations began to shift up and policy failed to react, these could now prove a destabilising accelerant.

Inflation expectations are the key risk ahead

The risks around inflation expectations remain notable. Household inflation expectations tend to be driven more by fuel, food and goods than by services (Rowe, 2016). These areas are likely to see a strong increase in prices over the coming months. Acute shortages could also affect inflation expectations, while strong house prices also imply further upward pressure. For now at least, inflation expectations seem well anchored (Figure 2.34). However, upward pressure is beginning to grow. Our own household inflation survey – conducted in conjunction with YouGov – saw long-term inflation expectations increase to 3.8% in September – their highest level since 2013 (Table 2.1). Financial market expectations show a similar trend. With CPI expected to accelerate to 4.6% year on year in April 2022, upside risks here will continue to require careful management.

However, upside risks now are also juxtaposed with downside risks further out. We expect at least some of the inflationary drivers today to collapse subsequently, leading to CPI inflation falling to 1.5% in 2023. While the economic consequences of COVID have been putting inflation expectations under some upward pressure in recent months, the main impact has been to flatten the distribution of inflation expectations. We expect this to prove a lasting legacy (Meeks and Monti, 2019). This suggests greater risk that inflation expectations could become de-anchored to the upside in the months ahead, but also de-anchored to the downside in the years ahead. Such a shift would also be costly. With monetary policy near its effective lower bound, such a move carries a particular risk of a ‘disinflationary trap’ where limited policy space and downward moves in inflation expectations compound one another (Krugman, 1998; Broadbent, 2020b). UK inflation has averaged target levels in the last decade, but this has only been with the support of two record sterling depreciations.

Figure 2.34. Distribution of inflation pressures across subcomponents (% total, categorised by standardised inflation rates), 1989–2021



Note: The categories reflect the number of CPI items by their position on a normalised distribution of inflation rates of a given subcomponent since 1990. The measure is based on two-year rather than one-year inflation rates.

Source: ONS.

Table 2.1. Various measures of inflation expectations

	Sept 2021	2016–20	2010–15	2005–10
12 months ahead				
Households				
BoE/TNS (%)	2.7	2.8	3.2	2.7
Citi/YouGov (%)	4.1	2.5	2.5	2.5
Firms				
CBI Distributed Trends (% balance)	72.0	40.3	34.0	23.9
5–10 years ahead				
Households				
BoE/TNS	3.0	3.3	3.3	-
Citi/YouGov	3.8	3.0	3.2	3.4
Markets	.			
5Y 5Y RPI swaps	3.8	3.4	3.4	3.4

Source: Bank of England/TNS, YouGov, CBI, Bloomberg.

2.6 What are the long-term effects of COVID?

The aftermath of both Brexit and COVID-19 is likely to require substantial economic adjustment. This is unlikely to be painless, and carries risks to economic potential. Some capital will be written down as the specific activity to which it applied becomes less valuable. In other areas, some workers and capacity will need to adjust. Historically, the longer this process tends to take, the greater the long-run damage. There is, then, greater interdependence between the speed and scale of the recovery.[44] In the longer term, we do not expect COVID-19 to have an impact on long-term potential growth rates, though we continue to think potential growth is likely to remain a little weaker (1.5% per year) than currently forecast by the OBR (1.7%).

Reductions in output through the pandemic have almost exclusively come through a reduction in hours worked – in many cases supported by the furlough scheme. Productivity within sectors has fallen marginally on average. But the overall impact on output per hour worked has been offset by disproportionate reductions in working hours among lower value-added sectors. Measured productivity, overall, has therefore increased.

From here, the longer-term impact of COVID-19 on potential output depends on two questions.

Hours worked

First, is the number of hours worked in the UK economy likely to be permanently smaller (or larger) as a result of the pandemic? We expect only a limited impact here. The total working-age population seems to have been more resilient than initially feared (discussed in Section 2.4). The key question here is the scale of net emigration. Despite considerable sector-specific challenges, we think the recent data have been suggestive of only relatively small changes. We assume a net employment loss totalling 130,000 as a result of one-off net emigration effects, weighing on output by 0.2ppt.

Limited losses here are likely to be complemented by only a limited fall in participation too. As we noted above, the risks here likely offset one another. A long period out of work, a large pay penalty and strong house prices increase the risk older workers choose to leave the labour force in the aftermath of the pandemic. However, there is little evidence yet that many more now plan to retire early. Downside risks here may also be offset by the positive impact on participation of a move towards more flexible working.

[44] This point has been made by others. In her annual report to the Treasury Select Committee, for example, Silvana Tenreyro noted 'The faster that output and employment can return towards their pre Covid trends, the less likely that temporary reductions in supply translate into more persistent scarring' (Tenreyro, 2021).

Instead, we think employment is likely the more persistent risk. As we noted above, medium-term equilibrium unemployment is likely to increase in the aftermath of the pandemic: we currently expect a 0.6ppt increase between 2022 and 2023, weighing on aggregate supply by roughly 0.3ppt. In our forecasts, these effects ease relatively quickly into 2024. However, more protracted adjustment could pose some notable risks. Persistent unemployment has been shown to weigh on both the probability of attaining work and the prospect of better-paid work (Wilson et al., 2020). These effects also seem to be particularly profound among younger people (Cribb et al., 2017). Policy already faces an uphill challenge managing some of these risks, with the number out of work for over six months increasing by 251,000.

We expect labour supply scarring to total just over 0.3% of GDP – primarily as a result of net emigration during the pandemic and a slightly higher long-term equilibrium unemployment rate. We also estimate that the loss of experience to date is likely to mean a 0.2ppt drop in productivity, with the loss of one year's work experienced estimated to weigh by 3% on individual earnings, all else equal (Buhai et al., 2014). These effects could be larger if the recovery proves lacklustre, and hysteresis effects have more time to take hold.

Productivity

The second question concerns productivity – specifically, is output per hour worked likely to be permanently lower compared with what could have reasonably been expected before the pandemic? The picture is here somewhat more complicated. The sharp drop in aggregate investment during the pandemic is likely to prove a net drag here, as is capital scrapping as reconfiguration progresses. On the other hand, heavy investment in intangible assets – and innovative ways of delivering output – could also add to productivity on a persistent basis.

On balance, we assign more weight to the first set of arguments. Write-offs to tangible capital in particular seem likely to weigh on long-term productivity. Here the main issue is likely to be capital scrapping as the economy adjusts. We estimate these effects using capacity utilisation rates in 2020Q4, discounted to reflect the impact of the rebound earlier in 2021. We then apply a 'redeployability' score based on the approach of Kim and Kung (2017).[45] Combined, we think this suggests total tangible capital scrapping of roughly 3%, translating into a hit to GDP of 0.7ppt. Here we have discounted write-downs to commercial property. More home working constitutes an activation of 'potential capital' that previously fell outside of the production boundary (Eberly et al., 2021), offsetting some of the impact.

By contrast, the outlook for intangible capital seems relatively strong. Investment here has already proven somewhat stronger during the pandemic. Changes in practice are also now likely

[45] This approach was taken in the Bank of England's November 2020 Monetary Policy Report.

to mean not just a more capital-intensive recovery, but an intangible-intensive one too. Investment here not only adds to the UK's private asset base, but also total factor productivity (TFP) (Haskel, 2021b). We currently expect total intangible capital services to end 2025 around 0.5% above their pre-COVID trajectory, implying a direct GDP boost of 0.2%. Depending on the scale of the feedback effect to TFP, however, this could prove greater. For now, we assume the latter to remain somewhat depressed by reconfiguration challenges.

Taken together, we think these factors imply total scarring of 1.4% of GDP as a result of the pandemic – significantly less than initially feared and notably less than the OBR's latest assumption of 3.0%, but a little more pessimistic than the Bank of England's latest assumption of 1.0% (see Table 2.2). While significantly less than for other recent downturns – and in particular the financial crisis – this is not necessarily strong in comparison with previous pandemics where full economic recoveries have been possible (Dahl et al., 2020), if not the norm, and now seem likely in other economies such as the United States.

However, we still expect output to lag the OBR's pre-COVID trajectory by roughly 2.5ppt. Brexit remains the notable additional concern. While a strong recovery from the pandemic is possible, we continue to expect additional trade frictions will weigh heavily on output in the years ahead. Alongside the OBR, we have adjusted our population estimates to use the ONS's zero migration scenario to model labour supply growth. The key question is the impact on productivity. In March, the OBR reaffirmed its previous assumption that Brexit would weigh on the UK overall by roughly 4%, with around 40% of the productivity impact already reflected in the impact of Brexit-related uncertainty between 2016 and 2020. The rest, it seems, is assumed to accumulate gradually over the coming 15 years.

Table 2.2. Comparison of COVID-19 scarring assumptions (% of real GDP)

	OBR, November 2020	Citi	Bank of England
Total scarring	3.0	1.4	1.0
of which:			
Hourly productivity	2.0	1.2	
Capital scrapping	0.8	0.7	
Total factor productivity	1.2	0.4	
Labour supply	1.0	0.3	
Population	0.2	0.2	
Participation	0.5	0.0	
Equilibrium unemployment	0.3	0.1	

Source: Bank of England, OBR and Citi Research.

We see it slightly differently. First, we expect the long-term impact of the move to the Trade and Cooperation Agreement to be a little higher – with a net 12% drop in trade likely to mean an aggregate productivity loss of a little below 8%. This reflects a larger trade production elasticity, but one more in keeping with recent literature[46] and the exposure of sectors that tend to exhibit increasing returns to scale.[47] We think around a third of these costs have already materialised. Alongside our view expressed above that there is more near-term Brexit-related adjustment to come, we expect a greater portion of these effects to now also prove front-loaded. Hence, while OBR estimates would suggest an aggregate Brexit impact of roughly 0.5ppt over the coming three years, we expect something closer to 1.6ppt.

Hence, we still expect total output to be around 2.5ppt below March 2020 OBR forecasts – despite the downward revision to our own COVID scarring assumptions. Beyond the current forecast horizon, adjustment here in the longer term also implies a potential growth rate roughly 0.2ppt below the OBR's. We therefore expect long-term growth of roughly 1.5%.

2.7 Conclusion: what is policy to do?

The economic outlook we have outlined above suggests the UK faces a tricky recovery in the years ahead. Uncertainty remains high, as reflected in the elevated spread between our two alternative scenarios (in Boxes 2.1 and 2.2). But the initial economic rebound does seem to have increasingly proven incomplete. With the broader economic recovery contorted by large sectoral and regional imbalances, we think a protracted period of adjustment likely lies ahead.

For policy, these effects suggest a distinct profile to the recovery. Rather than demand fluctuating around fixed supply, demand and supply are likely to recover simultaneously – though not in lockstep, with demand exceeding supply in some parts of the economy and lagging it in others. In this environment, traditional measures of the output gap are likely an imperfect guide for policy. For example, we noted in Section 2.4 that older workers may return to the labour market only slowly. A stronger recovery may speed this process along. This could also mean more investment, and a greater incentive to reapply different assets. These considerations apply in normal times to some degree (Fornaro and Wolf, 2021), but in a context of economic

[46] Many official forecasters, including the Bank of England, have assumed a trade production elasticity of 0.25 based on Freyer's (2009) study of the 1970s closure of the Suez Canal. We base our value on a 2013 study by Felbermayr and Gröschl (2013) looking at more recent impacts of natural disasters – this suggests an elasticity of 0.74.

[47] In this case, the productivity impact of a drop in trade tends to be extenuated – see OBR (2018). See also Melitz (2003).

reconfiguration we think they have the potential to be more extensive.[48] For policy, this means recognising the potential for supply to be more responsive to changes in demand.

This provides a good reason for policy to remain patient. In a context of extreme uncertainty, policy should be focused on a spectrum of risks, not a single objective. Currently, we think this leans in favour of keeping policy accommodative for longer. Tightening prematurely could mean not only a slower recovery, but ultimately a less complete one too. While the long-term 'scarring' effects of COVID need not be as dramatic as we might have feared, they could turn out to be if the recovery proves underwhelming – as we discussed above. These effects apply on top of more established risk management concerns (Evans et al., 2015). The latter still hold some weight in our view. With rates near zero and the Bank of England currently holding over 40% of all outstanding gilts, if inflation began to undershoot, it is not clear the Bank of England now has the means to stimulate a path back.

These risks now have to be weighed up against very real concerns surrounding rising inflation expectations. The ultimate constraint on any monetary or fiscal policy today remains the UK's external deficit. Domestically, the most important factor in ensuring continued access to international capital markets is the credibility of the Bank of England. A perceived threat to the pre-eminence of price stability, especially for a large dual deficit economy like the UK, could be hugely and immediately damaging. With inflation now set to accelerate to above 4% for six of the seven months between November 2021 to May 2022, the challenges here are clear. Upside pressure is already evident in longer-term financial and household inflation expectations. These began the crisis in line with target levels, not below. If these were to consistently shift up, monetary policy would have to act to reaffirm its commitment to price stability in order to avoid fears of a further departure from its mandate.

However, from here, policymakers do likely have room to manage many of these risks. If policy does prove too accommodative and inflation expectations begin to edge up, monetary policymakers would also still likely have scope to react without triggering financial ruin. Doing so would be costlier than if inflation expectations had been stable, but this need not result in large-scale financial instability. The UK's 1970s experience shows that it was not inflation expectations shifting up that drove accelerating monetary disorder, but the lack of a timely and sufficiently aggressive policy response (Barnett et al., 2010; Broadbent, 2020b, 2020c). As long as the Bank feels it has the tools and political backing to react to shut down these pressures if expectations increase, the risk of an initial increase in inflation expectations should not

[48] We think there is greater potential for multiple long-term macroeconomic equilibria in the aftermath of the pandemic. For a discussion of the drivers here, see Vines and Willis (2021), Nabarro (2021a) and Krugman (2003).

necessarily be prohibitive *ex ante*. Instead, this provides a firm rationale for reacting in a timely fashion *ex post*.

For now, we would emphasise that the UK economy remains a large recession off its pre-pandemic trajectory. There are over 1 million UK workers who until very recently were supported either in full or in part by furlough. While bottlenecks and supply disruption are likely to take time to ease, one has to be very pessimistic about the supply side of the economy to assume we are already 'running hot'. Some parts of the economy may be seeing high demand, but others are also seeing depressed demand and disinflation. For now, this looks more like reconfiguration than a complete, sustained and broad recovery. In our view, this suggests many of the current cost pressures are more likely to prove temporary. The risk of a persistent domestically driven inflationary surge still seems contained.

Instead, we think the focus for policy should be on sustaining a level of demand such that it errs on the side of pulling the recovery in supply, rather than acting as a fetter. With the recovery in capacity likely more responsive than usual to a strong cyclical recovery in demand, this is likely the best way to ensure minimal long-term scarring from the pandemic. In the near term, this could pose some additional inflationary risks. But just as allowing inflation to overshoot in perpetuity would pose a threat to the UK economy, there are also risks in overreacting unnecessarily. This would weigh on the real economic recovery in the long term, and could also pose risks to monetary stability if, as we expect, transitory inflation does give way to a subsequent period of disinflation in 2023.

The UK economic authorities do not currently appear to share our view. The Bank of England has repeatedly signalled an intention to normalise policy relatively quickly in the years ahead – and is now considering increasing Bank Rate before the end of the current asset purchase scheme in mid December (Bank of England, 2021e, para. 65). We condition our forecasts on a first hike to Bank Rate in February, and again in the autumn of 2022 – triggering a passive unwind of the balance sheet. However, we do not expect the economic recovery to prove sufficient to drive a genuine rate-hiking cycle. The Treasury has already legislated for tax increases from April 2022 (see Chapter 3). This increases the downside risks to the recovery in both the medium and longer term.

What is also clear going forward is that fiscal policy must be ready to take on responsibility for macroeconomic stabilisation. Without this, a lack of monetary policy space increases the risks of persistent disinflation if the recovery begins to soften. For now, UK fiscal policy seems a long way from ready. We think this leaves the UK extremely exposed.

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3. Outlook for the public finances

Carl Emmerson and Isabel Stockton (IFS)

Key findings

1 **The economic and fiscal outlook for this year has improved hugely since the March Budget**: our central projection is for borrowing in 2021–22 to be £180 billion, over £50 billion below the March Budget forecast. This striking reduction is driven by a boost to revenues from higher growth, alongside our assumption that departments will underspend by even more than the Office for Budget Responsibility (OBR) expects. Nevertheless, at 7.7% of national income, borrowing would remain extraordinarily high: since the Second World War, that level has only been reached during the financial crisis – and last year.

2 **Stronger economic performance is expected to be only partly persistent**: by the middle of the decade, Citi's forecast is for the economy to have returned closer to the path forecast in the March Budget, with the boost to real-terms growth fading out entirely. **But assuming that large tax rises announced in March and September go ahead and current spending plans are not topped up, they appear sufficient for borrowing to continue to run at least £20 billion a year below the March 2021 Budget forecast, and for the current budget to be in surplus from 2023–24.** Under our central scenario, borrowing in 2024–25 is £5 billion *lower* than forecast pre-pandemic as the tax rises announced in the March 2021 Budget more than offset the enduring economic impact of the pandemic on revenues.

3 Uncertainty around this central scenario continues to be extraordinarily high: **in Citi's optimistic scenario, where there is no long-term economic damage, we would expect the overall budget deficit to be eliminated for the first time since the turn of the millennium.** This would be driven by the Chancellor's relatively tight set of spending plans, combined with large tax rises and higher inflation. Even a more moderately optimistic scenario based on the

Bank of England's growth forecast could lead to borrowing in 2023–24 being as low as 1.7% of national income (or £44 billion), some 0.8% of national income (£19 billion) lower than our central scenario. Under these more optimistic scenarios, some of the planned tax rises would be less likely to go ahead, and spending plans would be more likely to be topped up.

4 **In a pessimistic scenario where a vaccine-resistant COVID variant forces further lockdowns, borrowing is forecast to still be 5.1% of national income by 2024–25, more than twice the level forecast pre-pandemic.** It would only take growth from now until 2025–26 to average around 3.2% a year, rather than the 3.7% a year in our central forecast, for there to be a £10 billion deficit on the current budget at the end of that period. Further tax rises and/or continued squeeze on some public spending would be likely to follow at some point if scenarios such as these came to pass.

5 Under Citi's central scenario, the tax rises set out by the Chancellor would, if implemented in full, be enough to **prevent debt from rising further beyond 2023–24 – but it would only start to fall very slowly and, at 89% of national income, would be 17% of national income higher in 2025–26 than it was pre-pandemic**. This additional debt has been effectively financed by increased deposits from commercial banks held by the Bank of England. This depresses debt interest spending, but also increases the exposure of debt interest spending to rises in interest rates.

6 Interest rates on government bonds have risen this year, with yields on 30-year bonds averaging 1.13% in September 2021 having averaged just 0.86% in January 2021. Alongside this, RPI inflation – which feeds directly into interest payments on index-linked debt – has risen from just 1.4% in the year to January 2021 to 4.8% in the year to August 2021. **This has pushed up debt interest spending such that we expect it will be around £15 billion a year higher than forecast in March.**

7 **Long-term challenges that were known prior to the pandemic are putting additional pressure on the public finances and will continue to grow over the longer term.** Were increasing costs for healthcare, adult social care and state pensions accommodated through higher borrowing, debt would be on an increasing, and indeed accelerating, path. The estimated direct fiscal impact of transitioning to a net-zero economy by 2050 makes this increase even steeper in the late 2020s, 2030s and 2040s, but that impact is expected to decrease over time. It seems unlikely that those pressures will be met by another dose of

austerity for other public services. **Given this, and the risks from much elevated debt, there will therefore be a strong case for further sizeable – and permanent – tax rises to be implemented in the second half of this decade.**

8 These long-term pressures, rather than the immediate consequences of the pandemic, are the drivers behind the tax rises announced by the Prime Minister last month. **If the new health and social care levy is to rise to meet future health and social care pressures then we estimate that its rate will need to more than double from 1.25% to 3.15% by the end of this decade.**

3.1 Introduction

Since the easing of the latest nationwide lockdown, the early economic data have been encouraging. There are signs of a strong recovery in consumer spending and the labour market, and with them government revenues. However, there remains substantial uncertainty over the speed and, more importantly in the longer term, the completeness of the recovery. Most forecasters continue to expect some degree of long-term economic damage, as some who lost their jobs do not find equally productive alternative employment (see Chapter 9 for a discussion of developments in the labour market), some firms that would otherwise have survived go to the wall, while other firms do not fully make up for investment decisions delayed during the pandemic. The severe disruption to face-to-face education and to exams will also have enduring impacts. As government support, including business loan programmes and the Coronavirus Job Retention Scheme (better known as furlough) are withdrawn, the extent of economic restructuring required, and the ease with which it can be achieved, will become more apparent.

The 'central' Citi/IFS forecast, which assumes that the government's tax and spending plans are kept to (unlike the scenarios in Chapter 2 which assume a further fiscal loosening), underlies the analysis in this chapter. It is more optimistic about growth, especially this year, than official forecasts at the time of the March Budget. This is partly a matter of timing: the boost to real-terms growth fades away by the end of the forecast period in 2025–26. But the large boost to nominal growth, which matters for the public finances, especially while income tax thresholds are frozen, is somewhat more persistent. While this is partly countervailed by higher debt interest spending – up by £14 billion this year relative to the March 2021 Budget forecast – we would expect the deficit to be £54 billion lower this year, and between £21 billion and £24 billion lower in subsequent forecast years.

To illustrate the extraordinarily wide range of uncertainty around this central forecast, Citi has presented two illustrative alternative scenarios. We describe and contextualise these scenarios in Section 3.2, and then set out in Section 3.3 what they would imply for the path of borrowing under current tax and spending plans.

In Section 3.4, we move on to consider the trajectory of debt under the three scenarios and examine the impact of recent increases in interest rates on government bonds on debt interest spending. To the extent that these reflect the improved growth outlook, they are far outweighed by higher tax revenues. However, further sizeable increases in interest rates would prove a challenge if not accompanied by stronger growth in the economy.

In Section 3.5, we look beyond the COVID-19 crisis and immediate recovery, at debt dynamics over the next 45 years, and the impact of rising costs of healthcare, adult social care and state pensions, as well as the estimated direct fiscal impact of the transition to net zero by 2050. Section 3.6 concludes.

3.2 A faster recovery

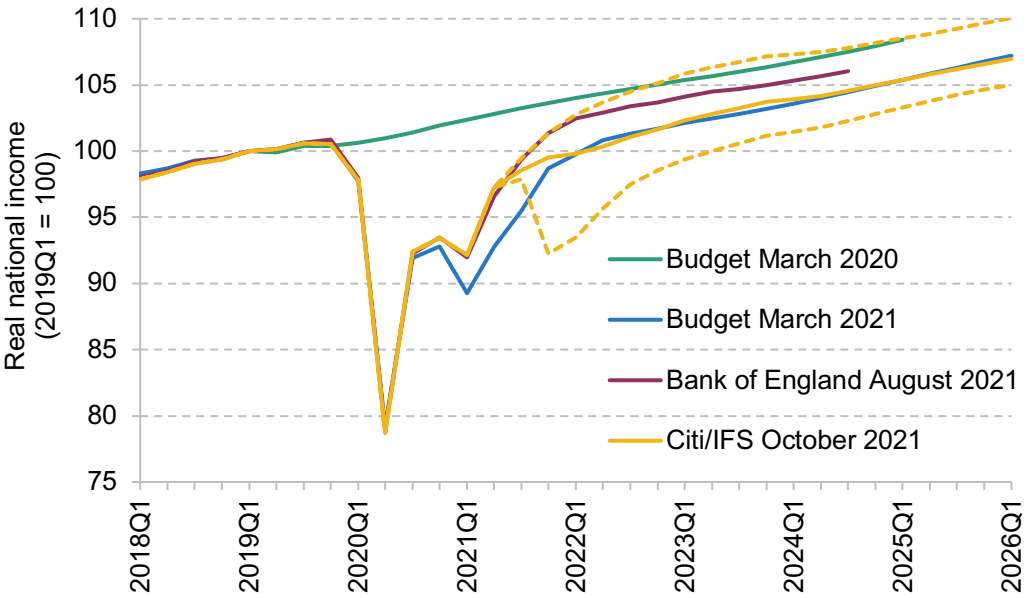
With most restrictions on social contact and economic activity now lifted, most early economic indicators have painted a relatively optimistic picture of the recovery (see Chapter 2). Consistent with these encouraging early data, the central forecast has much higher growth in the short term in both real (Figure 3.1) and nominal (Figure 3.2) terms than the official Budget forecast back in March. In addition to the impact of good news on the economy's post-lockdown recovery since March, the difference between the Budget forecast and Citi's central scenario also reflects differences in their judgements of a range of other economic factors, such as the impact of Brexit.

The 'central' Citi forecast suggests that the economy will return to its real-terms pre-pandemic *size* by the spring of 2022, as did official forecasts at the time of the March Budget. The Bank of England's latest forecast is more optimistic and suggests that threshold will already be crossed by the end of this year.

But none of these central forecasts sees the economy returning to its pre-pandemic *growth path*. In other words, under each of these central forecasts, some of the growth lost during the pandemic is not recovered and the productive capacity of the economy is permanently smaller than it might have been, had the pandemic never happened. Indeed, it would be surprising if the enormous hit to activity through the pandemic did not lead to at least some persistent damage to economic output. In Citi's central scenario, despite the early improvement in growth, by 2025–26 the economy is expected to be the same size in real

terms as forecast by the Office for Budget Responsibility (OBR) at the time of the March Budget.

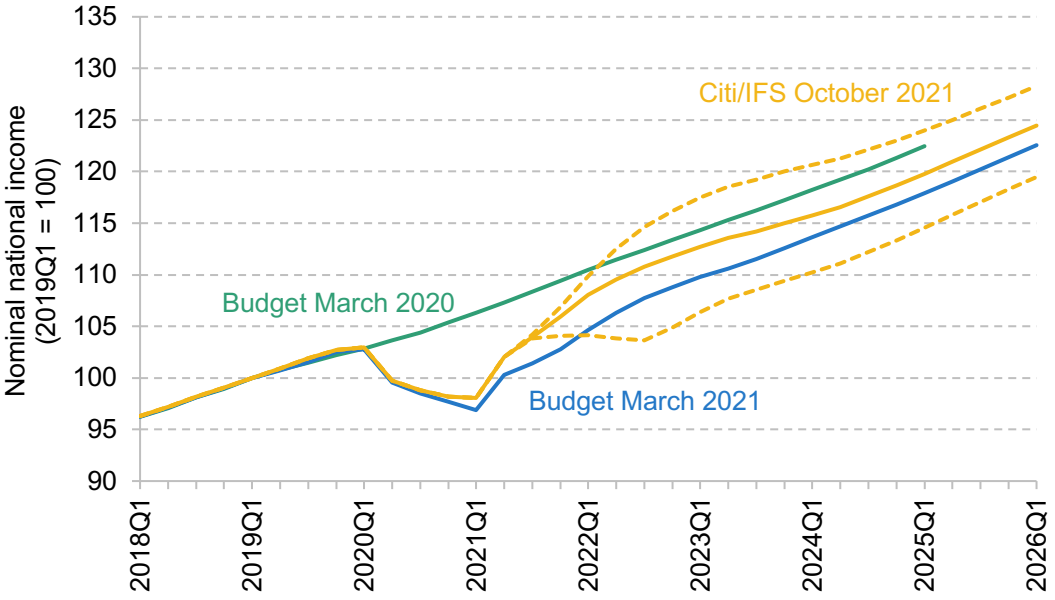
Figure 3.1. Forecasts for quarterly national income in real terms



Note: Four-quarter rolling averages are shown. Dashed lines indicate Citi's optimistic and pessimistic scenarios. Bank of England includes backcast.

Source: OBR's Economic and Fiscal Outlook, March 2020 and March 2021; Bank of England's Monetary Policy Report August 2021; Citi forecasts.

Figure 3.2. Forecasts for quarterly national income in nominal terms



Note: Four-quarter rolling averages are shown. Dashed lines indicate Citi's optimistic and pessimistic scenarios.

Source: OBR's Economic and Fiscal Outlook, March 2020 and March 2021; Citi forecasts.

But while real-terms growth is a better measure of overall economic well-being, nominal growth matters more for the public finances. This is driven by the fact that taxes are levied on nominal incomes (which is especially important when income tax thresholds, such as the personal allowance, higher-rate threshold and additional-rate threshold, are all set to be fixed in cash terms for several years) and on nominal consumer spending. At the same time, departmental spending plans are typically fixed in cash terms, although higher inflation can create pressure for these plans to be revised upwards. In consequence, higher nominal growth tends to improve the public finances whether or not it is underpinned by faster real-terms growth, because tax revenues tend to rise in response while departmental spending might not.

In nominal terms, the improvement in growth under Citi's forecast only partially fades away, leaving the cash size of the economy about 1½% bigger by 2025–26 in Citi's central scenario than forecast at the Budget in March. This implies the economy running just under 3% smaller in real terms than the official pre-pandemic forecast, with the gap in nominal terms just under 2½%.

Public finance forecasts are always subject to uncertainty, but this continues to be heightened by the pandemic. Huge uncertainty remains around the future trajectory of the virus in the UK and globally, as well as the extent to which changed patterns of work, consumption and investment will persist into the post-COVID future. How swiftly and smoothly the economy adjusts to these changes will be of crucial importance.

The wide range between Citi's two alternative scenarios illustrates this: in its optimistic scenario, where economic confidence is restored quickly and little or no restructuring is required, the real size of the economy does return to its pre-COVID growth path – and in nominal terms, which matters most for the public finances, it grows by even *more* than forecast pre-pandemic (due to higher economy-wide inflation). This may, unfortunately, not be likely to emerge, but is useful as a best-case benchmark. In contrast, in Citi's pessimistic scenario, a vaccine-resistant strain and renewed restrictions cause further damage to an economy which will need to adjust in a much more significant way to long-term changes in consumers' and firms' behaviour and, in the process, falls further behind the pre-pandemic growth path. Such a scenario may also be unlikely and we should certainly hope that it does not occur. But it will be prudent for policymakers to prepare for what action they would take were it to emerge.

3.3 Outlook for borrowing

In 2020–21, the latest out-turn data suggest that borrowing was £325.1 billion, which is £30 billion lower than the £354.6 billion forecast by the OBR in the March Budget. The improved outlook for the nominal size of the economy in the central and optimistic scenarios

translates into higher revenues and lower borrowing going forwards.[1] Under Citi's central forecast, we expect borrowing to be £54 billion lower than in the March Budget this year, and between £21 billion and £24 billion lower (in cash terms) in subsequent forecast years. As long as spending plans are not topped up further, the large tax rises announced in March and September 2021 would be enough, under the central scenario, to outweigh ongoing weakness in the economy and higher debt interest spending, and push borrowing to £5 billion *below* the pre-pandemic forecast in 2024–25.

The key development that reduces borrowing relative to the March Budget forecast is that recent improvements in the economic outlook push up revenues (see Table 3.1). In addition, after departments underspent against planned limits by some £34 billion in 2020–21, we assume that the £55 billion 'COVID-19 Reserve' set aside for the current financial year will also only partially be spent, contributing to an additional £10 billion of underspend this year (on top of the £11 billion general underspend, and £4 billion additional COVID-related underspend already assumed by the OBR). Spending on the furlough scheme, and the Self-Employment Income Support Scheme, has also been substantially lower than forecast in the first few months of the financial year, which will contribute to lower spending over the year as a whole (although of course the scope for additional underspends ends with the expiry of these schemes).

Table 3.1. Changes in the borrowing forecast for 2021–22 (£ billion)

	Budget March 2021	Central scenario	Difference
Public sector net borrowing	234	180	–54
Revenues	819	873	53
Spending	1,053	1,053	–0.3
Of which:			
Debt interest	25	38	14
Underspend	15	25	10

Note: Debt interest is central government debt interest net of income from the Asset Purchase Facility.

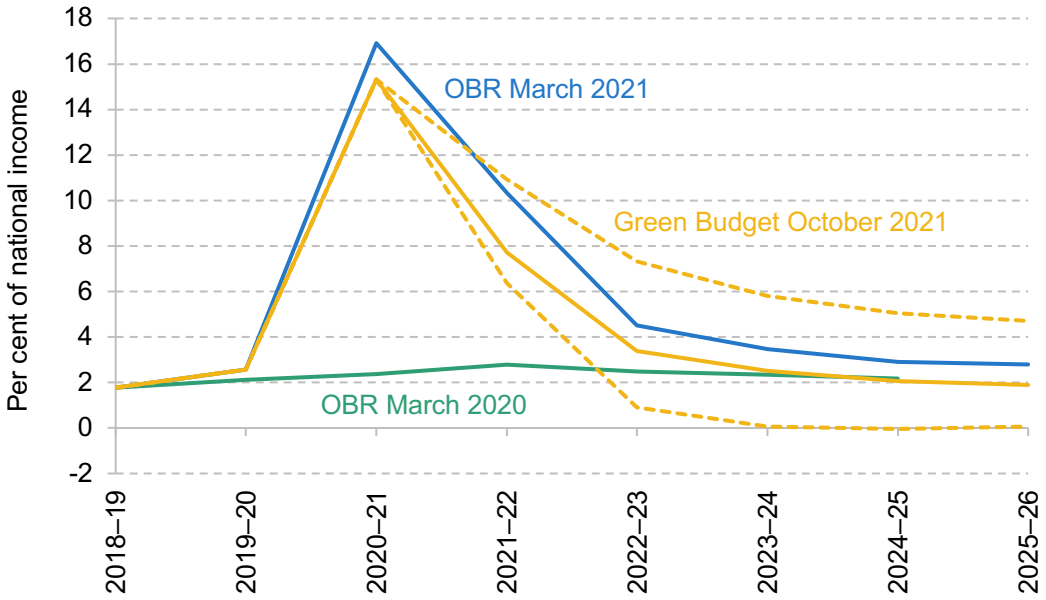
Source: OBR's Economic and Fiscal Outlook, March 2020 and March 2021; Citi forecasts; authors' calculations.

[1] We decompose the change in the fiscal forecast between the March 2020 and March 2021 Economic and Fiscal Outlooks into changes due to nominal GDP, the stock market, debt interest and discretionary policy measures and scale these impacts according to Citi's current macroeconomic forecast and changed interest rate expectations. For more details, see box 4.1 of Emmerson and Stockton (2020).

In the current financial year (2021−22), we would expect revenues to reach £873 billion in the central scenario, just 4.2% below the pre-pandemic Budget forecast, compared with £819 billion, or 10% below the pre-pandemic forecast, that the OBR forecast back in March. In the optimistic scenario, revenues even reach £902 billion, shrinking the gap with the pre-pandemic forecast further to just 0.9%. In contrast, in the pessimistic scenario, more lingering economic damage depresses revenues to £810 billion, 11% below the pre-pandemic forecast and similar to the OBR's March Budget forecast.

Pushing borrowing up instead of down, debt interest spending is now forecast to be £14 billion higher in 2021–22 than forecast in the March 2021 Budget. This is driven by the increases in interest rates on government bonds seen since the Budget was finalised. If correct, this would make debt interest spending £1 billion higher than under the pre-pandemic forecast for 2021–22, and would be despite it coming in £11 billion lower than forecast pre-pandemic in the previous financial year. Compared with the large improvements in the fiscal position from stronger nominal GDP, greater underspend, and stronger-than-expected growth in revenues since April, this would be a more modest change.

Figure 3.3. Forecasts for borrowing (% of national income)



Note: Dashed lines indicate Citi's optimistic and pessimistic scenarios.

Source: OBR's Economic and Fiscal Outlook, March 2020 and March 2021; Citi forecasts; authors' calculations.

Table 3.2. Forecasts for borrowing (£ billion)

	OBR Budget forecasts		Green Budget October 2021		
	March 2020	March 2021	Central	Optimistic	Pessimistic
2019–20	47.4	57.1	57.1	57.1	57.1
2020–21	54.8	354.6	325.1	325.1	325.1
2021–22	66.7	233.9	180.2	151.2	246.3
2022–23	61.5	106.9	82.4	22.9	168.4
2023–24	60.2	85.3	63.2	1.4	138.4
2024–25	57.9	74.4	53.1	–1.2	125.2
2025–26		73.7	50.7	1.6	121.4

Source: OBR's Economic and Fiscal Outlook, March 2020 and March 2021; Citi forecasts; authors' calculations.

Figure 3.3 shows the forecasts for borrowing pre-pandemic, at March 2021's Budget and in Citi's three scenarios. The equivalent £ billion figures are shown in Table 3.2. In all three scenarios, borrowing falls sharply over the next three years from last year's peacetime record. In the central scenario, borrowing in 2024–25 falls £5 billion *below* the level forecast pre-pandemic, 0.9% of national income – or £21 billion – below that forecast in the March 2021 Budget.

This is despite some lingering weakness in the economy – though less than in the Budget forecast back in March – weighing on borrowing, along with higher debt interest spending. These factors are outweighed by the consolidation measures announced by the Chancellor in the last year – in particular in the March 2021 Budget. The package of measures announced in September raises spending on health and social care by an average of £14 billion a year, whilst increasing National Insurance contributions – in the form of the new health and social care levy – and dividend tax by around the same amount, and is thus borrowing-neutral. Additionally, the announcement made later on the same day – that the triple lock on pensions would for one year be suspended and temporarily replaced by a double lock[2] – reduces spending on state pensions by an estimated £2 billion relative to having retained the triple lock.

Table 3.3 sets out the estimated total impact of discretionary policy measures since March 2020 on borrowing – both the large loosening through the pandemic, and the subsequent

[2] Under the triple lock, state pensions increase by the highest of 2½%, inflation and the growth in average earnings. Under the double lock, this list excludes earnings growth, which is elevated by average earnings bouncing back post-pandemic, especially with many employees coming off the furlough scheme and returning to full pay.

consolidation. The emergency fiscal response to the pandemic was heavily skewed towards spending, with a total of £329 billion committed across 2019–20, 2020–21 and 2021–22 to support businesses, households and public services. Tax cuts played, in relative terms, a minor role in the emergency response, peaking at £25 billion of cuts in 2021–22. At least on current plans, none of this additional spending is to be permanent. Indeed, even after additional spending on health and social care was announced in September, departments' day-to-day spending totals in 2023−24 and 2024−25 are still set to be around £3 billion lower than what was planned pre-pandemic.

From April 2023, large tax rises are also planned. The March 2021 Budget was the biggest tax-raising Budget since Lord Lamont's Spring Budget of 1993. An increase in the main rate of corporation tax from 19% to 25% in April 2023 is expected by the government to raise around £17 billion by 2025−26. And on income tax, a four-year cash freeze in both the personal allowance and the higher-rate threshold is expected to raise £8 billion by 2025−26.

Under the central scenario, these tax rises and cuts to previous spending plans (assuming they are delivered) are sufficient to outweigh the impact of the ongoing weakness in the economy and higher debt interest spending. This would deliver a modest but growing current budget surplus by 2023–24 (Figure 3.4 and Table 3.4), whilst the March Budget forecast that the current budget deficit would only be brought close to zero two years later. This is chiefly thanks to the enduring improvement in the forecast for nominal growth. This would mean that this year, the Chancellor could meet the previous fiscal target of forecast current budget balance three years into the future, with some headroom. For a discussion of fiscal targets, see Chapter 4.

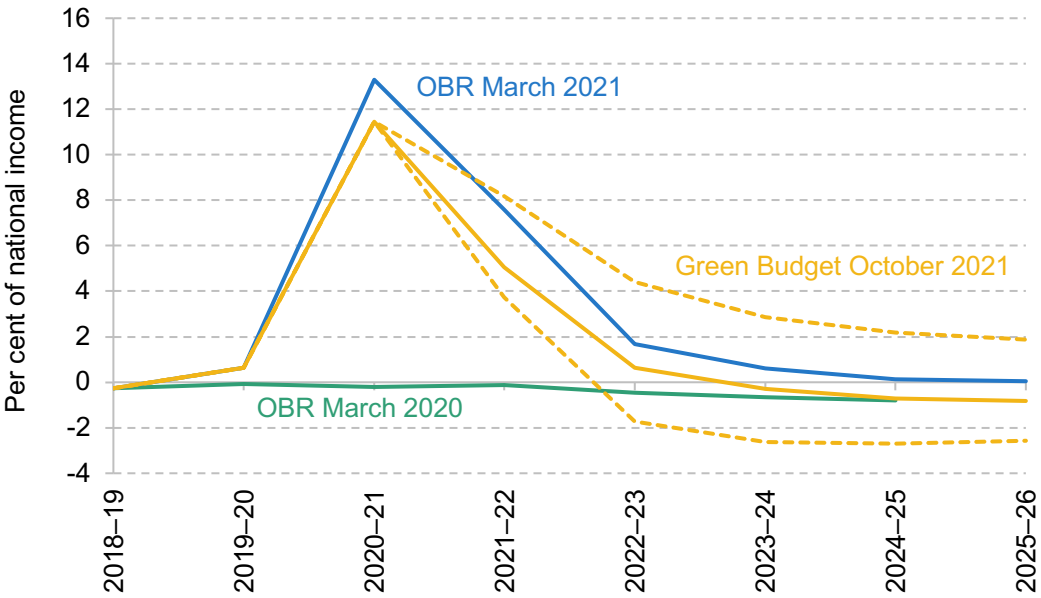
Table 3.3. Borrowing and the impact of measures announced since March 2020 (£ billion)

	Borrowing	Effect of loosening (adds to borrowing)		Effect of tightening (reduces borrowing)	
		Spending increases	Tax cuts	Spending cuts	Tax rises
2019−20	57	2	0	0	0
2020−21	325	250	19	2	0
2021−22	180	77	25	3	8
2022−23	82	13	9	14	14
2023−24	63	10	1	17	24
2024−25	53	12	1	18	37

Note: Direct effects only, nominal terms. Where an increase and cut are reported for the same year, these happened at separate fiscal events/announcements.

Source: OBR's Economic and Fiscal Outlook, March 2020, November 2020 and March 2021.

Figure 3.4. Forecasts for the current budget deficit (% of national income)



Note: Dashed lines indicate Citi's optimistic and pessimistic scenarios.

Source: OBR's Economic and Fiscal Outlook, March 2020 and March 2021; Citi forecasts; authors' calculations.

Table 3.4. Forecasts for the current budget deficit (£ billion)

	OBR Budget forecasts		Green Budget October 2021		
	March 2020	March 2021	Central	Optimistic	Pessimistic
2019–20	–1.7	14.0	14.0	14.0	14.0
2020–21	–4.9	278.8	243.0	243.0	243.0
2021–22	–2.7	171.8	118.0	89.0	184.1
2022–23	–11.7	40.0	15.5	–44.0	101.5
2023–24	–16.7	15.2	–7.0	–68.7	68.2
2024–25	–21.2	3.2	–18.1	–72.4	53.9
2025–26		0.9	–22.1	–71.2	48.6

Source: OBR's Economic and Fiscal Outlook, March 2020 and March 2021; Citi forecasts; authors' calculations.

Risks from alternative economic scenarios

As with growth, the range of uncertainty around the central scenario (as illustrated by the two alternative scenarios) is very wide. In the optimistic scenario, a combination of a very strong economic recovery especially in nominal terms, tight spending plans and substantial tax rises pushes forecast borrowing in 2024–25 2.2% of national income *below* what had been forecast pre-pandemic (Figure 3.3). This would be sufficient to eliminate the overall deficit for the first time since 2000–01. That said, were such a scenario to emerge, we might well expect some of the planned tax rises not to go ahead and for spending plans to be topped up.

Even if real-terms growth followed the Bank of England's August forecast – i.e. if the growth rate fell between those in the central and optimistic scenarios – with no other changes, borrowing would be forecast to be running 1.2% of national income lower than in the central scenario in 2022–23 and 0.8% lower in 2023–24, and 2.3% and 1.7% of national income below the March 2021 Budget forecast in those same two years.

In sharp contrast, in the pessimistic scenario, a very incomplete recovery would keep borrowing elevated at around 5% of national income in the middle of this decade: twice the post-war average. Borrowing could not be sustained at that level indefinitely: a further combination of tax rises and spending cuts at some point would be required. It would only take average growth to average around 3.2% a year over the next five years, rather than the 3.7% a year in our central forecast, for there to be a £10 billion deficit on the current budget in 2025–26.

Looking at the current budget, in the optimistic scenario under current stated policy, we would expect a substantial surplus of at least 2.6% of national income from 2023–24 (which would be the largest since 1971–72), and a deficit of 2.9% dropping to 2.2% in 2024–25 and 1.9% in 2025–26 in the pessimistic one. But again, were a scenario similar to the optimistic one to emerge, we might expect some planned tax rises to be cancelled and/or spending plans to be topped up. Indeed, under the optimistic scenario, all of the tax rises announced in the March 2021 Budget could be reversed and we would still be on course for a substantial current budget surplus from 2023–24 onwards. Conversely, under the pessimistic scenario, the £28 billion package of tax rises would need to be nearly tripled for a current budget surplus to be forecast for 2025–26.

Risks from policy change

Our forecasts – and the Citi economic forecasts used in this chapter – make a number of assumptions about government policy. In particular, they assume that stated tax policies are implemented and that the totals announced for the Spending Review are kept to. In practice, there are risks around both of these assumptions.

On the revenue side, our forecasts – following the OBR – take the government's stated policy of uprating fuel duty in line with inflation as given. However, fuel duty has now been frozen for 11 successive years, casting serious doubt on the seriousness of the commitment to return to indexation after just one more year. If rates of fuel duties are frozen for a further four years, this would reduce revenues by around £3 billion, and bring the total cost of cuts and freezes to fuel duties since 2010, relative to an alternative of RPI indexation, up to £14 billion a year.

A further risk relates to the tax rises announced in the March 2021 Budget. As stated above, the rise in corporation tax from 19% to 25% in April 2023 is forecast to raise £17 billion by 2025–26. On income tax, a four-year cash freeze in both the personal allowance and the higher-rate threshold is expected to raise £8 billion by 2025−26. Were, for example, the freezes in the income tax personal allowance and higher-rate threshold to run for three rather than four years, this would reduce revenues by around £2 billion a year from April 2025 onwards.

On the spending side, there are a number of risks related to NHS spending and to public service spending more generally. These are addressed in detail in other chapters: Chapter 6 shows that the NHS may be facing a funding shortfall of £5 billion by 2024–25, while Chapter 5 puts pandemic-related spending pressures on education and public transport at around £3 billion a year over the next three years and also shows that day-to-day departmental spending is still £3 billion below pre-pandemic plans in 2024–25.

There will be pressure on overseas aid spending as well. In the November 2020 Spending Review, the government reduced the overseas aid budget from 0.7% of national income to 0.5%. However, it has also claimed that 'this is a temporary measure and the Government are committed to the 2015 Act and to spending 0.7% of GNI on ODA once the fiscal situation allows' and that a return to spending 0.7% of national income will happen when 'on a sustainable basis, we are not borrowing for day-to-day spending and underlying debt is falling'.[3] In our central scenario, the current budget deficit is eliminated by 2023–24. By the following year, the surplus would be sufficient to return to spending 0.7% of national income on overseas aid, spending roughly an additional £5 billion. However, with debt still elevated, it could be that the government would hold off increasing aid spending until a later year. And, were aid spending to be increased, it is also unclear whether that would add to borrowing or whether it would be met from within existing spending totals.

[3] For more details, see https://www.gov.uk/government/news/changes-to-the-uks-aid-budget-in-the-spending-review and https://hansard.parliament.uk/commons/2021-07-12/debates/c8f3bb2c-50f2-4b61-9cf2-3af0b47ed89a/WrittenStatements.

Table 3.5. Funding the rising cost of health and adult social care in the latter half of the decade

	Healthcare	Adult social care	Total	Levy increase, percentage points *(rate in 2023–24 = 1.25%)*
2026–27	£3.2bn	£0.5bn	£3.7bn	0.4
2027–28	£6.5bn	£1.0bn	£7.5bn	0.7
2028–29	£9.9bn	£1.3bn	£11.2bn	1.1
2029–30	£13.3bn	£1.7bn	£15.0bn	1.5
2030–31	£16.8bn	£1.9bn	£18.7bn	1.9

Note: Costs in today's (2021–22) terms on top of their level in 2025–26. Levy increase assumes public sector employers are compensated for the increase in employer contributions, as was the case in the initial package announced in September 2021, and that revenues from the levy grow in line with long-run average earnings growth.

Source: Authors' calculations using OBR's Fiscal Sustainability Report, July 2020, and HM Government's 'Building back better: our plan for health and social care', September 2021.

Finally, the costs of funding health and adult social care are projected to continue to increase as the population ages and increasing numbers of people live with multiple chronic conditions. The longer-run projections on this are set out in Section 3.5. But this is not just a problem for the distant future: these pressures are growing now, and are expected to continue to do so over the rest of this decade. Table 3.5 shows that by 2030–31, these additional pressures are estimated to total about £18½ billion on top of their level in 2025–26. Again, it is not clear whether these are to be met and, if they are, how they are to be financed. One option might be for the new health and social care levy to rise to meet these costs. If this is to happen, and assuming (as was the case in the September 2021 announcement) that it is also increased by enough to compensate other public services, then this would imply a further increase of 1.9 percentage points in the health and social care levy (and on dividend tax), more than doubling the total levy on employees, employers and the self-employed from its currently planned rate of 1.25% to 3.15% by 2030−31.

3.4 Outlook for debt and debt interest spending

Comparing the Citi central scenario with the March 2021 Budget forecast, the improvement in the economic outlook leads to a lower level of underlying net debt throughout the forecast period. However, the economic improvement is insufficient to reduce debt quickly as a share of national income whilst debt interest spending also becomes more burdensome. Debt is forecast

to peak at 90% of national income in 2023–24, but to fall only gently in the following two years, by a total of 1.2 percentage points of national income (Figure 3.5). The COVID crisis would thus have added 17% of national income to debt. While large, this is much less than the 39% of national income increase (from 34% to 73%) that occurred over the course of four years between 2008 and 2012, during and immediately following the financial crisis.

Box 3.1. The Bank of England's contribution to public sector net debt

When politicians and analysts talk about fiscal policy, they will often refer to 'underlying' debt. This usually means debt excluding the contribution of the Bank of England.

The Bank of England's activities contribute to public sector net debt through its purchases of government gilts and (to a much smaller extent) corporate bonds in the context of quantitative easing, and through its two Term Funding Schemes which offer loans to firms to support the economy in the wake of the 2016 referendum (the TFS) and the COVID-19 pandemic (the TFSME, or Term Funding Scheme for small and medium enterprises).

Through its programme of quantitative easing, the Bank of England buys gilts – essentially IOUs issued by the government – from financial institutions and in return credits them with central bank reserves. Reserves are deposits on which interest is paid at Bank Rate that commercial banks hold at the Bank of England.

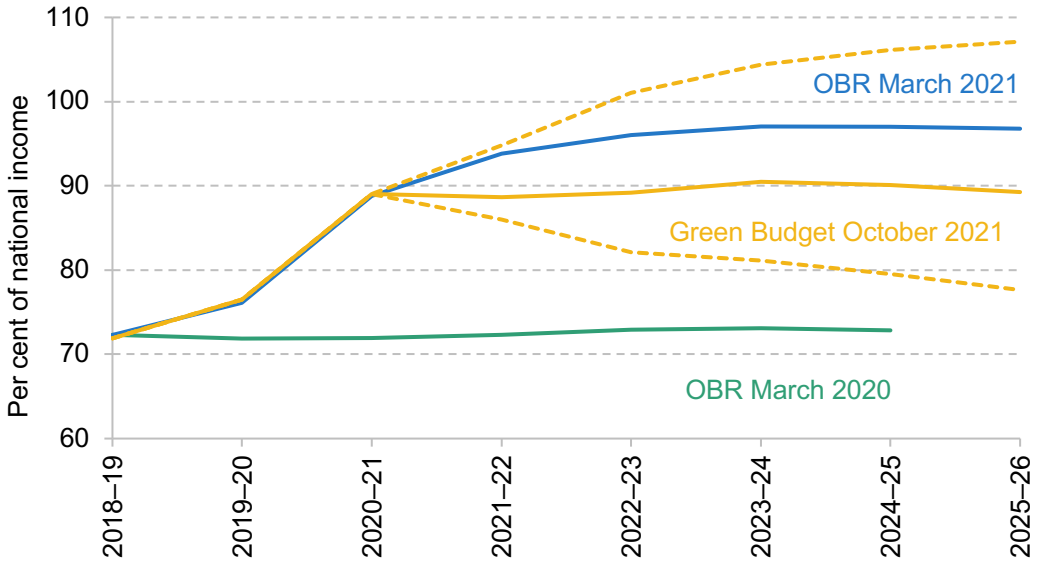
Any difference between the value of the reserves issued to purchase the gilts (the gilts' market value) and their redemption value (the amount the government promises to pay) contributes to public sector debt. Since this part of public sector debt is not the direct result of the government's choices around spending and tax, it is often appropriate to focus on debt excluding the Bank of England when evaluating the fiscal situation.

For the central scenario, Figure 3.6 decomposes the increase in the debt-to-GDP ratio in 2024–25[4] between the pre-pandemic Budget forecast and the current central scenario into policy measures, the impact of lower economic growth throughout the period, and other factors. Three-fifths of the increase – 11.6% of national income – is explained by the large emergency measures last year and this, with only 2.8% counterweighed by tax rises in the later years of the forecast (shown by the blue bar). Over a third of the increase is explained by lower growth adding to borrowing through lower revenues (and, to a lesser extent, higher spending – e.g. on benefits), with smaller parts explained by the denominator effect (i.e. the fact that the same cash

[4] We choose that year since it is the last one for which an official pre-pandemic forecast is available to allow for a direct comparison.

debt in 2024–25 will represent a larger share of a smaller national income) and additional debt interest spending.

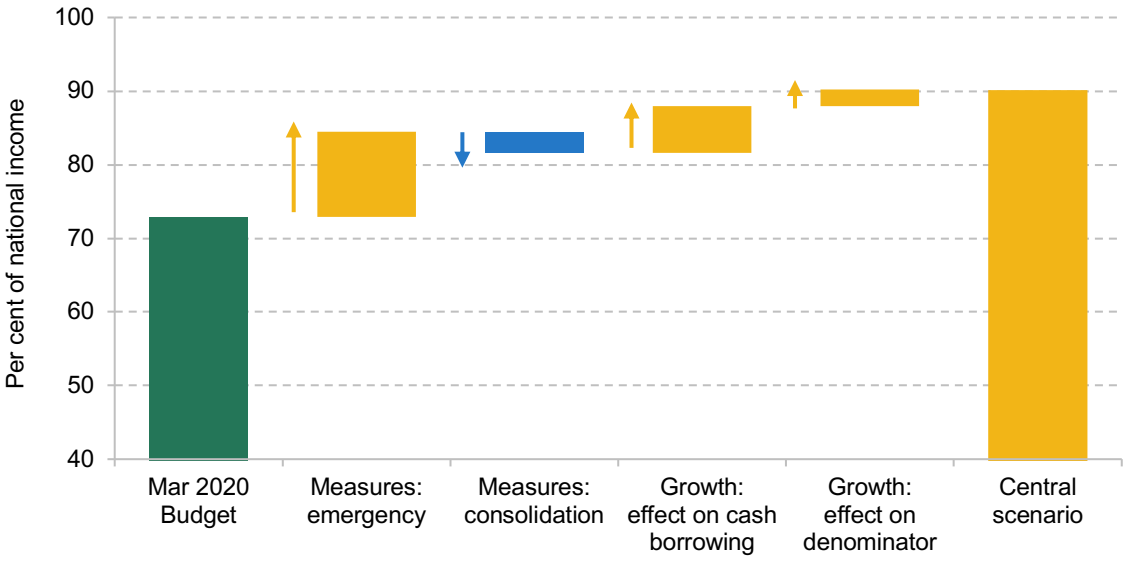
Figure 3.5. Forecasts for debt



Note: Dashed lines indicate Citi's optimistic and pessimistic scenarios. Debt is net debt excluding the Bank of England.

Source: OBR's Economic and Fiscal Outlook, March 2020 and March 2021; Citi forecasts; authors' calculations.

Figure 3.6. Sources of increased debt-to-GDP ratio in 2024–25



Note: Debt is net debt excluding Bank of England.

Source: OBR's Economic and Fiscal Outlook, March 2020, November 2020 and March 2021; Citi forecasts; authors' calculations.

The pattern shown in Figure 3.6 contrasts with the large increase in public sector net debt arising as a result of the financial crisis and associated recession, where much less of the increase in debt was due to the fiscal stimulus package and much more of the increase was due to the denominator effect (Chote, Emmerson and Tetlow, 2009, figure 3.4). There are two key drivers of this difference. First, the emergency fiscal support since March 2020 has been much bigger than what was implemented in response to the financial crisis, in part due to substantial increases in day-to-day spending on public services – most obviously the NHS – but also because of a bigger increase in spending on working-age benefits (Emmerson, 2020; IFS Taxlab, 2021). Second, the financial crisis was associated with both weak real growth and much lower-than-expected inflation, whereas higher inflation following the pandemic means the drop in nominal national income (the denominator) is less than the drop in real output.

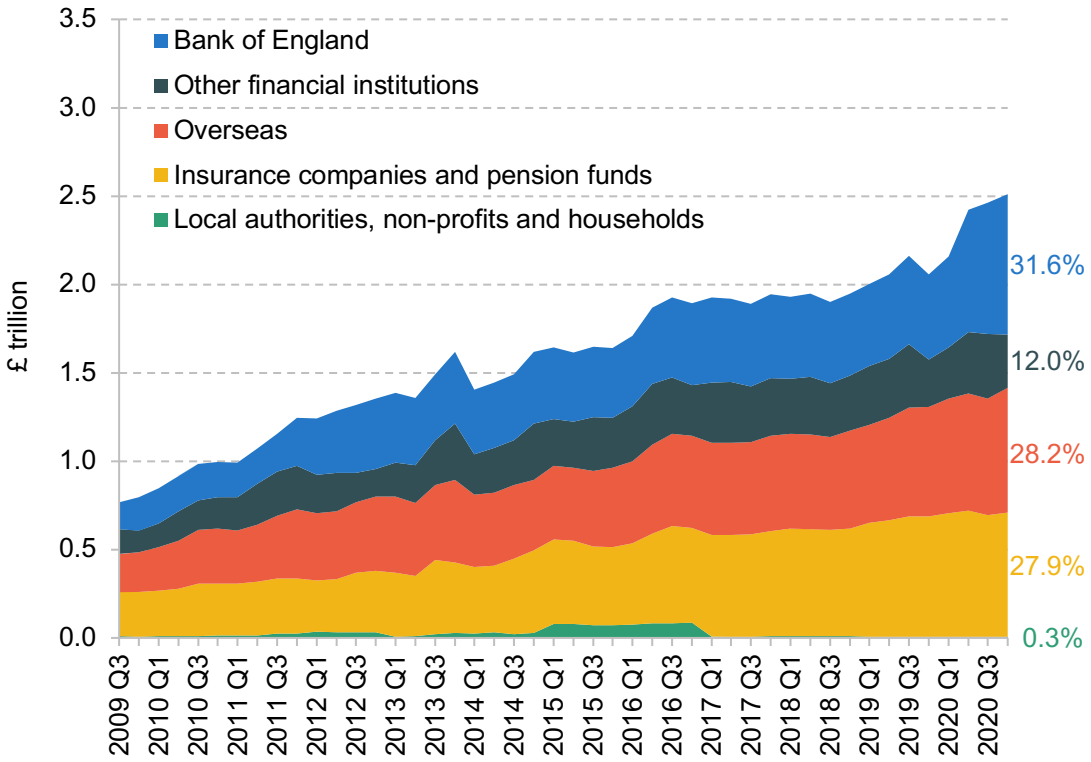
How is government debt financed?

Public sector debt is held in the form of government bonds, or gilts. Figure 3.7 shows that overseas investors (including foreign central banks) and insurance and pension funds have steadily increased their holdings of gilts since 2009. The Bank of England's holdings have also increased gradually during that period. They then increased sharply during the COVID-19 crisis, when the Bank essentially absorbed all newly issued UK government debt: between March 2020 and May 2021, the Debt Management Office issued £431 billion of debt, net of redemptions, while the Bank of England voted to purchase an additional £460 billion of gilts via quantitative easing.

At the same time that the government was accumulating a large amount of debt to fund the COVID-19 emergency response, the cost of servicing that debt fell to record lows. This was a continuation of a long-term trend that has seen interest rates on UK government debt – and that of governments in other advanced economies around the world – fall across short, medium and long durations (Figure 3.8). These are rates on conventional gilts, i.e. ones that are not indexed to inflation. The UK's Debt Management Office (DMO) also issues index-linked gilts that pay out interest relative to the growth in the Retail Prices Index (RPI). Yields on these gilts have also been running at extremely low levels. For example, on 22 September 2021, the DMO auctioned £350 million of gilts that run to 2056 at a yield of RPI *minus* 2.3%.[5]

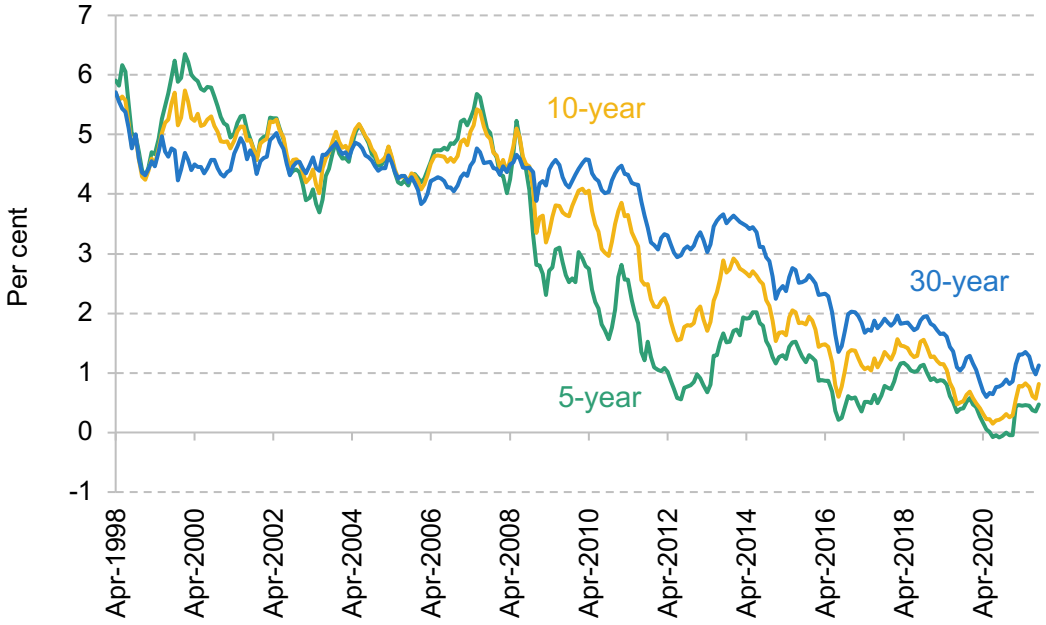
[5] Source: https://www.dmo.gov.uk/data/gilt-market/.

Figure 3.7. Holders of gilts over time



Source: Debt Management Office, Quarterly Reviews.

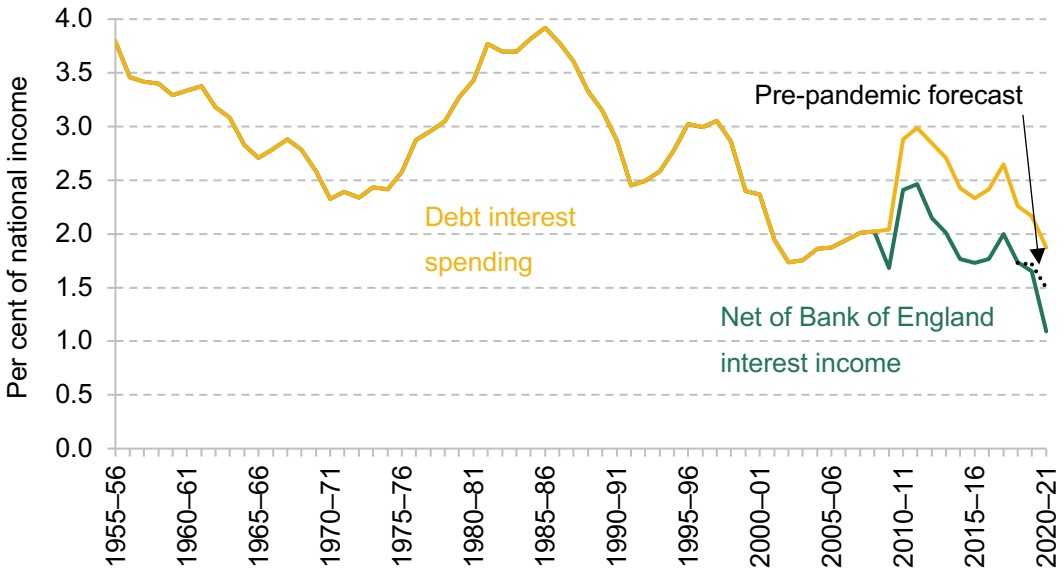
Figure 3.8. UK gilt rates over time



Note: Simple averages of the close-of-business redemption yields for each month of the prevailing benchmark gilts.

Source: Debt Management Office, historical average daily conventional gilt yields.

Figure 3.9. Debt interest spending over time



Note: Central government debt interest spending. This is not the measure of debt interest used to measure performance against the fiscal target stated in the Conservative Party manifesto.

Source: Office for National Statistics, series NMFX and MU74; OBR's Economic and Fiscal Outlook, March 2020.

In addition to worldwide falls in interest rates on safe assets, the expansion of quantitative easing led to a further reduction in debt interest spending. This is because quantitative easing effectively allows the government to borrow at the interest rate paid on central bank reserves, which is set at the contemporaneous Bank Rate (currently 0.1%) and is even lower than the interest rates on government bonds, which – as shown above – are themselves already at historically low levels.

This means that despite the huge amounts that the government has borrowed during the pandemic, and despite the fact that underlying government debt rose by 17% of national income between 2018–19 and 2020–21, the UK government spent *less* on debt interest over the last two years than it spent in 2018–19 and than had been forecast under pre-pandemic plans (Figure 3.9). We should not lose sight of this astonishing fact.

However, things are changing. Alongside an improvement in the near-term economic outlook, interest rates have started to rise since the beginning of 2021. For example, in January 2021, the average gilt yield on a five-year gilt was –0.05% while even on a 30-year gilt it was just 0.86%. By September 2021, these had risen to 0.47% and 1.13%, as shown in Figure 3.8. Alongside this, RPI inflation – which feeds directly through to debt interest spending through the 28% of

UK government bonds that are index-linked – has also picked up.[6] In the year to January 2021 the RPI grew by just 1.4%, while over the year to August 2021 this had risen sharply to 4.8%. This rise in the RPI has been a key driver of debt interest spending over the first six months of 2021–22 running £4.7 billion (20.5%) above that forecast for this period by the OBR in the March 2021 Budget.[7]

In Citi's central scenario, debt interest spending in the current financial year, to next March, will be £1 billion higher than anticipated in the pre-pandemic forecast in March 2020, and £14 billion higher than forecast at the March 2021 Budget. But it is worth stressing that this increase is far outweighed by a £53 billion improvement in revenues: an increase in interest rates that accompanies an improvement in the growth outlook is always likely to be associated with an overall reduction in government borrowing.

In addition to making government debt cheaper to finance, quantitative easing also shortens the delay between any increase in interest rates, and a noticeable increase in debt interest spending by the government. UK government gilts have an average remaining duration of around 15 years, which is a long average duration by international comparison (OECD, 2021). This means that, in principle, debt will only mature – and need to be refinanced – slowly.

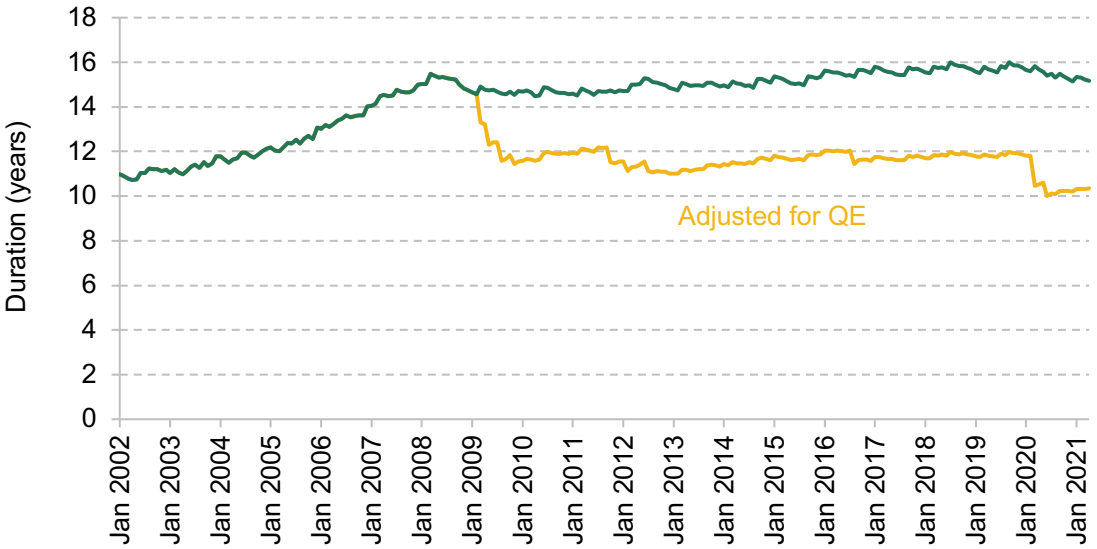
However, the effective cost of financing gilts held by the Bank of England through quantitative easing is not the interest rate on the bond, but the cost of the reserves the Bank creates to fund its purchases. This cost is Bank Rate, which can – and does – change with immediate effect. As shown in Figure 3.10, our calculations suggest that prior to the pandemic (in February 2020) the impact of this was effectively to reduce the average remaining duration of gilts by 24% from 15.6 years to 11.8 years. However, as of April 2021, the expansion of the programme of quantitative easing has increased this reduction to 32%, from 15.2 years to 10.3 years.

While Bank Rate is low, the Bank of England could choose not to pay interest – or pay a lower interest rate than Bank Rate – on some or all of the reserves that commercial banks hold ('tiering'), as has been suggested by some commentators. This is currently done by the European Central Bank and the Bank of Japan. As demand for reserves is high, this could be done while still being able to finance the asset purchases set by the programme of quantitative easing. This might no longer be the case in a situation where Bank Rate needed to rise. If Bank Rate were to rise before the quantitative easing programme had been unwound, this could mean that it would not be possible to have a policy of paying lower than Bank Rate on some reserves.

[6] This 28% figure is for 2019−20. Note that the index-linked share of gilts not owned by the Bank of England is greater, because it only purchases conventional (non-index-linked) gilts.

[7] Source: https://obr.uk/docs/September-2021-PSF-commentary.pdf.

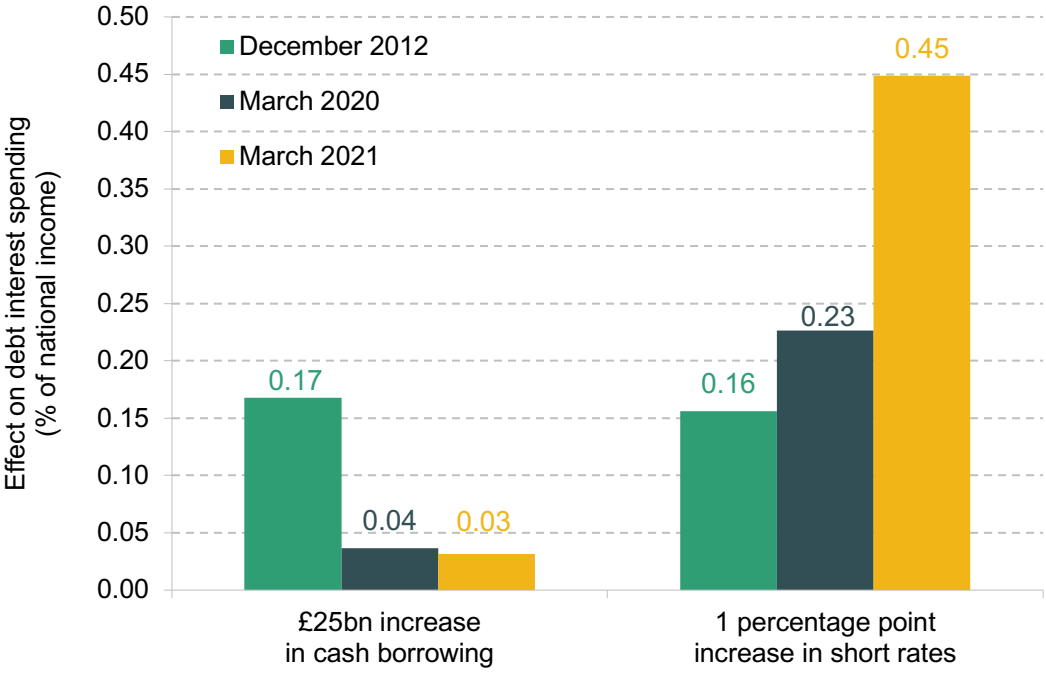
Figure 3.10. Estimated impact of quantitative easing on the effective duration of gilts over time



Note: Weighted remaining duration (time to redemption) shown. Adjusted series treats gilts held in the Asset Purchase Facility as having a remaining duration of zero. Excludes Treasury bills and non-sterling issues.

Source: Authors' calculations using the Heriot-Watt British Government Securities Database.

Figure 3.11. Sensitivity of debt interest spending to borrowing and rate rises



Note: Shows impact in last forecast year.

Source: OBR's Economic and Fiscal Outlook, November 2020 and March 2021.

Another way to show the extent to which the government is able to borrow cheaply at the moment, but that debt interest spending is also more sensitive to changes in interest rates, is to show how the OBR's ready reckoners for debt interest spending have changed over time. This is shown in Figure 3.11. In December 2012 – when gilt rates were higher (as was shown in Figure 3.8) – £25 billion of extra borrowing each year would push up debt interest spending after four years by an estimated 0.17% of national income (£4.0 billion in today's terms). By March 2020 this had fallen by three-quarters to just 0.04% of national income (£0.9 billion), and by March 2021 it had fallen slightly further to just 0.03% (£0.7 billion). In other words, debt interest spending has become less sensitive to additional borrowing over time, as you would expect when interest rates had fallen.

Turning to the sensitivity of debt interest spending to increases in rates of borrowing, back in December 2012 a permanent 1 percentage point (or 100 basis points) increase in rates would push up debt interest spending in four years' time by 0.16% of national income (£3.7 billion in today's terms). By March 2020 this had increased slightly to 0.23% of national income (£5.4 billion). But by March 2021 this had risen to 0.45% of national income (£10.5 billion) – an increase of 180% on the responsiveness estimated in December 2012. Debt interest spending has thus become much more sensitive to changes in interest rates.

An increase in interest rates that is not accompanied by an improved outlook for growth would be much more burdensome for the public finances. In our central scenario, debt interest spending is forecast to be £14 billion higher than in the March 2021 Budget forecast. This is still more than compensated for by £53 billion higher revenues. But if interest rates increased further, without a corresponding increase in growth and revenues, the outlook for the public finances would be much more challenging.

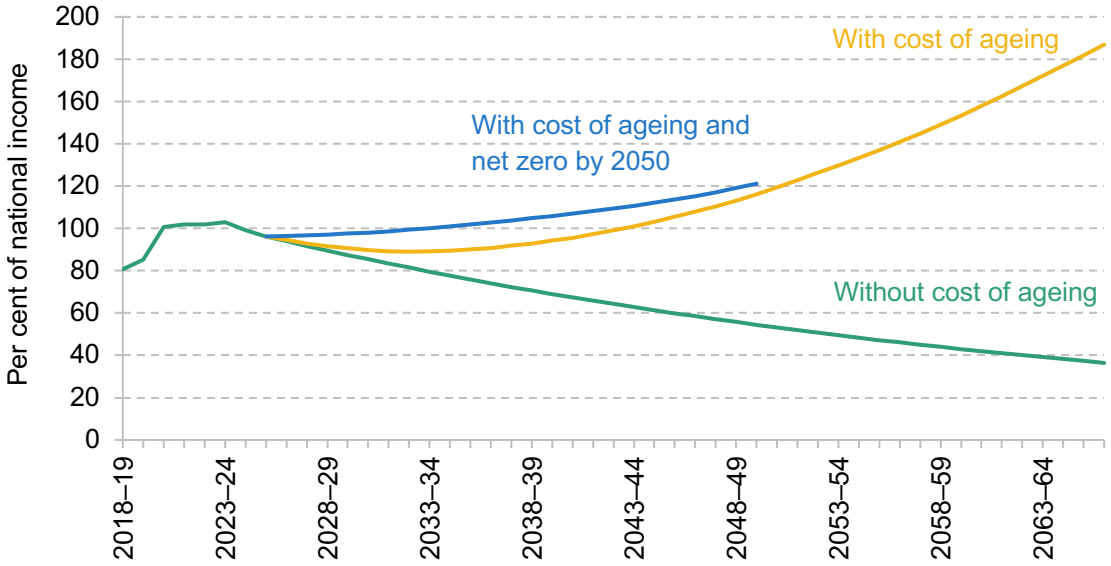
3.5 The long-run trajectory of debt

When considering the UK's long-term fiscal situation, the one-off increase in debt during the COVID-19 crisis is less significant than the future trajectories of growth and interest rates, and the policy choices the government makes around taxes and spending. These choices will need to be made in response both to unexpected challenges that arise and to known ones (where perhaps the most obvious are population ageing and the transition to a net-zero economy).

Figure 3.12 shows different illustrative trajectories for debt. For each of them, the starting point is the central scenario set out above. We use a set of broad-brush assumptions: that the effective interest rate on government debt remains unchanged from 2025–26 onwards, and that growth in nominal national income is constant at the 3.9% per year projected by the OBR in its July 2020 Fiscal Sustainability Report. This would be slightly better than the very muted growth

performance after the financial crisis and before the onset of COVID-19, but still much lower than the longer-term post-war average. Of course, in reality, growth and interest rates will not stay constant. However, these trajectories are not intended to be precise forecasts. Instead, they illustrate the underlying dynamics of debt given today's starting point, and the scale of long-term challenges.

Figure 3.12. Illustrative long-term debt trajectories with and without cost pressures of ageing and the net zero transition



Note: Shows headline debt (including Bank of England). Central scenario until 2025–26. Thereafter, primary balance and effective interest rate are assumed constant. 'With cost of ageing' assumes that increases in spending on healthcare, adult social care and state pensions are fully accommodated through higher borrowing. 'With cost of ageing and net zero by 2050' additionally uses the OBR's 'central' public sector share scenario for spending, plus its net revenue effects.

Source: OBR's Fiscal Sustainability Report (July 2020) and Fiscal Risks Report (July 2021); authors' calculations.

The green line shows projected debt under the assumption that primary borrowing (i.e. borrowing before net debt interest spending) remains constant beyond 2025–26, at 0.4% of national income. One way to think of this scenario is that it is what might be expected were future governments to meet the costs of any pressures on revenues or spending with tax rises or spending cuts elsewhere. In this scenario, debt is on a falling path and returns to its pre-COVID level in the early 2030s, but only comes close to the level seen before the financial crisis (34% of national income in 2007–08) at the very end of the forecast horizon.

A key challenge in the decades covered by this projection are the rising costs of health and adult social care, and state pensions. One important driver of increasing costs is the ageing of the population through rising life expectancy at older ages, reductions in the birth rate and lower

immigration. On average, people need more healthcare and social care at older ages, and the healthcare they need also tends to be more expensive. In addition to this, healthcare costs have tended to rise over time independently of demographic change. One reason is that new medical technologies and drugs – while of course delivering many benefits – are often expensive, at least initially. Another reason is that more people are being treated for chronic conditions (notably diabetes and dementia), with an especially sharp increase in the number of people being treated for multiple chronic conditions at the same time. These are all trends that are expected to continue, and to continue to drive up care costs (Charlesworth and Johnson, 2018).

The green line effectively assumes that the rising cost of healthcare, adult social care and state pensions either is simply not accommodated at all (e.g. state pension indexation is made less generous or rising care needs go unmet by the state) or is offset by tax rises or spending cuts in other areas. If, in contrast, the government chose to meet those pressures and fund them through higher borrowing, the yellow line in Figure 3.12 shows that debt would be on a rising – and even accelerating – path. In practice, such a scenario would be unlikely to be allowed to emerge, as tax rises or spending cuts would be needed to demonstrate prudent stewardship of the public finances and prevent a loss of confidence in the UK as a borrower, with a corresponding unwelcome increase in the cost of borrowing.

We now turn to the direct fiscal cost of the transition to net zero,[8] a challenge with very different dynamics over the period from those of the rising costs of healthcare, social care and pensions just discussed. The illustrative trajectory shown by the blue line in Figure 3.12 combines the fiscal impact of both of these long-term challenges. In addition to the rising cost of healthcare, social care and pensions just discussed, this includes two aspects of the fiscal impact of the transition to net zero. The first is the negative impact of decarbonisation on some tax bases – for example, revenues from fuel duties will dry up as fewer and fewer vehicles with combustion engines remain on the roads. In addition, this debt trajectory assumes that the government shoulders a share of the cost of transitioning to net zero in different sectors. This share is based on the OBR's 'central' public sector share scenario (Office for Budget Responsibility, July 2021, table 3.2). For example, this would see the government bearing just 6% of the costs of the decarbonisation of cars, but 44% of the cost of decarbonising residential buildings and 64% of carbon emissions removals during the 2020s, 2030s and 2040s. Over time, these costs to the public sector are increasingly countervailed by increasing revenues from carbon taxation, reducing the direct fiscal impact of the transition. But without offsetting tax rises or spending cuts, this would lead to debt rising even faster over the next 30 years, with the net zero transition adding more than 12% of national income to debt in the late 2030s.

[8] The full fiscal impact of the net zero transition will depend crucially on its effects on the trajectory of national income until 2050 and beyond, which is a fascinating question entirely beyond the scope of this chapter.

Clearly, this scenario represents only one of a wide range of possible ways of funding the net zero transition. Policymakers may choose to fund a greater or smaller share of transition costs, at different points in time. In the OBR's 'high' public sector share scenario, the state shoulders a greater share of these costs, especially towards the end of the transition, with the impact on government spending nearly 70% greater than in the central scenario in the late 2040s. Under proposals recently set out by Labour (Reeves, 2021), the government would spend an additional £28 billion a year for eight years on investment related to environmental protection, which is more than the amount the OBR assumes would be spent in 2025 even under the 'high' public sector share scenario. This might imply that the state takes an even more active role in funding the net zero transition. In contrast, in the OBR's 'low' public sector share scenario, the private sector is assumed to shoulder more of the costs of transition. As a result, spending is more than 60% lower than in the central scenario in the early 2040s. Similarly, the impact on carbon-related tax bases is uncertain and its size and timing may differ from the broad-brush, central scenario presented in Figure 3.12.

Of course, even in 'normal' times – absent large shocks such as pandemics and financial crises – economic growth is not smooth, as the illustrative trajectories in Figure 3.12 suggest. Instead, cyclical recessions happen irregularly but frequently, with the OBR estimating that the chance of a recession in any five-year period is about one in two.[9] Recessions can have a 'ratchet effect' on debt, in that the debt burden rises by more, relative to trend, during and immediately after a recession than it falls during an expansion. The economic downturns of the early 1980s, 1990s and 2000s added between 4 and 10 percentage points to the ratio of debt to national income within two years, compared with a continuation of the trend before that. This suggests that if policymakers aim to reduce debt over the long run in order to preserve 'fiscal space' – the capacity to sharply increase debt to respond to a crisis such as the COVID-19 pandemic – a more rapid pace of consolidation during economic expansions is required. As discussed in Chapter 4, this would require having lower borrowing (or bigger surpluses) in good, and potentially just normal, years.

3.6 Conclusion

The success of the vaccine roll-out in the UK and encouraging early indicators on the recovery in consumer spending, the labour market and government revenues have led to an upwards revision in most economic forecasts. In the short term, our analysis (based on Citi's central forecast used for our public finance calculations which assumes that the government's

[9] In its most recent Fiscal Risk Report, the OBR cautions that 'the world may in fact be becoming riskier' and this probability and/or the typical impact of recessions may have increased (Office for Budget Responsibility, July 2021, p. 212).

tax and spending plans are kept to – unlike the scenarios in Chapter 2 which assume a further fiscal loosening) suggests that borrowing this financial year could be 2.6% of national income (£54 billion) lower than official forecasts suggested at the time of the March Budget – a very large improvement in such a small space of time. In this context, however, it is worth noting that the latest estimate is that borrowing in the last financial year (2020–21) is almost £30 billion lower than was forecast in the March 2021 Budget.

Some of this 'windfall' for the Chancellor looks likely to prove temporary: in the latter part of the forecast, the improvement in economic performance vis-à-vis the March forecast is smaller. Our forecast is that borrowing in 2024–25 will be 0.9% of national income, or £21 billion in cash terms, below the March 2021 Budget – and £5 billion *lower* than forecast pre-pandemic as the tax rises announced in that Budget more than offset the enduring economic impact of the pandemic on revenues. However, as shown in Table 3.6, it is noticeable that the central forecast is for both revenues and spending to be slightly higher than forecast pre-pandemic.

Uncertainty around this central forecast remains even more substantial than is typically the case. Delivering current budget balance by the end of the forecast period will depend on something close to our central scenario (or better) materialising. Under currently stated plans for taxes and spending, the Chancellor could deliver a modest but growing current budget surplus in the latter three years of the forecast. However, this would require that substantial increases in income tax and corporation tax that have been announced are actually implemented. Uncertainty in the economic outlook means it is possible that growth and, with it, revenues come in much more strongly than under our central scenario. Though were this to emerge it might be more likely that some of the planned tax rises are not actually implemented.

Table 3.6. Forecast for receipts, spending and borrowing in 2024–25 (£ billion)

	OBR Budget forecasts		Green Budget October 2021		
	March 2020	March 2021	Central	Optimistic	Pessimistic
Current receipts	1,022	994	1,037	1,084	981
Total managed expenditure	1,080	1,069	1,091	1,082	1,106
Borrowing	57.9	74.4	53.1	–1.2	125.2

Source: OBR's Economic and Fiscal Outlook, March 2020 and March 2021; Citi forecasts; authors' calculations.

The new spending totals, once you account for higher spending on health and social care after September's announcement, appear relatively tight. They make no allowance for pandemic-related spending pressures on areas other than the NHS, and leave little headroom to deal with negative economic surprises or the spending pressures that existed prior to the pandemic. Were the economy to recover much more strongly than under our central scenario, it would not be surprising if spending plans were topped up. A return to current budget balance, and falling public sector net debt, is also – at least under stated government policy – intended to trigger a return to spending 0.7% of national income on overseas aid, which would be an increase of around £5 billion a year on top of the current spend of 0.5% of national income.

Since the beginning of the year, interest rates on government bonds have started to rise, with yields on 30-year bonds averaging 1.13% in September 2021 having averaged just 0.86% in January 2021. Alongside this, RPI inflation – which feeds directly into interest payments on index-linked debt – has risen from just 1.4% in the year to January 2021 to 4.8% in the year to August 2021. Although interest rates remain very low by historical standards, these changes are set to have a non-trivial impact on debt interest spending over the forecast period, with our central forecasts suggesting it will be around £15 billion a year higher than forecast in March. This increase in interest rates reflects growing optimism about the economic recovery, and since the same improvement in the economic outlook that drives up interest rates also drives up government revenues, the net effect is to reduce borrowing. However, further increases in interest rates *not* accompanied by a stronger outlook for growth and revenues remain a risk, especially while debt is high and, owing to the large share held by the Bank of England via its quantitative easing programme, while interest rate rises feed through to spending quickly.

Difficult decisions loom not just on the immediate COVID recovery, but also when it comes to facing pre-existing long-term challenges. Notably, if increases in the cost of healthcare, adult social care and state pensions over the next decades are not funded through tax rises or cuts to other spending, debt would be on an increasing and accelerating path that would at some point prove unsustainable. Even in the near future, meeting rising health and social care costs through further increases in the health and social care levy would require this to more than double from its planned rate of 1.25% to 3.15% by 2030.

While the fiscal impact of the transition to a net-zero economy, at least on current plans and commitments, has a very different trajectory – public sector costs occur primarily in the near future, and in the longer term are increasingly outweighed by revenues from carbon taxation – both developments combined will put significant pressure on the public finances in the 2030s and 2040s, even if the COVID crisis leaves few economic or fiscal scars. Given the risks from much elevated debt, and the known future pressures on the public finances, once the economic

recovery is secured then, absent a willingness to deliver another dose of austerity for many public services, there will likely be a strong case for further sizeable tax rises to come in the second half of this decade.

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4. Rewriting the fiscal rules

Carl Emmerson and Isabel Stockton (IFS)

Key findings

1 **In principle, well-designed fiscal rules could make it easier for governments to borrow for good reasons while making it hard to borrow for bad reasons.** Borrowing during periods of temporary weakness or to finance spending that delivers future benefits can be appropriate, but simply borrowing in order to defer announcing or implementing measures that involve difficult trade-offs is not.

2 **Successive Chancellors have been too quick to announce poorly designed fiscal targets: in total, 11 have been announced in the last seven years, with most of them being missed before being dropped.** The Chancellor was right to suspend and review the government's fiscal targets – and to allow borrowing to rise sharply – when the pandemic hit. The manifesto commitment to reduce debt over this parliament was always badly conceived and Rishi Sunak is right not to attempt to meet it.

3 **Indications are that both the Conservative Government and the Labour Opposition remain in favour of setting policy so that a current budget balance (or better) is forecast for the medium term.** This has much to commend it: it allows borrowing for investment purposes and gives some time for policy to adjust to shocks. But the split between capital and current spending will not always align with what spending does and does not benefit future generations. There is also a judgement to be made about the timescale over which a forecast current budget balance should be aimed for: too short and it could necessitate inappropriately sharp adjustments to policy; too long and governments may have more scope to promise future tax rises or spending cuts that they do not intend – or are perhaps unable – to implement.

4 The combined legacy of the COVID-19 pandemic and the global financial crisis (GFC) has been to elevate debt to levels not seen in recent UK history. Debt

interest payments are, however, lower than prior to the GFC as interest rates have fallen sharply. Indeed, they are lower as a share of revenue than at any time since 1700. This does not mean additional debt has been costless: the public finances are now much more exposed to increases in interest rates. This has been exacerbated by the fact that the increase in debt since the start of the pandemic has been effectively financed by increased deposits of commercial banks at the Bank of England. **There remains a strong case for gilt issuance to be tilted more towards long-dated index-linked gilts in order to lock in the current low real cost of more debt.**

5 There is a case for setting policy so that over the long term, debt is reduced as a share of national income. This could help reduce future debt interest spending and could create 'fiscal space' so that debt could be increased again when the next severe adverse shock strikes. Reducing debt from its newly elevated level will be made harder by known pressures facing the public finances. **The Office for Budget Responsibility estimates that the rising costs of healthcare, adult social care and state pensions will total 6.1% of national income by 2050–51, while costs associated with the transition to net zero are estimated to peak much sooner, in 2026–27, at 2.2% of national income.**

6 The International Monetary Fund estimates that UK general government net worth is the lowest of 24 advanced economies. **A clear risk with a narrow focus on debt is that public sector assets are inappropriately sold – or are not acquired – to help keep headline debt down.** Whatever its merits, measurement challenges mean that a formal target for public sector net worth may not be sensible. While there are advantages to reducing debt over the longer term, both the Treasury and the Labour Opposition should retain their welcome focus on the broader public sector balance sheet.

7 A clear lesson from the last 25 years is that, rather than having firm and fixed fiscal rules, it would be better for these to be considered rough rules of thumb that Chancellors should strive to keep to in most periods. This should be communicated from the outset. **We should not pretend that any fiscal target, however carefully designed, will be sacrosanct for evermore.**

4.1 Introduction

The COVID-19 pandemic led to UK government borrowing reaching its highest level since the Second World War and has pushed public sector net debt to a share of national income not seen since the early 1960s. Such a response is appropriate: governments should borrow more during periods of crisis in order to support households, businesses and public services.

To allow for borrowing on this scale in response to the crisis, the Chancellor Rishi Sunak sensibly suspended the government's fiscal rules. These rules were never designed for the current situation: it is hard to imagine any set of fiscal targets that would be usefully constraining during most periods but flexible enough to allow the increase in borrowing and debt that we have seen during the pandemic. Mr Sunak's first Budget in March 2020 initiated a review of the fiscal rules, stating that this would conclude by a Budget that following autumn. That Budget was then pushed back to the spring of this year, at which point it was announced that the review of the fiscal framework was continuing and that new fiscal rules would be set out in the Autumn 2021 Budget.

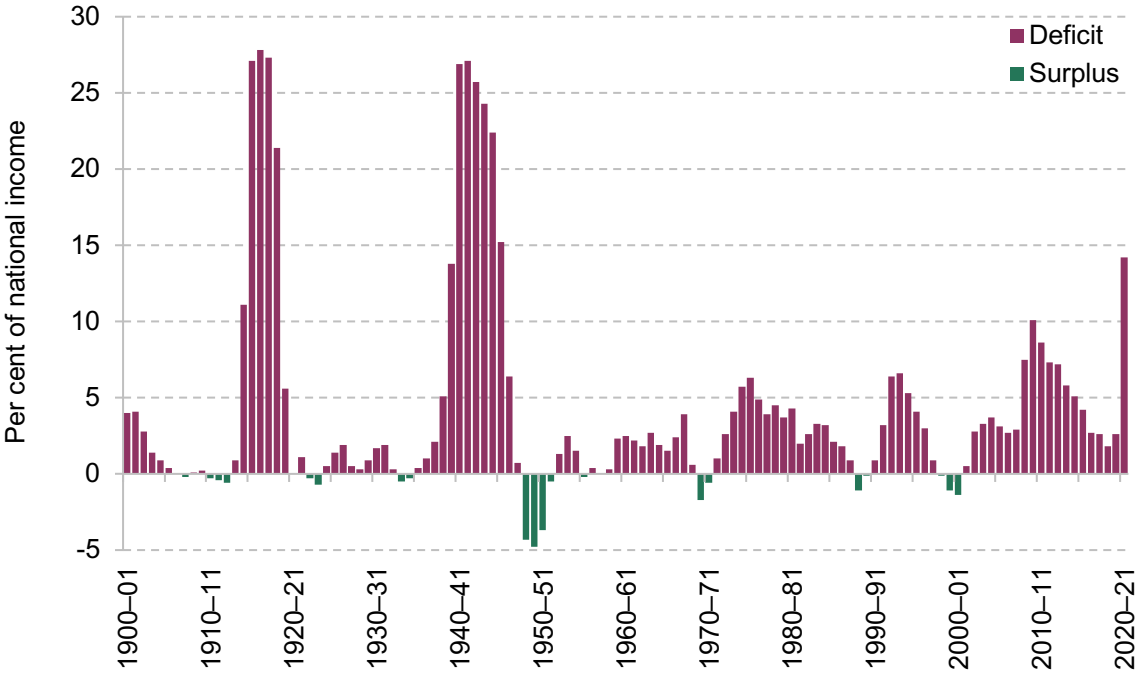
With this in mind, this chapter discusses the design of fiscal rules. It starts in Section 4.2 by asking why fiscal rules might be useful in helping the stewardship of the public finances in the first place. Section 4.3 provides a brief history of the experience of such rules in the UK over the last 25 years. Section 4.4 sets out the key features of a well-designed set of fiscal targets and makes some recommendations for the UK. Section 4.5 concludes.

4.2 Why fiscal targets at all?

It is common for governments – both in the UK and elsewhere – to raise less in revenue than they spend: in other words, to borrow. As shown in Figure 4.1, in the UK there has not been an overall budget surplus for over 20 years (the last one was in 2000–01), and since the start of the 20th century on average four out of every five years has seen spending exceed total revenues (98 out of 121 times).

There are often good reasons for governments to borrow, some of which apply in some temporary circumstances and some of which can justify planning to borrow on an ongoing basis. But governments might, at least in some circumstances, be tempted to borrow more than is appropriate from an economic point of view. And while debt can – and indeed should – grow faster than the size of the economy in some circumstances, it cannot continually increase as a share of national income forever; at some point, a combination of tax rises or spending cuts would be required to prevent debt interest costs and inflation from spiralling out of control. Excessive government borrowing can thus risk substantial costs. The key argument for fiscal

Figure 4.1. Public sector net borrowing since the start of the 20th century



Source: Office for Budget Responsibility, Public Finances Databank, www.obr.uk/data.

targets is therefore that they can make it harder for governments to borrow for inappropriate reasons, but still allow borrowing when it is felicitous.

Good and bad reasons for governments to borrow

As has been discussed in previous Green Budgets (see, for example, Crawford et al. (2016)), there are at least five good principles for allowing governments to borrow:

- **Intergenerational fairness.** Where spending now delivers benefits in the future – either financial or non-financial – it is arguably fair that future generations share in the cost of financing this spending. The alternative, where such spending is financed from taxes levied on the current population, risks only doing spending that has reasonably immediate benefits. This could, for example, mean that investment projects with large up-front construction costs but more valuable benefits over a long period of time would not be commissioned. Such projects should go ahead where the benefits exceed the costs of financing them, even if the benefits only accrue slowly. This also has the implication that the lower the interest rate on government borrowing then, all else equal, the greater the amount of spending that delivers future benefits that should go ahead.
- **Output stabilisation.** When adverse shocks hit the economy, there will be temporary reductions in tax revenues and additional demands on spending, as indubitably demonstrated since the outbreak of the pandemic. The government should have the flexibility to increase borrowing (or to reduce any surplus) during adverse shocks in order to support households,

businesses and public services and to help stabilise the macroeconomy. Attempting to maintain borrowing at its previous level following an adverse economic shock would require a combination of tax rises and spending cuts, which would risk worsening the harm done and causing long-term economic damage. This is especially true when the role of monetary policy is limited, which could occur if it was not possible to reduce interest rates (e.g. because they are already near zero or if exchange rates are fixed and there is a non-common shock).

- **Gradual adjustment.** When tax rises or spending cuts are needed – for example, when the longer-term outlook for future economic performance is revised down – it may make sense to adjust taxes and spending gradually rather than all at once. Rapid adjustments could have unwanted impacts on aggregate demand in the economy that monetary policy may be unable to offset. Making changes quickly – in particular, cuts to day-to-day spending on public services – could also mean less efficient changes being made than would be possible over a longer timescale.
- **Tax-rate smoothing.** Rather than trying to smooth tax *revenues* over time, economic theory suggests that it is better to smooth tax *rates* over time. Stability in tax rates could also help individuals and businesses with saving and investment decisions.
- **Forecast errors.** Even in the very short run, there is considerable uncertainty around total public spending and total tax revenues (in fact, the estimated amount borrowed in a given recent year will be subsequently revised, and sometimes substantially so). This means that even if a government produced unbiased fiscal forecasts, there would be a (roughly) 50:50 chance of borrowing being greater than planned. But any unexpected borrowing should, over time, be balanced out by years in which borrowing turned out lower than had been planned.

Governments might be tempted to borrow more than is appropriate, a phenomenon known as deficit bias. This could occur because governments (unsurprisingly) find it easier to increase spending and to cut taxes than to cut spending and to increase taxes. Particularly in the run-up to a general election, a Chancellor might be tempted to defer difficult decisions to a later Budget when either they have been returned to office and may not face a general election for a number of years or, in the event of an election defeat, the challenges can become the problem of a political opponent. Indeed, the history of recent UK fiscal events has shown a tendency for large tax increases to be much more likely to be announced in the 12 months following a general election than in other years (with the year following the 1992, 1997, 2001, 2005, 2010 and 2015 general elections all showing this pattern).

The fact that politicians might be tempted to borrow more than is appropriate has implications for the design of the fiscal framework and associated fiscal rules. It means that there needs to be a political cost to an unjustified breach of fiscal rules: otherwise the rules will be, and will be seen to be, meaningless. Similarly, the rules need to be carefully designed so that they cannot be easily gamed: otherwise, rather than trying to comply with the principles behind a rule, there

may in some circumstances be a temptation for a Chancellor to attempt to meet the letter of the rules – for example, by inappropriately distorting policy, delivery or measurement.

Potential benefits of well-designed fiscal rules

There are a number of related reasons why a Chancellor might decide to implement a fiscal framework and fiscal rules that constrain their behaviour. Most obviously, and as stated above, a fiscal framework and fiscal rules that are well designed, credible and understood by policymakers, voters and others who are trying to hold the government to account can lead to better policy outcomes as they make it easier for governments to borrow for good reasons and harder for governments to borrow for bad ones. Second, fiscal rules might help the government explain to voters and to those lending the government money what it is trying to achieve. This could help persuade voters and financial market participants that the public finances are going to be kept on a sustainable path and that tax and spending choices would not impose an unfair financial burden on future generations. This could help keep the UK risk premium low and therefore debt financing costs down. Third, one potential benefit – from the perspective of the Treasury or finance ministry, at least – is that fiscal rules that are constraining might help the Chancellor win arguments with cabinet colleagues in Spending Review negotiations.

Features of well-designed fiscal rules

The good reasons for government borrowing set out above have several implications for any fiscal rules that we might wish to adopt.

- First, we should certainly not want to constrain the government to running an overall budget surplus in each and every year, which was a mistaken commitment made by George Osborne when he was Chancellor. But in most circumstances, and certainly in 'good' economic times, we might think tax revenues paid by the current generation should cover all spending from which it benefits.
- Second, higher borrowing (or lower surpluses) should be allowed during periods of crisis, when the economy is temporarily underperforming. This will be particularly important when it is not possible, or not appropriate, for monetary policy to be loosened further. Conversely, borrowing should be lower (or surpluses larger) during unsustainable economic booms. But even outside of a boom, we may want lower borrowing in order to create the fiscal space to allow borrowing to rise when future adverse shocks occur.
- Third, borrowing should be allowed to finance spending that benefits future generations. For example, borrowing increased enormously during the Second World War and it might be considered right that subsequent generations share in this cost. But we might also want to put a limit on the extent to which we pre-commit the spending of future generations as they might value greater flexibility, not least as their preferences might be different. Therefore we might want to borrow more for purposes that deliver future benefits when the interest rate on

government borrowing is low and when future growth is expected to be high. We should also bear in mind that if borrowing is done at short durations then future increases in interest rates would lead to higher debt interest costs when borrowing is refinanced.

- Fourth, revenue streams or spending pressures will vary over time and, where changes are known in advance, governments should consider adjusting before they happen. For example, there is a case for increasing taxes and/or cutting spending, and therefore reducing debt relative to what it otherwise would have been, ahead of future spending pressures from demographic change. Equivalently, were a new revenue source – for example, from the discovery of a new tax-rich natural resource – to be on the horizon, this could justify cutting taxes and/or increasing spending, and therefore increasing debt relative to what it would have been, in advance of the new revenues actually materialising. Doing this will help to smooth tax rates over time and should aid the efficient implementation of decisions.

These implications make designing a good set of fiscal rules extremely challenging. Rules need to be flexible enough to allow more borrowing in temporary periods of economic weakness and especially so when monetary policy is constrained. They need to distinguish between whether or not borrowing is being used to finance spending that will benefit future generations. They need to look forwards, considering not just known future pressures on revenue and spending but also unexpected crises that will – at some point – doubtlessly occur (as the global financial crisis and the COVID-19 pandemic have comprehensively demonstrated). Yet to have the benefits of fiscal rules set out above, they need to be widely known and understood, which suggests a need for simple rules and – ideally – rules that are relatively stable over time.

In many cases, there is a trade-off between introducing greater flexibility to allow additional borrowing for good reasons in particular circumstances (most obviously temporary weakness in the economy or the financing of spending that benefits future generations) and the increased cost of opening the rules up to the possibility that they will be gamed. More flexible rules may also be more complicated and therefore harder to communicate and to be understood.

With these considerations in mind, we now turn to look at the UK's experience of fiscal rules over the period since 1997.

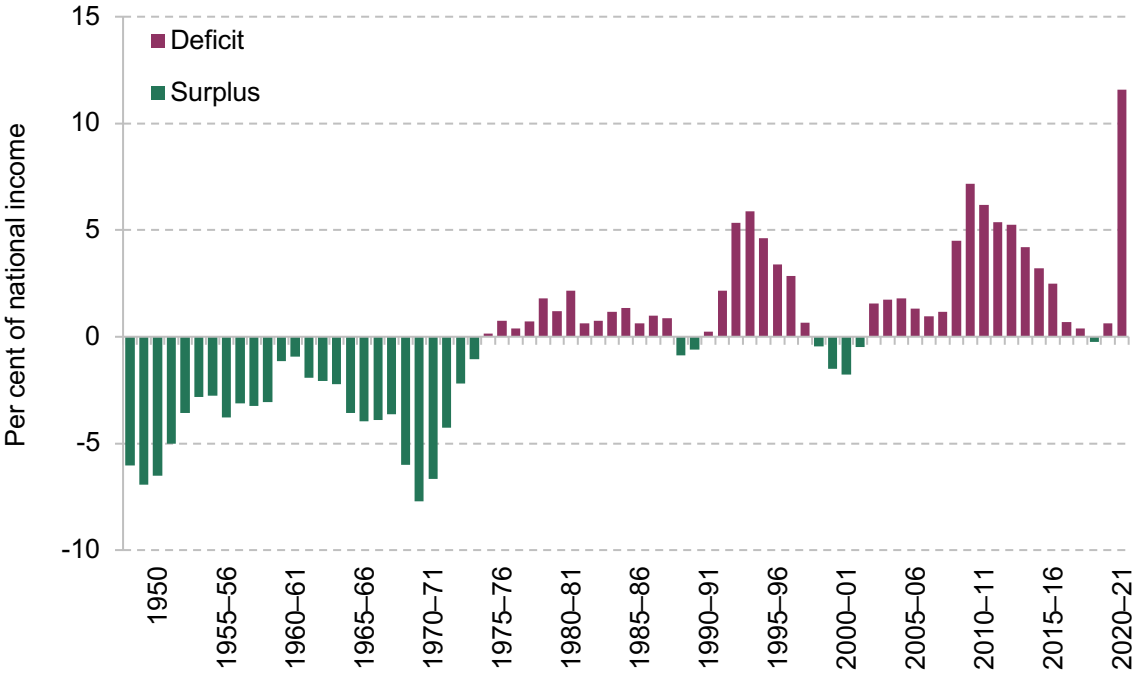
4.3 A brief history of UK fiscal targets

The pre-COVID targets

The Conservative Party's 2019 general election manifesto – and associated policy costings document – committed to three fiscal rules (Conservative Party, 2019a, 2019b). These are:

- to have the current budget in balance no later than the third year of the forecast period;

Figure 4.2. Current budget deficit since 1948



Source: Office for Budget Responsibility, Public Finances Databank, www.obr.uk/data.

- to limit public sector net investment to 3% of national income; and
- to reassess plans in the event of a pronounced rise in interest rates taking interest costs above 6% of government revenue.

The manifesto also confidently asserted that 'debt will be lower at the end of the Parliament'.

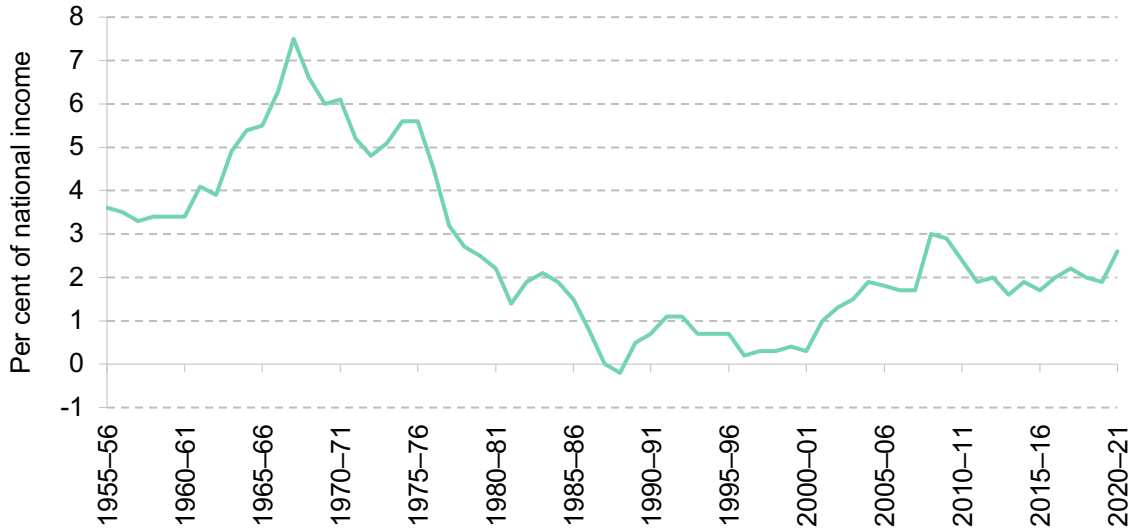
The three fiscal rules relate closely to many of the features of well-designed rules set out in the previous section. The first – aiming for a current budget balance within three years – commits to collecting sufficient revenue from the current generation to pay for all non-investment spending. As shown in Figure 4.2, over the period since 1975 it has been more common for there to be a deficit than a surplus on the current budget, or in other words for the government to borrow more in a year than it spends on public sector net investment. The average current budget deficit over this period has been 2% of national income.

By relating to the third year of the forecast horizon, the rule has a forward-looking element. This allows forecast errors or periods of economic weakness to lead to current budget deficits as long as these are not too long-lived. However, as can be seen in Figure 4.2, the big increases in the current budget deficit that were seen in the early 1990s and the late 2000s took much longer than three years to unwind.

The second rule places a limit on public sector net investment. As shown in Figure 4.3, allowing investment spending to run at 3% of national income is consistent with a level of investment

spending that had not been sustained in the UK since the late 1970s. This rule therefore gave the government scope, which it said it wanted, to increase investment spending quite substantially. When combined with the target for current budget balance, it also provided a ceiling on the amount of total borrowing the government could aim for by the third year of the forecast horizon, of 3% of national income. By UK historical standards, this would not be a particularly low level of borrowing: on average over the 74 years from 1946–47 to 2019–20, UK government borrowing averaged 2.5% of national income (see Figure 4.1).

Figure 4.3. Public sector net investment



Source: Office for Budget Responsibility, Public Finances Databank, www.obr.uk/data

The third rule states that the rules would be re-evaluated were debt interest costs to rise above 6% of government revenues. A logic behind this was that the 3% ceiling on investment spending had been chosen in the light of the low cost of government borrowing. As stated above, there is a case for doing more investment spending if it can be done well and can be financed more cheaply. Equivalently, were debt interest costs to rise, this would justify investment plans being revisited and projects with lower benefits potentially being abandoned.

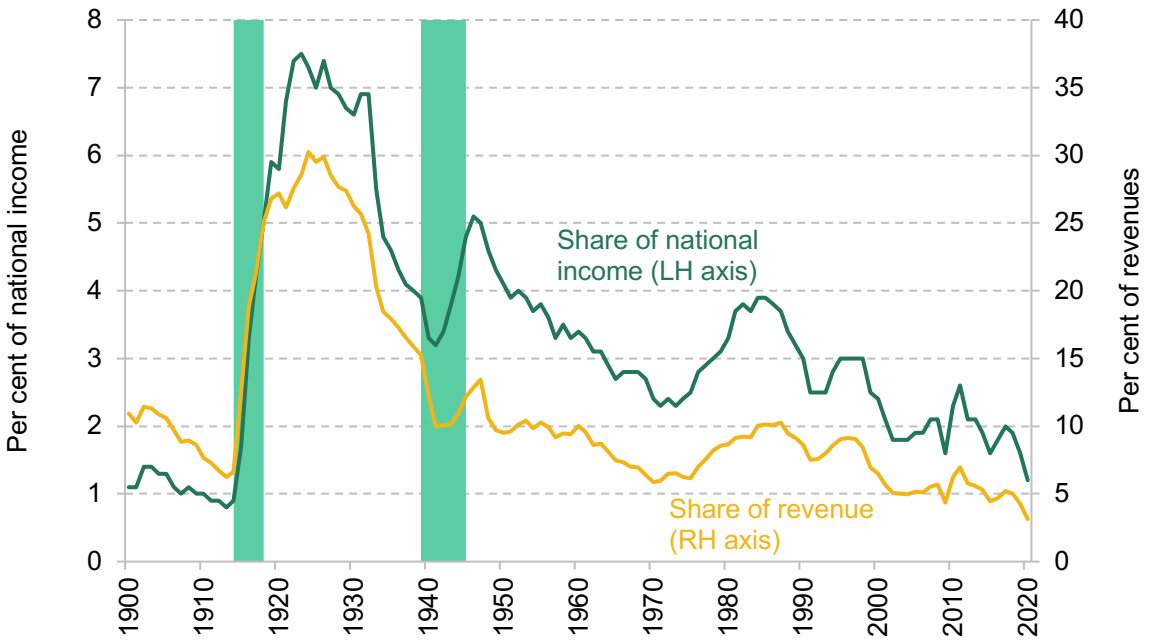
A ceiling on debt interest payments alongside a ceiling on total borrowing also (at least in part) provides a limit on the extent to which the national income of future generations is being pre-committed which, again as stated above, might be considered desirable. However, it would have been more appropriate to state the cap on debt interest spending as a share of national income rather than as a share of government revenues. While the latter is sometimes used in assessing the fiscal sustainability of developing countries, this is justified by concerns about their capacity to tax.

A measure of debt interest spending, both as a share of national income (left-hand axis) and as a share of government revenues (right-hand axis) is shown in Figure 4.4. Relative to both national

income and government revenues, debt interest spending has tended to fall since the mid 1980s. The Conservative manifesto target, as interpreted by the Office for Budget Responsibility (OBR), uses a wider measure of debt interest, which includes interest payments by and to the wider public sector.[1] This measure is typically lower than the measure shown in Figure 4.4, and is less closely related to the cost of financing the national debt. When the Conservatives set their fiscal rules, debt interest spending was running at 4.6% of revenues (or 4.1% on their own measure) in 2018–19, again suggesting the fiscal target provided a bit of flexibility against the 6% ceiling. In fact, debt interest spending fell further as a share of revenues over the next two years as the effective interest rate on government borrowing fell sharply – although recent months have seen this start to reverse.

The three rules set out by the Conservatives therefore did share many of the features of well-designed fiscal rules. They also appeared to give the government some flexibility. One striking thing about them is, taken together, they did not place any limit on public sector net debt. With

Figure 4.4. Spending on debt interest



Note: Central government debt interest net of income from the Asset Purchase Facility shown; 'revenues' are total public sector revenues. This differs slightly from the Conservative target, which is for public sector net debt interest as a share of non-debt-interest revenues.

Source: Office for National Statistics, series NMFX, MU74, JW2O and YBHA; Bank of England, A Millennium of Macroeconomic Data, tables A9, A27 and A28.

[1] The target is for public sector net debt interest as a share of non-interest receipts, whereas we focus on central government debt interest net of interest income from the Asset Purchase Facility measured as a share of total receipts. Since fiscal targets are intended to constrain central government borrowing, it is arguable whether interest income of the wider public sector should be netted off the numerator.

debt at around 80% of national income prior to the pandemic, borrowing of 3% of national income would lead to debt rising as a share of national income unless nominal growth in the economy was more than 3¾%. For comparison, the OBR's March 2020 (i.e. pre-pandemic) Budget forecast was for growth to average 3½% a year over the six years from 2018–19 to 2024–25.

Despite this, the manifesto was firm that 'debt will be lower at the end of the Parliament'. This is a very poorly designed fiscal target. While there are good reasons to want, over the longer term, to reduce debt from the level it was at in 2019, the target gave very little flexibility in the event of an adverse shock – as illustrated by the pandemic, but a much smaller and more mundane event could equally have made it unachievable, depending on when it occurred. Were a government to be on course to miss the target marginally, it could provide a temptation to sell assets purely to reduce debt at the time of the next general election (see Section 4.4 for further discussion of balance sheet issues). It is also the case that by stating that debt at the time of the next general election should be lower than at the start of the parliament, it raised the possibility that how hard the target would be to meet would depend on the timing of the next general election.

In his first Budget speech in March 2020, as the implications of the COVID-19 pandemic for the UK were only starting to become clear, Mr Sunak stressed that he was meeting these fiscal rules and that debt was forecast to fall over the parliament. But he also announced that the fiscal framework was to be reviewed – despite the rules having only just been committed to in the December 2019 general election manifesto – with a wide consultation of experts, and that he would report back in the autumn.

The Autumn 2020 Budget was then cancelled. The following March 2021 Budget document stated:

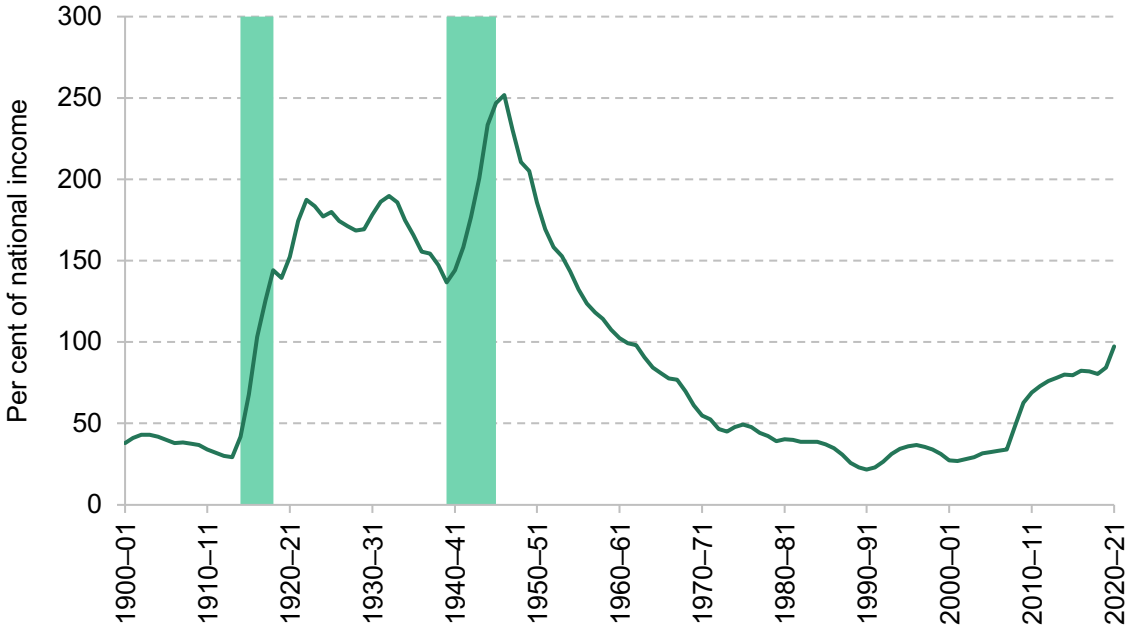
> **The current level of uncertainty means it is not yet the right time to set new medium-term fiscal rules and many countries around the world have suspended their fiscal rules. The fiscal framework remains under review, and the government intends to set out new fiscal rules later in the year, providing economic uncertainty recedes further.**
>
> HM Treasury, 2021a

Suspending the rules was the right decision by Mr Sunak. They were not designed with a crisis like the pandemic in mind. Had these rules not been suspended at this point then the requirement to have a current budget balance by at least the third year of the forecast horizon would have been breached (the Budget 2021 forecast for the current budget in 2023–24 is for a deficit of

0.6% of national income). However, the 3% of national income ceiling for public sector net investment would not have been breached, and debt interest spending remained – and was forecast to remain – well below 6% of government revenues.

Public sector net debt, however, is forecast to rise over the course of the parliament. As shown in Figure 4.5, having been 84.4% of national income in 2019–20 (the year in which the December 2019 general election fell), it climbed sharply to 97.2% of national income in 2020–21. While the future path of public sector net debt is highly uncertain, we can be extremely confident that it will not fall back below 84.4% of national income before the date of the next general election. So the manifesto commitment to reduce debt will be broken.

Figure 4.5. Public sector net debt



Note: Shaded areas are the two World Wars.

Source: Office for Budget Responsibility, Public Finances Databank, www.obr.uk/data.

And before that there was …

Over the last 25 years, it has been common for UK Chancellors to set themselves fiscal rules. This is in line with the trend seen across advanced economies. The IMF's Fiscal Rules Database suggests that out of 33 advanced economies, the number with a fiscal rule in place rose from 4 to 31 between 1985 and 2015.[2] On taking office in 1997, the then Chancellor Gordon Brown committed to meet his 'golden rule' (to ensure revenues covered day-to-day spending over the

[2] Authors' calculations using International Monetary Fund (2017). A fiscal rule is defined there as having in place a numerical limit on a budgetary aggregate.

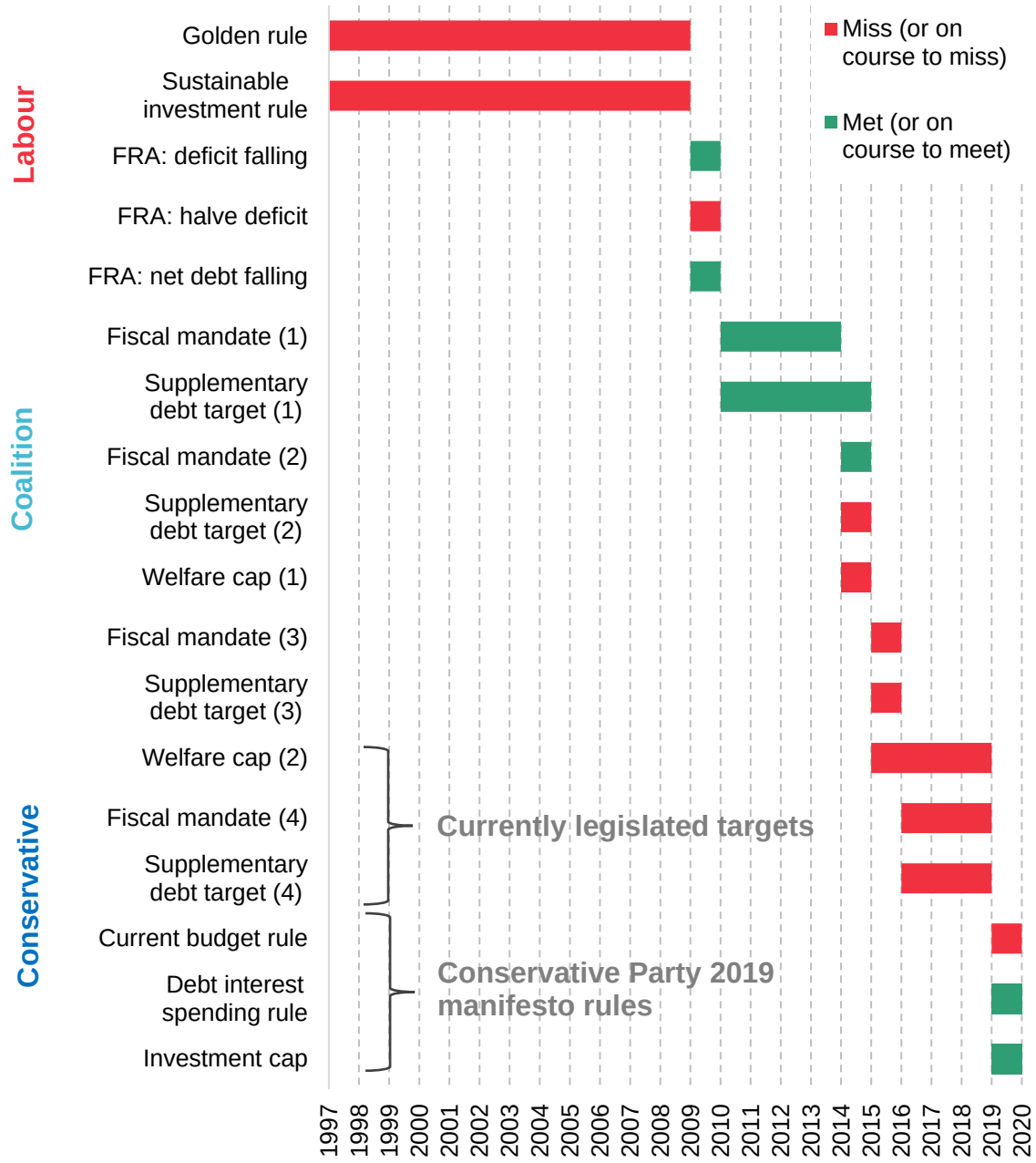
economic cycle) and his 'sustainable investment rule' (to keep public sector net debt below 40% of national income). Successive Chancellors – Alistair Darling, George Osborne, Philip Hammond and Sajid Javid – have all implemented new fiscal targets. So they have now been a feature of Labour, Coalition and Conservative Governments. But while Mr Brown's two fiscal targets lasted for 12 years before the financial crisis led to them sensibly being dropped, the period since 2009 has seen rapid churn in new fiscal targets. In particular, since Mr Osborne set out his second set of three fiscal targets in 2014, we have seen a total of 11 fiscal targets announced in just 7 years, as shown in Figure 4.6.

Many of these fiscal targets were not well designed and many have been missed; and in many cases the poor design means that missing them was the appropriate thing to do. The latest set of fiscal targets have even been announced, and then dropped, before they were formally legislated. This means that the Office for Budget Responsibility remains legally required to assess whether the Budget plans are compliant with Mr Hammond's chosen fiscal targets as set out in the January 2017 Charter for Budget Responsibility (HM Treasury, 2017). These relate to borrowing in 2020–21 (missed), debt in 2020–21 (missed) and a measure of welfare spending (missed).

Of course, extreme adverse shocks – such as the global financial crisis and the COVID-19 pandemic – are likely to lead to fiscal rules being suspended and, in many cases, abandoned. It would be very difficult to design a set of fiscal rules that were suitably constraining in the run-up to those events but flexible enough to allow the increase in borrowing that was appropriate once they arrived. And simply reactivating the previous set of fiscal rules once a crisis has passed may often not be appropriate either. Most obviously, the legacy of a crisis will affect the appropriate path of debt going forwards. Other changes – for example, to long-run interest rates – might also lead to fiscal rules needing to be reconsidered.

Changing fiscal rules is not, however, costless, as many of the benefits of fiscal rules are unlikely to materialise if they are not consistent over time. The high frequency with which the UK has gone through successive sets of fiscal rules since the financial crisis – and in particular since 2014 – makes it far more difficult for them to be understood or for their presence to be taken seriously as an indicator of the government's commitment to the careful stewardship of the public finances. It seems unlikely that many voters – or even, for that matter, gilt traders and foreign investors who lend to the UK government – have been keeping up with the changing details of fiscal targets. Even if a well-designed set of fiscal rules were now implemented, one would have to question whether it was likely they would actually prevent borrowing from being inappropriately high, or whether it is more likely that the Chancellor would simply choose to fudge or abandon them.

Figure 4.6. A history of UK fiscal rules in one graph



Note: FRA stands for the Fiscal Responsibility Act 2010, https://bills.parliament.uk/bills/565.

Source: Authors' calculations.

One potential reason so many rules have been abandoned in recent years is that they were too quickly announced and, as a result, badly designed, and therefore dropping them swiftly then became the best course of action. For example, Mr Osborne's legal commitment to run an overall budget surplus in 2019–20 (and beyond) was inflexible and abandoned immediately after the 2016 EU referendum result. The eventual deficit in that year was £57 billion. But his successor, Mr Hammond, failed to learn sufficiently from this experience: while his commitment

to keep borrowing below 2% of national income in 2020–21 did allow an adjustment for the economic cycle, it was still extremely inflexible and was swiftly scrapped by his successor, Mr Javid, even before the pandemic hit. The latest OBR estimate is that (cyclically adjusted) borrowing in that year exceeded Mr Hammond's 2% of national income ceiling in 2020–21 by almost £250 billion. One clear lesson from this is that setting rules that refer to a fixed near-term year risks being very inflexible. Another is that we should not rush to implement a new set of fiscal targets.

Despite these clear lessons, in his 2020 Party Conference Speech Mr Sunak said 'this Conservative government will always balance the books'. This risked yet another swiftly implemented and poorly designed fiscal target. And if by 'always balance the books' the Chancellor was referring to an overall budget surplus being run every year by the current Conservative Government, then a more likely accurate statement would be that the current Conservative Government will 'never balance the books'.

A new hope?

Much more sensibly, in his March 2021 Budget Speech Mr Sunak stated:

> **This Budget is not the time to set detailed fiscal rules, with precise targets and dates to achieve them by – I don't believe that would be sensible. But I do want to be honest about what I mean by sustainable public finances, and how I plan to achieve them. Our fiscal decisions are guided by three principles.**
>
> **First, while it is right to help people and businesses through an acute crisis like this one, in normal times the state should not be borrowing to pay for everyday public spending. Second, over the medium term, we cannot allow our debt to keep rising, and, given how high our debt now is, we need to pay close attention to its affordability. And third, it is sensible to take advantage of lower interest rates to invest in capital projects that can drive our future growth.**
>
> HM Treasury, 2021b

Waiting before setting a new set of fiscal rules is a good call by the Chancellor. The previous set of rules (aside from the supposed commitment to have debt lower as a share of national income at the end of the parliament than at the start) had much to commend them. It could be that

returning to those targets would make sense. If a further delay until beyond the coming Budget resulted in a better-designed set of rules ultimately emerging, then this too would be welcome. As well as allowing more time to refine the rules, a delay would also mean that more of the heightened uncertainty in the outlook for the public finances arising from the pandemic should have dissipated. This means that further delay could well make it easier to set rules that strike a good balance between being suitably constraining while allowing sufficient flexibility to borrow more when that is appropriate. There is no rush.

The quote from the Chancellor above also reveals quite a lot about his fiscal principles which, presumably, will underpin any fiscal targets that he ultimately announces and commits to. These principles have much in common with the good and bad reasons for borrowing set out in previous Green Budgets and summarised in Section 4.2. They also have much in common with the fiscal targets that Mr Sunak inherited from Mr Javid, and actually have a reasonable amount of common ground with fiscal targets introduced by Mr Brown and Mr Osborne – and those committed to by the then shadow Chancellor, John McDonnell, in the Labour Party manifestos of 2017 and 2019.

So, there is much here that does not appear to be economically or politically controversial. In line with this, recent reports suggest that the government's new fiscal targets and the ones that Labour will commit to may well have much in common. On 16 September, the *Financial Times* reported that Mr Sunak's new rules will 'commit him to stop borrowing to fund day-to-day spending within three years …. [and] also require underlying debt to start falling by 2024–25'.[3] The first of these would be identical to the rule set out in the Conservatives' 2019 General Election manifesto.

Ten days later, on 26 September, the same paper reported that Rachel Reeves, the Shadow Chancellor, will 'pledge to balance the current budget in the medium term, ensuring that tax revenues at least match day-to-day public expenditure, and that the burden of public debt is on a downward trajectory of national income'.[4] The piece on Labour's rules reported that alongside a set of rules, there would also be a number of principles, including an intention to 'look at public sector assets as well as liabilities' and a 'mechanism for suspending the rules if the economy was hit by an exceptional shock' – we turn to these issues in Section 4.4. There are close similarities between Ms Reeves's reported rules (which are themselves similar to those proposed by the Conservatives) and those in Labour's 2019 General Election manifesto. This pledged 'to eliminate the current budget deficit by the end of the rolling five-year forecast period' and 'to improve the strength of the Government's balance sheet (Public Sector Net Worth)' and also

[3] https://www.ft.com/content/eb23375d-7219-4b22-a8a7-3060cd848163.
[4] https://www.ft.com/content/5dcfa73d-5a39-4f95-b8b3-b706bf9239ce.

proposed a 'knock-out' when monetary policy was unable to support demand sufficiently (Labour Party, 2019).

This might make us hopeful that a new set of fiscal targets could emerge that have some attractive features, have broad political support, and are able to last a reasonable amount of time – at least to make it to the two-year mark that most of those rules announced since 2014 have failed to do. We now turn to examine what a well-designed set of targets could look like.

4.4 What should new fiscal targets be?

The principles set out in Section 4.2 suggest that to be well designed, fiscal rules need to:

- be forward-looking;
- look through temporary factors that can depress or flatter headline measures of the public finances;
- help ensure fairness for different generations;
- be credible; and
- be communicable and, ideally, stable.

This section sets out what a well-designed target for borrowing might look like. It then turns to debt, where the task of balancing appropriate flexibility with a target that is constraining is more challenging. It then considers whether the Chancellor should set out in advance circumstances under which the rules would be suspended and whether, given all these challenges, the Chancellor should be setting formal fiscal targets at all.

A fiscal rule for borrowing

As argued in Section 4.2, it might be considered fair that the costs of financing spending should be shared across the generations that benefit from it, and that this might also help to improve the efficiency of spending decisions. A reasonable proxy for this might be considered to be to aim for a current budget surplus. This would ensure that revenues were expected to be at least as great as day-to-day spending and it could allow borrowing to finance investment spending. Mr Sunak's first fiscal principle, stated above – that 'in normal times the state should not be borrowing to pay for everyday public spending' – would suggest that he agrees.

Precisely this type of target would have much to commend it, and as such it has been advocated in past editions of the IFS Green Budget.[5] By setting policy to ensure a forecast current budget

[5] This was first proposed by IFS researchers in section 2.6 of Chote and Emmerson (2005), with the argument refined and repeated in subsequent Green Budgets.

surplus a few years into the future, this allows time for the public finances to recover from any temporary adverse shocks, such as those caused by a cyclical downturn. (For this reason it makes more sense to target the headline current budget, rather than one that attempts to adjust for the estimated impact of the ups and downs of the economic cycle, which is extremely difficult to do with any accuracy in real time.) And it would avoid the situation where a one-off forecast error could lead to the rule bring breached.

What spending should count as 'everyday'?

Targeting the current budget would not be a perfect proxy for ensuring each generation pays for itself. There is no guarantee that the timing of the stream of interest payments resulting from a decision to borrow to invest will match the timing of the stream of benefits from that investment having occurred. More fundamentally, some day-to-day spending – most obviously, spending on education and training – will be expected to deliver future benefits. Similarly, it is arguable whether the cost of day-to-day spending that mitigates past carbon emissions going back multiple generations should be borne entirely by the current generation. Working in the other direction, payment of pay-as-you-go public sector pensions, while benefiting recipients now, would better be considered as a payment for services delivered to previous taxpayers rather than being day-to-day spending benefiting the current generation. And while investment spending should deliver benefits to future taxpayers, some poorly chosen and/or badly managed investment projects could fail to do that.

In principle, though, one could imagine attempting to define comprehensively which spending was benefiting the current generation. The risk with such approach is that it would then doubtless divert attention of spending departments towards arguing that their activities should not be classified as being for the current generation – most likely on the basis that they deliver future benefits – in the hope that this would make it easier to secure a more generous budget settlement. A Chancellor might also be tempted to indulge in such reclassifications in order to make a fiscal target defined in this way easier to meet. While far from perfect, using the distinction of 'current spending' and 'public sector net investment' spending as defined by the Office for National Statistics (ONS) has the advantage of being based on an independent body's assessment of how spending should be classified on the basis of international accounting rules.

What is the right time horizon?

A key decision would need to be made over how many years into the future to aim to deliver a current budget balance. The right answer to this will depend in part on how far from current budget balance we are at any point in time – in situations where there was a sizeable structural current budget deficit, it would seem reasonable to take longer to get back to balance than when there was only a modest deficit to begin with. This has perhaps been seen in practice. Mr Osborne's version of this rule – which came into force in 2010 when there was a sizeable, and structural, current budget deficit – targeted the current budget five years out. In contrast, Mr

Javid's rule, which was in the Conservative Party's 2019 general election manifesto, was set when there was already a surplus on the current budget and instead targeted the current budget three years out. Indeed, official forecasts from December 2014 until March 2020 (inclusive) were for a current budget surplus by the third year of the forecast horizon. The COVID-19 pandemic led to the two most recent official forecasts (November 2020 and March 2021) forecasting a current budget deficit three years hence (2023–24). However, the improved outlook for the economy (see Chapter 2), and the rolling nature of the target, are very likely to lead to a current budget surplus being forecast for three years hence (now 2024–25) in the October 2021 Budget (see Chapter 3).

The right time frame will also depend on the likely frequency and scale of adverse shocks that might hit the economy and the extent to which these lead to – or necessitate – an increase in government borrowing. If sizeable adverse shocks are common then this would point to having a longer time horizon than if adverse shocks typically only had a modest and short-lived impact on the public finances.

Taken together, in most periods, it could be deemed appropriate to target the current budget three years hence. During particularly adverse situations, it will be appropriate to extend the period; the Chancellor should make clear in advance that there is nothing economically sacrosanct about three years and that the horizon would be extended in the event of that being deemed the right response to the occurrence of another severe and somewhat persistent adverse economic shock.

Changing defaults to strengthen the automatic stabilisers?

The extent to which periods of temporary economic weakness automatically lead to higher borrowing will depend in part on the automatic stabilisers, i.e. the extent to which tax revenues are reduced – for example, from taxes on incomes, spending and profits – and public spending is increased – for example, on benefits paid to low-income working-age families.

These stabilisers have not been optimised so as to best manage the needs of the economy over the ups and downs of the economic cycle. Rather, they result from decisions made by successive governments over the progressivity of the tax and benefit system and, specifically, a trade-off between a desire to redistribute to those on lower incomes, a desire to preserve financial incentives to increase income and a desire to keep public spending down. But this may not be a problem: if deemed appropriate, discretionary fiscal policy giveaways could be implemented to provide greater support to the economy.

Within the UK's current macroeconomic framework, such discretionary fiscal stimulus packages will be more likely in downturns where it is deemed that a response solely through looser monetary policy is poorly suited to, or unable to meet, the task at hand. Indeed, discretionary

temporary tax cuts and spending increases were made by the then Labour Government in the financial crisis and to a much greater extent by the current Conservative Government in the COVID-19 crisis (Emmerson, 2021). Some have called for these automatic stabilisers to be strengthened so that borrowing is automatically more counter-cyclical: for example, by economists at the OECD (Caldera et al., 2021) and, for the United States, by Orszag, Rubin and Stiglitz (2021) and, for the United Kingdom, by the Resolution Foundation (Smith et al., 2019).

One challenge with this approach is that no two recessions will be the same and therefore the size of the policy response should differ. But we might think that the costs of too big a stimulus are smaller than the costs of too small a stimulus. While the former could lead to an overheating economy and high inflation, this could be calmed with tighter monetary policy. Having too small a stimulus could lead to the economy underperforming for longer than necessary and risk greater harmful economic scarring, particularly when monetary policy cannot effectively be loosened.

The type of economic stabilisation policies that should be adopted in response will also vary by the type of downturn. In principle, a given set of automatic stabilisers could be too weak for some downturns and too strong for others. In terms of the policy mix, a cut to the main rate of VAT to boost consumer spending might be a good policy in a financial crisis (as was implemented for 13 months from December 2008) but a bad one during a pandemic lockdown where the cause of the recession is the need to reduce virus transmission and where job furlough schemes would instead make more sense (as were implemented during COVID-19).

The trade-off between redistribution and incentives will vary over the economic cycle, with reduced concerns over the impact of diminished work incentives during periods of weak labour demand. This is one argument in support of the temporary £20 per week boost to universal credit that was in place between April 2020 and September 2021. We could imagine setting a system where universal credit was *automatically* set at a higher level during periods when vacancies are scarce and set at a less generous level in other periods. This would be primarily for reasons of efficient redistribution, but may also promote macroeconomic stabilisation.

In the US context where the system of government and resulting political structure makes legislating swift changes to fiscal policy difficult, there may be a particularly strong case for increasing the extent to which economic downturns automatically boost spending and/or reduce government revenues. While swiftly implementing measures that were precisely targeted at the specific nature of the downturn would in principle be a better outcome, in practice it may be preferable to have a stronger automatic response than the possibility of only a limited discretionary package that might not be implemented in a timely way.

In the UK context, the argument seems far less clear-cut. The UK system of government and resulting political structure means that decisions can be made and legislated very quickly – as

with the temporary boost to universal credit described above. So a better approach to macroeconomic management in the UK context might well be to manage the public finances so that there should be scope to loosen policy substantially if needed – that is, to create fiscal space to react. As the OBR puts it, 'In the absence of perfect foresight, fiscal space may be the single most valuable risk management tool' (Office for Budget Responsibility, 2021). Alongside this, operational conditions need to be in place so that, once legislated, well-targeted policies can be swiftly implemented. These could include having:

- Information databases that are kept up to date so policies can be well targeted. This was a particular challenge when designing a furlough scheme for the self-employed (Cribb, Delestre and Johnson, 2021).
- Flexible computer systems so that cuts to taxes or increases in the generosity of working-age benefits can be done quickly. The March 2020 decision to boost working-age benefits led very impressively to universal credit increasing just two weeks later. But equivalent increases to legacy benefits were not made, with both the Permanent Secretary and the Secretary of State at the Department for Work and Pensions suggesting that a key reason was that it was simply not possible to increase those benefits that quickly (Mackley, Hobson and McInnes, 2021).
- Investment projects ready-to-roll for when a downturn hits, to ensure that any injection of stimulus via this channel is timely.

One place where changing policy defaults in the UK could lead to better fiscal policy outcomes could be around how the public finances adjust to long-run pressures such as an ageing population. One such measure that has already been put in place is that the state pension age is linked to rises in life expectancy. Rises in the state pension age help offset the pressures of an ageing population through reduced spending on state and public service pensions and increased tax receipts. There may be other parameters in the tax and benefit system that could be explicitly related, by default, to pressures on the public finances, easing the management of these pressures.

Vulnerable to a St Augustinian approach?

A final concern over a forward-looking target for the current budget (or indeed for any measure of borrowing) is that it could be met by stating that policies would be pursued, despite a government not having the willingness or (perhaps) ability to implement them in practice. This might be considered St Augustine's approach to the public finances – 'Lord, make me pure but not yet'. For example, just as an individual might promise to improve their health by quitting smoking, improving their diet and frequently going to the gym from next month and never actually do it, a Chancellor could claim that they would reduce borrowing in future years through spending plans or tax changes that, in reality, they would not implement when the moment came. Provisional spending totals are often revised up before a Spending Review is

actually conducted – as we saw in Mr Javid's Spending Round 2019 (HM Treasury, 2019) and frequently during Mr Brown's time as Chancellor (Crawford, Johnson and Zaranko, 2018). And on the tax side, every year since 2011 has seen a freeze or cut in the rates of fuel duties despite formal policy remaining that, in future years, rates will increase in line with the Retail Prices Index (RPI). As it is the formal policy position, the OBR continues to incorporate the assumption of RPI indexation into its supposedly 'central' revenue forecasts, despite also acknowledging it considers there to be a less than 10% chance that this will actually happen (see figure 1 of Office for Budget Responsibility (2021)).

Preventing such gaming is difficult. But the fact that the fiscal forecasts are produced by the OBR means Chancellors have to be explicit about the policy settings that underpin the official forecasts, and the OBR is admirably transparent about these. This allows bodies outside of government – such as IFS – to point out clearly when they consider policy settings to be unrealistic, to quantify the impact of a perhaps more realistic scenario and also to highlight when previously announced spending cuts or tax rises are repeatedly deferred. For example, if – as seems more plausible than continued RPI indexation – rates of fuel duties are frozen for a further four years, this would reduce revenues by around £3 billion a year relative to the latest forecast and bring the total cost of cuts and freezes to fuel duties since 2010, relative to an alternative of RPI indexation, up to £14 billion a year.

A fiscal rule for debt

By not restricting borrowing for investment purposes, a target for the current budget would not, on its own, place any constraint on the debt that can be accumulated. Prior to the financial crisis, Mr Brown's sustainable investment rule made the commitment that public sector net debt would be below 40% of national income which was, very roughly speaking, the level of debt bequeathed to him by the previous Conservative Government.[6] As was shown in Figure 4.5, both the global financial crisis and the COVID-19 pandemic have pushed debt up considerably and it is now running close to 100% of national income. This is a level not seen in the UK since the early 1960s. But while high by recent historical standards, it is not high relative to a longer swathe of history: over the 263 years from 1699 to 1961 (inclusive), debt was higher than 100% of national income in more years than it was below it (142 years above it, 121 years below it).

Debt high, but debt interest not high?

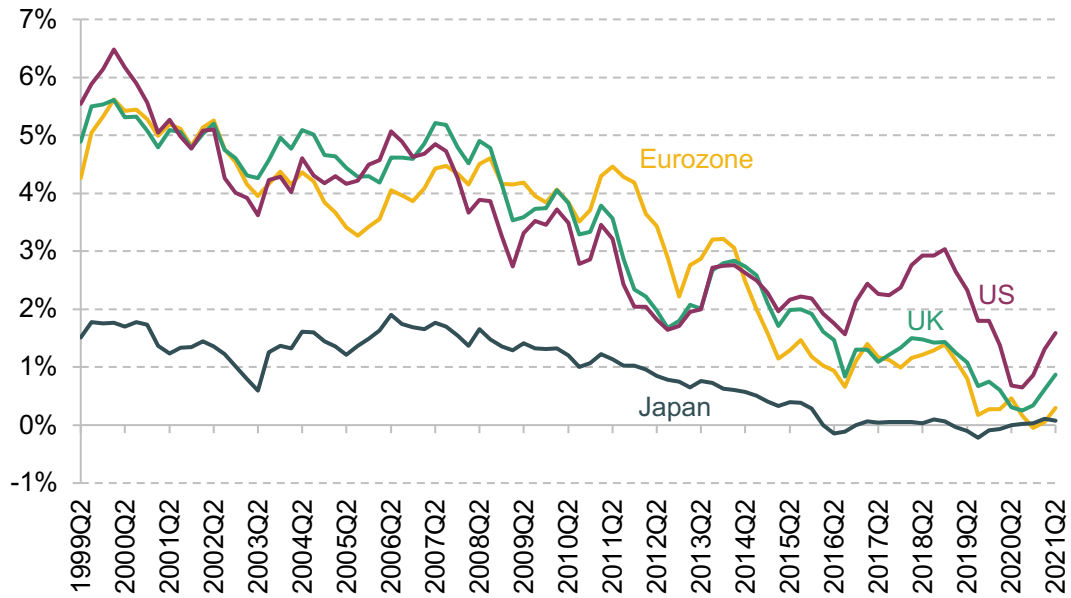
There is no consensus over the right level of debt, or the levels at which it would become particularly problematic. These will depend on many factors, some of which will change over

[6] Public sector net debt in 1996–97 is now estimated to have been 36.7% of national income. Earlier estimates were higher, as methodological changes have increased measured GDP. For example, in the March 1999 Budget, public sector net debt in 1996–97 was estimated to have been 44.3% and falling over time.

time. The continued fall in interest rates – including long-term interest rates – over the last decade has led to a general view that advanced economies can live with more debt than was previously thought (see, for example, Blanchard (2019)). Figure 4.7 shows how the yields on 10-year government bonds in the UK compare with those in the Eurozone, Japan and the US over the period from 1999 to 2021. For all these currency zones, yields on government debt have fallen over most of this period, although there have been some increases – most notably in the UK and US – since the end of 2020. Despite this, rates in the UK, the Eurozone and the US are now closer to the extremely low rates that have become typical for Japan. At the same time, over the period from 1999 to 2019, debt rose by 103% of national income in Japan, 59% in the US, and between 7% and 49% in Germany, Italy and France, major Eurozone economies.[7] This combination of falling interest rates and rising debt suggests that lenders were not very concerned that these higher debt levels were unsustainable.

Where countries are borrowing at low long-term interest rates, they can indeed use this as a good justification for having more debt. There are two obvious reasons for this. First, it could mean that more policies offer a return greater than the cost of financing them. The obvious candidates

Figure 4.7. Yields on 10-year government bonds for selected economic areas



Note: Rates on 10-year government bonds. 'Eurozone' refers to the evolving composition of the monetary union, i.e. including Greece from 2001 and including Slovenia from 2007. National rates are weighted by the nominal amounts outstanding in the maturity band.

Source: OECD monthly monetary and financial statistics (Main Economic Indicators).

[7] General government debt, a measure which is available on an internationally comparable basis. It is different from the broader public sector net debt measure, which we focus on in our UK analysis.

will include potential investment projects. Figure 4.3 showed that the current government's previous ceiling on investment spending of 3% of national income gave scope for a much higher level of investment than has been sustained over the last 40 years. But doing this investment spending well requires policymakers to:

- have access to well-done cost–benefit analyses that consider all relevant factors – including the extent to which private sector spending may be crowded out or leveraged in by the project;
- be able to choose the right projects to pursue; and
- be able to ensure that they are delivered well.

A second reason for choosing to have higher debt when borrowing at low interest rates is that more debt could be accumulated before the same share of future national income was pre-committed to debt interest spending, alleviating concerns that we were inappropriately pre-committing the spending decisions of future generations. For example, the March 2008 Budget, produced prior to the global financial crisis, forecast that public sector net debt would remain below 40% of national income and that public sector net debt interest payments would be running at 1.7% of national income in 2012–13. Thirteen years later, the March 2021 Budget forecasts public sector net debt running at around 100% of national income but that by 2025–26 public sector net debt interest payments will be just 0.9% of national income. So, at least for now, lower interest rates have meant that, despite much higher debt, there is a much lower share of national income being devoted to spending on debt interest.

Debt interest spending more exposed to increased interest rates

That is not to say that the increase in debt since March 2008 has been costless. Higher debt also increases the sensitivity of debt interest spending to the average interest rate that is paid on that debt. This will be less of an issue when those interest rates have been locked in for a long time. However, the additional borrowing done since the start of the pandemic is of a similar scale to the expansion of the Bank of England's programme of quantitative easing over the same period. This means that elevated public sector debt has effectively been financed through increased deposits of commercial banks at the Bank of England, on which interest is paid at the contemporaneous Bank Rate.[8] Overall quantitative easing now reduces the average overall duration of government borrowing from 15 years to 10 years (see Figure 3.10). So debt interest spending over the next few years, while lower in 2020–21 than had been forecast prior to the pandemic despite debt being much higher, is now more exposed to increases in interest rates (see Figure 3.9).

[8] Chapter 5 of last year's Green Budget contains a more detailed explanation (Emmerson, Miles and Stockton, 2020).

Last year's Green Budget argued that there was a strong case for tilting gilt issuance more towards long-dated index-linked debt (Emmerson, Miles and Stockton, 2020). Since then, long-run interest rates on RPI-indexed UK government bonds have remained extraordinarily low. For example, on 22 September the Debt Management Office auctioned £350 million of gilts that run to 2056 at a yield of RPI *minus* 2.3%.[9] The case for a greater share of government financing to be done on long-term inflation-linked terms to lock in the real cost of debt servicing remains strong. Though there will be limits to the extent to which this will reduce the sensitivity of debt interest spending to interest rate changes.

With elevated debt – and in particular elevated debt financed on a short duration – it becomes much more important that interest rates remain low (or, more precisely, the relationship between interest rates and growth in the economy remains benign). The interest rate at which the UK government can borrow at will be determined by the international interest rate on safe assets – which has been falling for many years – and the risk premium that investors attach to the UK relative to other governments. The former is outside the control of anything that the UK does.[10] But the latter is not. Specifically, this highlights the importance of maintaining the confidence of international investors who are lending to the UK government but often have alternative governments they could lend to instead were the UK to start to look relatively less attractive. Ensuring confidence in the UK's institutions – the independent OBR producing the economic and fiscal forecasts, and the independent Monetary Policy Committee of the Bank of England setting monetary policy to meet the publicly stated target for inflation – is an important component of this, as is the rest of the fiscal and monetary framework. Carefully communicating the fiscal strategy and having well-designed fiscal targets that are clearly explained may help to support this. Having badly designed, poorly understood, non-credible fiscal targets could make maintaining this confidence more difficult.

What to target?

Setting a fiscal target for debt is difficult as the lack of consensus over the right level of debt, and the fact that it is a stock rather than a flow variable, mean that it does not lend itself easily to a forward-looking target. There is a very strong case for allowing debt to rise during periods of economic weakness – and indeed it would often prove futile to attempt to prevent this. But, as set out in Section 4.2, there is a good case for the debt to national income ratio to be reduced at least over the very long run – it certainly cannot be allowed to increase for evermore. Reducing debt in advance of the next severe adverse shock would be advantageous, and there are known sizeable future pressures on spending on health and social care, including from the ageing

[9] https://www.dmo.gov.uk/data/gilt-market/.

[10] For a recent summary of academic studies into the factors behind the fall in global real interest rates see Chart 4.7 of Office for Budget Responsibility (2021).

population, for which smaller tax rises (or spending cuts) in place for longer might be preferable to having larger ones in place for less long.

One concern with debt targets is that they can inappropriately incentivise governments to sell assets solely to reduce debt. For example, in its recent Balance Sheet Review, the Treasury admits that the accounting treatment of student loans was a driver of its earlier attempt to sell the student loan book (HM Treasury, 2020). The broader concern is that any target for public sector net debt will inappropriately incentivise asset sales to reduce debt at particular points in time. Equivalently, it could discourage the public sector from issuing debt to purchase assets even when doing so would lead to the nation's assets being better managed. For example, regardless of the merits – or otherwise – of the programme of nationalisation proposed in the 2019 Labour Party manifesto, this would not have been consistent with a desire to reduce headline debt (Crossman, Emmerson and Kraftman, 2019). Both public sector assets and public sector debt would have been increased substantially as the substantial assets and liabilities of those organisations being nationalised became part of the public sector's balance sheet.

This has led to some – including Richard Hughes, Chair of the OBR, in his former role at the Resolution Foundation – arguing that rather than targeting public sector net debt, there should instead be a target for public sector net worth (Hughes et al., 2019). Public sector net worth is essentially an estimate of the value of all of the assets of government (both financial and physical) net of the value of all its liabilities (such as gilts in issuance). In principle, this would be attractive since while, for example, purchasing or selling a physical asset for what it is worth would have an impact on public sector net debt, it would leave public sector net worth unchanged. This would allow proposals such as nationalisation programmes to be considered under more appropriate tests – most obviously whether society would be better off if the assets in question were managed by the public or private sector – rather than by looking at the impact on just one side of the public sector balance sheet.

The idea of measuring public sector net worth is not new. Arguably, an early attempt was made by William the Conqueror in the Domesday Book of 1086. A more recent example came after the Labour Government took office in 1997:

> **On arrival in office in 1997 the Government was faced with a large structural fiscal deficit, low net investment, rising public debt and falling public sector net worth. Urgent action was needed.**
>
> HM Treasury, 1999

This led to the Treasury publishing estimates of, and forecasts for, public sector net worth. This was never formally targeted – at the time, there were concerns about the reliability of the

measure – but figures were contained in Budget documents for several years. These showed public sector net worth rising as debt was falling while additional investment spending increased the valuation of public sector assets. The financial crisis then led to forecast debt rising sharply and part of the then Labour Government's medium-term fiscal response was to cut back on planned investment spending. Combined, this led to forecast public sector net worth falling and turning negative, and the measure was quickly – and quietly – dropped.

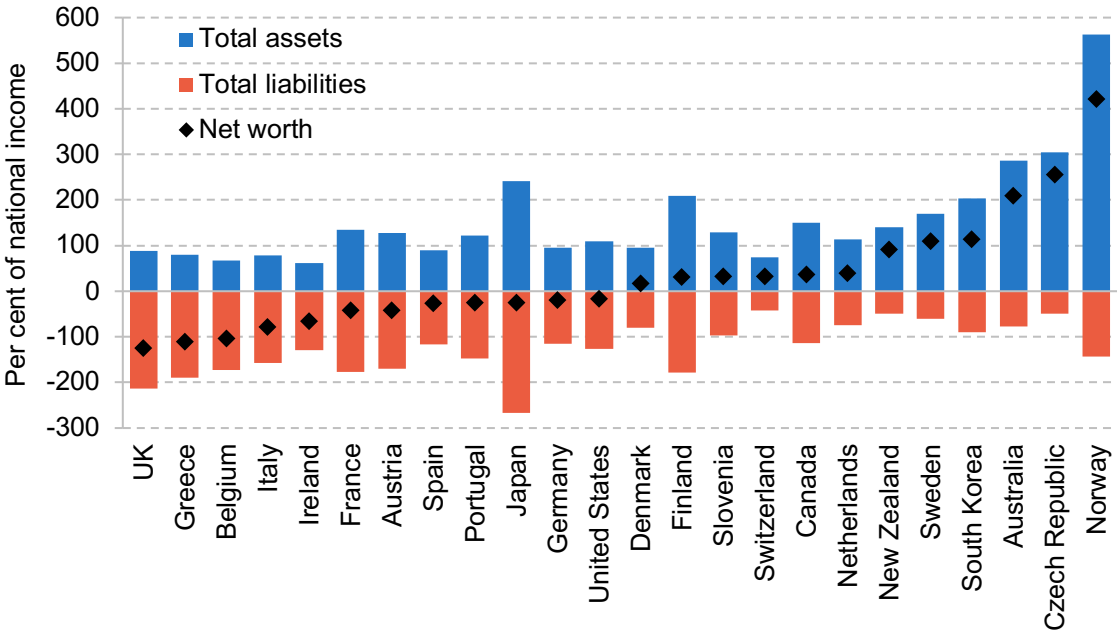
Interest in the measure has reignited recently. The ONS produced two separate estimates of public sector net worth, using different methodologies, and is currently working on a new measure that will be fully consistent with the other public finance statistics that it produces (Office for National Statistics, 2021). Alongside its forecasts for public sector net debt, the OBR now routinely produces forecasts for public sector net financial liabilities, which nets off not just short-term financial assets but also long-term financial assets (such as the value of the student loan book) from public sector net debt. The OBR has also said that it will explore methodologies for forecasting public sector net worth in future.

There are, however, big measurement challenges with valuing the public sector's assets – for example, what is the value of the UK road network? On the other side of the public sector's balance sheet, the valuation of long-run liabilities – such as the costs of meeting obligations made to pay public sector pensions and nuclear decommissioning costs – is both uncertain and hugely sensitive to the discount rate used. For example, nuclear decommissioning costs are projected to run until 2137 and the scale and timing of these costs are understandably uncertain. The government's Whole of Government Accounts include a provision for these costs. Between 2017–18 and 2018–19, it fell from £263.4 billion to £152.2 billion, with £96.0 billion of the £111.2 billion drop being attributed to a rise in the assumed discount rate.

Improvements to the measurement of the public sector balance sheet, an increased focus by the government, and the commitment from Ms Reeves to 'look at public sector assets as well as liabilities'[11] are welcome, and especially so if they lead to better management of public sector assets and liabilities and a more consistent approach across the public sector. This is particularly the case given that while the UK's debt is certainly not the highest among advanced economies, the International Monetary Fund estimates that its general government net worth is the lowest of 24 advanced economies. This is shown in Figure 4.8. The Office for Budget Responsibility (2021) puts this down to the UK having 'relatively high debt stock, significant public sector pension liabilities, and paucity of financial and non-financial assets'.

[11] https://www.ft.com/content/5dcfa73d-5a39-4f95-b8b3-b706bf9239ce.

Figure 4.8. General government net worth for selected advanced economies



Source: Chart 4.17 of Office for Budget Responsibility (2021) using data from the IMF.

Rather than striving for a consistent approach to managing public sector assets and liabilities, the Treasury Balance Sheet Review unfortunately seems to embed status quo bias by favouring gilt financing unless assets are currently held. Specifically, on page 34 it celebrates the funding of the local government pension scheme being 'in a strong position ... with a 98% funding level … Long term investment performance has been generally good with thirty year returns at 8.4%'. In contrast, on the very next page, it rejects funding the Nuclear Liabilities Fund (NLF): 'investing funds in the private sector in order to meet future liabilities is deemed to be an unnecessary risk and not a financially efficient use of funds'. There may be good arguments for having a different funding approach to the two sets of liabilities, but the fact that increasing the extent to which the liabilities of the NLF were backed by holdings of private sector assets would have 'worsened PSND [public sector net debt]' is not a good one.

The substantial measurement challenges around public sector net worth are important for the appropriateness of setting a fiscal target based on it. Changes to the methodology, or changes to assumptions about (for example) discount rates, could lead to big movements in public sector net worth. In some cases the right response might be to adjust fiscal policy, while in others the right response might be to leave policy unchanged. But would a symmetric fiscal response be followed? A clear risk is that a Chancellor could respond to a technical change that increased measured net worth with a set of tax cuts or spending rises whereas, had they been faced with the equivalent change in the opposite direction, they might have chosen not to adjust policy. In isolation, either response might (depending on the details) be justifiable – and even the right thing to do – but an asymmetric response would mean that, over time, methodical changes could lead to a weakening of the public finances.

One partial remedy might be to target public sector net financial liabilities, rather than public sector net debt. This would have the advantage of considering the value of long-term financial assets of government where the measurement issues are likely less severe. But it would not be going anywhere near as far as including the value of the public sector's non-financial assets.

Even if challenges related to the measurement of the value of assets owned by the public sector could eventually be overcome, it should be remembered that the most substantial public sector asset is its ability to levy taxes. And its biggest liabilities will be the implicit promise to provide public services, social security benefits and state pensions in future years. None of these will be included in the public sector balance sheet – but obviously the good management of both taxes and spending is crucial to the country's well-being. The New Zealand Treasury now incorporates estimates of 'fiscal net worth' – that is, the present value of expected future revenues less expected future spending – in its measure of 'comprehensive net worth'. The broadness of public sector net worth as a summary measure of the overall health of the public finances should therefore not be overstated.

Considering the substantial methodological challenges, it might well be better for any fiscal rule to remain related to public sector net debt (or potentially public sector net financial liabilities) – while being aware of its limitations in judging decisions around buying or selling assets. Specifically, a forward-looking desired path for public sector net debt could be stated. Under a given outlook for nominal growth in the economy, this would translate into a forward-looking desired average level of borrowing. When combined with a forward-looking target for the current budget – as suggested earlier – this would also translate into a forward-looking target for public sector net investment.

The trade-off between borrowing and the eventual debt level is illustrated in Table 4.1. This shows the projected ratio of debt to national income under different scenarios for average nominal growth in the economy and for the average deficit. For example, if public sector net borrowing runs at an average of 2% a year, and nominal growth averages the OBR's long-run projection of 3.9% a year, then in 2050 the UK's debt would fall to 69% of national income, i.e. below the share it was at before the outbreak of the pandemic.

Were borrowing instead to average 3% a year – the maximum consistent with the government's previous set of fiscal rules (current budget balance and spending 3% of national income on public sector net investment) – then public sector net debt would still fall as a share of national income from its current elevated level. So Mr Sunak might be able to run deficits of this size and still meet his reported desire to have debt falling as a share of national income. Labour has set out plans to spend an additional £28 billion a year over the next eight years on green investments (Reeves, 2021) – our calculations suggest that, at least over the next few years, it might be possible to do this and still just about meet its reported objective to have debt on a downward

path. However, as Table 4.1 shows, continuing to borrow an average of 3% of national income each year would, at least under the OBR's central growth assumption, still have debt in 2050 above its pre-pandemic (2018–19) share of 80%.

Even under this scenario, while debt would remain elevated as a share of national income, were the average effective interest rate on government debt to remain low at its forecast level for 2025–26 the share of national income that would have to be devoted to debt interest spending in 2050 would be just 1.3%. This is lower than the 1.6% of national income spent prior to the pandemic in 2018–19.

The table also highlights how – for a given size of average deficit – higher growth would contribute to a faster fall in the ratio of debt to national income, while lower growth would lead to it being higher.

The challenge of running deficits of a given average size will be made harder by known pressures on – and adverse shocks that hit – the public finances. The known pressures include the rising cost of healthcare, adult social care and state pensions in an ageing society, which is estimated by the OBR to build over time to an additional 6.1% of national income between now and 2050–51. Other expected costs include those associated with the transition to net zero which, at its peak in 2026–27, the OBR puts at 2.2% of national income.[12]

Table 4.1. Debt in 2050–51 as a share of national income under different assumptions for average deficit and for growth

Debt		Average deficit beyond 2025–26			
2018–19 80.4%	2025–26 97.9%	0%	1%	2%	3%
Nominal growth rate beyond 2025–26	2.9%	47%	65%	83%	101%
	3.4%	42%	59%	76%	93%
	3.9% (OBR)	37%	53%	69%	86%
	4.4%	33%	48%	64%	79%
	4.9%	29%	44%	59%	73%

Note: Long-run nominal growth rate from 2025–26 to 2050–51. 3.9% is the OBR's long-run growth assumption in its Fiscal Sustainability Report (Office for Budget Responsibility, 2020). Debt in 2025–26 is assumed to be at 97.9% of national income from our 'central' scenario in Chapter 3.

[12] This is based on the OBR's 'central' government share scenario. The government may decide it is appropriate for the private sector to instead shoulder a greater or a smaller share of the cost of the transition.

Given the lack of consensus over what the right level of public sector net debt should be, it is not possible to say what path of debt, or equivalently (for a given growth path) what level of borrowing, we should be aiming for. The right path will depend on the importance placed on a number of factors, including:

- building 'fiscal space' in advance of the next adverse shock;
- the risk that higher borrowing costs push up debt interest spending without a corresponding boost to the outlook for revenues (though, as described above, this is a risk that could also be reduced by issuing a greater proportion of long-dated index-linked debt);
- whether investment spending – or any other spending that is intended to deliver benefits to future generations – will actually be able to deliver the hoped-for returns.

A similar trade-off would result were we instead to target public sector net financial liabilities, as might be preferable.

When should rules be broken?

A clear lesson from the UK's recent history of fiscal rules is that there will be periods of time when they will need to be broken or suspended or both. This will be particularly true of badly designed rules or – to be kinder – rules that have attempted to be more constraining and, as a result, less flexible (such as those that prescribe a particular level of borrowing or debt in a single specific year). This indicates that any rules should be more flexible than many of those seen in recent years. It has also been argued that, when setting rules, the Chancellor should go further and explicitly set out in advance the situations in which they would automatically suspend or abandon their rule.

This was a feature of Mr Osborne's commitment to eliminate the overall budget deficit from 2019–20: the rule had a clause stating it would be suspended were growth over four quarters to be less than 1% (either in out-turn or forecast; HM Treasury, 2015). It has also been reported that Labour's fiscal targets would include a 'mechanism for suspending the rules if the economy was hit by an exceptional shock'.[13] This raises the question of how such a mechanism might be designed. In their proposals for UK fiscal targets, Portes and Wren-Lewis (2015) propose that fiscal rules should contain a 'knock-out' where the rules are immediately suspended when interest rates hit their zero lower bound (ZLB) and that debt should instead be increased at that point so that interest rates can rise. They then add that:

[13] https://www.ft.com/content/5dcfa73d-5a39-4f95-b8b3-b706bf9239ce.

> **This increase in debt will almost certainly mean that previous fiscal targets will become outdated, and so it makes sense for the government to say at the same time how they think the fiscal rule will change once the ZLB constraint no longer operates. Indeed it would be positively desirable for it to do so. Raising the level of debt to help counteract a recession must imply that taxes will be higher and/or government spending will be lower once the recession is over.**
>
> Portes and Wren-Lewis, 2015

So this would explicitly be allowing more borrowing and debt during downturns where interest rates reach their zero lower bound than might otherwise be allowed by a set of fiscal rules. And it also makes clear that if the economy is supported through lower taxes and higher spending then it implies that taxes will be higher or spending lower at some subsequent point.

This type of knock-out makes sense. Since there will not always be a consensus as to whether or not we are at the ZLB, one could imagine the Monetary Policy Committee of the Bank of England being asked to rule when the scope for interest rate cuts, or looser monetary policy, was exhausted. This mechanism was proposed by Labour in its 2019 General Election manifesto, alongside an additional knock-out whenever 'unconventional monetary policy operations' are expanded by the Bank of England. But there might well be other circumstances in which the right thing to do would be to jettison the fiscal targets that were in place, and other situations where fiscal targets should be refined rather than abandoned altogether. For the example, in the event of a severe adverse shock, from which recovery is expected to take several years, the right response might be to extend the time frame for getting forecast borrowing back on track from, say, three years to five years hence. This would be the case regardless of whether or not the scope for looser monetary policy was exhausted at this time.

This suggests that rather than having fiscal rules that are to be firm and fixed unless specific circumstances are met, it might be better for the Chancellor to consider fiscal targets to be rough rules of thumb that they should be keeping to in most periods. The Chancellor should be clear from the outset that this is the case, and that effective and appropriate scrutiny through the parliamentary process, by the OBR and by credible outside institutions cannot be easily substituted by comprehensive 'knock-out' clauses. Carefully communicated, this could allow flexibility to achieve better policy outcomes and avoid the pitfall of fiscal rules being inappropriately followed or great efforts of policymakers being inappropriately put to ensuring the letter of a specific fiscal rule is being met regardless of the underlying principle behind the rule.

4.5 Conclusion

A well-designed set of fiscal targets could help to improve policy outcomes. But this is not easy to achieve. Targets need to be forward-looking, they need to account for any temporary factors that may be depressing or flattering the public finances, and they should help ensure fairness across generations. This might point to some rather complex measures that consider many factors. But they also need to be communicable, credible and, ideally, stable. The Chancellor was right to suspend the current set of fiscal targets during the pandemic, and he is also right to take time to consider what a good set of post-pandemic targets will look like. Having announced 11 fiscal targets in the last seven years, there is no point in rushing to implement another set of poorly designed targets.

There appears to be a reasonable amount of consensus across several Chancellors and Shadow Chancellors in their chosen fiscal targets. Specifically, several – Mr Brown, Mr Osborne prior to 2014, Mr McDonnell, Mr Javid, Mr Sunak and Ms Reeves – have set rules with the desire to raise sufficient revenues to pay for spending that is of benefit now, while being content to borrow to finance spending that delivers future benefits. And, with the exception of Mr Brown, all have followed the advice of previous IFS Green Budgets and operationalised this with a target for the forecast current budget. Such a target is far from perfect, but it does have many desirable features and, unlike many of the targets set in the last decade, was flexible enough to cope with the shocks hitting the public finances until the onset of COVID-19.

Far harder is setting an appropriate target for debt. While a near-term target for debt would risk being insufficiently flexible, there are good reasons to set fiscal policy so that debt will decline as a share of national income over the longer term. Achieving this could help keep future debt interest payments down and could create 'fiscal space' so that, if appropriate, debt can be increased again when the next severe adverse shock strikes. But reducing debt will not be easy in the face of growing pressures from the rising costs of healthcare, social care, state pensions and the transition to net zero. And it will be important for policymakers not to respond to a debt target by selling public sector assets, or not acquiring them even when they would be better managed in the public sector.

A clear lesson from the last 25 years is that, rather than having firm and fixed fiscal rules, it would be better for these to be considered rough rules of thumb that Chancellors should strive to keep to in most periods. The Chancellor should be clear from the outset that this is the case, and that effective and appropriate scrutiny through the parliamentary process, by the OBR and by credible outside institutions cannot be easily substituted by 'knock-out' clauses that would risk being insufficiently comprehensive. What we should not do is pretend that any fiscal target, however carefully designed, will be sacrosanct for evermore.

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5. Spending Review 2021: plans, promises and predicaments

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Key findings

1 **At the Spending Review on 27 October, the Chancellor faces a dilemma.** He has announced a £14 billion top-up to his March 2021 spending plans, alongside a manifesto-breaking increase in National Insurance contributions. Overall funding for public services is planned to increase at a faster rate than at Labour's 2007 Spending Review. Rishi Sunak, a Conservative Chancellor, is set to oversee a lasting increase in the size of the state of around 2% of national income. **But still he faces an unpalatable set of spending choices.**

2 The latest overall spending envelope, set and published in early September, is more generous than those previously pencilled in at the March 2021 Budget, **but still marginally less generous (around £3 billion lower in 2024–25) than those published in March 2020**. In other words, despite the substantial pressures placed on public services by the pandemic, the Chancellor is planning to spend no more overall than he was prior to COVID-19.

3 **These plans imply a tight settlement for many areas of government over the next two years.** Sticking to them would mean overall public service funding increasing year on year, **but would require cuts to unprotected budgets (which include local government, prisons, further education and courts) of more than £2 billion in 2022–23.** This could be difficult to reconcile with the government's promises on levelling up and social care reform. **The Chancellor's plans imply more wiggle room in the medium term**: funding for unprotected budgets is set to grow by more than 8% in 2024–25, the final year of the Spending

[1] The author is grateful to Tom Hart, Yani Tyskerud and Ross Warwick for helpful comments and suggestions.

Review period, after real-terms cuts over the previous two. **Mr Sunak might consider bringing some of that funding forward to the next two years, when pandemic-related pressures on departments are likely to be at their most acute.** If he wished, he could do so without spending any more overall.

4 **In reality, an ever-growing NHS budget and top-ups needed elsewhere will likely eat into the amount available for unprotected budgets** in 2024−25. Plugging a possible £5 billion shortfall in the NHS budget in 2024−25, plus an extra £4 billion or so to return overseas aid spending to 0.7% of national income (which the government claims to be committed to), would be more than enough to require further real-terms cuts to unprotected budgets in that year. **A difficult two years for areas such as local government and justice could very easily become a difficult three.**

5 Most of the unprotected budgets facing potential cuts under the Chancellor's current plans were cut hard through the 2010s. For instance, **despite recent increases in the day-to-day budget for the Ministry of Justice and the Law Officers' Departments (which includes the Crown Prosecution Service), core spending in 2021−22 for each is still set to be 21% lower in real terms than in 2009−10**. Meanwhile, health spending has risen steadily, and is set to account for an ever-growing share of day-to-day public service spending: 44% by 2024−25, up from 42% in 2019−20, 32% in 2009−10 and 27% in 1999−2000.

6 The Chancellor's plans allow for additional spending to deal with pandemic-related pressures on the NHS, but **make no allowance for virus-related spending on other services**. COVID-19 pressures on other parts of the public sector will not simply dissipate after this year: ongoing support for public transport operators and a catch-up package for schools could easily require £3 billion of extra spending each year. **The Chancellor should be prepared to make additional funding available via a 'COVID-19 Reserve'**, but is right to set out spending plans of individual departments for the remainder of the parliament. **After sensibly following the advice in last year's Green Budget to set budgets for only one year in the 2020 Spending Review, now is the time to return to the certainty and stability of multi-year budgeting**, while retaining the flexibility to respond to changing conditions.

7 **Many public sector workers – particularly those who are more experienced and higher earning – are still earning substantially less than their equivalents in the past.** For instance, pay levels for experienced teachers in 2021 are 8% lower in real terms than in 2007, and average real-terms pay for NHS dentists fell

by more than a third between 2006–07 and 2019–20. More generally, during the sustained period of public sector pay restraint in the years after 2010, pay awards in the public sector failed to keep pace with private sector pay growth. But over the past two years, average public and private sector earnings have grown at roughly the same rate. The Spending Review will not make direct public sector pay awards, but could provide an indication of future pay policy – including whether the pay freeze for most public sector workers will come to an end next year. **There was some logic to the public sector pay freeze in 2021, but extending it risks having a damaging effect on recruitment, retention and motivation.**

5.1 Introduction

A Spending Review is an important economic and fiscal event. It is an opportunity for the government to think carefully about its priorities and objectives, balance off competing demands, and allocate huge sums of public money towards meeting its goals. That makes it an important political event, too, and a potential source of conflict and tension within Whitehall.

The past two Spending Reviews have been limited in scope, each covering only a single year: the 2019 review was scaled back because of the uncertainties of Brexit, and – following a recommendation in last year's IFS Green Budget – the 2020 review because of the even greater uncertainties of COVID-19. In the autumn of this year, the Chancellor, Rishi Sunak, intends to hold a Spending Review, setting out expenditure plans until at least the end of this parliament. He is right to do so. As the shoots of economic recovery emerge, now is the time to provide public services with the certainty and stability of multi-year budgets, to enable them to plan for a recovery from the impacts of the pandemic.

This year's review promises to be highly significant, and highly revealing. The final spending plans will represent the culmination of many behind-the-scenes arguments, and will set the scene for inevitable disputes to come. Over the rest of this parliament, we will undoubtedly see numerous stand-offs between departments with legitimate cases for additional spending, and a parsimonious Treasury with one eye on the public finances, acutely conscious that it cannot say yes to everything. The balance struck by Mr Sunak in the forthcoming Spending Review will provide insight into how these arguments are likely to be resolved, into how public services will fare over the next few years, and into the government's broader economic and fiscal strategy.

Of course, some of the big decisions have already been made. On 7 September, the Chancellor confirmed his spending totals for the next three years (the 'envelope') – topping up his previous plans by around £14 billion per year in the process. This additional spending (announced alongside a corresponding increase in tax) is earmarked for health and social care. After also

accounting for the government's existing promises and commitments on defence, schools and overseas aid, this means that getting on for two-thirds of the spending pot has already been pre-allocated ahead of the Spending Review.

Yet there remain many meaningful – and difficult – decisions and trade-offs to be made. Those trade-offs will be made all the more difficult by three important, related factors.

The first is the huge pressures placed on public services by the COVID-19 pandemic. The government's 7 September announcement included substantial sums to help the NHS deal with pandemic-related pressures: sums which the analysis in Chapter 6 suggests ought to be 'enough' to meet those pressures, at least for the next two years. But no such allowance has been made for virus-related spending elsewhere. Other areas – most notably schools and public transport operators – are also likely to require billions of additional financial support in the coming years, though the appropriate scale of that support is far from certain. Rather than try to meet these pressures from within existing budgets, the Chancellor would be wise to meet future pandemic-related costs out of a 'COVID-19 Reserve', in order to retain the flexibility to respond to changing conditions, while acknowledging the ongoing need for (temporary) virus-related spending.

The second factor is the tightness of the Chancellor's spending plans for 'unprotected' areas not fortunate enough to be covered by existing commitments – particularly in the near term. Between this year (2021−22) and next (2022−23), for example, *overall* departmental day-to-day budgets are set to grow by 6.2% in real terms (i.e. over and above inflation). The Department of Health and Social Care – the immediate beneficiary of the latest tax rise – is set for real-terms growth in excess of 12%. But unprotected budgets are facing a real-terms cut of 2.5%, or more than £2 billion, in that year. Such a tight settlement for areas such as local government, prisons and further education would pose considerable challenges – not least because of the ongoing impacts of the pandemic.

The third factor is the scale of the government's broader policy ambitions. Boris Johnson has announced his long-awaited reforms to social care funding, but it remains to be seen whether adequate funding will be provided for councils to implement them successfully while meeting a myriad of other budget pressures (see Chapter 7). The Prime Minister has also promised an ambitious 'levelling up' agenda, to address the UK's substantial regional inequalities – an issue covered in last year's IFS Green Budget (Davenport and Zaranko, 2020). The details and objectives of the agenda remain vague and ill-defined; a White Paper is expected later in the year, which may shed some light – but will presumably also come with a price tag. It would be challenging, to say the least, to make progress on each of these fronts – social care reform and levelling up – while cutting local government grants over the next two years, yet that is what the Chancellor's latest spending plans imply. The government is also committed to an ambitious

'net zero' target and is especially keen to make visible progress ahead of the COP26 summit in Glasgow later this year (see Chapter 8). That could mean substantial amounts of public expenditure over the forthcoming Spending Review period.

The upshot is that the 2021 Spending Review still promises to be a tricky one. There will be no full-throated return to austerity, and the pandemic is expected to result in a permanent increase in the size of the state. But as it stands, some areas are still facing budget cuts over the next two years. Others will avoid cuts, but will not get the support that they think is required.

Improvements in the economic and fiscal outlook might provide the Chancellor with some breathing room and allow him to make more funding available for public services, without the need for another round of tax rises or an increase in borrowing relative to previous plans. That is especially likely to be the case in the short term. But given the scale, breadth and likely persistence of pressures created by the pandemic, and the seeming inevitability of future top-ups to the NHS budget, the additional headroom is unlikely to be enough to meet the many demands for additional funding. Some areas will be left wanting. To govern is to choose, and the Chancellor has some unenviable choices to make.

We now proceed as follows. Section 5.2 lays out the Spending Review process and the government's framework for planning and controlling public spending. Section 5.3 describes recent trends in spending, including how different departments' budgets have fared since 2010. Section 5.4 considers some of the key areas where the Chancellor will be under pressure to allocate additional funds. These include public services disrupted by the pandemic – most notably the NHS – but also public sector pay awards, social security (including the triple lock) and the government's stated policy priorities (such as social care reform, levelling up and net zero). Section 5.5 sets out the Chancellor's existing spending plans and the various commitments that limit his room for manoeuvre at the forthcoming Spending Review. Section 5.6 analyses the implications of these, and discusses some of the options and trade-offs facing the Chancellor. Section 5.7 concludes.

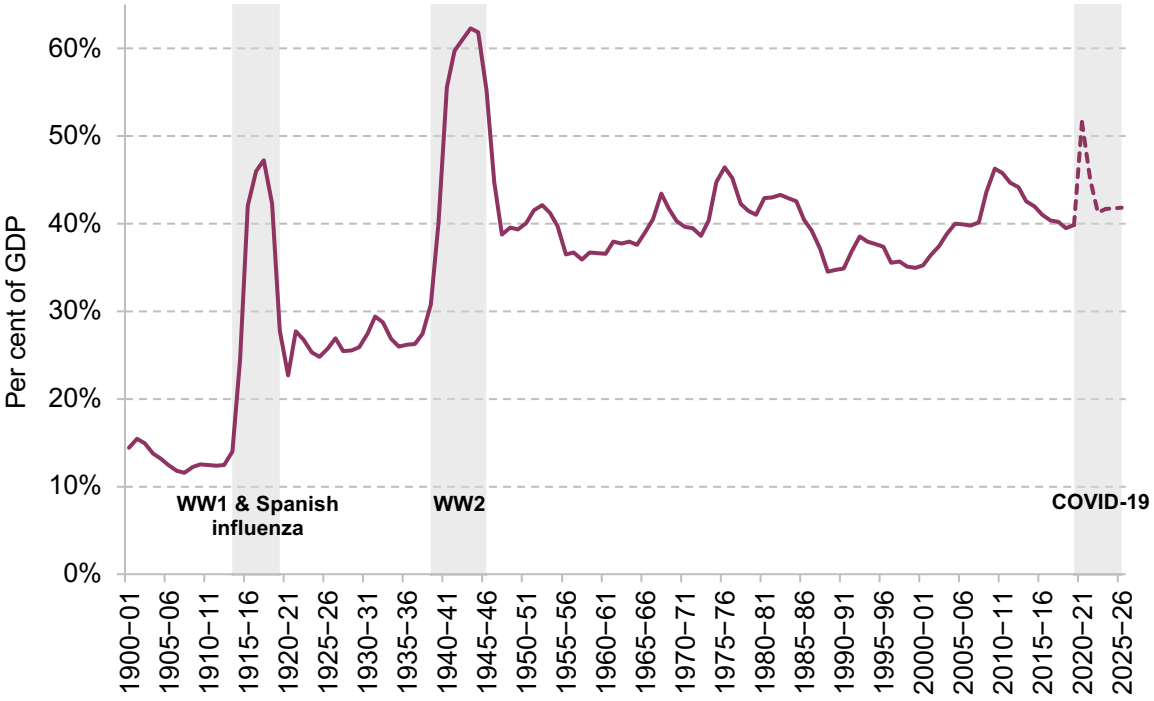
Readers should note that the first half of this chapter is backwards-looking. Those interested only in analysis of the outlook for the 2021 Spending Review should skip to Section 5.4, on page 205. Those in even more of a hurry and only wanting to look at the implications of the Chancellor's latest plans and the quantification of the trade-offs he faces might wish to skip to Section 5.6, on page 221.

5.2 The fiscal framework and the planning of public spending

The backdrop

This year's Spending Review will be held as government spending as a share of the economy – one measure of the size of the state – falls from its highest level since the end of the Second World War. Figure 5.1 shows how total government spending as a share of GDP has evolved over the past 120 years. In 2020–21, as the economy contracted and the government appropriately expended huge sums in emergency support, UK government spending amounted to more than 50% of the entire economy for the first time since 1945–46.

Figure 5.1. Total managed expenditure as a share of GDP, 1900–01 to 2025–26



Note: Dashed lines denote forecasts as of the March 2021 Budget, updated to reflect September 2021 spending announcements and Citi's latest forecasts for the economy.

Source: Office for Budget Responsibility Public Finances Databank, accessed July 2021, and HM Treasury, 'Chancellor launches vision for future public spending', 7 September 2021.

As the economy recovers and emergency support is withdrawn, this increase is expected to be reversed – but not in full. Following the latest spending announcements on 7 September, and on the basis of Citi's 'central' forecast for economic growth (Chapter 2), government spending is expected to stabilise at 41.8% of national income, around 2% of national income higher than its pre-pandemic level. A little over one-third of this increase is from higher investment spending

(an increase which was planned pre-pandemic), with the remaining two-thirds or so coming from higher day-to-day spending (on social security and public services).

In other words, the pandemic will be followed by a permanent increase in the size of the state. This mirrors what happened in the aftermath of the First and Second World Wars: spending fell as a share of national income, but not all of the way back to its pre-war level. Notably, this is not what happened following the financial crisis: while the crash did lead to a spike in spending as a share of national income, this was reversed fully over the subsequent decade.

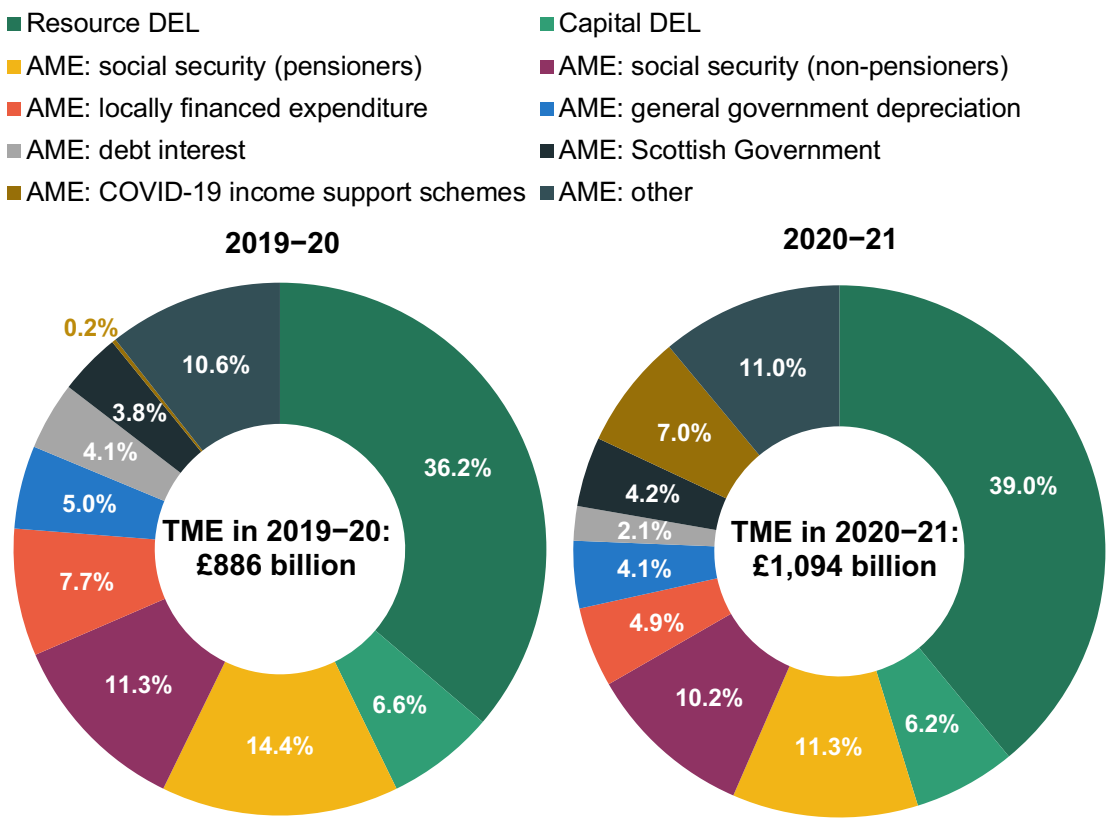
The spending framework

While total government spending shot up during the pandemic to more than 50% of GDP (or, equivalently, more than £1 trillion), not all of this spending is subject to the Spending Review process. Since 1998, when the first Spending Review was held by then-Chancellor Gordon Brown, government spending has been divided into the following two totals:

- **Departmental expenditure limits (DEL)** can be broadly thought of as spending by central government on public services, and encompasses spending that can be controlled (rather than being driven by, for example, the economic cycle). This spending is allocated between departments, often for three or four years at a time, at Spending Reviews. It includes spending on things such as the NHS, the courts system, the police and schools. Within DEL, departments are set separate resource (current, or day-to-day) and capital (investment) budgets.
- **Annually managed expenditure (AME)** includes spending items which are more volatile and demand-led, or which lie outside of central government's immediate control. In other words, it covers the categories of spending that are more difficult to plan and control: those which the government argues cannot reasonably be subject to firm multi-year limits. This includes things such as debt interest payments and spending on social security benefits and state pensions, as well as spending by local or devolved governments financed through the taxes that they control.

Together, DEL and AME add up to total managed expenditure (TME), or total government spending, which amounted to £886 billion in 2019−20 and shot up to £1,094 billion in 2020−21. TME is broken down into its various components in each year in Figure 5.2. It can be seen that the composition of government spending changed during the pandemic. Most notably, COVID-19 income support schemes (such as the furlough scheme and the Self-Employment Income Support Scheme) did not exist pre-pandemic, but accounted for 7% of all spending in 2020−21.

Figure 5.2. Components of total managed expenditure (TME) in 2019–20 and 2020–21



Note: £ billion figures shown are nominal (cash terms), and reflect the latest estimates at the time of writing. 'Resource DEL' and 'Capital DEL' denote the OBR's definition of PSCE in RDEL and PSGI in CDEL, respectively. COVID-19 income support schemes include the Coronavirus Job Retention Scheme and the Self-Employment Income Support Scheme. Other components of AME include, for example, net public service pension payments, spending by funded public sector pension schemes, spending by the BBC and public corporations, current VAT refunds, environmental levies, expenditure transfers to the EU and student loans.

Source: Author's calculations using OBR Public Finances Databank (accessed 29 July 2021) and table 3.14 of OBR March 2021 Economic and Fiscal Outlook, with the pensioner/non-pensioner split calculated based on DWP Benefit Expenditure and Caseload Tables 2021.

The focus of the Spending Review will be departmental budgets within DEL. The Treasury uses a slightly broader definition of DEL than that shown in Figure 5.2 for its control total (to include block grants paid to the Scottish Government) but, even then, only around half of all spending falls within scope. It is important to remember that despite all of the emphasis on and theatre

around the Spending Review, there is a huge chunk of spending – around half of the total – that is not subject to the process or to firm annual limits.[2]

Departmental budgets are then split into a resource (current, or day-to-day) and a capital (investment) component:

- **Resource DEL (RDEL)** accounts for almost 40% of total spending and around 85% of total DEL. It covers the day-to-day running and administration costs of public services, so includes things such as staffing costs.
- **Capital DEL (CDEL)** accounts for 6−7% of total spending and around 15% of total DEL. It covers money spent building or maintaining physical government assets, such as roads and buildings.

Resource and capital budgets are planned and managed separately. This distinction was originally introduced to address a perceived bias against capital investment in the 1980s and 1990s: when times were hard and budgets tight, there was a belief that departments would cut back on investment projects to meet day-to-day spending pressures (HM Treasury, 1998). The separation was thus introduced to encourage departments to undertake the public investment that they had been budgeted to do. The separation between the two is not always clean, however (discussed in Box 5.1), and this did not stop the government from cutting capital DEL sharply in the years after 2010 (discussed in the following section).

As is implied by the name, departmental expenditure limits are a set of annual spending limits for departments. In practice, departments tend to spend less than the limit, because there are very strong incentives not to overspend (Crawford, Johnson and Zaranko, 2018), and departments show a particular tendency to undershoot their capital budgets (Atkins, Tetlow and Pope, 2020). Departmental underspending during the pandemic is discussed in Box 5.2 later.

Box 5.1. The murky distinction between capital and investment spending

The separation of departments' resource and capital budgets was introduced in 1998 to prevent investment spending from being cut back to meet short-term pressures on day-to-day expenditure, and thus to protect against departments' tendency to underinvest. The distinction is based on a public accounting definition: capital spending is defined as 'expenditure on fixed capital assets, capital grants and the acquisition of certain financial assets acquired or sold for policy reasons' (HM Treasury, 2021a). Fixed assets are defined as goods and services that are used in production for more than one

[2] The 2010 and 2015 Spending Reviews included parts of AME – in particular, spending on working-age social security – within the envelope, but this approach remains the exception rather than the rule. For more detail on previous Spending Reviews and on how the spending framework has evolved over time, see Crawford, Johnson and Zaranko (2018).

year: roads, bridges and buildings are some obvious examples. This distinction is seen as worth protecting because such spending – 'investment' – can produce future benefits or promote economic growth.

The challenge is that the accounting definition of what constitutes investment spending does not always align with an economic concept of 'investment'. Economists might cast the net more widely, to include other types of spending that produces long-run returns. Education is an obvious example: investment in human capital (such as spending on schools, further education colleges or training) can produce substantial long-term economic benefits. We might like to design a fiscal framework that protects this 'economic' definition of investment spending. But there is no precise definition, and there are clearly some fuzzy edges. Most might agree that (at least some) spending on education is an 'investment' in the future, but it is much harder to judge where to draw the line when it comes to other areas, such as spending on healthcare, or rehabilitation programmes for prisoners.

In the absence of such a definition, we rely on a precise accounting distinction between current and capital expenditure. Under the existing framework, the education services produced by schools, colleges and universities are treated as being consumed by students in the process of acquiring knowledge and skills (United Nations, 2008). Spending on those areas is thus treated as current rather than capital spending, because it does not produce a fixed asset as understood in the system of national accounts.

This may sound like an obscure and technical debate about accounting definitions – and it is. But it has important implications, particularly when the outlook for current ('day-to-day') spending is tight and the government employs fiscal rules that explicitly favour capital spending. The current Chancellor has indicated that he is willing to borrow for capital expenditure, but that he wants all day-to-day spending to be paid for out of tax revenues (i.e. he wants to achieve current budget balance). To achieve that objective, he has set out a tight set of spending plans that leave very little room for additional current expenditure (discussed in Section 5.6). That could lead to a situation where there is plenty of funding sloshing around for capital projects but where current spending projects are squeezed – regardless of the respective merits of the two. In other words, there could be instances where capital spending projects of low value to the public get commissioned while current spending ones of higher value do not, because they do not meet an accounting definition of 'investment'. The Treasury's recent reluctance to provide substantial funds for schools to catch up on lost learning during the pandemic is perhaps a case in point (Sibieta and Zaranko, 2021).

One option occasionally floated is to simply reclassify large chunks of expenditure on education as investment spending. It is important to distinguish here between the UK's public accounting framework and the Chancellor's fiscal rules. There is nothing to stop the Chancellor from changing his fiscal rules to allow him to borrow to pay for capital spending *and* spending on education, if he thinks that the long-term benefits would justify doing so. He could even come up with a new spending definition for his fiscal rules,

such as borrowing only to pay for 'growth-enhancing spending' – if such a category could be defined – without making any changes to the UK's national accounts. But such a change would no doubt lead to furious lobbying from departments seeking to have their spending programmes classified as 'growth-enhancing', and would set a precedent for future targets to be similarly gamed. Sticking to the ONS's interpretation of international accounting rules is cleaner. Chapter 4 contains a further discussion of the issues around the design of the fiscal framework.

Ultimately, if the government wishes to spend more on an area such as education, and is willing to borrow more in order to do so, it should say so explicitly and make the case on its own terms with a clear argument of the potential long-term benefits.

Multi-year budgeting (at least in theory)

The introduction of Spending Reviews in 1998 also saw the advent of multi-year budgeting to replace the previous annual spending cycle. In setting 'firm and realistic multi-year limits', the objective was to give departments a solid base for planning their spending and operations (HM Treasury, 1998). It meant the end of the annual Public Expenditure Survey, which was frequently used by departments to bid for extra funds, or by the Treasury to make incremental cuts. Multi-year budgeting was an explicit attempt to move away from this annual tinkering. Departmental spending plans were initially set for three years at a time (with planning periods often overlapping), but in recent times have covered as many as four years and as few as one (Table 5.1).

Table 5.1. Past Spending Reviews

Date of Spending Review	Number of years covered	Financial years for which departmental limits set
July 1998	3	1999–00 to 2001–02
July 2000	3	2001–02 to 2003–04
July 2002	3	2003–04 to 2005–06
July 2004	3	2005–06 to 2007–08
October 2007	3	2008–09 to 2010–11
October 2010	4	2011–12 to 2014–15
June 2013	1	2015–16
November 2015	4 (5 for capital DEL)	2016–17 to 2019–20 (to 2020–21 for capital DEL)
September 2019	1	2020–21
November 2020	1	2021–22

Source: HM Treasury Spending Reviews (various).

The two most recent Spending Reviews have both covered just a single year. The September 2019 Spending Review, held by then-Chancellor Sajid Javid just a few months before the December 2019 general election, was limited to a single year, setting departmental resource budgets for 2020−21 only. In announcing a 'fast-track', single-year Review, the government cited the need for departments to focus on delivering Brexit (HM Treasury, 2019). The prevailing Brexit-related uncertainty at the time also undoubtedly fed into the decision.

In 2020, Chancellor Rishi Sunak announced his intention to hold a Comprehensive Spending Review to set plans for the remainder of this parliament. In the event, following a recommendation in last year's IFS Green Budget (Zaranko, 2020), the Review was sensibly limited to just a single year (2021−22) due to the huge amount of COVID-related economic uncertainty.

This year's Spending Review is an opportunity to move back towards multi-year budgeting – a framework which, in normal times, represents a strength of the UK's system for the planning and control of public expenditure (and one that is unusual internationally). Setting departmental limits for the next three years (2022−23, 2023−24 and 2024−25) would provide departments a basis on which to plan up to and beyond the next general election. The pandemic is not behind us, and future virus-related spending seems a certainty (even if the scale of such spending is far from certain). But that should not prevent the Treasury from providing departments with some certainty, stability and predictability over their 'core' budgets used to deliver their usual services. Any additional virus-related spending could and should be funded separately from a 'COVID-19 Reserve'. That way, the Chancellor can retain the flexibility to respond to changing conditions, while acknowledging the fact that some COVID-19 spending will need to continue.

5.3 Recent trends in spending

The decade prior to the pandemic saw the longest sustained squeeze on public spending on record. As part of a broader austerity programme, departmental budgets faced deep cuts in the years after 2010, with particularly large cuts to investment budgets in the first few years of the coalition government. Overall departmental spending started rising again after 2016−17, but most departments entered the pandemic with a smaller budget than a decade previously. Following the onset of the pandemic, departments have been allocated huge sums to deal with the impacts of COVID-19. This section discusses each of these trends.

Resource and capital budgets since 2010

Resource and capital budgets fared very differently during the 2010s. Between 2009−10 and 2017−18, resource DEL was cut by 9.1% in real terms (1.2% per year). It was increased by an average 1.7% per year over the next two years, such that it in 2019−20 it was 6.0% lower than a

decade previously. In other words, despite a decade of near-uninterrupted (though relatively anaemic) economic growth, day-to-day spending by central government on public services was 6.0% lower in 2019−20 than ten years previously (and 12.3% lower in per-capita terms, as the population grew over this period). But spending was on an upwards trajectory pre-pandemic, and under the government's March 2020 plans, the post-2010 cuts to overall RDEL would have been reversed in real terms by 2021−22, and the per-person cuts reversed by 2024−25.[3]

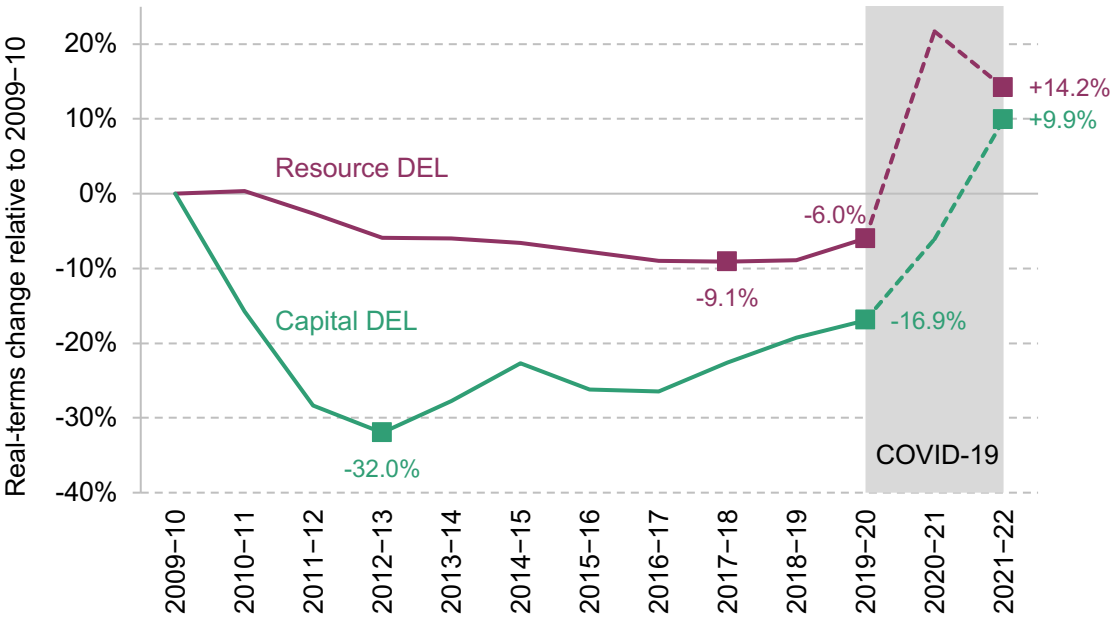
Capital budgets followed a more tumultuous path. Between 2009−10 and 2012−13, capital DEL was cut by almost a third (32.0%) in real terms – a remarkable amount to cut from budgets in such a short time, and an even bigger cut than was originally planned. Capital budgets then followed a bumpy path upwards over the following seven years, which undid around half of the initial cuts. Capital DEL in 2019−20 was 16.9% lower in real terms than in 2009−10 (and 22.5% lower in real per-person terms). The government had, however, pencilled in large increases in capital DEL for subsequent years: Spending Review 2020 planned for average annual real-terms growth of 15.9% in 'core' (non-virus) departmental capital budgets between 2019−20 and 2021−22.

Figure 5.3 shows that resource DEL shot up in 2020−21 to more than 20% above its 2009−10 level (largely but not entirely due to virus-related spending), but is expected to fall back in 2021−22 as pandemic-related support is withdrawn. (A breakdown of the government's COVID-19 spending is provided later in this section.) Under current forecasts, overall resource DEL in 2021−22 (including virus-related spending) will be 14.2% higher in real terms than in 2009−10.

Capital DEL also increased sharply in 2020−21 but, unlike in the case of resource DEL, this was largely due to a pre-planned increase in spending rather than a virus-related increase. And rather than falling back, the growth in capital DEL is set to accelerate in 2021−22. The outlook for capital spending in the forthcoming Spending Review period is covered in Section 5.5.

[3] This slightly overstates the generosity of the government's spending plans, because from 2019−20 those figures include between £5 and £6 billion of additional RDEL relating to a fall in the discount rate used in setting employer contribution rates to public service pension schemes. Additionally, the planned increase in RDEL was part-funded by direct savings from EU contributions that the UK will no longer pay. See footnote 6 of Emmerson, Pope and Zaranko (2019) and Zaranko (2020) for further details.

Figure 5.3. Changes in resource and capital DEL since 2009−10



Note: 'Resource DEL' and 'Capital DEL' here denote the OBR's definition of PSCE in RDEL and PSGI in CDEL, respectively, adjusted for historical discontinuities. The resource DEL figures for 2019−20 onwards are also adjusted to remove additional resource spending related to employer pension contributions. Figures for 2020−21 and 2021−22 include COVID-19 spending.

Source: Author's calculations using OBR Economic and Fiscal Outlook (October 2018 and March 2021), HM Treasury Public Expenditure Statistical Analyses (various) and ONS June 2021 GDP deflators.

Non-COVID spending by departments

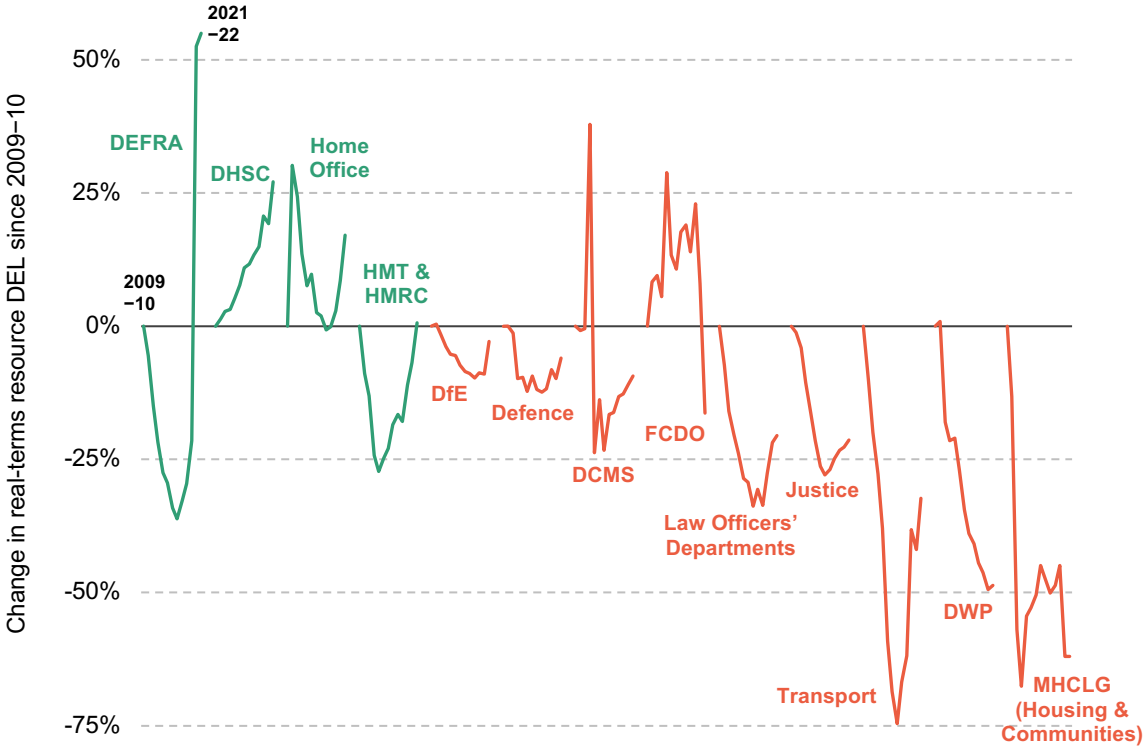
A large part of the increase in resource and capital DEL since 2019−20 is a result of virus-related spending programmes, which are discussed in more detail in the following subsection. Here, we ignore spending related to COVID-19 and instead look at how different departments' 'core' (non-virus) budgets have evolved since 2010, taking resource and capital spending in turn.

Figure 5.4 plots the percentage change in major departments' core resource (day-to-day) budgets between 2009−10 and 2021−22. A few key patterns emerge.

- **Most departments saw sharp cuts in the initial years after 2010.** These cuts were especially deep for the Ministry of Justice (MoJ), the Law Officers' Departments (which includes the Crown Prosecution Service), the Department for Work and Pensions (DWP), the Department for Transport (DfT), the Department for Environment, Food and Rural Affairs (DEFRA) and the Housing and Communities budget within the Ministry of Housing, Communities and Local Government (MHCLG). The Home Office also saw sharp cuts after 2010−11, and the Department for Culture, Media and Sport (DCMS) saw sharp cuts after the 2012 London Olympics.

- **This was not the case for all departments.** The Department of Health and Social Care (DHSC) budget increased steadily over the 2010s, and has grown to account for an ever-growing share of day-to-day public service spending: 44% by 2024–25, up from 42% in 2019–20, 32% in 2009–10 and 27% in 1999–2000. The Foreign, Commonwealth and Development Office (FCDO) budget also grew steadily (up to 2019–20).[4] Health spending is discussed in more detail in Chapter 6; aid spending is discussed in Section 5.5.

Figure 5.4. Percentage change in departmental 'core' (non-virus) resource budgets, 2009–10 to 2021–22



Note: Figures for 2020–21 and 2021–22 are 'core' resource DEL spending plans from the March 2021 Budget and exclude COVID-19 funding. All figures are for resource departmental expenditure limits, excluding depreciation. DEFRA = Department for Environment, Food and Rural Affairs; DHSC = Department of Health and Social Care; HMT = HM Treasury; HMRC = HM Revenue and Customs; DfE = Department for Education; DCMS = Department for Culture, Media and Sport; FCDO = Foreign, Commonwealth and Development Office; DWP = Department for Work and Pensions; MHCLG = Ministry of Housing, Communities and Local Government. DEFRA figures for 2020–21 and 2021–22 include direct payments to farmers, replacing those previously made under the EU Common Agricultural Policy.

Source: Author's calculations using HM Treasury Public Expenditure Statistical Analyses (2015–21 editions), HM Treasury Budget 2021 and HM Treasury June 2021 GDP deflators.

[4] Note that the FCDO was created in September 2020 through a merger of the Foreign and Commonwealth Office (FCO) and the Department for International Development (DfID); Figure 5.4 shows the percentage change in the combined budget of both pre-merger departments. The spending growth over the 2010s was driven by increases in the DfID, rather than the FCO, budget.

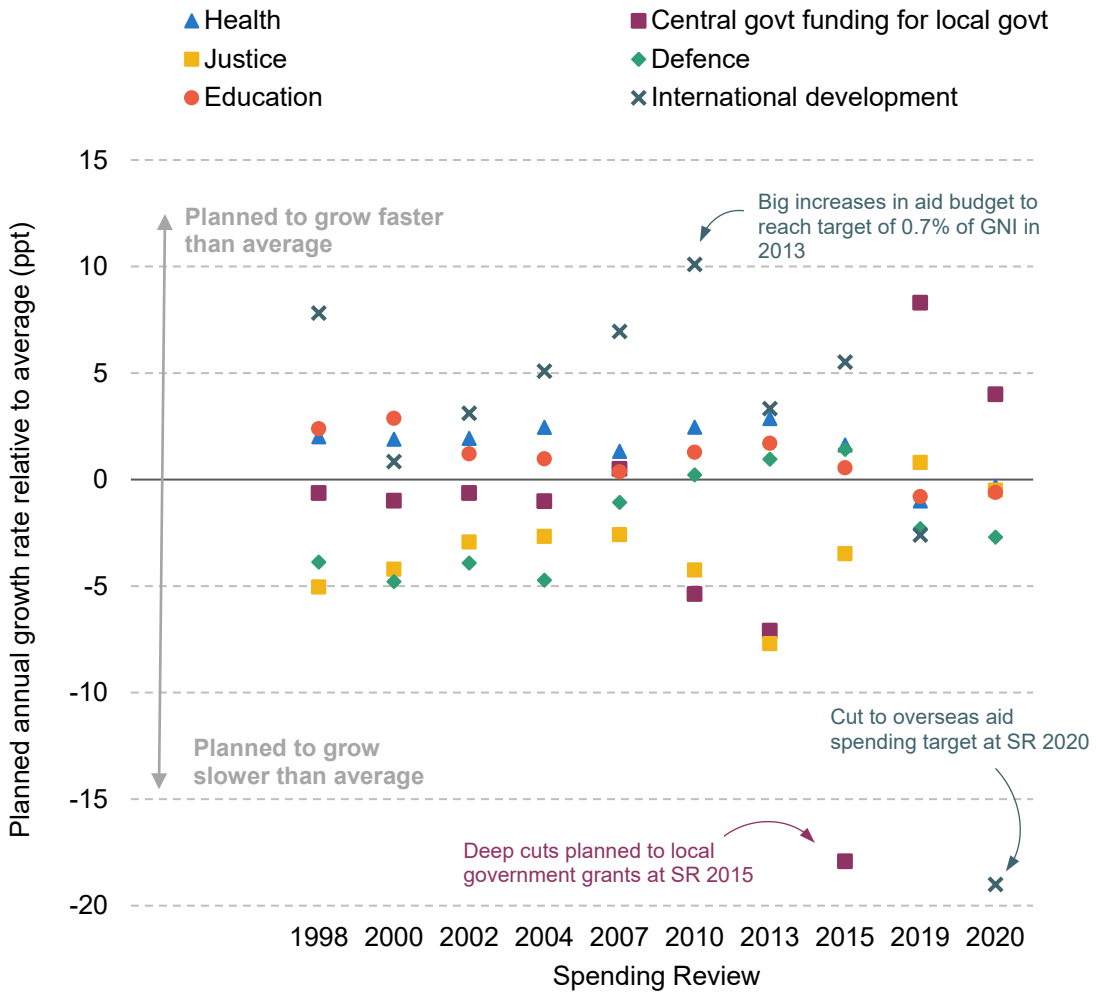
- **Most departments have seen budget increases in recent years.** This has in part reflected a deliberate decision by the government to increase departmental budgets in the face of pressures on public services, as well as a general move away from a policy of 'austerity' at the two most recent Spending Reviews. But, notably, some of the largest increases have been for departments with significant post-Brexit responsibilities (DEFRA, the Home Office and HMRC). In fact, these three departments are the only ones (other than DHSC) that are set to have a budget in 2021−22 higher than it was in 2009−10. The DEFRA budget, in particular, has rocketed upwards in 2020−21 and 2021−22 as the department took on responsibility for agricultural payments previously undertaken by the EU.
- **For the most part, these recent increases have not been enough to undo the post-2010 cuts.** For instance, despite recent increases in the budget for the Ministry of Justice and the Law Officers' Departments, core spending in 2021−22 for each is still set to be 21% lower in real terms than in 2009−10. In the case of the DWP, resource spending is set to be almost 50% lower, and for the Housing and Communities budget, more than 60% lower.

This clearly shows that departments and public services did not fare equally over the decade prior to the pandemic. But the tendency to favour some areas over others is not just a feature of the period after 2010. Figure 5.5 shows how planned growth rates in selected areas compared with what was planned for overall growth in resource DEL at each Spending Review since 1998. A positive figure indicates that spending in that area was planned to grow faster than the average department; a negative figure indicates that it was planned to grow more slowly than the average. Again, a few clear patterns emerge.

- **Health spending almost always receives above-average settlements** (i.e. the blue triangles are almost always above the zero line). The exceptions to this have been the most recent two Spending Reviews, where overall resource DEL was planned to grow by 4.1% and 3.8%, respectively, compared with 3.1% and 3.5% for the Department of Health and Social Care.[5] A similar story can be told for the education budget (shown by the red circles).
- **International development did much worse than average at the most recent Spending Review, but this is an exception to the rule.** At every Spending Review held between 1998 and 2015, the international development budget did better than average, and sometimes significantly so. But the 2020 Spending Review planned a 15% cut to the Foreign, Commonwealth and Development Office budget, far below the 3.8% increase planned overall.

[5] Note that the Spending Review 2020 figures exclude any COVID-19 funding. Note also that these figures refer to *planned* spending, and that health spending has historically tended to grow significantly faster than planned (Zaranko, 2021).

Figure 5.5. Planned growth in resource (day-to-day) funding in selected areas, relative to the average, by Spending Review



Note: Figures denote planned real-terms growth, not the out-turn. A figure of zero would indicate that spending in that area was planned to grow at the same rate as overall resource DEL. Real growth rates are taken from the SR documents if published, and calculated using nominal spending plans and contemporaneous GDP deflator forecasts if not. 'Education' refers to the Department for Education and Employment at SR 1998 and SR 2000, to the Department for Education and Skills at SR 2002 and SR 2004, to the Department for Children, Schools and Families at SR 2007, and to the Department for Education from SR 2010 onwards. 'Health' refers to the Department of Health from SR 1998 to SR 2015, and the Department of Health and Social Care from SR 2019 onwards. 'International development' refers to the Department for International Development from SR 1998 to SR 2019, and the Foreign, Commonwealth and Development Office at SR 2020.

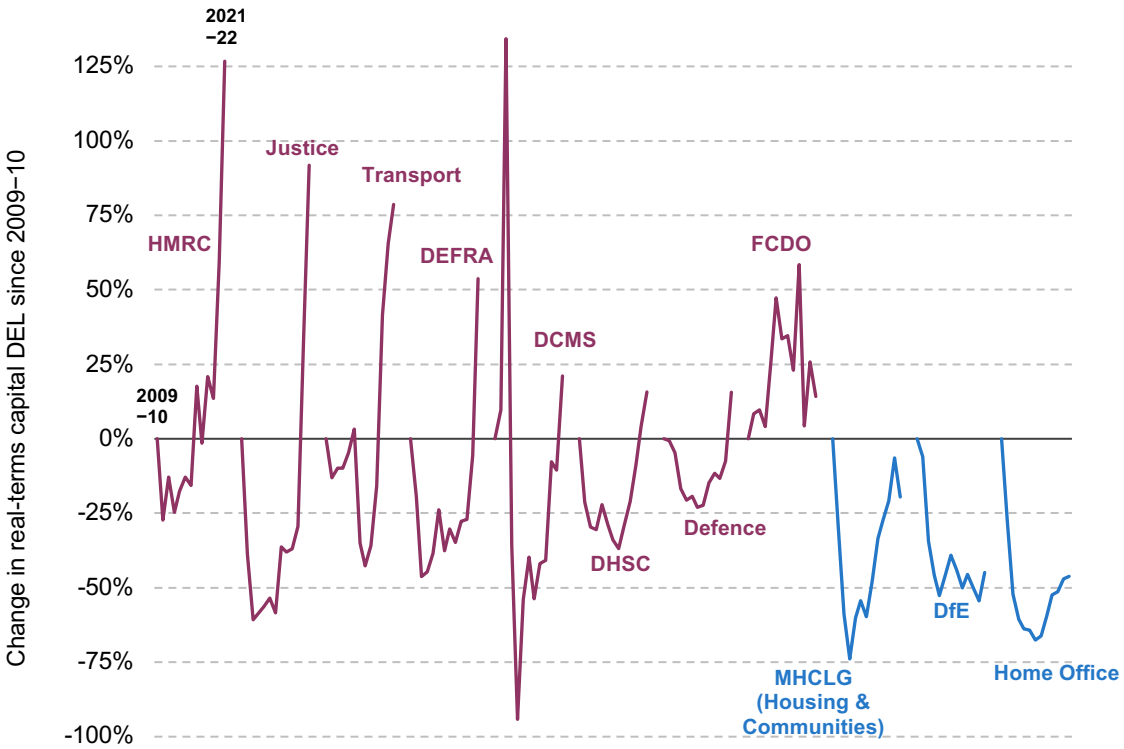
Source: Author's calculations based on various Spending Reviews.

- **Some areas that have almost never been prioritised historically have done better at recent Spending Reviews.** At every Spending Review held between 1998 and 2015, the Ministry of Justice was awarded below-average budget increases, and thus languished in the bottom part of the chart. But at the two reviews since, the awards have been above or close to the average. Local government (or, to be specific, central government funding for local government) is another such area: at seven of the eight reviews held between 1998 and 2015,

planned increases were below average (and in the case of the 2010, 2013 and 2015 Spending Reviews, substantially below average). Yet in recent years, recognition of the need for additional resources for social care has led to funding for local government growing at a faster-than-average rate (albeit after a decade of swingeing cuts). Local government funding is discussed in more detail in Chapter 7.

The analysis thus far in this section has been concerned with departments' resource (day-to-day) budgets. Figure 5.6 instead shows how major departments' core *capital* budgets evolved between 2009−10 and 2021−22. The percentage changes are greater than those for resource budgets, in part because capital spending is inherently 'lumpier' but also because capital budgets were cut faster and then subsequently increased faster over the 2010s (as shown in Figure 5.3). There are a few key takeaways.

Figure 5.6. Percentage change in departmental 'core' (non-virus) capital budgets, 2009−10 to 2021−22



Note: Figures for 2020−21 and 2021−22 are 'core' capital DEL spending plans from the March 2021 Budget and exclude COVID-19 funding. All figures are for resource departmental expenditure limits, excluding depreciation. HMRC = HM Revenue and Customs; DEFRA = Department for Environment, Food and Rural Affairs; DCMS = Department for Culture, Media and Sport; DHSC = Department of Health and Social Care; FCDO = Foreign, Commonwealth and Development Office; MHCLG = Ministry of Housing, Communities and Local Government; DfE = Department for Education.

Source: Author's calculations using HM Treasury Public Expenditure Statistical Analyses (2015−21 editions), HM Treasury Budget 2021 and HM Treasury June 2021 GDP deflators.

- **All areas other than international development (FCDO) saw cuts to their capital budget after 2010.** In the case of the MoJ, Housing and Communities, the Department for Education (DfE) and the Home Office, these early cuts were in excess of 50%. The DCMS budget was increased during the 2012 London Olympics, and then cut almost to zero the following year.
- **Most departments saw growth in their capital budgets between 2016−17 and 2019−20, and all are set for budget increases between 2019−20 and 2021−22.** For most departments, this will be enough to take their core capital budgets in 2021−22 above their 2009−10 level. The exceptions are Housing and Communities, DfE and the Home Office.
- **Some departments are set for extremely rapid growth in their capital budgets this year (2020−21) and next (2021−22).** This is especially true for HMRC (for investments in the UK's post-Brexit customs system), Justice (for delivering 18,000 additional prison places), Transport (for, amongst other things, HS2) and DEFRA (for flood defences).

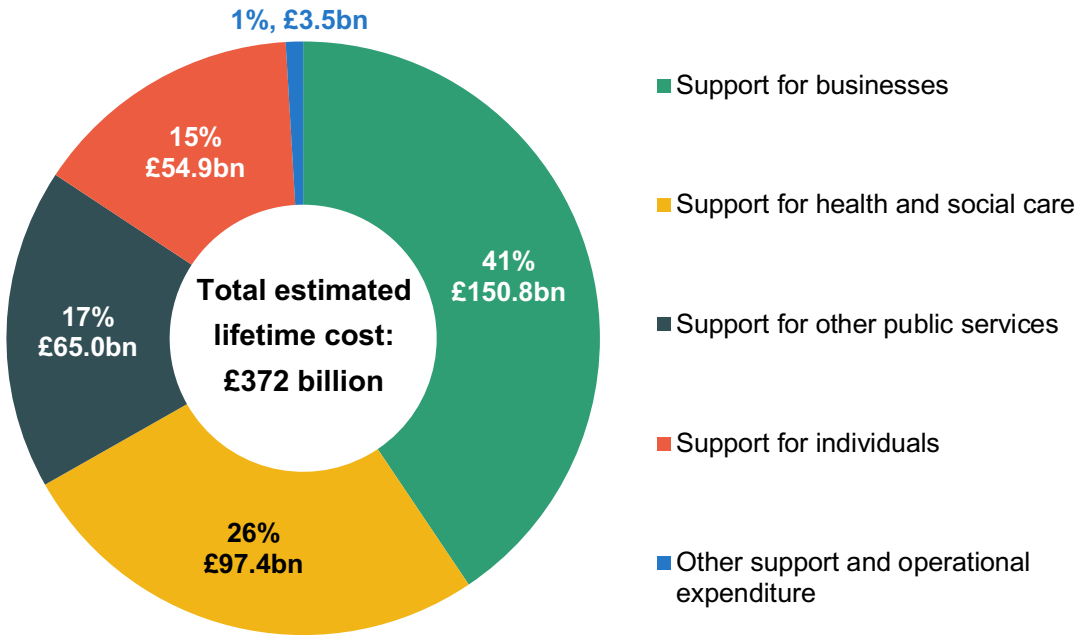
The spending response to the COVID-19 pandemic

The government's response to the coronavirus has involved spending huge sums of public money. The National Audit Office (NAO) estimates that the total lifetime cost of the government's COVID-19 response will come to £372 billion – equivalent to more than £5,500 for every person in the UK (NAO, 2021). This spending has provided essential support to businesses, public services and households in the government's role as insurer of last resort. As shown in Figure 5.1, this has led to an expansion in the size of the state to its largest level since the Second World War.

Figure 5.7 shows how this total breaks down into broad categories of support. Of the total, £150.8 billion (41%) is classified as support for business. Within that, by far the largest item is the Coronavirus Job Retention Scheme (CJRS, or the furlough scheme), with an estimated lifetime gross cost of £61.6 billion.[6] (While classed as support for business, this will clearly have benefited many millions of households. For more discussion of the furlough scheme, see Chapter 9.) The next-largest items of business support are: the Bounce Back Loan Scheme (estimated lifetime cost due to non-repayment of £22.8 billion); business rates holidays for selected sectors (£18.2 billion); grants to small businesses and hospitality and leisure businesses (£11.1 billion); and a reduced rate of VAT for hospitality, accommodation and attractions (£7.8 billion). A full breakdown can be downloaded from the NAO website (NAO, 2021).

[6] Note that this figure was the estimate of the lifetime cost at the time of the NAO's report. The latest statistics from HMRC indicate that a cumulative £68.5 billion has been claimed (HMRC, 2021).

Figure 5.7. Estimated lifetime cost of COVID-19 response, by category, as of May 2021



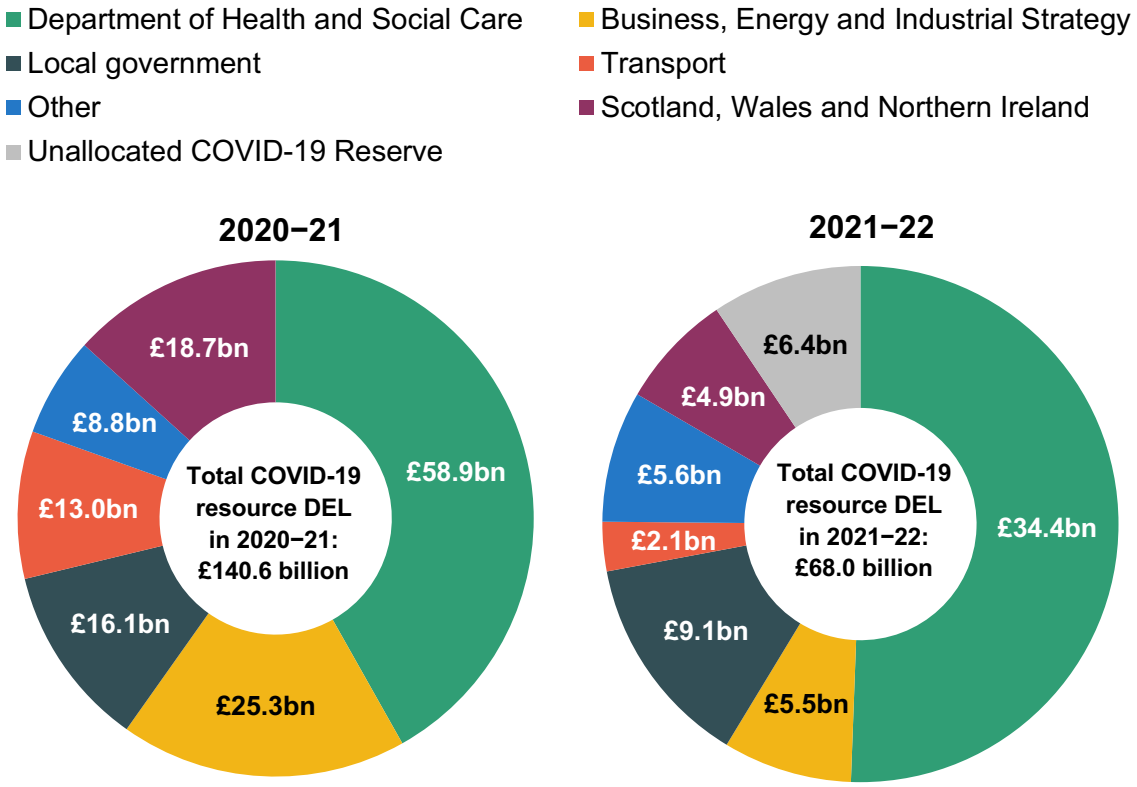
Source: National Audit Office, COVID-19 cost tracker, accessed 12 August 2021.

A further £97.4 billion (26% of the total) has been provided as support for health and social care. The largest items within this total are spending on NHS Test and Trace (£38.1 billion) and procurement of personal protective equipment (£16.9 billion). A more detailed discussion of virus-related health spending, and the extent to which such spending might need to continue, can be found in Chapter 6. Within the NAO's estimate of the lifetime cost of support for other public services (£65.0 billion, or 17% of the total) is £25.9 billion of support for the devolved administrations and £12.9 billion of emergency measures for the railways. The estimated £54.9 billion (15%) of support for individuals contains £27.3 billion for the Self-Employment Income Support Scheme (SEISS), £6.9 billion for the temporary £20 per week uplift to universal credit, and £5.4 billion for the temporary cut to stamp duty.

Not all of this spending is relevant for the forthcoming Spending Review, however. Many of the largest spending items – such as the furlough scheme, SEISS and expected write-offs on virus-related loan schemes – are inherently unpredictable and demand-driven and so fall within AME, outside of the expected scope of this year's Spending Review. Here, we are interested in the funding provided to departments in the form of additional DEL.

Figure 5.8 therefore shows the amount of virus-related resource DEL provided to departments. This amounted to £140.6 billion in 2020–21 and £68.0 billion in 2021–22. However, it is unlikely that all of this funding will ultimately be spent, as discussed in Box 5.2.

Figure 5.8. COVID-19 resource DEL allocated to departments in 2020–21 and 2021–22



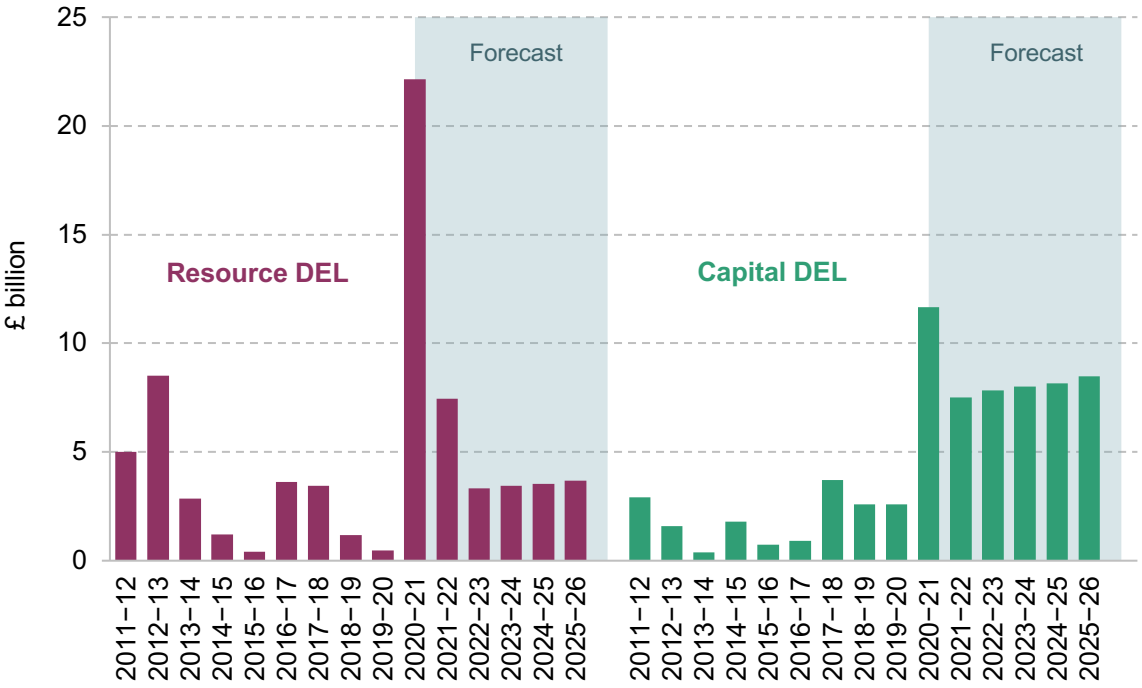
Note: Figures are for departmental expenditure limits only, and so do not include items such as the Coronavirus Job Retention Scheme, which falls within annually managed expenditure. Figures may not sum due to rounding. £11.8 billion of the COVID-19 Reserve for 2021–22 was yet to be allocated as of March 2021. Of that, £5.4 billion was allocated to DHSC in early September, leaving £6.4 billion remaining; some (or all) of this amount may have been allocated in the interim.

Source: Author's calculations based on HM Treasury March 2021 Budget and Department of Health and Social Care, '£7 billion for NHS and social care for COVID-19 response and recovery', press release 18 March 2021, and 'Additional £5.4 billion for NHS COVID-19 response over next 6 months', press release 6 September 2021.

Box 5.2. Departmental underspending

Departmental expenditure limits are, by definition, set as limits. There are strong incentives for both officials and ministers to avoid breaching expenditure limits. The responsible minister must write to the Treasury setting out the size of the breach, why it occurred, and what remedial action is being taken in response (HM Treasury, 2021b). Ministers and officials can be hauled before the Public Accounts Committee to explain themselves, and additional spending may need to be approved by parliament. Plus, any overspend against the control total can also mean an offsetting reduction in the corresponding total in the following year. It is perhaps not surprising, then, that departments tend to underspend their limits, even during times of austerity (Crawford, Johnson and Zaranko, 2018).

Figure 5.9. Departmental underspends against final plans, 2011−12 to 2025−26



Note: Figures denote the total underspend against plans published in Public Expenditure Statistical Analyses (PESA), net of any additional spending carried forward from earlier years via Budget Exchange. 2020−21 figures are provisional out-turns; figures for 2021−22 onwards are OBR forecasts.

Source: Office for Budget Responsibility, Economic and Fiscal Outlook March 2021, supplementary expenditure table 3.5.

Figure 5.9 shows departmental underspends against final plans since 2011−12, split by resource and capital. In the years prior to the pandemic, resource and capital underspends were broadly similar, despite the resource budget being more than five times larger. This illustrates departments' particular tendency to undershoot their capital budgets (Atkins, Tetlow and Pope, 2020).

Departmental underspending was particularly high in 2020−21: more than £22 billion in the case of RDEL and almost £12 billion in the case of CDEL. This reflects two factors: first, the huge additional sums allocated during the pandemic, not all of which departments ultimately needed to (or were able to) spend; and second, the fact that during the pandemic, many departments struggled to spend their allocation as successive lockdowns hit hiring and procurement plans, and the construction sector ground to a halt.

The Office for Budget Responsibility (OBR) forecast for underspends in future years is also shown in Figure 5.9. While RDEL underspends are forecast to fall to around £3.5 billion from 2022−23 (only slightly above the pre-pandemic average), capital underspends are forecast to remain high, at around £8 billion per year. This reflects the fact that the government has topped up capital budgets in recent years and is planning to ramp up departmental capital budgets quickly – something that history teaches us is

hard to do (Crawford, Johnson and Zaranko, 2018; OBR, 2020). In the March 2020 Budget, the OBR assumed that 20% of the additions to planned capital spending would go unspent, implying that around 8% of total CDEL plans would go unspent in each year (in line with the experience of the 2000s). These underspends are incorporated into the OBR's forecasts for the public finances.

A few key points can be drawn from Figure 5.8:

- **The Department of Health and Social Care has received by far the greatest amount of COVID-related resource DEL** – more than 40% in 2020−21, and more than 50% in 2021−22. This illustrates the importance of future COVID-related health spending to the outlook both for overall RDEL and for other, smaller, departments. We return to this issue later in the chapter, but a more detailed discussion of the spending pressures on the NHS can be found in Chapter 6.
- **Local government is the second-largest recipient of COVID-related RDEL in 2021−22.** This funding has helped councils to meet the costs of new responsibilities (e.g. enforcement of public health measures) and the additional costs for existing services (most notably adult social care), and compensated them for lost income. These pressures will not vanish at the end of 2021−22. Local government funding is discussed in detail in Chapter 7.
- **The Treasury has more than £6 billion of unallocated funding in its 2021−22 COVID-19 Reserve.** The 2020 Spending Review provided £55 billion to support the response to the virus in this financial year. As of the March 2021 Budget, £36.2 billion had been allocated. A further £7 billion was allocated to the NHS and social care in late March, and a further £5.4 billion in September. Based on the latest available figures, then, there is approximately £6.4 billion available for the remainder of the financial year. No such reserve exists for future financial years, an issue to which we return in Section 5.6.

5.4 Spending pressures

Pressures on public services

The legacy of COVID-19

The previous section described the huge sums allocated to public services in the face of huge pandemic-related pressures. These pressures will not conveniently dissipate at the end of this financial year: COVID-19 is likely to have an effect on many public services for years to come.

Central among these pressures are those facing the health service, which are discussed in more detail in Chapter 6. These include the ongoing direct costs of the pandemic (such as the need to treat patients with COVID-19 and 'long COVID', personal protective equipment, and vaccines) and other indirect costs (such as increased demand for mental health services, and the need to

catch up on care that was not provided during the pandemic). In Chapter 6, we estimate that meeting these various pressures could require an additional £9.1 billion in 2022−23, £6.2 billion in 2023−24 and £5.5 billion in 2024−25. These are similar in scale to recent estimates from the Office for Budget Responsibility, though with a different time profile (OBR, 2021).[7]

On 7 September, the government announced a new funding settlement for health and social care, funded by a corresponding increase in tax. This is discussed in detail in Chapter 6. Here, we simply note that while the money looks as if it will be 'enough' to meet pressures on the NHS in the near term, that is less likely to be the case in the medium term: by 2024−25, we estimate a potential shortfall of around £5 billion (an issue to which we return in Section 5.6). In any case, history teaches us that we ought to expect the NHS settlement to be revised upwards (Zaranko, 2021).

The OBR also produced estimates of the funding pressures on two other major spending areas:

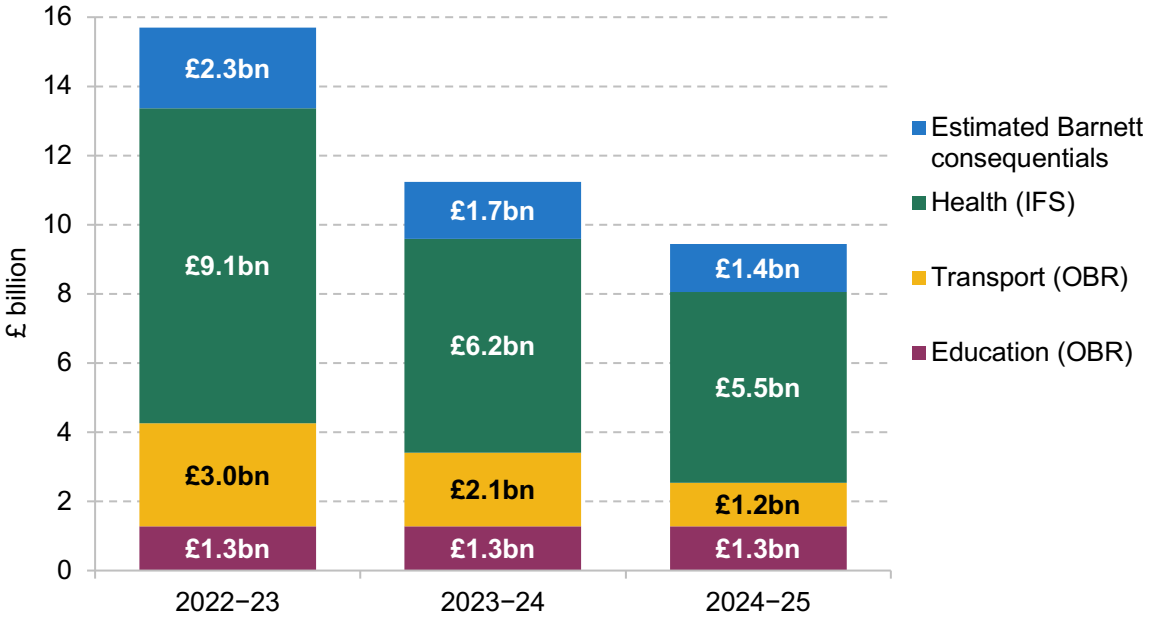
- **Transport:** Sharp reductions in passenger numbers during the pandemic have posed severe financial difficulties for railways and public transport operators. The National Audit Office estimates that the lifetime cost of the Department for Transport COVID-19 response will come to £18.4 billion (NAO, 2021), and the department has been allocated £13.0 billion and £2.1 billion of resource DEL in 2020−21 and 2021−22, respectively (Figure 5.8). How much support is required going forward depends hugely on future patterns of working and commuting. The OBR assumes a 25% shortfall in rail passenger income in 2022−23, easing to 10% by 2024−25. This would require a further £3.0 billion of support in 2022−23, falling to £2.1 billion in 2023−24 and £1.2 billion in 2024−25 (OBR, 2021).
- **Education:** Successive lockdowns and other virus-related disruptions have meant that pupils have lost something like half a year's worth of schooling. In June 2021, Sir Kevan Collins, the government's 'Education Recovery Commissioner', resigned over the size of the proposed catch-up package. The government has suggested that more money could be announced at the Spending Review: the Prime Minister described the £3.1 billion in catch-up funding announced so far as being 'just for starters' (Johnson, 2021a). The OBR estimates that a catch-up package for schools could amount to £1.3 billion per year for each of the next three years, noting that these estimates are highly uncertain and sensitive to the specific type of intervention that is actually pursued.

The OBR's estimates of funding pressures on public transport and education, along with IFS estimates of NHS funding pressures, are shown in Figure 5.10. Combined, these amount to

[7] The OBR estimates that pandemic-related health funding pressures could require £7.6 billion of additional funding in 2022−23, £6.9 billion in 2023−24 and £6.7 billion in 2024−25. The estimated total required over the three years is therefore extremely similar (£20.8 billion under our estimates, versus £21.1 billion under the OBR's) but funding would need to be much more front-loaded under the IFS scenario.

£13.4 billion in 2022–23, falling to £9.6 billion in 2023–24 and £8.0 billion in 2024–25. Once we also account for the Barnett consequentials of these (the corresponding increase in grant funding for Scotland, Wales and Northern Ireland via the Barnett formula), the cost rises to £15.7 billion in 2022–23, £11.2 billion in 2023–24 and £9.4 billion in 2024–25.

Figure 5.10. Estimates of selected pandemic-related spending pressures



Note: 'Health' denotes IFS estimates of the net cost to the health service of pandemic-related pressures. For a detailed discussion of these estimates and the assumptions underlying them, see Chapter 6. 'Transport' and 'Education' denote OBR estimates of pandemic-related pressures on those areas, details of which can be found in chapter 2 of the 2021 Fiscal Risks Report.

Source: Chapter 6 of IFS Green Budget 2021, HM Treasury Spending Review 2020 and OBR Fiscal Risks Report July 2021.

It should be emphasised that this is not an exhaustive list. It does not, for example, include any estimate of the pandemic's financial impact on councils (discussed in Chapter 7), or the courts system (where backlog of cases in the Crown Court in England and Wales grew to almost 60,000 in the first quarter of 2021, up 45% on a year earlier (Ministry of Justice, 2021a)). But we judge these areas to be the most likely large sources of funding pressure. In any case, as was discussed in Section 5.2, there is a strong case for continued use of a 'COVID-19 Reserve' so that funds can be allocated flexibly as needed, rather than earmarking all virus-related funding for specific public services in advance.

Pre-existing funding pressures

The funding pressures on public services are not just a story of the pandemic. Many areas were showing signs of strain even before COVID, particularly those that faced deep budget cuts in the

years after 2010 (Institute for Government, 2019). An obvious example is the prison service. Between March 2011 and March 2020, the number of prisoner-on-prisoner assaults in England and Wales almost doubled, and the number of assaults on prison staff more than trebled (though the number of both types of incident fell back during the pandemic) (Ministry of Justice, 2021b).

Other services will be placed under increasing pressure by demographic changes – at both ends of the age spectrum. While an ageing population is set to increase demand for social care services (discussed in Chapter 7), further education colleges are braced for an expected 17% rise in the number of 16- and 17-year-olds between 2019 and 2024 (Sibieta and Tahir, 2021).

Other departments have acquired substantial new post-Brexit responsibilities. Figure 5.4 showed that funding for DEFRA, HMRC and the Home Office has sharply increased in recent years as these departments took on additional responsibilities relating to agricultural subsidies, customs and immigration.

Public sector pay

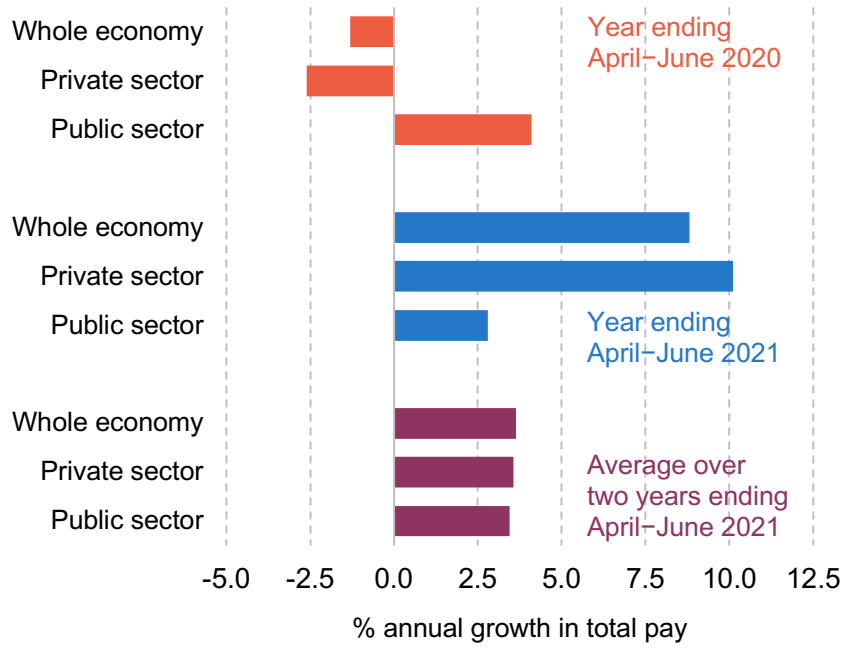
In 2020−21, the government spent £222 billion employing around 5.4 million public sector workers (HM Treasury, 2021a). What happens to the pay of those workers is an important determinant of the path for day-to-day spending.

The decade prior to the pandemic saw a prolonged squeeze on public sector pay. Public sector pay was frozen in cash terms for all but the lowest-earning employees in 2011−12 and 2012−13; pay scales were then increased by 1% per year in cash terms in the years that followed, before the pay cap was lifted in 2017. Despite above-inflation pay awards in recent years, average earnings in the public sector in the first quarter of 2020 were 1.5% lower than a decade previously, while average earnings in the private sector were 1.9% higher.[8] This ongoing pay restraint in the public sector meant that on the eve of the pandemic, the gap between average public and private sector pay was at its lowest level in decades (Zaranko, 2020). Or, put another way, public sector pay was at its lowest level *relative to private sector pay* since at least the early 1990s.

During the early stage of the pandemic, however, public sector pay outperformed private sector pay – just as was the case during and immediately after the Great Recession. Figure 5.11 shows that in April−June 2020, average total earnings in the public sector were 4.1% higher (in cash terms) than a year earlier, while they were 2.6% *lower* in the private sector. This reflects the fact that private sector workers could (unlike public sector workers) have been placed on furlough

[8] Source: Author's calculations using ONS series KAD8 (public sector excluding financial services average weekly earnings), KAC4 (private sector average weekly earnings) and L522 (CPIH index).

Figure 5.11. Annual growth in average total weekly earnings by sector



Note: Figures denote the growth in total pay in the period in question. Great Britain only.

Source: Author's calculations using Office for National Statistics, 'Average weekly earnings in Great Britain: August 2021', https://www.ons.gov.uk/employmentandlabourmarket/peopleinwork/employmentandemployeetypes/bulletins/averageweeklyearningsingreatbritain/august2021.

(which could be associated with a 20% cut in weekly earnings) during the pandemic and associated lockdowns, and is despite the fact that job losses in the private sector were concentrated among the lower-paid. It was in this context that the Chancellor announced a pay freeze for most public sector workers at the 2020 Spending Review.

Private sector earnings have since bounced back. In April–June 2021, average private sector earnings were 10.1% higher than a year previously, compared with 2.8% in the public sector.[9] This means that over the two years ending April–June 2021, average public and private sector earnings will have grown at roughly the same rate (shown by the lowest two bars in Figure 5.11).

Despite two years of pay growth, many public sector workers are still earning substantially less than their equivalents in the past – particularly more experienced and higher-earning public sector staff. Pay levels for experienced teachers were 8% lower in real terms in 2021 than in

[9] The high figure for average private sector pay growth is due in part to a base effect (the latest months are compared with low base periods when earnings were initially hit by COVID-19) and a composition effect (job losses have been concentrated among low earners, thereby increasing average earnings of those in work), plus the fact that many workers will be coming off furlough (and receive a 25% pay rise at that point).

2007, compared with 4−5% for less experienced teachers (Cribb and Sibieta, 2021). NHS hospital consultants experienced an average 8.7% real-terms pay cut between March 2011 and March 2021, compared with 4.1% for junior doctors and 4.8% for nurses, midwives and health visitors (see Chapter 6). Average real-terms pay for NHS dental associates and NHS dental practice owners in England fell by an astonishing 32% between 2006−07 and 2017−18, and these are estimated to have continued to fall since.[10] The average salary for a senior civil servant fell by 10.9% in real terms between 2010 and 2020.[11]

There was some logic to the public sector pay freeze for 2021. But it cannot continue indefinitely. If pay awards in the public sector fail to keep pace with those in the private sector in the years ahead, after failing to do so in the decade prior to the pandemic, the government risks failing to attract and retain the skilled workers needed to deliver high-quality public services. The School Teachers' Pay Review Body, for example, is 'firmly of the view that a pay pause for teachers of more than one year risks a severe negative impact on the competitive position of the teaching profession, jeopardising efforts to attract and retain the high-quality graduates necessary to deliver improved pupil outcomes' (STRB, 2021). Three-quarters (76%) of police officers surveyed in 2020 said that they were unfairly paid for the risks and responsibilities of their job during COVID-19 and just 10% thought that the pay was fair compared with employees doing similar work in other organisations (PRRB, 2021). The public sector has not struggled with recruitment during the pandemic-induced recession, while private sector jobs have been hard to come by and workers are attracted by the security and stability of employment in the public sector. But as the economy and labour market bounce back, questions around public sector pay are certain to come to the fore.

The Chancellor will not make direct pay awards at the Spending Review – those will come next year, following the usual process of consultation with the Pay Review Bodies – but he could provide an indication of the government's overall pay policy and, in particular, whether the public sector pay freeze will come to an end next year. Departments' day-to-day budgets will also need to be set with future pay awards in mind.

Social security

At the 2010 and 2015 Spending Reviews, then-Chancellor George Osborne included large parts of the working-age social security budget within the scope of the Spending Review. Mr Sunak is

[10] A series break means that it is not possible to compare average dentist earnings across the full period. Source: Author's calculations using NHS Digital Dental Earnings and Expenses Estimates and ONS series L522 (CPIH index).

[11] Source: Author's calculations using figure 3.8 of Senior Salaries Review Body Report 2021 (SSRB, 2021) and ONS series L522 (CPIH index).

not expected to take a similar approach this autumn. But the outlook for social security spending still has important implications for the Spending Review.

The Chancellor has stated his intention to achieve current budget balance by the middle of the decade: to have all day-to-day expenditure covered out of tax revenues, so that the government is borrowing only to invest. Day-to-day expenditure includes social security. So, any decision that increased the social security bill would, all else being equal, mean less funding available for public services if the Chancellor wishes to target the same level of current budget deficit.

A detailed analysis of the issues around social security spending is beyond the scope of this chapter, but there are two important issues to note.

The first is that the Secretary of State for Work and Pensions confirmed on 7 September that the 'triple lock' on the state pension is to be suspended this year: instead, the state pension will be uprated by the higher of inflation or 2.5% (Coffey, 2021).

The second is the reversal of the temporary uplift in entitlements to universal credit (UC) and working tax credit (WTC) of £20 per week. This will already have taken place by the time of the Budget and Spending Review, meaning a £1,040-per-year drop in the income of around 5 million lower-income families receiving UC, as monthly awards drop by around £86 between September and October.

The fact that decisions on these areas have already been made means that we perhaps should not expect any major social-security-related announcements in the autumn fiscal event. But if the Chancellor did decide to do something in this sphere – to help low-income families in the face of rising gas bills, for instance – then this would have implications for his overall spending plans.

Promises, promises

Even without any major policy changes, there would be substantial upwards pressure on public spending. But the government also has an ambitious set of broader policy goals. Delivering on them could require additional spending running into the tens of billions. Here, we ignore the government's recent announcements on reform of the social care funding system (discussed in Chapter 7), and focus on two other big policy areas: levelling up and the transition to net zero.

Levelling up

The UK is one of the most geographically unequal countries in the developed world. The current government has made tackling those deep-seated inequalities a central part of its domestic policy agenda. In last year's IFS Green Budget, we showed that the levelling-up agenda is complicated by the fact that the areas hit hardest by the immediate economic impacts of the pandemic – such

as London – are not, in general, those that were most economically disadvantaged pre-pandemic (Davenport and Zaranko, 2020).

A year on, and the details and objectives of the levelling-up agenda remain nebulous and ill-defined. Much of the focus so far has been on capital spending projects: investments in green technology or public transport, for instance. Currently, public spending on transport and on research and development (R&D) is heavily concentrated in London and the South East (Davenport and Zaranko, 2020). Increasing spending on these in other parts of the country could help with levelling up. But the Prime Minister has also stated that levelling up will not be to the detriment of London and the South East (Johnson, 2021b). This suggests, then, that any additional spending on investment in the regions is likely to come from an increase in overall transport or R&D spending, rather than cuts to the amount spent in London and the South East. Given that capital budgets are planned to rise over the coming years, and more than half is yet to be allocated (as discussed in Section 5.5), this is unlikely to pose too many problems for the Chancellor.

Levelling up cannot just be about capital spending, though. In many cases, day-to-day (current) spending could be as, if not more, effective. That is particularly true of funding for local government and further education.

Local governments will play an important role in levelling up. Council funding was cut substantially over the 2010s, with the largest cuts falling on more deprived areas (Harris, Hodge and Phillips, 2019). In the face of ever-growing pressures on adult and children's social care budgets, councils were forced to squeeze everything else – including the spending programmes that one might expect to be most helpful in promoting local economic growth.[12] The outlook for local government funding is discussed in Chapter 7. Here, we simply note that further cuts to local government funding would be difficult to reconcile with a coherent levelling-up agenda.

The Prime Minister has talked about the importance of practical and vocational education to levelling up (Johnson, 2021b). Yet funding per student aged 16–18 fell by over 11% in real terms between 2010–11 and 2020–21 in further education and sixth-form colleges, and by over 25% in school sixth forms (Sibieta and Tahir, 2021). The government allocated an extra £400 million to colleges and sixth forms in the 2020–21 financial year, but with 5% growth in student numbers in 2020, this, at best, restores funding back to 2018–19 levels, leaving most of the cuts over the last decade in place. An extra £570 million will be required by 2022–23 just to maintain spending per student in real terms from 2020–21 onwards (Sibieta and Tahir, 2021). A

[12] Between 2009−10 and 2019−20, councils in England reduced spending on planning and development services by 59% in per-person terms (Harris, Hodge and Phillips, 2019). This includes, among other items, spending on economic development, community development, economic research and business support.

government serious about boosting further education in order to level up might wish to spend even more.

Net zero

The government has a legislated goal to reduce net greenhouse gas emissions to zero by 2050. The fiscal costs of achieving this goal could be significant (though the costs of inaction would likely be greater still). The OBR provided detailed analysis of the fiscal risks presented by climate change in the July 2021 Fiscal Risks Report (OBR, 2021). In its reference scenario (based in turn on the Bank of England's 'early action' scenario), the fiscal impact of achieving net zero, without offsetting spending cuts or tax rises, adds 21% of national income to public sector net debt in 2050−51 (equivalent to £469 billion in today's terms). Direct government spending on the net zero transition is just one component of this.[13] The potential impact of the transition to net zero on the public finances is discussed in more detail in Chapter 3.

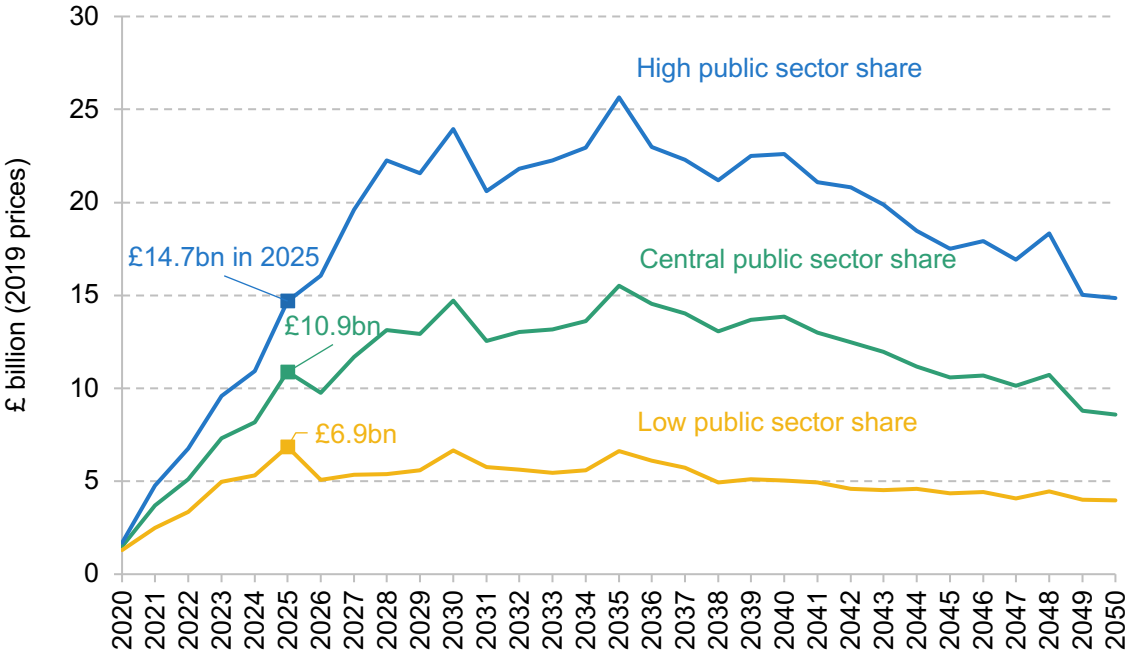
The Climate Change Committee estimates that net zero investment, plus the operating costs of emissions removals, will have a cumulative whole-economy cost of around £1.4 trillion between 2020 and 2050. How much of that will be borne by the public sector is unknown: the government has not set out its position or expectations. The OBR therefore makes a set of assumptions about the share of the costs borne by the government over the next 30 years in each sector.

In the OBR's central scenario, the state bears around a quarter (27%) of the £1,408 billion cost over the three decades. When combined with the state's share of the savings from more energy-efficient buildings and vehicles, the net cost to the public sector is £344 billion, equivalent to an average of around £11 billion per year (both in 2019 prices). Figure 5.12 shows that these costs are expected to rise steadily between now and 2030, before levelling off and falling after 2035.

The OBR also produces a 'low public spending variant', intended to represent a lower bound in which the government deals only with its own assets (and bears far less of the cost of insulating the homes of low-income households, for instance). In this case, the government would bear 13% of the overall net costs (£152 billion over the full period, or around £5 billion per year, in 2019 prices). In addition, the OBR produces a 'high public spending variant' in which the state takes on almost all infrastructure costs in the vehicles, residential buildings, industry and removals sectors. That would mean the state bearing 41% of all net costs (£557 billion in total, or around £18 billion per year, in 2019 prices).

[13] The overall net fiscal impact also includes: lost tax receipts from (among other things) the shift to electric vehicles, which pay no fuel duty or vehicle excise duty; higher receipts from carbon taxes; the indirect fiscal consequences of lower GDP, which results from a higher and steadily rising carbon price; and additional debt interest costs. Taxes and climate change are discussed in Chapter 8.

Figure 5.12. OBR estimates of costs to the public sector of the transition to net zero



Source: Office for Budget Responsibility, Fiscal Risks Report July 2021.

The headline is that the transition to net zero is expected to come at a substantial, but affordable, cost to the public sector. Under the OBR's central scenario, net zero spending of around £8 billion per year could be required over the forthcoming Spending Review period (rising to around £11 billion by 2025). The equivalent figures for the 'low public spending' and 'high public spending' variants are around £5 billion and £10 billion per year, respectively. It is essential to note that the costs of meeting the net zero target are not actually projected to be a long-run issue. Much of the spending is projected to happen soon – during the period to be covered by this Spending Review. That is especially true in the 'low public sector share' scenario in Figure 5.12. This autumn, if the government is serious about its ambitious net zero commitment, Mr Sunak will need to tackle these issues head on.

5.5 Existing plans and commitments

Existing commitments

Some areas already have multi-year spending settlements that cover part or all of the three-year period expected to be covered by this year's Spending Review (2022–23 to 2024–25). These include recent announcements on health and social funding, but also previously agreed settlements with schools in England and the Ministry of Defence. These are summarised in Table 5.2.

Table 5.2. Confirmed spending settlements ahead of the Spending Review (£ billion)

				Spending Review 2021 period		
	2019–20	2020–21	2021–22	2022–23	2023–24	2024–25
DHSC RDEL	133.4	140.3	147.0	164.8	171.4	175.9
Schools RDEL	44.4	47.6	49.8	52.2	-	-
Defence RDEL	29.5	30.8	31.6	31.6	31.4	31.6
Defence CDEL	10.3	11.7	14.4	15.6	16.0	16.0

Note: Figures up to 2021–22 are for 'core' funding, excluding COVID-19 spending, in nominal (cash) terms. 'DHSC' refers to the Department of Health and Social Care; 'Schools' refers to schools in England; and 'Defence' refers to the Ministry of Defence. RDEL refers to resource departmental expenditure limits, excluding depreciation; CDEL refers to capital departmental expenditure limits.

Source: HM Treasury Spending Review 2020, Budget 2021, and 'Chancellor launches vision for future public spending' (7 September 2021).

As can be seen in Table 5.2, the schools settlement runs only to 2022–23, whereas we expect the Spending Review to cover the period up to 2024–25. Therefore, for the purposes of the modelling that follows, we make assumptions over what happens to schools spending in the later years of the forecast period. Specifically, we assume that the schools budget is held flat in real terms after 2022–23. Pupil numbers are set to fall by 1.2% between 2022 and 2025 (Department for Education, 2021) and so this would equate to increases in real per-pupil spending. We judge this to be more realistic than flat real per-pupil spending, given the government's commitment to increasing teacher starting salaries to £30,000 by September 2023 (Cribb and Sibieta, 2021).

The government is also committed in the near term to spending 0.5% of gross national income (GNI) on official development assistance (ODA, or overseas aid), down from the previous objective to spend 0.7%, which was met each year between 2013 and 2020. This commitment means that, following the initial one-off cut, aid spending will need to grow at least as fast as the wider economy over the coming years in order to maintain its share of national income. On top of that, the government has pledged to increase ODA spending back to 0.7% of GNI 'once the fiscal situation allows'. In July 2021, Chancellor Rishi Sunak provided more detail, stating that the 0.7% target would be reinstated when the government is no longer borrowing to fund day-to-day spending (i.e. running a current budget deficit) and when underlying debt (excluding the Bank of England) is falling 'on a sustainable basis' (Sunak, 2021). In our central modelling, we assume that ODA remains at 0.5% of GNI for the entirety of our period of interest (taking growth forecasts from Citi's central scenario in Chapter 2), and additionally assume that 80% of ODA falls within the resource budget (in line with the resource/capital split of the Department for International Development budget in 2019–20). In Section 5.6, we also consider a scenario in which ODA returns to 0.7% of GNI in 2024–25.

Box 5.3. Official development assistance and IMF Special Drawing Rights

Special Drawing Rights (SDRs) are an international reserve asset created by the International Monetary Fund (IMF), and can be exchanged for the currency of IMF member states. The IMF has announced a 2021 special allocation of SDRs, which is intended to 'boost global liquidity … address the long-term global need for reserves, build confidence, and foster the resilience and stability of the global economy' and to provide particular support to lower-income countries (IMF, 2021).

Along with other high-income countries, the UK is expected to reallocate (at least some of) its SDRs to help support the response to and recovery from COVID-19 in developing countries, most likely via the IMF's Poverty Reduction and Growth Trust (PRGT), a vehicle for concessional finance for low-income countries. Under international rules governing what counts as foreign aid, part of any reallocation via the PRGT – which could run into the billions over the three-year review period – could count towards the 0.5% ODA target.

That would mean, all else being equal, higher spending on ODA. In theory, then, if the government were determined to meet its 0.5% target exactly (and not to exceed it), it may spend less on other aid programmes than it otherwise would have done in the absence of the SDR reallocation (Worley and Saldinger, 2021). That could mean additional cuts to departmental aid budgets, on top of those already made as a result of the contraction in UK national income and as part of the move from a 0.7% to a 0.5% of GNI target between 2020 and 2021. This would cause further disruption to affected programmes and spending areas (Hughes et al., 2021).

Whether this possibility will bear out in reality is currently unclear. For instance, the economic outlook has improved in recent months (see Chapter 2), and the level of UK national income is expected to be higher – meaning that a higher level of cash spending is needed to achieve a given percentage of GNI. If the government were on track to undershoot its 0.5% target this year as a result, a reallocation of SDRs could be one means of making up this possible shortfall, without increasing departmental spending allocations.

Given the uncertainty around how any reallocation of SDRs might affect other ODA spending, we assume for the remainder of this chapter that any ODA resulting from a reallocation of SDRs is in addition to any ODA spending currently planned.

Table 5.3 provides a summary of the government's estimated resource commitments over the Spending Review period, based on the assumptions outlined above. More than £250 billion of resource funding has already been committed in each year – a little more than 60% of total planned resource DEL.

Table 5.3. Estimates of the government's resource spending commitments

	Plans	Spending Review 2021 period		
	2021–22	2022–23	2023–24	2024–25
£ nominal billion				
DHSC RDEL	147.0	164.8	171.4	175.9
Schools RDEL	49.8	52.2	53.3	54.4
Defence RDEL	31.6	31.6	31.4	31.6
ODA RDEL (estimated)	9.1	9.5	9.8	10.2
Total protected RDEL	237.5	258.1	265.9	272.1
£ real billion (2021–22 prices)				
DHSC RDEL	147.0	165.0	168.2	169.1
Schools RDEL	49.8	52.3	52.3	52.3
Defence RDEL	31.6	31.6	30.8	30.4
ODA RDEL (estimated)	9.1	9.5	9.6	9.8
Total protected RDEL	237.5	258.5	261.0	261.6

Note: Figures for 2021–22 are for 'core' funding, excluding COVID-19 spending. 'DHSC' refers to the Department of Health and Social Care; 'Schools' refers to schools in England; and 'Defence' refers to the Ministry of Defence. Schools figures for 2023–24 and 2024–25, and ODA figures for all years, are calculated based on assumptions outlined in the text.

Source: Author's calculations using HM Treasury Spending Review 2020, Budget 2021, Public Expenditure Statistical Analyses 2020, June 2021 GDP deflators, and 'Chancellor launches vision for future public spending' (7 September 2021); Foreign, Commonwealth and Development Office, Statistics on International Development: Provisional UK Aid Spend 2020; and Office for Budget Responsibility, Economic and Fiscal Outlook, March 2021.

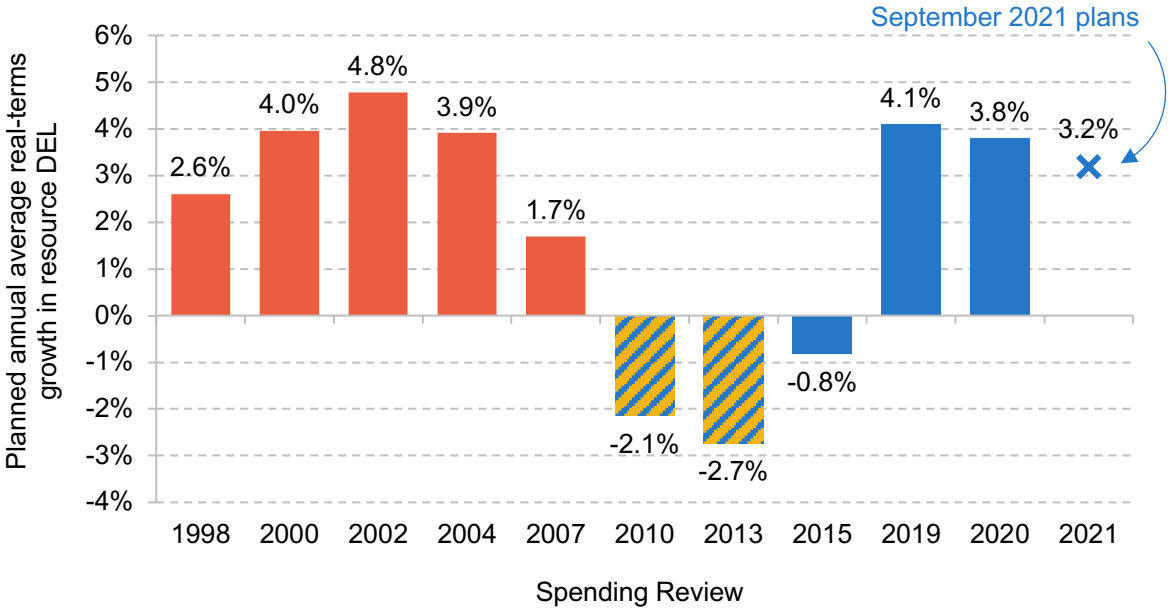
These figures actually understate the 'true' amount that has been committed, however, because all else being equal, higher spending on the health service and schools in England translates into more funding for the devolved governments in Scotland, Wales and Northern Ireland via the Barnett formula. Combined, the DHSC and schools settlements imply around £3.8 billion of additional funding for the three devolved governments in 2022–23, with a further £1.4 billion in 2023–24 and a further £1.1 billion in 2024–25. But the total effect on the Scottish, Welsh and Northern Irish block grants depends on what happens to funding for other devolved areas. If, for example, the entire increase in English DHSC and schools spending were offset by a cut to spending on English local government or justice, the two would cancel out and there would be no 'net' Barnett consequential. Were higher DHSC and schools spending accompanied by only modest cuts to 'unprotected' areas in England, part of that cut would be passed on to the devolved nations in the form of a negative Barnett consequential, offsetting only part of the

increase from higher DHSC and schools spending. The modelling in Section 5.6 takes this into account.

Existing plans for overall resource (day-to-day) spending

These existing commitments – most of which fall within the resource, rather than capital, budget – will have to be met from within the overall spending envelope: the total pot of money to be divvied up between departments at the Spending Review. On 7 September, the Chancellor published the Spending Review 2021 envelope (HM Treasury, 2021c). Under these plans, departmental resource (day-to-day) budgets will grow at an average real-terms rate of 3.2% between 2021−22 and 2024−25 (up from 2.1% under the plans published at the March 2021 Budget).[14]

Figure 5.13. Planned real-terms average annual growth in resource budgets, by Spending Review

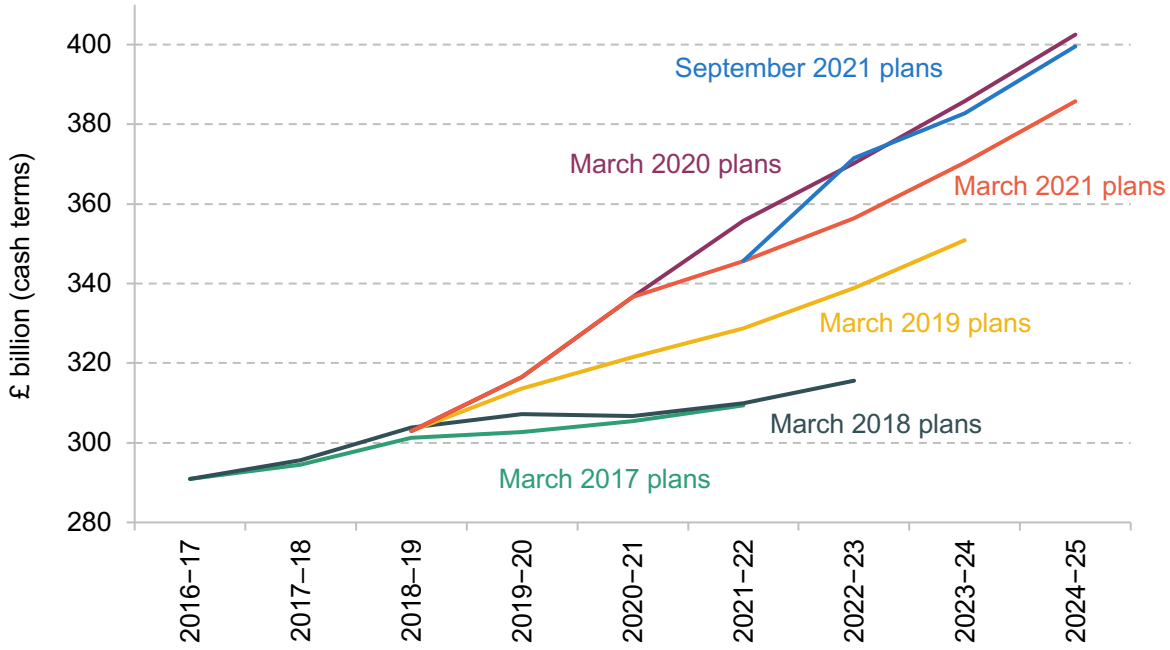


Note: Figures denote the *planned* average annual growth rate in day-to-day spending on public services (resource departmental expenditure limits excluding depreciation). The Spending Review 2020 figure is the average real-terms growth rate between 2019−20 and 2021−22 due to the atypical movement of the GDP deflator during the pandemic. The Spending Review 2021 figure is the average real-terms growth rate between 2021−22 and 2024−25.

Source: Author's calculations using HM Treasury Spending Review documents (various), HM Treasury GDP deflators (various), HM Treasury Budget 2021, HM Treasury 'Chancellor launches vision for future public spending' (7 September 2021) and OBR March 2021 Economic and Fiscal Outlook.

[14] Note that the 3.2% average real-terms growth rate is calculated relative to the 2021−22 figure for 'core' resource DEL, which excludes COVID-related spending.

Figure 5.14. Successive plans for departmental resource budgets



Note: All figures are for the OBR definition of PSCE in RDEL, adjusted for historical discontinuities. We have additionally adjusted for statistical and classification changes at each fiscal event, such that all figures are presented on a consistent March 2020 basis. This is a different measure of spending from that used by HM Treasury as its control total and these figures are not, therefore, directly comparable to the figures published in March or September 2021, or to the figures used elsewhere in this section; they are merely intended to illustrate how plans have changed over time. March 2021 figures are for 'core' budgets and exclude additional public service spending provided in response to the COVID-19 pandemic.

Source: Author's calculations using OBR Economic and Fiscal Outlook (various), HM Treasury Spending Review 2020, HM Treasury Budget 2021 and HM Treasury 'Chancellor launches vision for future public spending' (7 September 2021).

Figure 5.13 compares this with planned spending growth at previous Spending Reviews. It shows that 3.2% annual real growth would be slower than that seen at the two most recent (one-year) Spending Reviews, when resource budgets were planned to increase by around 4% above inflation, but would represent a more generous settlement than was seen at the four Reviews prior to those (2007, 2010, 2013 and 2015). It also shows that this is far from a return to the deep cuts of the 2010s.

The latest spending envelope topped up previous (March 2021) plans by £12–15 billion per year. This is just about enough to return to the spending trajectory pencilled in pre-pandemic, reversing most, but not quite all, of the £14–17 billion annual cuts from plans between March 2020 and March 2021 (Figure 5.14).[15]

[15] Note, however, that this top-up includes approximately £1.7 billion per year to compensate public sector employers for the costs of the increase in employer National Insurance contributions (and subsequently the health and social care levy). The modelling of 'unprotected' spending in Section 5.6 will take this into account.

This point is worth dwelling on for a moment. Despite the substantial pressures placed on public services by the pandemic (some of which were discussed in Section 5.4), the Chancellor is planning to spend no more overall than he was prior to COVID-19 – and in the case of the final year of the period (2024−25), around £3 billion less.

The spending announcements made on 7 September included funding to meet the pressures on the NHS over the next couple of years (the adequacy, or otherwise, of this funding is assessed in Chapter 6). But no explicit allowance has been made for virus-related spending in other areas, such as education or public transport. The Chancellor has indicated that some additional virus-related funding might be considered, but only in the 'immediate term' and only in 'exceptional circumstances' (HM Treasury, 2021c). Any persistent pandemic-related pressures will likely need to be met from within departments' budgets – which will, in many cases, be considerably lower than might have been expected pre-COVID. Section 5.6 explores what this might mean for 'unprotected' areas not covered by a pre-existing commitment.

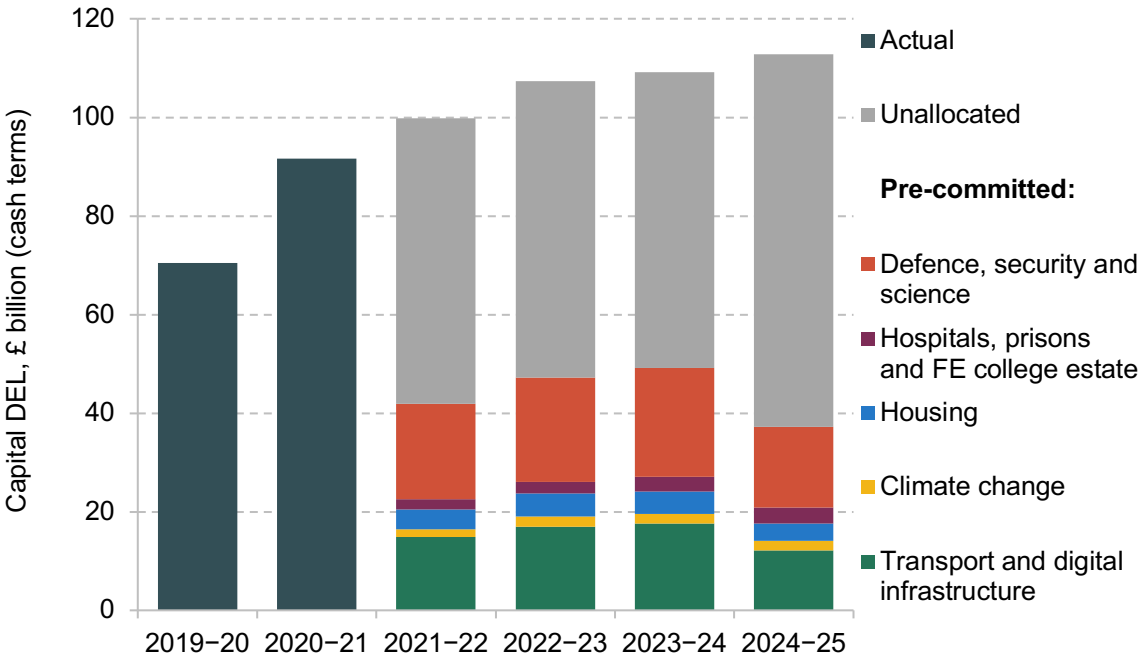
Existing plans for capital (investment) spending

The government has also pencilled in a set of capital spending plans, under which capital DEL is set to grow at an average annual real-terms rate of 2.8% after 2021−22. This will follow rapid growth in 2020−21 and 2021−22, though, such that over the course of the parliament (2019−20 to 2024−25), capital DEL is set to grow at an average real-terms rate of 8.1% per year.

There is also a set of pre-existing commitments on capital spend. Among these is the multi-year set of capital budgets agreed with the Ministry of Defence at the 2020 Spending Review (which run up to 2025−26). The government has also committed to a number of transport spending programmes, including £22.6 billion for high-speed rail between 2021−22 and 2024−25, plus £17.5 billion and £18.0 billion for Network Rail and the Road Investment Strategy, respectively, over the same period. There also exist smaller commitments covering climate-change-related projects (e.g. investment in carbon capture and storage), R&D funding, hospitals, prisons, the further education (FE) college estate, and housing. These various commitments, along with the government's provisional plans for overall capital DEL, are shown in Figure 5.15.

These commitments, while sizeable, amount to less than half of overall capital DEL in each year (and only around a third of the total in 2024−25). There is still some £60 billion of capital funding to allocate in each year. The Chancellor therefore has substantially more room for manoeuvre with regard to departments' capital budgets than he does for resource budgets. For that reason, the remainder of the analysis in this chapter will focus on resource DEL, where the trade-offs are more acute.

Figure 5.15. Planned departmental 'core' capital spending



Note: Figures exclude COVID-19 funding. 'Defence, security and science' includes the Ministry of Defence capital settlement and R&D funding.

Source: Author's calculations using HM Treasury, Spending Review 2020, table C.6.

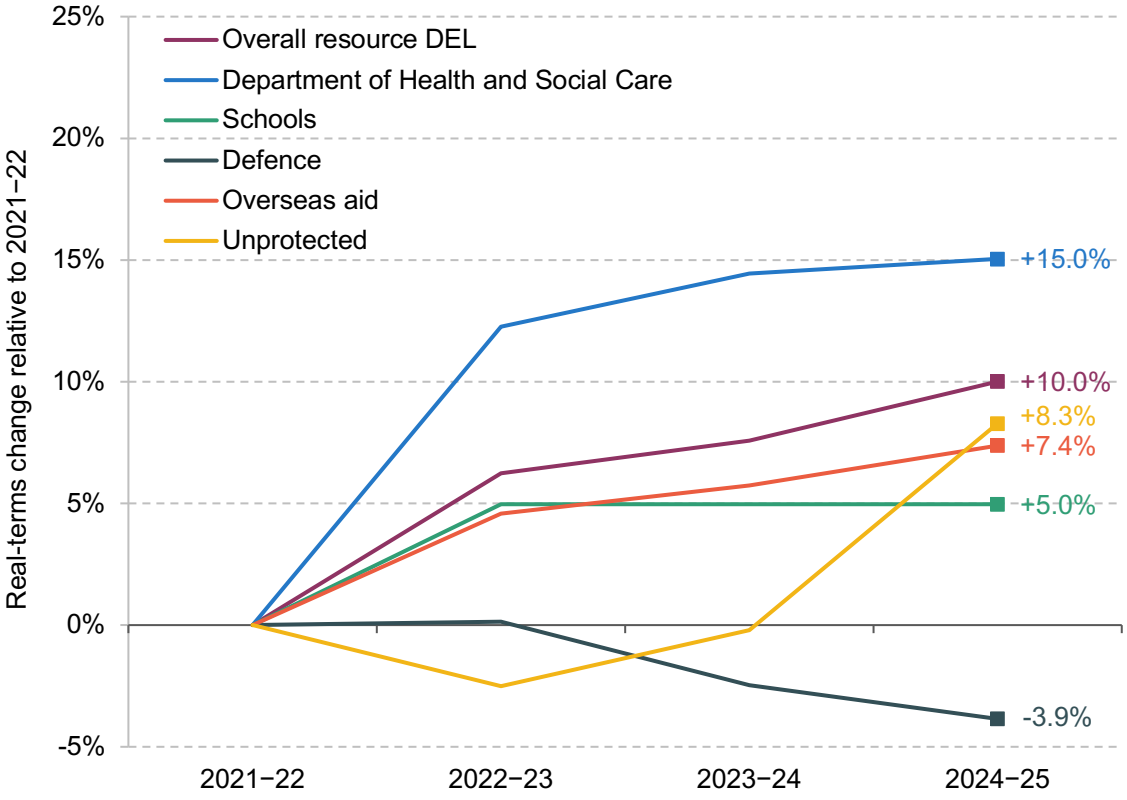
5.6 What does this mean for the Spending Review?

What do the Chancellor's latest plans imply for different areas?

Under the spending plans outlined by the Chancellor on 7 September, resource DEL (departmental day-to-day budgets) is set to grow by 3.2% per year in real terms (and so by 10.0% over the three years from 2021–22 to 2024–25). This is shown by the purple line in Figure 5.16.

The Department of Health and Social Care budget – and within it, the NHS England budget – is set to grow at a faster rate. Over the three years, the DHSC resource budget is set to grow by 15.0% in real terms, though this growth is extremely front-loaded: 12.3% in year one, 1.9% in year two and 0.5% in year three. This is because of the substantial sums provided to the health service to meet pandemic-related pressures in the near term, and the more limited nature of support after that point. The sums provided to DHSC in the first two years might be 'enough', but the analysis in Chapter 6 implies a possible shortfall of around £5 billion in 2024–25. We return to this below.

Figure 5.16. Projected real-terms change in day-to-day public service funding under the government's September 2021 spending plans



Note: Overseas aid denotes an estimate of the resource element of ODA, which is assumed to remain at 0.5% of GNI for the full period. All other figures are for resource DEL, excluding depreciation.

Source: Author's calculations using assumptions outlined in the text and all sources for Table 5.3.

The resource component of ODA would be expected to grow by 2.4% per year (7.4% over three years) to keep pace with growth in the wider economy and maintain aid spending at 0.5% of national income. The schools budget would grow by 5.0% in the first year, then flatline (as per our assumptions in Section 5.5, which would translate into rising real per-pupil spending). Under its long-term settlement, the MoD's capital budget (which amounts to around one-third of the total MoD budget) is set to increase by more than 40% over the parliament, and by around 7% over the Spending Review period. The MoD resource budget, on the other hand, is actually set to fall by 1.3% per year (3.9% over three years), as can be seen in Figure 5.16.

As discussed in Section 5.5, greater spending on the English NHS and schools system means greater funding for the Scottish, Welsh and Northern Irish devolved governments, via the Barnett formula. Once these Barnett consequentials are accounted for, the government's plans and commitments imply a 2.5% real-terms cut to unprotected budgets in 2022−23 (or,

equivalently, a £2.3 billion cut in 2021−22 prices).[16] Then, in subsequent years, as the pace of growth in the DHSC budget slows, the schools budget flatlines and the MoD budget starts to fall, more money would be freed up for unprotected areas. Those budgets would see real-terms growth of 2.4% in 2023−24 and 8.5% in 2024−25. Combined, that would mean an 8.3% increase over the three years (shown by the yellow line in Figure 5.16).

A short-term squeeze, followed by medium-term ease?

That would represent an extremely tight settlement for unprotected departments over the next two years, including a real-terms cut of more than £2 billion in 2022−23. Budgets in 2023−24 would be no higher, on average, than in 2021−22. Affected areas include things such as prisons, the courts system, local government, further education, the police, international trade and HMRC. As discussed in Section 5.4, many of these services are facing substantial pressures and challenges – whether from the pandemic, Brexit, a decade of austerity, or demographic trends.

And remember, while the Chancellor has provided additional cash to deal with COVID-related pressures on the NHS, no such funding has been provided to deal with pandemic-induced backlogs and disruptions elsewhere. If the Chancellor sticks to his latest spending envelope, but further virus-related expenditure is required (to deal with the backlog in the courts system, for instance, or to pay for a learning catch-up programme in schools), then the money would need to be found from within other budgets (i.e. from cuts to other services). If anything, then, the figures in Figure 5.16 likely understate the potential squeeze facing unprotected budgets in the near term.

On the face of it, though, while unprotected budgets would be squeezed in the near term, there might appear to be more than enough to go around in the medium term. Figure 5.16 clearly shows that unprotected budgets would – under these assumptions – be in line for a real-terms budget increase over the three-year period, including growth in excess of 8% in 2024−25. Taking the period as a whole, then, it might appear that there is little to worry about – and certainly no need to worry about a ‘return to austerity’. Perhaps – but there are two relevant points to consider here.

The first relates to the time profile of spending. Budget increases for areas such as local government, the Department for Transport and HM Courts & Tribunal Service are likely to be heavily backloaded, based on the analysis above. But the pressures facing those areas – particularly those related to the pandemic – are likely to be heavily front-loaded and at their most acute over the next two years. The Institute for Government recently suggested that the

[16] This allows for the fact that a portion of the cut to unprotected budgets in 2022−23 would be ‘devolved’ to Scotland, Wales and Northern Ireland. It also adjusts for the £1.7 billion or so of additional funding provided to compensate public sector employers for the extra costs associated with the new health and social care levy.

Chancellor ought to bring funding forward to ease COVID-19 disruption for other public services (Pope, 2021).

If he wished, the Chancellor could re-profile his spending totals to provide more funding in the near term, while spending the exact same amount over the three-year Spending Review period, and smoothing the growth in unprotected budgets. To illustrate, consider the case where £5.7 billion (in cash terms) is removed from plans for 2024−25, and £3.5 billion and £2.2 billion is added to plans for 2022−23 and 2023−24, respectively. Cumulative spending would be left unchanged, but this would allow for constant real-terms growth in unprotected budgets of around 1% per year, rather than the famine-and-feast of sharp cuts followed by sharp increases. That would likely allow for more efficient planning of services and better allow departments to deal with immediate virus-related pressures.

Second, do we really believe that 'protected' budgets will face such a tight settlement in 2024−25? Under the plans published on 7 September, the DHSC budget is set to increase by just 0.5% in real terms in 2024−25, and (within that) the NHS England budget by just 1.2%. History teaches us that the NHS budget is almost always topped up (Zaranko, 2021), and the analysis in Chapter 6 suggests that a top-up in 2024−25 seems all but certain. Below, we show that top-ups to the NHS or other protected budgets could very easily eat into the amount available for other, less fortunate, areas.

An alternative scenario: what if the Chancellor provides a top-up to NHS and aid budgets?

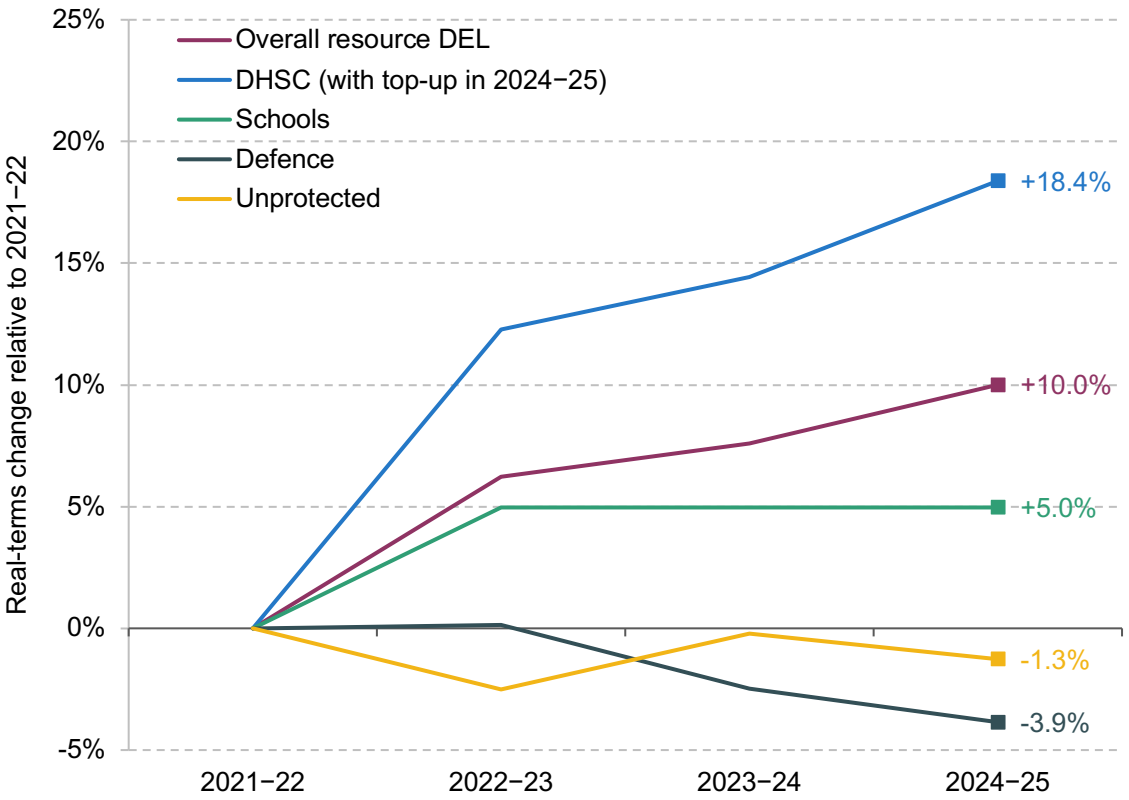
The Chancellor is facing a myriad of calls for additional funding in the face of spending pressures across the public sector. He will not be able to please everyone. But top-ups in at least some areas seem likely. Here, we consider two areas in which that seems particularly likely: the NHS and aid budgets. To be clear: this is not intended as an exhaustive list of the places where the Chancellor might need to find more money. Instead, the intention is to illustrate just how easily the real-terms increases implied for unprotected budgets in 2024−25 could fail to materialise.

First, the NHS. The new health and social care funding settlement, announced on 7 September, provided substantial amounts to deal with virus-related pressures over the coming two years. But these plans appear to allow for little or no long-term additional costs as a result of the pandemic, suggesting that the newly announced funding might be insufficient to meet COVID-related pressures in the medium term (see Chapter 6). These plans imply a potential shortfall of around

£5 billion in 2024–25. Here, we assume that the NHS England budget is topped up by that amount to meet ongoing pandemic-related cost and demand pressures on the health service.[17]

Second, overseas aid spending. The Chancellor has committed to returning ODA spending to 0.7% of national income 'once the fiscal situation allows' (for full details, see Section 5.5). It is possible that with an improving economic outlook (such as the 'central' and 'optimistic' scenarios discussed in Chapter 3), the Chancellor's conditions could be met during the Spending Review period. Here, we consider the case where the government returns ODA to 0.7% of national income in 2024–25, which would require additional (resource) spending of around £4 billion in that year.

Figure 5.17. Alternative scenario: projected real-terms change in day-to-day public service funding with top-ups for the NHS and aid budgets in the final year



Note: All figures are for resource DEL, excluding depreciation. Overseas aid would grow by more than 50% over three years in this scenario, and is excluded from the chart in order to preserve the vertical axis.

Source: Author's calculations using assumptions outlined in the text and all sources for Table 5.3.

[17] Note also that if the NHS budget were to exceed its planned growth rate by the average amount by which it has done so historically (i.e. 1.4 percentage points, in real terms), that would also imply spending £5 billion extra in 2024–25. See Zaranko (2021) for details.

Table 5.4. Resource spending totals under existing plans and alternative scenario

	Plans	Spending Review 2021 period		
	2021–22	2022–23	2023–24	2024–25
Existing (September 2021) spending plans (£ billion, 2021–22 prices)				
Total resource DEL[a]	385.0	409.0	414.2	423.5
Total protected resource DEL	237.5	258.5	261.0	261.6
Other (non-COVID) resource DEL	147.5	150.5	153.2	162.0
of which: estimated unprotected	*90.3*	*88.0*	*90.1*	*97.8*
Alternative scenario: a top-up to NHS and aid budgets (£ billion, 2021–22 prices)				
Total resource DEL[a]	385.0	409.0	414.2	423.5
Total protected resource DEL	237.5	258.5	261.0	270.5
Other (non-COVID) resource DEL	147.5	150.5	153.2	153.1
of which: estimated unprotected	*90.3*	*88.0*	*90.1*	*89.1*

[a] Resource DEL figure for 2021–22 excludes spending provided to deal with COVID-19.
Note: All figures are expressed in 2021–22 prices using June 2021 GDP deflators, and may not sum due to rounding. Protected RDEL includes DHSC, schools in England, the Ministry of Defence and ODA (as per Table 5.3). 'Other (non-COVID) RDEL' includes the estimated block grants to the devolved governments in Scotland, Wales and Northern Ireland as well as 'estimated unprotected'.

Source: Author's calculations using assumptions outlined in the text and all sources for Table 5.3.

What would this mean for unprotected budgets? Figure 5.17 shows that in this scenario, rather than growing in the final year of the period, unprotected budgets would face another round of real-terms cuts. Table 5.4 shows that these cuts would amount to around £1 billion over three years. The key point to take from this is that higher spending elsewhere – whether it is on the NHS and overseas aid, or something else – could easily eat into what is available for unprotected budgets.

In other words, it would not take much for a difficult two-year period (as implied by existing plans) to turn into a difficult three-year period for unprotected services. That would pose considerable challenges. Among other things, it could threaten the successful roll-out of the government's new social care funding reforms, jeopardise the levelling-up agenda, and limit the amount available to spend on the transition to net zero. The Chancellor's plans do not signify a full-throated return to austerity, but they do point to a difficult period ahead, with delicate trade-offs abounding.

Or might the Chancellor just top up his plans again?

The illustrative scenario above assumes that the Chancellor would provide additional funding to the NHS and to the ODA budget without increasing his overall spending plans (the line for total resource DEL is identical for both scenarios in Table 5.4). In other words, it assumes that he sticks to his spending envelope.

But will he? The NHS and overseas aid are not the only areas clamouring for additional funding: the Chancellor will face a cacophony of calls for extra cash. After all, his latest plans still imply spending less on public services than was planned in the March 2021 Budget (Figure 5.14), and no allowance has been made for virus-related spending outside of health. Cuts to unprotected services will be difficult to deliver, and ongoing pandemic pressures are likely across huge swathes of the public sector – not least for education and public transport providers. An improvement in the economic and fiscal forecast is likely (see Chapters 2 and 3), perhaps providing some room for manoeuvre. Mr Sunak might, therefore, be tempted to top up his spending plans.

The scale of any top-up would, of course, depend on what the Chancellor was trying to achieve. Returning to pre-pandemic plans for overall resource DEL would mean spending an additional £3 billion in 2024−25. Returning ODA spending to 0.7% of national income and providing additional funding for pandemic-related pressures on education and transport (see Figure 5.10) would require an additional £7 billion in that year. Adding an extra £5 billion for the NHS in 2024−25 to plug a possible shortfall (see Chapter 6) would take the total to £12 billion. Given the scale of the government's ambitions on social care reform, levelling up and net zero, one could easily imagine top-ups on an even larger scale.

5.7 Conclusion

The Chancellor's dilemma is this. He has announced a £14 billion a year top-up to his March 2021 spending plans alongside a manifesto-breaking increase in National Insurance contributions. Overall funding for public services is planned to increase at a faster rate than at Labour's 2007 Spending Review. Rishi Sunak, a Conservative Chancellor, is set to oversee a lasting increase in the size of the state of around 2% of national income. But still he faces an unpalatable set of spending choices.

Sticking to his plans would mean making cuts next year to some unprotected budgets. Many of those budgets – which include things such as local government, prisons, courts and further education – are already facing major challenges, from a combination of the pandemic, Brexit, a decade of austerity and demographic trends. The Chancellor has announced funding to meet pandemic-related pressures on the NHS, but has made no allowance for virus-related spending

on other services. Ongoing support for public transport operators and a catch-up package for schools (to take just two examples) could easily require £3 billion of extra spending each year. If the Chancellor allocates funding towards COVID-19 catch-up without increasing his overall envelope or rowing back on his commitments to areas such as the NHS, defence, schools and overseas aid, he will have to make even bigger cuts to unprotected budgets. Making meaningful progress in areas such as social care reform, levelling up and the net zero transition could additionally require tens of billions of spending each year. His plans might imply more wiggle room by the end of the parliament for unprotected services, but more likely an ever-growing NHS budget will swallow most – if not all – of that up.

In short, then, this Spending Review still promises to be a tricky one. There are no easy options, but the decisions made will be of major economic, fiscal and political importance.

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6. Pressures on the NHS

Max Warner and Ben Zaranko (IFS)[1]

Key findings

1 **The NHS was showing clear signs of strain even before the pandemic began.** The waiting list for elective treatment had grown by 50% since 2015; just 83% of A&E patients were seen within four hours in February 2020 (down from 92% in February 2015); and the estimated cost of eradicating the 'high-risk' maintenance backlog had quadrupled since 2010.

2 Following a decade of big budget increases, between 2009−10 and 2019−20 UK government health spending grew at an average real-terms rate of 1.6% per year – **lower than any previous decade in NHS history**. The NHS entered the pandemic with 39,000 nursing vacancies in England, and fewer doctors, hospital beds and CT scanners per person than in many similar countries. **Continued public sector pay restraint has meant real-terms pay cuts for many NHS staff**: average pay for consultants in 2021 is 9% lower in real terms than it was in 2011. It is 4% lower for junior doctors and 5% lower for nurses.

3 **NHS funding plans have been blown out of the water by the pandemic.** Theresa May's 2018 settlement for the English NHS was to increase annual spending by an eventual £34 billion over five years. **The Department of Health and Social Care spent £63 billion on COVID-19 support in 2020−21, and is planning to spend £34 billion in 2021−22.** This includes an estimated £29 billion in additional NHS England funding (across both years), £28 billion

[1] The authors are grateful to George Stoye for helpful comments on this chapter and Paul Aylin, Alex Bottle, Richard Cooley and Mark Cunningham for data access and support. Some analysis of Hospital Episode Statistics was carried out at the Dr Foster Unit at Imperial College London, which is funded through a research grant from Dr Foster Intelligence (a wholly owned subsidiary of Telstra Health). This work uses data provided by patients and collected by the NHS as part of its care and support. The views expressed in this publication are those of the authors and not necessarily those of the National Health Service (NHS). The authors have approval from the Secretary of State and the Health Research Authority under Regulation 5 of the Health Service (Control of Patient Information) Regulations 2002 to hold confidential data and analyse them for research purposes (CAG ref 15/CAG/0005). They have approval to use them for research and measuring quality of delivery of healthcare, including for this analysis, from the London – South East Ethics Committee (REC ref 20/LO/0611).

for NHS Test and Trace and £15 billion on personal protective equipment (PPE).

4 The NHS will continue to face direct and indirect pressures from COVID-19, and pre-pandemic funding plans would be insufficient to meet them. In our central scenario, we estimate that the English NHS will need **£9 billion in 2022−23 (an increase of 6.4% relative to pre-pandemic plans), £6 billion in 2023−24 (4.1% on pre-existing plans) and £5 billion in 2024−25** to deal with pandemic-related pressures. **These are substantial, but manageable, sums.** These estimates are highly uncertain and sensitive to assumptions about the future course of the pandemic, but are broadly similar to those reached by other organisations.

5 The new health and social care settlement, announced by the Prime Minister in September 2021, provides an additional £11.2 billion for the Department of Health and Social Care in 2022−23 and £9.0 billion in 2023−24. Of that, around £1.8 billion each year is earmarked for social care (assuming that the £5.4 billion over three years is spread evenly). **That leaves around £9 billion of additional funding in 2022−23 and £7 billion in 2023−24, to deal with health-related COVID pressures. Based on our analysis, this could be enough to meet the pressures on the NHS over the next two years.**

6 **But this new funding announcement is far less likely to be sufficient in the medium term.** The extra funding provided for the NHS in the recent announcement will result in spending growing at 3.9% a year between 2018−19 and 2024−25, exactly the same rate of growth as was planned between 2018−19 and 2023−24. **That suggests that these new plans allow for little or no long-term additional costs as a result of the pandemic, whereas we estimate that virus-related pressures could amount to £5 billion in 2024−25.** Meeting those ongoing pressures would likely require additional funding, or less spending elsewhere in the NHS.

7 Direct COVID pressures include the costs of treating patients with COVID-19 and ‘long COVID’, Test and Trace, vaccinations, PPE and other infection control measures. **These pressures are substantial but are likely to fall rapidly from their current level.** We estimate that the combined cost of meeting these direct pressures could be around £5.2 billion in 2022−23, falling to £2.0 billion in 2023−24 and £0.9 billion in 2024−25.

8 **The indirect costs and pressures associated with the pandemic could be greater and more persistent.** Millions of people missed out on NHS care during the pandemic. Much of this care will need to be delivered eventually and waiting lists are likely to rise rapidly as these 'missing' patients come forward. **We estimate that the NHS could need £2.5 billion per year between 2022–23 and 2024–25 if it is to catch up on missed activity.** This could be sufficient to return waiting lists to their pre-pandemic levels within three years, if the NHS finds effective ways to boost capacity and unit costs do not increase substantially. **Increased demand for mental health services could cost the NHS an additional £1 billion per year. An annual 3% pay rise for NHS staff, if continued over this period, would cost approximately £0.8 billion in 2022–23, £1.3 billion in 2023–24 and £1.8 billion in 2024–25** relative to the 2.1% annual increases assumed in the NHS's long-term plan.

9 The pandemic is also likely to save the NHS money in some areas. **The move to remote outpatient appointments, combined with reduced demand as a result of COVID-19 deaths, could save the NHS at least £0.7 billion per year between 2022–23 and 2024–25**. More broadly, the NHS has had to experiment hugely during the pandemic, and there are potential 'upsides' and gains from the resultant organisational learning.

6.1 Introduction

The COVID-19 pandemic has had deep and far-reaching impacts on the National Health Service (NHS). There have been more than 400,000 COVID-19 patients admitted into English hospitals between March 2020 and July 2021, and at the worst points of the pandemic there were genuine fears that the system might be overwhelmed. This has put incredible pressure on a health system that was already struggling to meet many of its constitutional targets even before the pandemic.

The success of the vaccination programme means that there is now less risk of COVID-19 patients overwhelming the system. But that does not mean the NHS is in the clear. In some senses, the challenge is only just beginning.

Millions of people missed treatment during the pandemic; much of that treatment will need to be delivered at some point. Waiting lists are already at their highest level since the current definition was introduced and Sajid Javid, the recently appointed Secretary of State for Health and Social Care, has warned that they could grow by millions more in the coming months (BBC, 2021a). Recent analysis by IFS researchers has shown that the only way for the NHS to catch up

is not just to return to normal, but to increase capacity relative to pre-pandemic levels (Stoye, Warner and Zaranko, 2021).

The NHS also faces other ongoing costs and pressures from the pandemic. There will be some COVID-19 hospital admissions for a long time. Even with a small number of COVID-19 cases, the need for infection control measures and personal protective equipment (PPE) will persist as long as COVID-19 continues to circulate within the population, which will act to increase costs and reduce capacity. The vaccination programme is likely going to continue with booster doses for much of the population for the foreseeable future. The harmful mental health impacts of the pandemic have been far-reaching, with some groups (such as young women) affected more than others (Banks, Xu and Fancourt, 2021). And the NHS may have to deal with hundreds of thousands of patients with long COVID. These pressures are on top of the pre-existing and substantial pressures associated with an ageing population and an ever-growing number of people living with multiple chronic conditions.

In the face of these pressures, and repeated requests for additional funding (e.g. Hopson, 2021), the government made a major announcement on health and social care funding on 7 September 2021. This included around £12 billion of additional funding for the Department of Health and Social Care (DHSC) in each of the next three years, alongside a corresponding tax rise. In this chapter we provide, to our knowledge, the first detailed and independent assessment of how the latest NHS funding announcement matches up to the scale of the challenge ahead.

The sheer size of the health budget means that these decisions have important ramifications for the government's overall spending plans and fiscal strategy, but also for the amount available for spending in other areas. Many other public services have also been put under considerable pressure by the pandemic, and some of the support provided to (for example) schools, public transport operators and local governments may need to be extended. But past experience tells us that the NHS gets special treatment.

The chapter proceeds as follows. In Section 6.2, we consider the NHS's starting point, in terms of its funding, resources and performance, and place these in historical and international context. In Section 6.3, we outline the plans for future NHS funding that were in place prior to the pandemic. In Section 6.4, we set out the pandemic-related pressures on the NHS and the potential financial costs associated with meeting each of these. The focus here is on the English NHS, but the issues discussed are relevant for the NHS in Scotland, Wales and Northern Ireland (and the funding of the English NHS is directly relevant for the funding of the devolved governments, due to the Barnett formula). We attempt to quantify the financial pressures from 2022−23 onwards: the period to be covered by the forthcoming Spending Review. These are summarised in Section 6.5, and compared with estimates made by other organisations. In Section 6.6, we analyse the government's latest health and social care funding announcement,

and assess its adequacy by comparing it with our assessments of the scale of NHS funding pressures. Section 6.7 concludes.

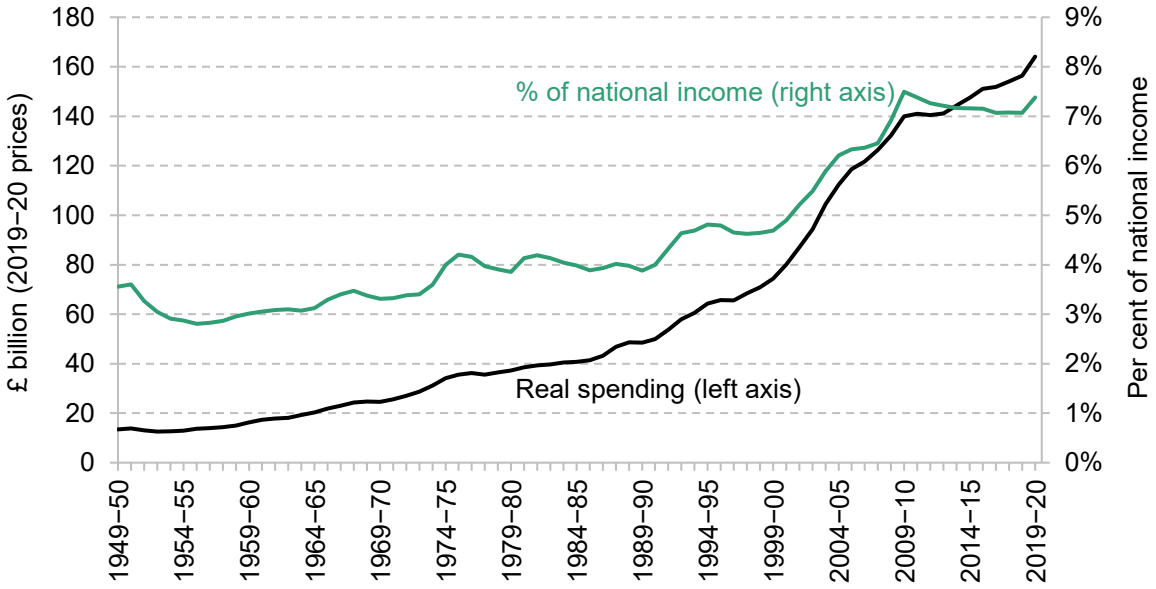
6.2 Where was the NHS pre-COVID?

Funding in historical and international context

History

Figure 6.1 shows annual government spending on health between 1949−50 and 2019−20, both in real terms and as a percentage of national income. Table 6.1 shows the corresponding real-terms growth rates in health spending (i.e. growth over and above economy-wide inflation) for different periods since 1949−50. Health spending has grown in real terms at an average real growth rate of 3.6% between 1949−50 and 2019−20. However, growth has been uneven, rising much more quickly during particular periods. For example, during the Blair and Brown New Labour governments, UK health spending grew at an average real rate of 6.0% per year.

Figure 6.1. UK health spending, 1949−50 to 2019−20



Source: Health spending: 1982−83 to 2019−20 HM Treasury Public Expenditure Statistical Analyses (various), 1978−79 to 1981−82 Statistical Supplement to FSBR 1994−95, prior to 1978 Office for Health Economics. GDP: OBR Public Finances Databank (2021). GDP deflator: ONS GDP Deflators at Market Prices (2021).

Table 6.1. Average annual growth in UK government real health spending

Period	Financial years	Real health spending growth rate	Real health spending per capita growth rate
Pre-1979 governments	1949–50 to 1978–79	3.5%	3.1%
Thatcher and Major governments	1978–79 to 1996–97	3.3%	3.1%
Blair and Brown governments	1996–97 to 2009–10	6.0%	5.5%
Coalition government	2009–10 to 2014–15	1.1%	0.3%
Conservative governments	2014–15 to 2019–20	2.2%	1.5%

Source: See Figure 6.1 and ONS's Population Estimates for the UK historical time series.

Growth in health spending has tended to outstrip economic growth, so health spending has also grown as a percentage of national income. This was not the case between 2009–10 and 2018–19, however, when health spending grew more slowly than the wider economy (at an average real-terms rate of 1.2% per year) and so fell as a share of national income, from 7.5% to 7.1%. Following a sharp uptick in 2019–20, health spending increased to 7.4% of national income on the eve of the pandemic. In all periods, health spending growth has exceeded population growth, so health spending per capita has also grown over time, as shown in Table 6.1.

Although health spending has grown at a historically low rate since 2010, it is important to note that it has fared much better than most other government departments which experienced real-terms cuts to their budgets. This is discussed in more detail in Chapter 5. Moreover, for a period at least, lower growth in health spending from 2010 might have been made possible due to the very strong growth in spending over the previous decade.

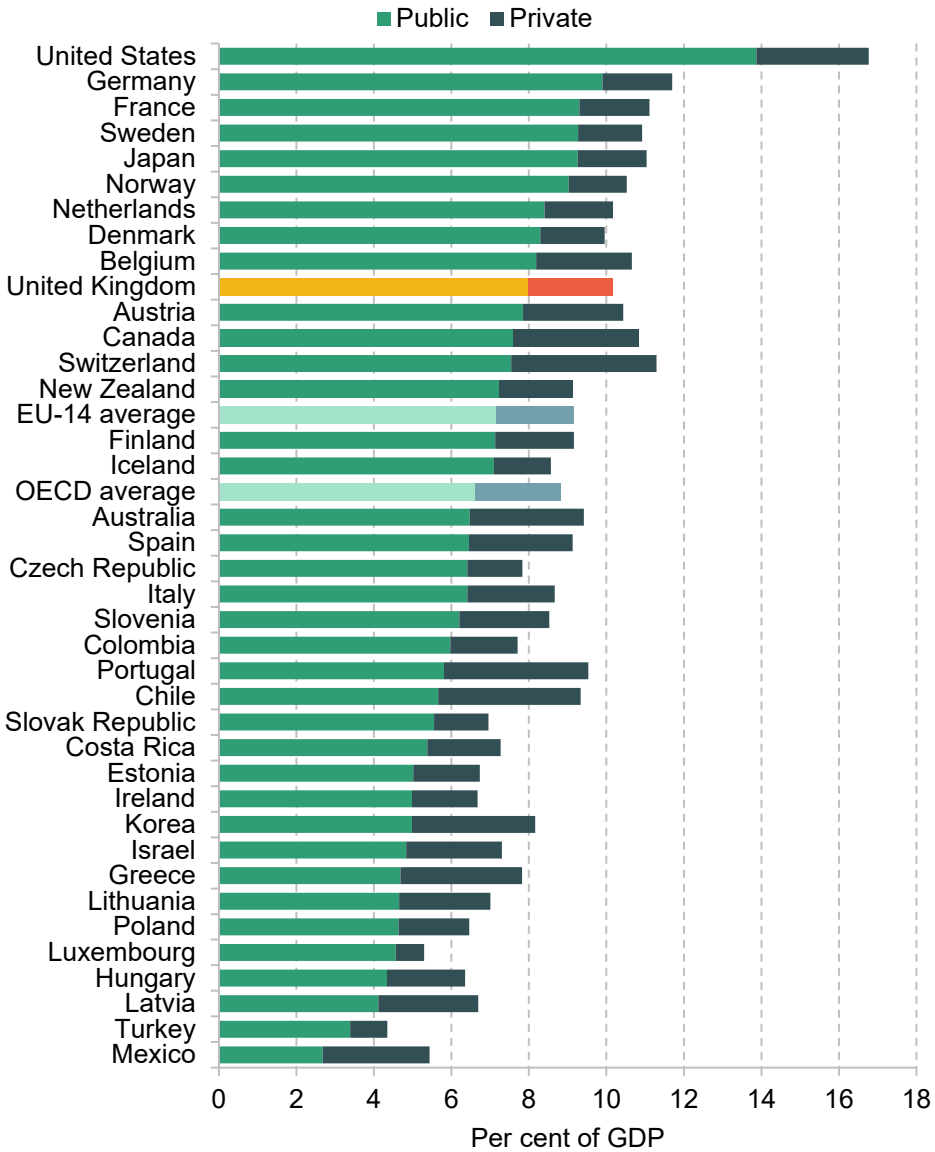
How does the UK compare internationally?

In the UK, total current health expenditure (i.e. the sum of both public and private 'day-to-day' expenditure on goods and services that are used within a year, as opposed to capital expenditure on equipment and buildings) amounted to just over 10% of national income in 2019. As shown by Figure 6.2, this was less than was spent in countries such as the US, Canada, France and Germany, but more than the (unweighted) mean and median level among OECD countries.

Within that total, the majority of current health expenditure is done by the government. At 8.0% of national income in 2019, UK government health spending is considerably higher than the OECD average of 6.6%, and higher than the average among (the then) EU-14 countries, though lower than in some of the UK's Northern European neighbours (e.g. lower than in France,

Germany, the Netherlands and Denmark).[2] At 2.2% of national income in 2019, private health expenditure in the UK is broadly in line with the OECD average.

Figure 6.2. Current expenditure on health as % of national income for OECD countries, 2019



Note: Public expenditure is expenditure by government or compulsory healthcare schemes. Private expenditure is expenditure by voluntary schemes and household out-of-pocket payments. 2018 levels used for New Zealand's private percentage. EU-14 are the EU member states that joined before 2004: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Italy, Luxembourg, Netherlands, Portugal, Spain and Sweden. All OECD countries are included in the graph and used to calculate the OECD average.

Source: OECD Health Expenditure and Financing (2021).

[2] Note that this 8.0% figure is higher than in Figure 6.1 because the OECD definition of health spending includes items that would typically be thought of and classified as 'social care' in the UK.

Differences within the UK

In 2019−20, government health spending in England was £2,427 per capita, slightly lower than in the other three parts of the UK. Northern Ireland spent £2,616 per capita (7.8% higher than England), Wales spent £2,546 per capita (4.9% higher) and Scotland spent £2,507 per capita (3.3% higher) in 2019−20 (HMT, 2021). This is due to differences in population demographics and health, how the NHS is organised and political decisions by the devolved administrations. These differences, however, are not fixed over time. The gap between Scottish and English per-capita health spending has, for example, fallen from 22% higher in Scotland at the start of devolution (1999−2000) to just over 3% higher in 2019−20 (Farquharson, Phillips and Zaranko, 2021) as NHS spending per capita has been increased less quickly in Scotland than in England over this period.

For the rest of this chapter, we focus on the NHS in England. However, funding for the NHS in England directly affects funding for the other three nations via the Barnett formula. And all four parts of the UK will face broadly similar ongoing pressures from COVID-19.

What is health funding spent on?

The vast majority of the government's expenditure on healthcare in England goes straight to the NHS. Of the DHSC's £133.5 billion resource (current, or day-to-day) expenditure in 2019−20, 92% or £123.4 billion went to the NHS. The remainder was spent on what it terms non-NHS bodies, though some of these are branded as NHS bodies, such as NHS Digital (£0.4 billion) and NHS Resolution (£0.4 billion), which deal with data and technology, and negligence complaints, respectively. Public Health England received £0.9 billion (excluding initial COVID-19 expenditure) while local authorities received £2.9 billion in public health grants. Health Education England (the body responsible for workforce planning, education and training, including funding for medical and dental students) received £4.1 billion.

One important change that is hidden in the growing government expenditure on health pre-pandemic is the declining share that was spent on non-NHS bodies. Between 2013−14 and 2019−20, non-NHS-England DHSC resource spending fell by 15.6% in real terms. If we look within that total, Public Health England's budget in 2019−20 was roughly the same in real terms as it had been on inception in 2013−14. But over the same period, the budget for Health Education England has declined in real terms by 25%, from £5.4 billion in 2013−14 (2019−20 prices) to £4.1 billion in 2019−20.

Capital spending and capacity

Capital spending is the purchase of goods that have up-front costs but are expected to have benefits that last over a number of years. Many inputs necessary to provide healthcare – such as hospitals and large medical equipment – have this property. The sum of past capital expenditure

is therefore a key determinant of the NHS's capacity. The Conservatives' 2019 manifesto promised to build 40 new hospitals and 20 hospital upgrades; the 2020 Spending Review committed £5.4 billion over four years to (start to) deliver on this promise.

Capital spending is likely to be under even more focus in the coming years as both the government and the opposition consider how well the NHS was prepared for the pandemic, and whether it might be beneficial to operate with a greater degree of spare capacity, or 'slack', given the potential for future adverse shocks such as pandemics. There will also be focus on how much more capacity will be needed to deal with pressures from missed care during the COVID-19 pandemic and the broader pressures of an ageing population.

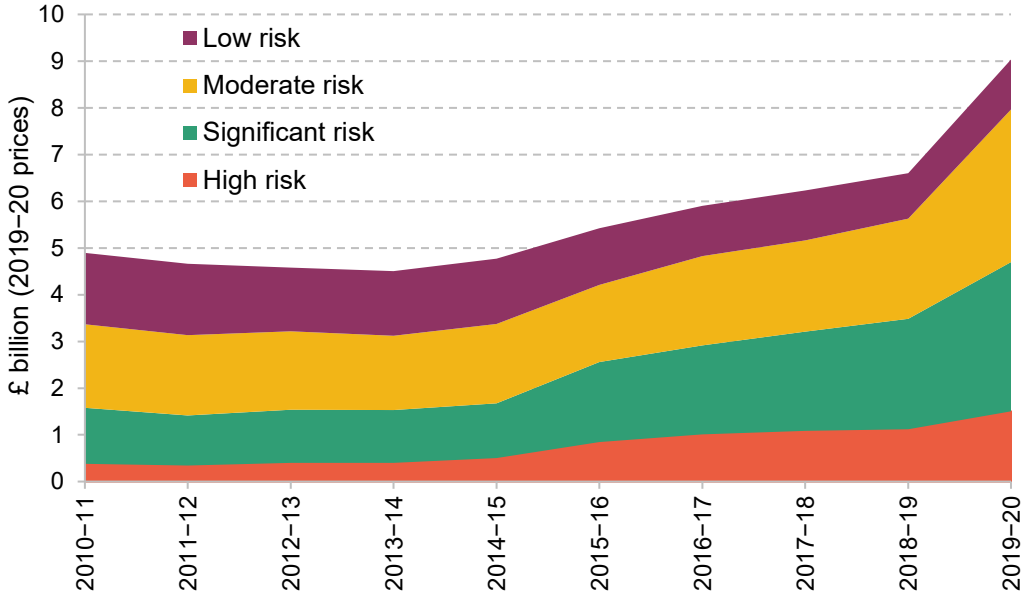
DHSC capital spending accounts for around 10% of all departmental capital spending, and around 5% of the total DHSC budget. It was cut sharply (by 37% in real terms) between 2009−10 and 2016−17, before increasing over the subsequent three years. In 2019−20, the DHSC capital budget was £7 billion, around 9% lower than a decade earlier. For comparison, over that same 10-year period, the DHSC resource budget grew by 21% in real terms.[3]

Because the benefits of capital spending are spread over a number of years, when the funding situation is tight there can be a temptation to cut back capital spending first, rather than reduce current spending, where the consequences of any change in funding are more immediate (if, for example, staff numbers or pay awards have to be reduced). Indeed, in past years, DHSC has repeatedly used capital funding to plug gaps in current expenditure, despite in principle this not being allowed under the Treasury's spending framework. For example, DHSC moved £0.5 billion from capital to resource budgets in 2018−19, £1.0 billion in 2017−18 and £1.2 billion in 2016−17.

A sign that capital spending has been lower than it perhaps should have been is the growing NHS maintenance backlog, as shown in Figure 6.3. This does not include planned maintenance work – rather, it is work where the judgement is that it should already have taken place. The total estimated cost to eradicate the backlog in the NHS has grown by 85% in real terms since 2010−11. Even more worryingly, the size of the high-risk backlog has quadrupled in real terms over the last decade. The cost of clearing this high-risk backlog, defined as cases 'where repairs/replacement must be addressed with urgent priority in order to prevent catastrophic failure, major disruption to clinical services or deficiencies in safety liable to cause serious injury and/or prosecution', stood at £1.5 billion in 2019−20 compared with less than £0.4 billion in 2010–11.

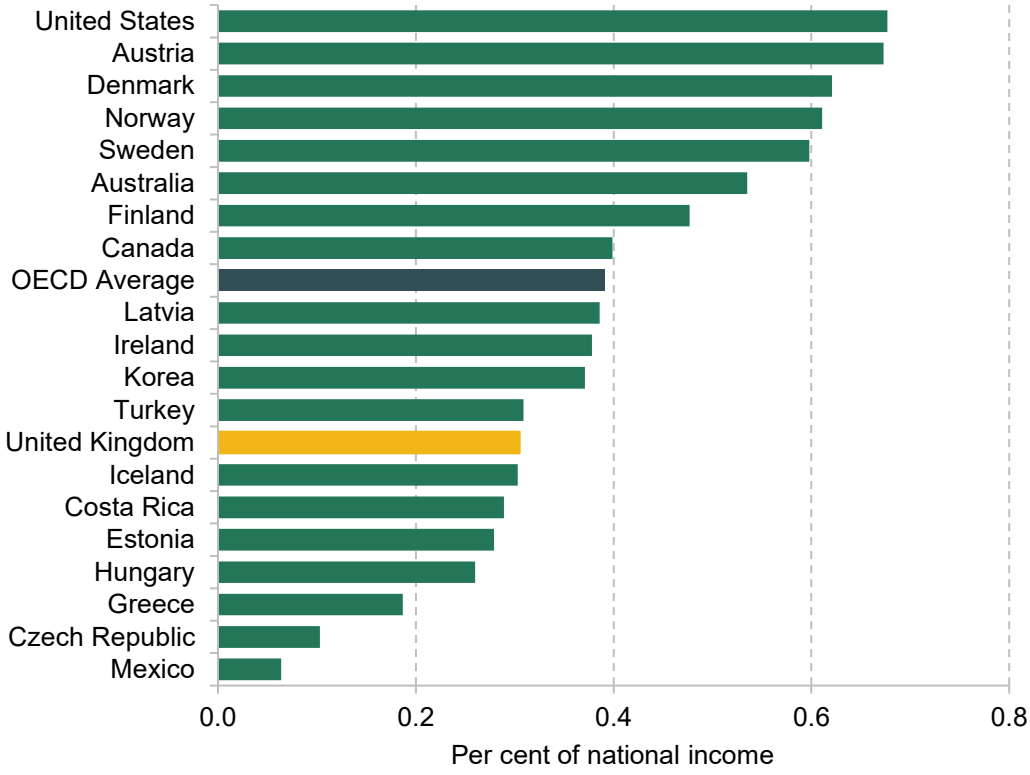
[3] For more detail on how DHSC and other departmental budgets evolved over the 2010s, see Chapter 5.

Figure 6.3. Estimated cost to eradicate the NHS maintenance backlog



Source: NHS Digital's Estates Returns Information Collection (2015–19).

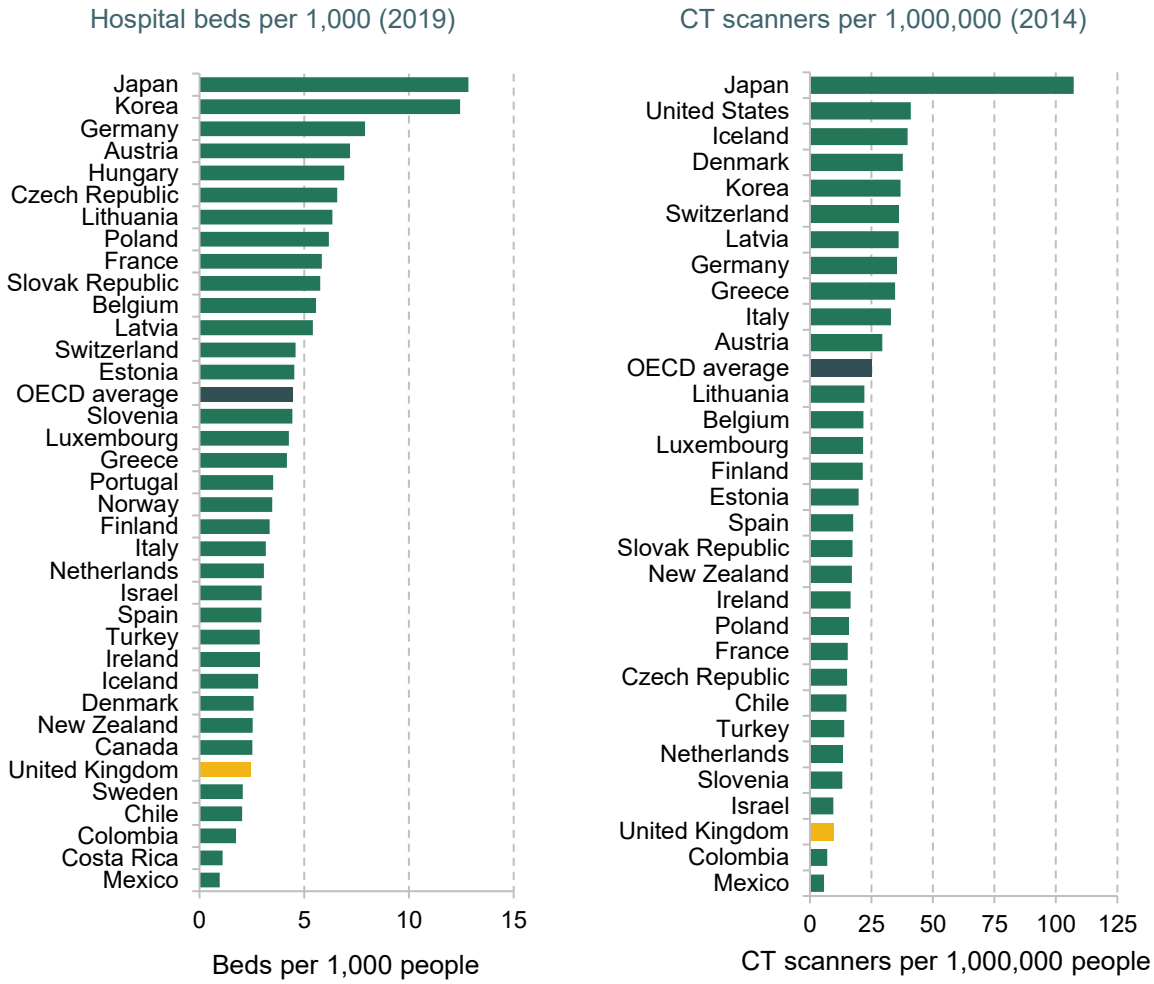
Figure 6.4. Capital expenditure in the healthcare system across OECD countries in 2019



Note: 2018 levels used for Australia and Ireland. OECD average only includes countries in the figure, which are those with available data. Capital expenditure refers to gross fixed capital formation.

Source: OECD Statistics' Gross Fixed Capital Formation in the Health Care System (2021).

Figure 6.5. Hospital resources for OECD countries



Note: OECD averages only include countries in each figure, which are those with available data.

Source: OECD Statistics' Health Care Resources (2021).

More evidence that capital spending has potentially been too low in recent years can be gleaned by comparing the UK's level with levels in similar countries. Figure 6.4 shows capital expenditure in the healthcare system for a number of OECD countries, which includes capital expenditure by private healthcare companies. In 2019, the UK spent 0.31% of national income on capital, 22% lower than the OECD average of 0.39%.

This low capital spending by international standards has fed through into fewer healthcare resources than many similar countries. Going into the pandemic, the UK had 2.5 hospital beds per 1,000 population. As Figure 6.5 shows, this is far below the OECD average of 4.4 beds per 1,000. The UK also had a relatively low number of critical care beds, at 7.3 per 100,000, lower than France (8.1 per 100,000), Australia (8.9), Canada (10.4), Germany (33.8) and the US (34.4) (Rocks and Idriss, 2020). Although the data are less up-to-date, Figure 6.5 also shows that the

UK had a very low number of CT scanners in 2014 compared with similar countries, a sign of lower investment in medical technology.

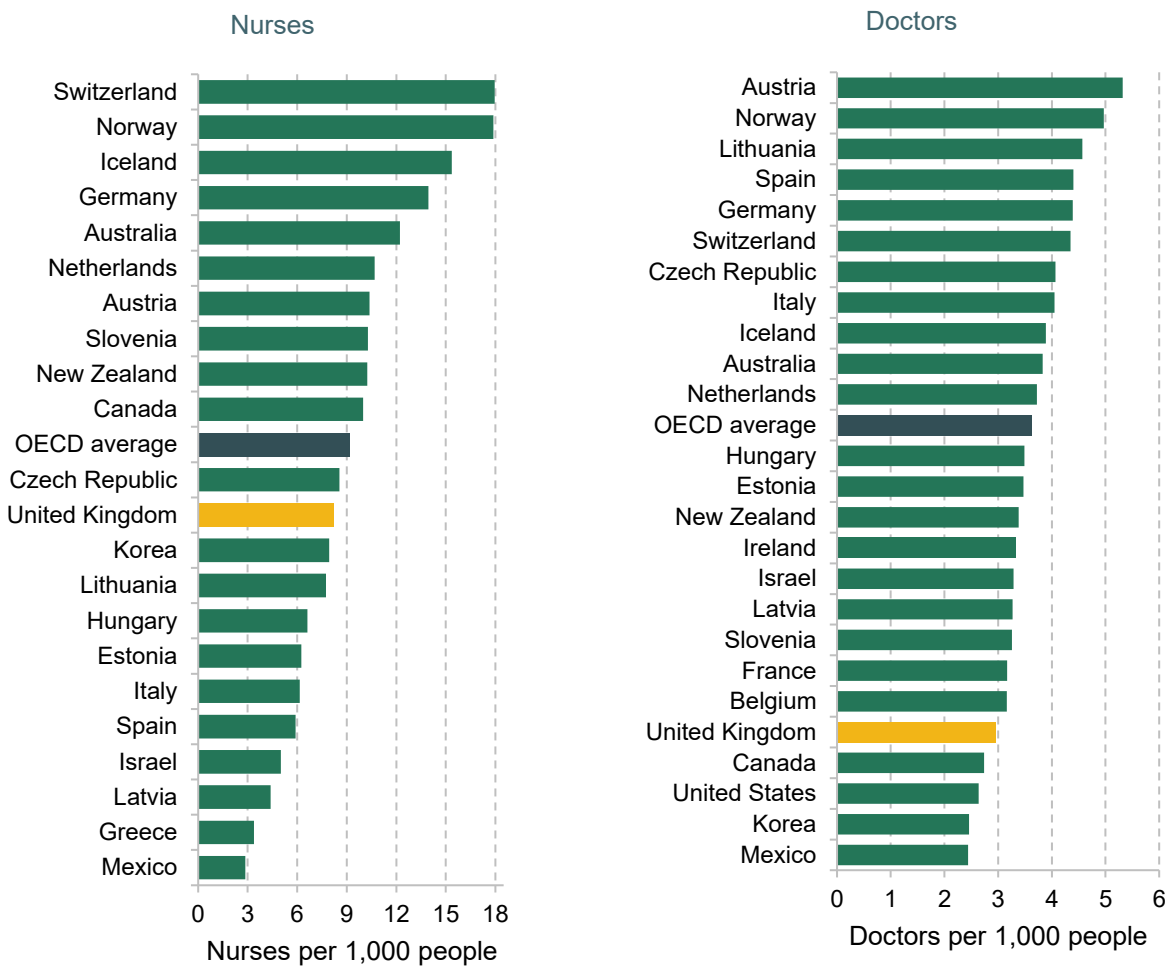
One could interpret the fact that the UK's healthcare system functions with fewer resources than those in other countries as a sign of its efficiency. Indeed, there has been a decades-long push for the NHS to reduce its number of hospital beds, from 299,000 in 1987−88 to 141,000 in 2018−19 (Ewbank et al., 2020). But since the outbreak of COVID-19, some have worried that running the health service 'hot', or at close to capacity, leaves it less resilient to adverse shocks (e.g. Cook, 2020). There are likely to be substantial benefits associated with having spare capacity in the event of a future pandemic or surge in demand for care (Coyle, Dreesbeimdieck and Manley, 2021). That being said, it is not obvious that any additional capacity would in practice be 'spare' – the NHS may simply move to operating at close to its new, higher capacity. Nor is it obvious that it would be possible (or desirable) to operate with sufficient spare capacity to absorb an adverse shock on the scale of COVID-19: for example, having a modestly higher number of hospital beds may not do much to reduce the chances of a lockdown being needed to prevent the system being overwhelmed by a pandemic.

Staffing

International comparisons

As discussed above, the UK spends a larger fraction of national income on healthcare than the OECD average but less than similar countries such as France, Germany and Canada. It has often been argued that the UK has less healthcare resources than similar countries (Ghazaryan, Giulietti and Wahba, 2020), which the previous subsection showed was true for hospital beds and some measures of medical technology. Here, we consider another key input: staffing. Figure 6.6 shows that the UK is middle of the pack among OECD countries for nurses per capita, but has very few doctors per capita by international standards. The UK had 8.2 nurses and 3.0 doctors per 1,000 population in 2019, compared with OECD averages of 9.2 and 3.6 respectively.

Figure 6.6. Medical staff per 1,000 population for OECD countries in 2019

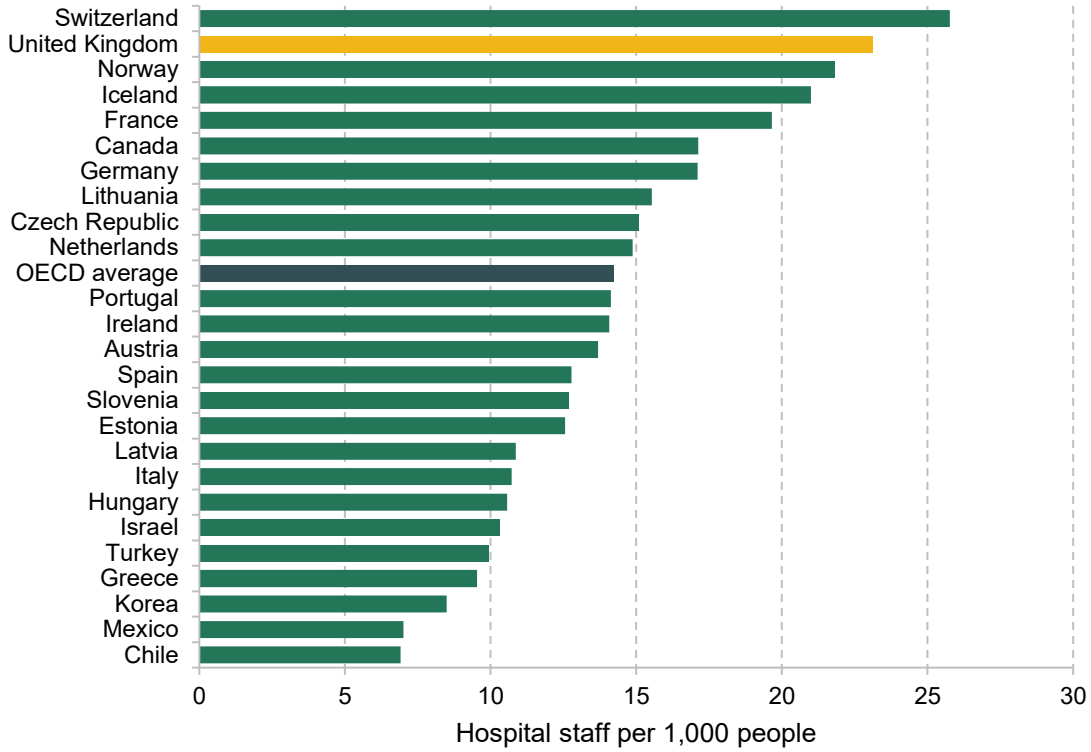


Note: OECD averages only include countries in each figure, which are those with available data.

Source: OECD Statistics' Health Care Resources (2021).

However, these differences may in part be due to differences in the composition of the healthcare workforce across different countries, and the way in which those staff are utilised. Figure 6.7 shows that the UK actually has a very high rate of hospital staff – 23.1 per 1,000 population compared with the OECD average of 14.2 per 1,000. This in part reflects definitional differences and the UK's reliance on nursing support workers (such as healthcare assistants or nursing associates, who perform many traditional nurse duties in the UK), who are not counted as nurses on the OECD definition. On a broader measure of nurse staffing, then, the UK may in fact have higher rates of nursing staff than the OECD average. The statistics could also reflect a greater number of hospital managers within the NHS, compared with other countries' health systems. This would not, however, explain the UK's relatively low number of doctors, though there is an increasing push to use nurse practitioners for care in the NHS that would have traditionally been provided by doctors (Health Education England, n.d.).

Figure 6.7. Hospital staff per 1,000 population for OECD countries in 2019



Note: OECD average only includes countries in the figure, which are those with available data.

Source: OECD Statistics' Health Care Resources (2021).

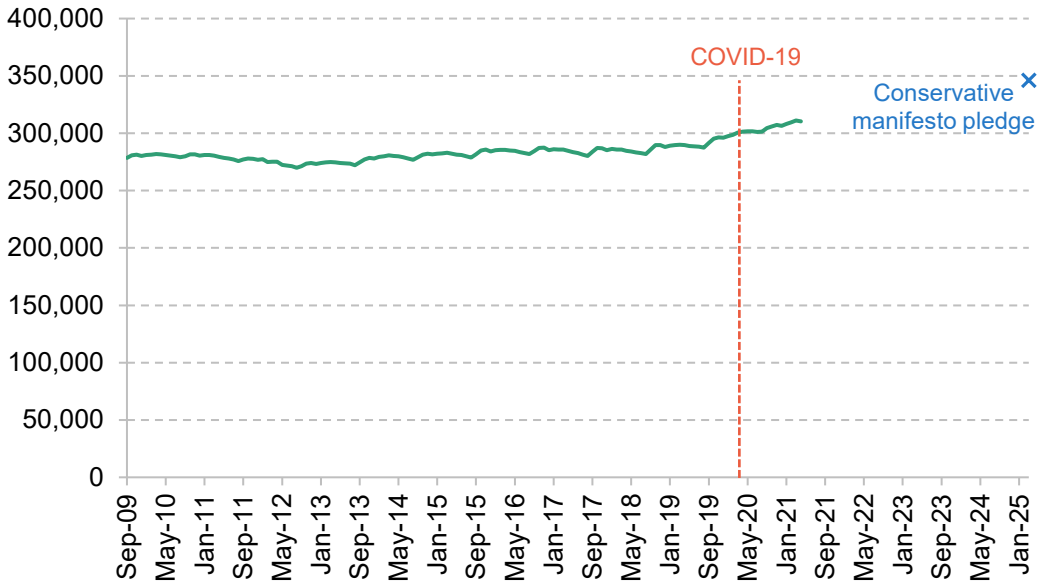
Trends in NHS staffing numbers

There have been longstanding concerns about staffing shortages in the NHS, in particular for nurses. In December 2019, there were 39,000 nursing vacancies, equivalent to a 10.7% vacancy rate (NHS Digital, 2021a).

As Figure 6.8 shows, the number of full-time-equivalent (FTE) NHS nurses and health visitors working in NHS Hospital and Community Health Services grew slightly over the 10 years prior to the pandemic, increasing from 278,000 in September 2009 to 292,000 in September 2019. This is despite hospital admissions, for example, increasing by 17% over the same period (NHS Digital, 2021b), suggesting that staffing numbers have not have kept pace with hospital activity. The number of nurses working in GP practices has increased at a faster rate in recent years, from 14,000 in September 2015 (the first year for which consistent data are available) to 16,000 in September 2019.

As part of its 2019 general election manifesto, the government committed to increasing the numbers of nurses in the NHS in England by 50,000 by 2025, which would represent an increase of approximately 17%. While still early days, the government looks to be broadly on track to meet this target – assuming that recent increases in nursing numbers continue.

Figure 6.8. FTE NHS nurses and health visitors in NHS Hospital and Community Health Services



Note: Nurses working in GP practices are not included as historical primary care workforce data are not consistent prior to 2015.

Source: NHS Digital's NHS Workforce Statistics (April 2021).

Although the number of nurses has remained relatively constant over the last decade, the composition has changed substantially. Between September 2009 and September 2019, the number of FTE adult nurses grew by 4.7% and the number of FTE children's nurses grew by a substantial 56.6%. But the number of FTE community health nurses fell by 13.9% and the number of FTE mental health nurses fell by 9.9%.

Around 15% of nurses in the UK were trained abroad, which is more than double the OECD average (Buchan et al., 2020). However, as Table 6.2 shows, the vast majority of new joiners to the nursing register in recent years are from the UK. The number of non-UK EEA/EU nurses coming to the UK has sharply declined over the last four years (Table 6.2), likely due to Brexit, and this has been accompanied by an increase in the number of EU-trained nurses leaving the NHS (Table 6.3).[4] However, this has been mostly offset by an increase in non-European international nurses joining the NHS. For example, the number of new nurses joining from India has increased by 260% between 2016–17 and 2020–21, while the number from the Philippines has increased by 70%.

[4] Data tables for years prior to 2016−17 are not available, but the available evidence suggests that the number and share of EU nurses was rising between 2012−13 and 2016−17, ahead of the referendum (NMC, 2017).

Table 6.2. Percentage of new nurses joining, by country of training

	UK	EEA/EU	Other
2016–17	79.7%	15.1%	5.2%
2017–18	93.4%	2.7%	3.9%
2018–19	91.1%	3.2%	5.7%
2019–20	87.2%	2.9%	9.9%
2020–21	84.6%	2.4%	13.0%

Source: Nursing and Midwifery Council's Registration Data Reports (2021).

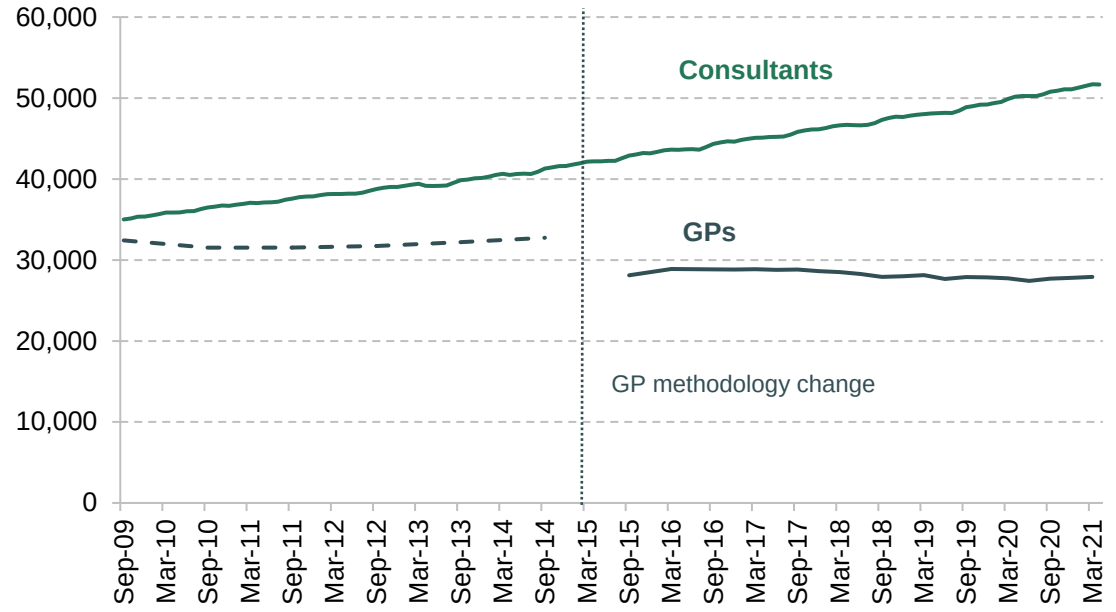
Table 6.3. Percentage of nurses leaving, by country of training

	UK	EEA/EU	Other
2016–17	91.7%	4.7%	3.6%
2017–18	88.5%	7.4%	4.1%
2018–19	88.6%	7.4%	4.0%
2019–20	88.5%	7.6%	3.9%
2020–21	88.5%	6.8%	4.8%

Source: Nursing and Midwifery Council's Registration Data Reports (2021).

There are also longstanding concerns about the size of the doctor workforce in England, particularly in primary care. Figure 6.9 shows how the number of FTE consultants and GPs has changed since 2009. While the number of consultants (who mostly work in hospitals) has grown consistently during this period, the number of GPs has grown at a slower rate, and perhaps even fallen. For example, between September 2015 and September 2019, the number of FTE consultants grew by 14% while the number of FTE GPs declined by 0.8%. Given that the population has been growing (and ageing) during this period, this represents a substantial decline in supply relative to demand for primary care. The Conservatives' 2019 manifesto promised 6,000 more doctors in general practice by 2024, which would represent an increase of more than one-fifth, but the lack of any progress so far suggests that it would now be a surprise if this target were met. Notably, the 'headcount' number of GPs is 34% higher than the FTE, reflecting the fact that 76% of GPs (and 90% of salaried GPs) work less than full time (NHS Digital, 2021c).

Figure 6.9. FTE consultants and GPs



Note: A change in the methodology for calculating GP numbers between September 2014 and September 2015 means that figures before and after that point cannot be directly compared. Consultants work in either hospitals or community healthcare settings. GPs do not include GPs in training.

Source: NHS Digital's NHS Workforce Statistics, NHS Digital's General Practice Workforce and NHS Digital's Appointments in General Practice.

Staff pay

Pay is a hugely important issue for the NHS and its workforce. About 45% of the NHS's budget is spent on pay (King's Fund, 2019), and any increase in pay reduces the size of the workforce that the NHS could afford without additional funding (from the government, or from other parts of the broader health budget). Pay will also be one important influence on how many hours staff want to work, their motivation and morale, how many staff leave the NHS and how attractive the NHS is to new domestic and international recruits.

As Table 6.4 shows, pay has been declining in real terms (that is, after adjusting for household inflation) for most NHS staff groups over the past decade.[5] Between 2011 and 2021, real pay for consultants has fallen by 8.7%, for junior doctors by 4.1% and for nurses, midwives and health visitors by 4.8%. In Section 6.4, we discuss the ongoing pay pressures that the NHS faces, including the recent 3% pay increase, and how these relate to ongoing staffing and recruitment pressures.

[5] Note that while we use the GDP deflator to calculate real-terms changes in health spending (in line with our broader approach to the public finances), we use CPIH as our inflation measure for calculating real-terms changes in staff pay, as this better captures changes in the purchasing power of those employees.

Table 6.4. Average FTE NHS pay by staff group, March 2021 prices

	March 2011	March 2016	March 2021	Change, 2011 to 2016	Change, 2016 to 2021	Change, 2011 to 2021
Consultants	£139,000	£129,000	£127,000	–7.1%	–1.8%	–8.7%
Junior doctors	£60,000	£56,000	£58,000	–6.7%	+2.8%	–4.1%
Nurses, midwives & health visitors	£41,000	£39,000	£39,000	–6.4%	+1.7%	–4.8%
Ambulance staff	£44,000	£42,000	£46,000	–3.7%	+9.7%	+5.7%
Scientific, therapeutic & technical staff	£45,000	£41,000	£42,000	–9.1%	+1.2%	–8.1%
Managers	£57,000	£54,000	£57,000	–5.9%	+6.1%	–0.2%
Senior managers	£88,000	£87,000	£87,000	–0.8%	–0.4%	–1.2%

Note: Average pay rounded to the nearest £1,000.

Source: NHS Digital's NHS Staff Earnings estimates to March 2021, NHS Digital's Monthly Workforce Statistics March 2021 and ONS's CPIH.

Hospital performance in England

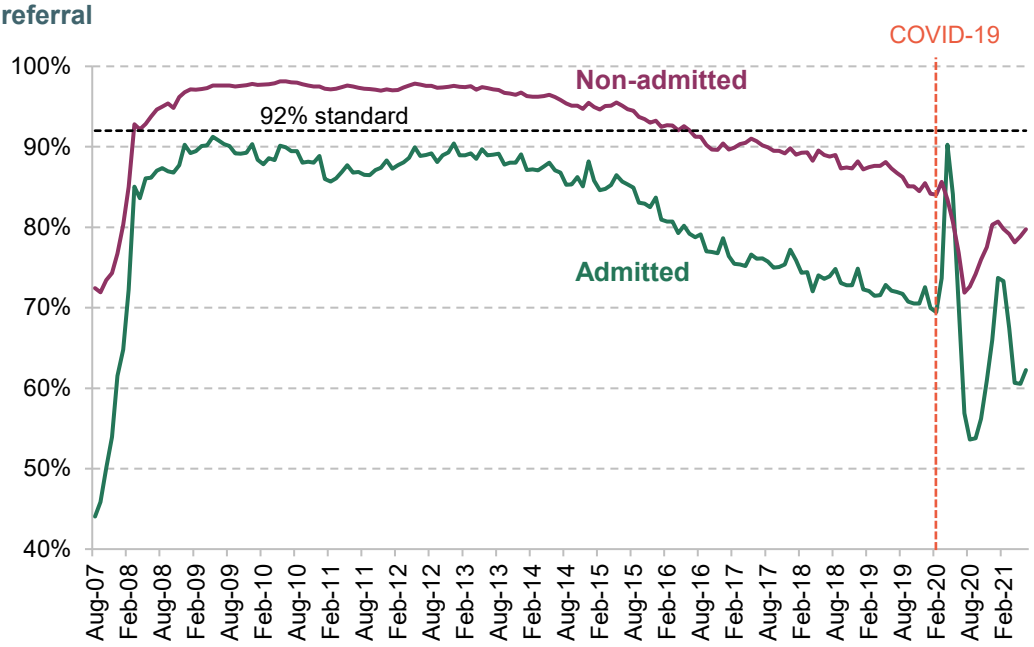
Pre-pandemic, the NHS was already struggling to keep up with demand for elective care and the waiting list had grown by more than 50% in the preceding five years, from 2.9 million people in February 2015 to 4.4 million in February 2020. Over the same period, the number waiting more than 18 weeks had more than tripled from 200,000 to 740,000. Figure 6.10 shows that performance against the NHS's constitutional standard – of at least 92% of people waiting no more than 18 weeks – had fallen from a peak of 91.2% in May 2009 to 69.5% in February 2020 for admitted patients, and from a peak of 98.1% in June 2010 to 84.0% in February 2020 for non-admitted patients. Both declines represent a fall in measured performance to levels not seen since early 2008.

Another important constitutional standard is that the waiting time in Accident & Emergency (A&E) from arrival to admission, transfer or discharge should be under four hours for at least 95% of people.[6] Figure 6.11 shows that in the five years prior to the pandemic, this target has been steadily achieved for a lower percentage of arrivals to A&E, indicating a similar

[6] The four-hour A&E target is expected to be dropped in the near future and replaced with a 'bundle' of measures (NHS England, 2021d).

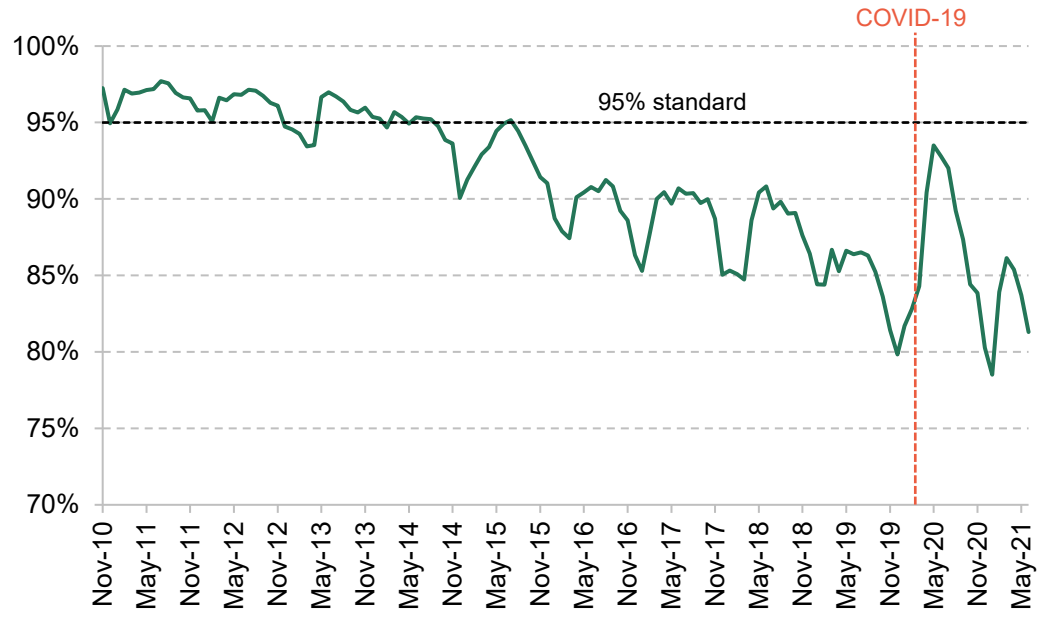
deterioration in performance to that seen for elective waiting times. In February 2015, 92.1% of arrivals were seen within four hours, but by February 2020 this was only 82.8%: so more than twice as big a proportion of arrivals in A&E in February 2020 were waiting for more than the four-hour benchmark than had been the case five years earlier.

Figure 6.10. Percentage of patients waiting no more than 18 weeks for treatment from referral



Source: NHS Digital's RTT Waiting Times Data.

Figure 6.11. Percentage of people waiting less than four hours in A&E



Source: NHS England's A&E Attendances & Emergency Admission Statistics (2021).

6.3 Pre-pandemic plans and pandemic funding

Pre-pandemic plans for NHS funding

In 2018, the then Prime Minister, Theresa May, announced a five-year funding settlement for the NHS that was to increase NHS England's resource budget in real terms by 3.4% on average per year.[7] This was front-loaded, so grew by 3.6% per year for the first two years (2019−20 and 2020−21), then by 3.1% for the next two years (2021−22 and 2022−23) and then 3.4% in the final year of the settlement (2023−24). This amounted to an additional £33.9 billion in cash terms in 2023−24, relative to 2018−19, or an additional £20.5 billion in real terms (in 2018−19 prices, as announced at the time). On top of this was an additional £1.25 billion per year (in nominal terms) to cover increased NHS employer pension contributions (HMG, 2018).

This 3.4% increase was slightly below the 3.6% long-term average for UK health spending between 1949−50 and 2018−19, but it was substantially higher than the 1.2% average real-terms growth between 2009−10 and 2018−19. Importantly, though, this settlement was for the NHS England resource budget only, and did not include capital budgets. It also did not cover budgets for non-NHS bodies such as Public Health England and Health Education England which, as discussed earlier, have tended to see their funding squeezed both in real terms and relative to the NHS in recent years.

The 2019 Spending Review reaffirmed the five-year settlement and increased funding in a number of areas for 2020−21. This included a £150 million increase for Health Education England for continuing professional development and a £1.9 billion increase in capital budgets, of which £0.9 billion was for the manifesto promise of upgrading and building new hospitals (HMG, 2019).

However, the pandemic has blown these plans out of the water. In the next subsection we consider in detail the COVID-19 funding that the healthcare system has received and in Section 6.4 we discuss ongoing pressures facing the NHS – pressures which any new funding settlement will need to account for.

Additional funding during COVID-19

The government has spent huge sums during the pandemic, much of which has been used to support the NHS. (For a full breakdown of the government's COVID-19 response, see Chapter 5

[7] Note that top-ups to the budget since, and lower inflation than was forecast in 2018 (as measured by the GDP deflator), mean that Theresa May's five-year settlement would, on the latest figures, amount to 3.9% average real-terms growth per year.

on the Spending Review.) DHSC has spent more on COVID-19 measures than all departments other than HMRC, which was responsible for income support schemes such as the Coronavirus Job Retention Scheme (furlough), discussed in detail in Chapter 9, and the Self-Employment Income Support Scheme. DHSC has spent £63 billion on COVID-19 support in 2020−21 and, as of September 2021, was planning to spend an additional £34 billion in 2021−22 (DHSC, 2021e).

Table 6.5 presents a breakdown of where this funding has been spent in 2019−20 and 2020−21 and where it is planned to be spent in 2021−22. For the rest of this section, we focus on the four largest areas of expenditure: Test and Trace, PPE, additional NHS funding and vaccines. Potential future ongoing expenditure for each of these areas, including more detailed cost breakdowns, is discussed in the next section.

An important caveat to all the following analysis is that it is very hard to track accurately how much has been spent by the government on different COVID-19 support measures. Figures often differ between different government sources, and there are often large differences between the amounts allocated and what is eventually spent. Indeed, as discussed in Chapter 5, departmental underspends have been extremely high since the onset of the pandemic. The following is our attempt to piece different government sources together, using the National Audit Office (NAO) figures as our preferred primary source.

Table 6.5. Estimated breakdown of COVID-19 additional expenditure (£ billion)

	2019−20 and 2020−21	2021−22
NHS	14.4	15.0
Test and Trace	13.5	14.2
PPE	13.0	2.1
Vaccines	2.9	0.7
Research	1.4	
Infection control	1.3	
Ventilators	0.9	
Capital	0.6	
Other	0.9	

Note: For 2019−20 and 2020−21, we use actual expenditure where possible; otherwise we use budgets. For 2021−22, we use the latest available budgets. For research, infection control, ventilators, capital and other, we use estimated lifetime cost.

The NHS has also received large increases in direct funding on top of what was previously agreed in the long-term settlement discussed earlier in this section. The March 2020 Budget included an emergency response fund for public services, including the NHS, of £5 billion (HMG, 2020a). This fund rapidly grew, and in April 2020 the Chancellor announced £6.6 billion had been provided to the NHS alone (HMG, 2020b).

The NHS also received additional funding for particular COVID-19 programmes. This included increasing hospital capacity – £2.6 billion for the use of the private sector and £0.5 billion for Nightingale hospitals (DHSC, 2021b). £2.4 billion was also provided to replace NHS Trusts' lost income. Another £2.2 billion was provided for enhanced hospital discharge services. Funding was also provided to support other health services – dentists (£0.7 billion), community pharmacies (£0.4 billion) and hospices (£0.2 billion).

In total, in 2020−21, NHS England's resource budget was £144.1 billion (HMT, 2021) compared with a planned budget of £129.7 billion (HMT, 2020). We therefore estimate total COVID-19 expenditure on the NHS to be £14.4 billion in 2020−21. This is lower than other estimates of the increase in NHS funding due to at least £5 billion of underspend (DHSC, 2021b).

The November 2020 Spending Review included £3.0 billion in additional funding for the NHS in 2021−22 (HMG, 2020c). This included £1 billion to begin tackling the elective backlog, £500 million for the NHS workforce and to address waiting times for mental health services, and the remaining £1.5 billion to ease COVID-19 pressures. In March 2021, Matt Hancock, the then Secretary of State for Health and Social Care, announced £6.6 billion in new funding for the NHS over the first six months of 2021−22 (DHSC, 2021a). In September 2021, another £5.4 billion in new funding was announced for the second half of 2021−22 (DHSC, 2021e). This included £2.8 billion for COVID-19 costs and £1.5 billion for elective recovery, bringing the total additional NHS funding in 2021−22 to £15.0 billion. The rest of the announced increases in NHS funding, covering 2022−23 to 2024−25, are discussed in detail in Section 6.6.

NHS Test and Trace (NHST&T), the programme responsible for contact tracing and COVID-19 testing (in the case of the latter, alongside Public Health England), has been one of the largest areas of expenditure. In 2020−21, NHST&T spent £13.5 billion, compared with its allocated budget of £22.2 billion.[8] The majority of this (77%, or £10.4 billion) was spent on testing, including £4.2 billion on mass testing and £3.1 billion on laboratories. The planned budget for NHST&T in 2021−22, as of May 2021, is £14.2 billion (NAO, 2021a).

[8] £13.5 billion is equivalent to around £580 for every household in England.

Another large area of expenditure is PPE. Pre-pandemic, NHS Trusts sourced PPE individually or through the NHS Supply Chain, and spent about £0.15 billion per year on PPE. From May 2020, DHSC centralised its purchasing and distribution. DHSC's budget for PPE in 2020−21 was £15.2 billion of new money from the Treasury, with £13.8 billion on sourcing PPE and £1.4 billion on freight and logistics (NAO, 2020). As of the end of February 2021, £13.0 billion of this budget had been spent (NAO, 2021b).[9] From August 2020 onwards, the Department stopped purchasing PPE and has started trying to cancel undelivered orders (DHSC, 2021c). The budget for PPE in the November 2020 Spending Review was set at £2.1 billion for 2021−22, enough to meet expected demand for PPE and maintain a four-month stockpile (HMG, 2020c).

The final large area of additional health spending has been on vaccines. Vaccine supply and production has been the responsibility of the Department for Business, Energy & Industrial Strategy (BEIS), while vaccine distribution has been the responsibility of DHSC and the NHS. In 2020−21, the Vaccines Taskforce spent £1.1 billion on vaccine procurement (NAO, 2021b) and signed contracts with vaccine manufacturers worth at least an additional £1.8 billion (DHSC, 2021d). The March 2021 Budget included an additional £0.7 billion for the Vaccines Taskforce in 2021−22 (HMG, 2021a). The lifetime costs for vaccine procurement were estimated to be £5.1 billion in total in March 2021 (NAO, 2021b). Figures for vaccine deployment are included within the NHS line of Table 6.5.

6.4 Ongoing pressures

In this section, we consider a number of ongoing pressures that the NHS faces, including direct COVID costs, catching up on missed activity, and staff and workforce issues. These pressures will determine how much additional funding the NHS will need, over and above what was agreed in the 2018 settlement. We therefore in each case provide a central scenario of how much funding might be needed to cope with the given pressure for the next three financial years. There is considerable uncertainty around such estimates. The focus of this analysis is once again the NHS in England, but similar issues apply in Scotland, Wales and Northern Ireland, and any increase in funding for the English NHS will affect the funding available to the devolved governments via the Barnett formula.

Direct COVID costs

We first consider the direct costs of COVID-19 to the NHS. This includes treating COVID-19 patients, infection control in healthcare settings, and vaccinations. In our central scenario, we assume that the number of COVID-19 cases falls rapidly year on year to almost zero in

[9] £13.0 billion is equivalent to around £9,700 for each NHS England staff member (or around £11,600 for each member of clinical staff).

2024–25. However, the last 18 months have demonstrated how hard it is to forecast the spread of the virus, and so we additionally discuss potential costs if COVID-19 cases do not fall so rapidly.

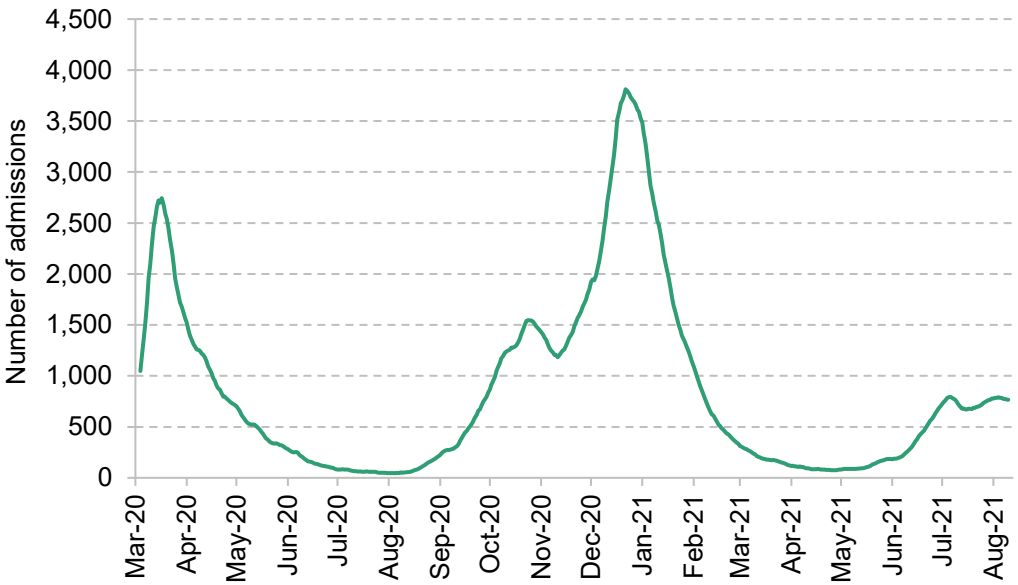
Treating COVID-19 patients

The NHS has already treated over 400,000 patients with COVID-19 in hospital. Not all of these patients will have been admitted for COVID-19 directly. Our analysis of hospital records suggests that between March 2020 and February 2021, 73% of those admitted with COVID-19 had a primary diagnosis of COVID-19. Even those COVID-19 patients admitted for other reasons will have put pressure on the NHS due to the necessary infection control measures, as we discuss later.

Even as COVID-19 case rates fall and the vaccination programme continues, the NHS will need to care for some COVID-19 patients – although the exact number is of course impossible to know.

Treating patients with COVID-19, particularly if they require intensive care or mechanical ventilation, is expensive. Although the exact costs are not known and are likely changing over time as treatment and processes improve, we can use past NHS costs for similar conditions as an estimate. In 2019–20, a long emergency stay in hospital for a patient with pneumonia cost the NHS between £1,623 and £8,348 on average, depending on the amount of treatment needed and the comorbidities of the patient (NHS England, 2021a).

Figure 6.12. Seven-day rolling average daily COVID-19 hospital admissions (England)



Source: gov.uk UK Coronavirus Dashboard. Figure accurate as of 2 September 2021.

In our central scenario, we assume that treating each COVID-19 admission costs £5,000. We assume that there will be 100 admissions per day in 2022−23, which is approximately the level it has been in between COVID-19 waves (and far below daily hospital admissions at the time of writing). We then assume this rate falls to 25 per day in 2023−24 and 5 per day in 2024−25. Under these assumptions, COVID-19 patients would directly cost the NHS £180 million in 2022−23, £46 million in 2023−24 and just £9 million in 2024−25. These are relatively small amounts. It should be noted, though, that even if there are very few (or zero) COVID-19 patients, for as long as the disease remains in general circulation there may well still be a need for infection control measures and additional PPE (which we discuss in the following two subsections).

The numbers of COVID-19 patients admitted to hospital in the coming years are, of course, impossible to predict accurately. What these approximate numbers suggest, however, is that, provided admissions do not reach what we have seen during recent COVID-19 peaks, the ongoing direct cost of COVID-19 patients in hospital will be relatively low: in the millions, rather than the billions. Even in a more pessimistic scenario, where the number of COVID-19 admissions remained at 500 per day, the cost – while more substantial – would only come to around £0.9 billion per year.

Infection control

Current infection control guidance requires hospitals to keep patients who have, or are suspected to have, COVID-19 separate from patients who do not. Additionally, healthcare staff who provide care for COVID-19 patients should not provide care for those without COVID-19 (PHE, 2021a). Staff are also required to change their PPE frequently, particularly when moving between different COVID-19 patients. This is important to prevent the spread of COVID-19 within hospitals, particularly since recent research suggests that 11% of COVID-19 hospital patients caught the virus in hospital (Read et al., 2021).

Infection control measures reduce the volume of treatment that the NHS can provide with the same number of staff and resources, and reduce the degree of flexibility available to Trusts in how they use their bed and staff capacity. PPE requirements for staff also reduce the amount of time available to spend with patients.

It is not clear how much infection control will cost the NHS, particularly as the numbers of COVID-19 patients and cases fall and infection control measures change. In August 2021, approximately 7.5–10% of the NHS's usual hospital beds were unusable due to infection control measures (Hopson, 2021). This suggests that infection control measures are currently significantly reducing the NHS's capacity, but this is likely to become less of a problem as the numbers of COVID-19 community cases and COVID-19 patients in hospital fall. But for as long

as COVID-19 remains a threat, infection control measures are likely to be required in some form.

Infection control has two consequences for the NHS's costs. The first is that the average treatment will be more expensive if clinical staff spend time changing and setting up PPE and other infection control measures. Even if staff only have to spend 20 minutes with PPE and infection control measures per 12-hour shift, this could reduce the amount of time that staff spend with patients by 3%, and thus increase the cost of providing a given amount of care by the same amount.

The second, and more important, cost is that infection control measures reduce bed and staffing capacity, and so make it more expensive for the NHS to increase volumes of treatment. This is especially true of some treatments, such as aerosol-generating dental procedures, which require dental surgery ventilation and downtime between patients (PHE, 2021b). It is also of particular concern in the face of a large and growing waiting list for elective care (discussed below). When some staff and beds are out of action, to return to 100% of pre-pandemic levels of activity requires more than 100% of pre-pandemic resources. Hospitals might need to open up closed wards, make greater use of agency, bank or locum staff, or make greater use of private sector capacity – just to get back to pre-pandemic levels of activity. This is likely to act to increase the marginal cost of an additional unit of treatment.

In our central scenario, we assume that infection control will increase the NHS's costs of hospital treatment by 3% in 2022−23, 2% in 2023−24 and 1% in 2024−25. This would cost £0.9 billion in 2022−23, £0.6 billion in 2023−24 and £0.3 billion in 2024−25.

This percentage increase in costs is higher, in the near term, than the Office for Budget Responsibility's estimate of 1.2%. Its estimate is based on its estimated effect of COVID-19 on economy-wide productivity, whereas we believe the health sector will be particularly affected relative to the rest of the economy. If the OBR's estimate is closer to the truth and infection control measures have a smaller effect on the NHS than we assume in our scenario, the corresponding cost figure would be smaller. If infection control measures increase costs by 1.2% (in line with the OBR's assumption), this would cost the NHS £0.4 billion per year. But, on the other hand, if infection control is more disruptive than in our central scenario, the costs could be substantially higher. A 5% increase in costs, for example, would cost £1.5 billion per year.

PPE

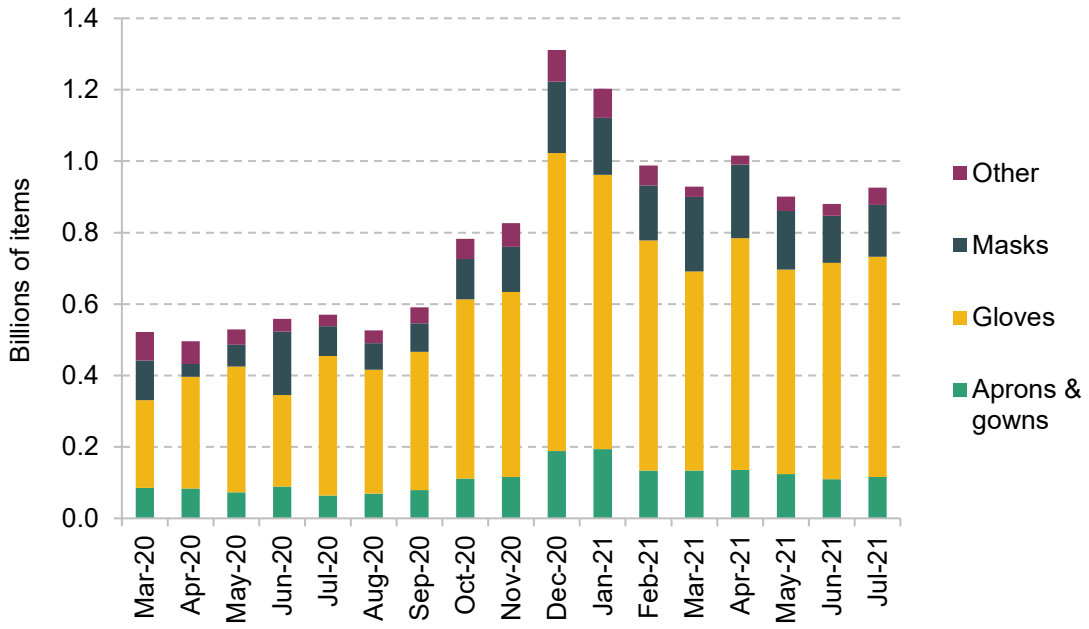
The NHS also needs to continue to purchase PPE. Figure 6.13 shows in more detail what PPE the government has distributed to health and social care providers since the onset of the pandemic. As of 10 June 2021, the UK has purchased 32 billion items of PPE, of which 11.7 billion have been distributed, 12.6 billion are centrally stockpiled in the UK and 8.4 billion

are not yet delivered, although some 2.9 billion items have been deemed not usable in medical settings and DHSC is cancelling some of the contracts for the undelivered PPE (Public Accounts Committee, 2021a) (DHSC, 2021c). The cost of purchasing PPE has thus far been £15 billion – equivalent to more than £11,000 per NHS employee – and suggesting an average unit cost of 45p, substantially higher than pre-pandemic prices (NAO, 2020). This high level of spending reflects the huge increases in unit prices during the pandemic as global demand soared: the unit price of respirator masks increased by 166% between 2019 and 2020, face masks by 258%, gloves by 519%, gowns and coveralls by 1,277% and body bags by 1,310% (NAO, 2020).

DHSC's 'reasonable planning basis' suggests that it will need to use 11.7 billion items between June 2021 and May 2022 (DHSC, 2021c). If we assume that in total 15 billion items will be available from the stockpile, and the NHS uses 12 billion in 2021−22, then it will not necessarily need to purchase additional PPE in 2021−22.

However, it is likely that the government will want to maintain a larger stockpile of PPE than prior to the pandemic. The 2021 Budget suggests that the government wants to maintain a four-month stockpile (HMG, 2021a). In our central scenario, we assume this is based on expected 2021−22 usage and is therefore 3.9 billion items. This suggests that the government will need to purchase approximately 0.9 billion units of PPE in 2021−22 to maintain its stockpile.

Figure 6.13. PPE distributed by DHSC in England



Source: DHSC's PPE Distribution (England) (2021).

Under our central scenario, we assume the NHS will use 8 billion items in 2022−23, 4 billion items in 2023−24 and 2 billion items in 2024−25. We assume that the unit price is 15p in 2022−23 and 10p from 2023−24 onwards. This would cost £1.2 billion in 2022−23, £0.4 billion in 2023−24 and £0.2 billion in 2024−25. However, prior to the pandemic, NHS Trusts spent about £0.15 billion per year on PPE, so this represents £1.05 billion, £0.25 billion and £0.05 billion in additional expenditure in each of the three years, respectively.

Maintaining a stockpile of PPE is not free (due, for instance, to the need for warehouse space), and the government was spending approximately £6.7 million per week on maintaining its stockpile in June 2021 (Public Accounts Committee, 2021a). We assume that cost is proportionate to stockpile size, which means the new stockpile would cost approximately £100 million per year to maintain relative to the pre-pandemic stockpile. The total additional cost of PPE would therefore be an estimated £1.15 billion in 2022−23, £0.35 billion in 2023−24 and £0.15 billion in 2024−25.

Vaccinations

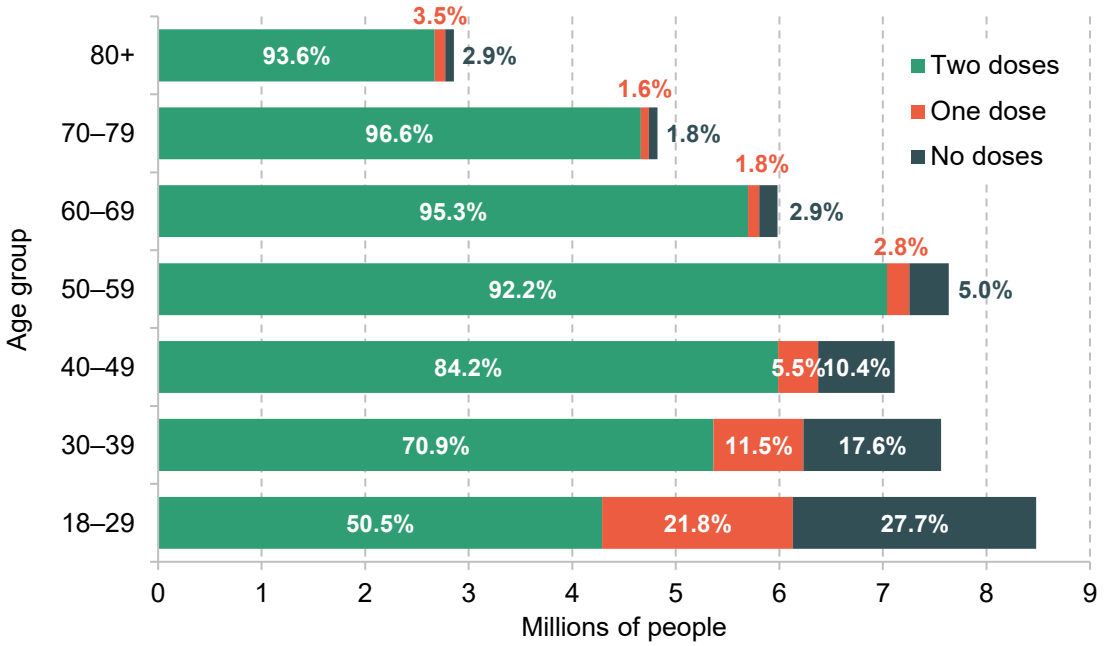
Another ongoing cost for the NHS is the continued vaccination programme. The government is currently planning to provide booster jabs for some groups from September 2021, though it has not yet published its full plan. This is likely to take place alongside an expanded winter flu vaccination programme. In this subsection, we consider the costs of vaccination for the whole of the UK, rather than just England, since vaccine procurement is managed at the UK level.

There are three vaccines currently in use in the UK – Oxford/AstraZeneca, Pfizer/BioNTech and Moderna. The UK government had orders for at least 100 million, 135 million and 17 million of each, respectively. At the time of writing, 91 million vaccine doses have been given (HMG, 2021b), which means that the UK still has 161 million (ordered) doses unused, of which another 10–15 million will likely be delivered as first and second doses.

This suggests that, depending on delivery times, the UK may not need to purchase additional doses for the booster programme. If it does need more, although the cost of procurement is not published as it is a part of commercial agreements, it would likely cost approximately £10 per dose (Public Accounts Committee, 2021b).

GP practices are currently paid £12.58 per dose of the COVID-19 vaccine that they deliver, 25% more than the fee for flu vaccines, £10.06 (NHS England, 2020a). It is likely that the booster programme will be delivered alongside the flu jab programme, potentially providing large efficiency savings. In our central scenario, we assume that GP practices will be paid £17.61, 75% more than the standard flu vaccine fee – but 22% less than the total of the current separate flu and vaccine fee – to deliver both the flu and COVID-19 vaccines.

Figure 6.14. Vaccine uptake in England by age group



Source: NHS England's COVID-19 Daily Announced Vaccinations 2 September 2021 and ONS's Mid-Year 2020 Population Estimates. Figures accurate as of 2 September 2021.

Under our central scenario, we assume that each winter the government will offer a booster vaccine to all health and social care workers, those aged 50 or over and those with underlying health conditions in the UK, similar to the standard winter flu programme. This represents approximately 31.8 million people (BBC, 2021b), and we assume that take-up will be 95%, which is similar to the current level for these groups in England, as shown in Figure 6.14.

The cost of delivery, assuming that 80% of these people would have received a flu vaccine anyway and everyone receives a flu vaccine at the same time as a COVID booster vaccine, would be £290 million per year. We have been unable to estimate transport and logistics costs, but it is unlikely that they would be substantially higher than for a normal flu vaccine programme. Under these assumptions, the government has no need to order additional vaccines. If it does need additional vaccines, perhaps because a new variant has appeared that the current vaccines are ineffective against, this would cost an estimated additional £300 million per year.

It is possible that the NHS will wish to provide booster vaccines to more than just the over-50s, the health and social care workforce, and the clinically vulnerable. Offering a booster vaccine each year to all adults would (assuming 85% take-up, and that none of the younger, non-clinically vulnerable adults receive or would have received a flu jab) increase costs of delivery to around £510 million per year. Purchasing additional vaccines for all adults (if that proved necessary) could cost approximately £480 million per year.

Long COVID

The term 'long COVID' can be used to refer to a number of conditions related to COVID-19. It includes experiencing COVID-19 symptoms between 4 and 12 weeks after infection (ongoing symptomatic COVID-19) and experiencing symptoms that develop during or after a COVID-19 infection that continue for more than 12 weeks and are not explained by other diagnoses (post-COVID-19 syndrome).

The current evidence is that long COVID affects many of those who have been infected with COVID-19. An ONS study between April 2020 and March 2021 found that 13.7% of people who tested positive for COVID-19 continued to experience symptoms for at least 12 weeks, compared with just 1.7% among the control group who were unlikely to have had COVID-19 (ONS, 2021a). 12% were still experiencing symptoms after 18 weeks. ONS survey evidence suggests that between 10 May 2021 and 6 June 2021, 1.5% of the UK's population were experiencing self-reported long COVID (ONS, 2021b).

In the NHS's plan for long COVID, it estimates that around 2.9% of people who had COVID-19 will subsequently need NHS support (NHS, 2021). At the time of writing, this suggests that this would be approximately 170,000 people in England (HMG, 2021b), though many were infected many months ago and may have already made a full or near-full recovery. After triage and screening of these people, the NHS estimates that 30–50% will need supported self-management, 18–30% could be supported in primary and community care settings, and 20–50% would need specialist treatment and rehabilitation.

The NHS is planning to spend £94 million on long-COVID services in 2021−22. An additional £30 million is allocated to supporting general practice. The National Institute for Health Research (NIHR) has also committed £50 million to long-COVID-related research (NHS England, 2021b).

The cost of treatments for long COVID are currently unknown, but we can use the average pre-pandemic cost of similar treatment to estimate potential costs. We estimate the initial appointment for each long-COVID patient will cost £200, similar to the cost for an initial outpatient appointment for respiratory medicine. We estimate the cost for patients supported in primary care will be £200, based on using six GP appointments. We estimate the cost for specialist treatment to be at least £1,000, based on the cost of two rehabilitation outpatient appointments in 2019. Assuming that 60% of patients are supported in a primary care setting, and 40% of patients need specialist treatment in 2021−22, we estimate the total cost of long COVID in 2021−22 would be £120 million, similar to the level of funding that the NHS has committed.

The cost of long-COVID services from 2022 onwards is harder to estimate, for three reasons. First, we do not know how many new people will be infected with COVID-19. Second, it is not clear to what extent vaccines will provide protection against long COVID. Third, it is not clear how persistent long COVID will prove to be, and how effective treatment will be. In our central scenario, we assume that there will be 80,000 people using the service in 2022−23 (a little less than half the number that we assume in 2021−22), 40,000 in 2023−24 and 20,000 in 2024−25. This implies a cost of £60 million in 2022−23, £30 million in 2023−24 and £14 million in 2024−25.

Even under more pessimistic assumptions, long-COVID costs would remain small relative to the other direct costs of COVID-19. For example, if the cost of treatment is twice our central scenario's assumptions (£400 for each initial outpatient and for each set of GP appointments, and £2,000 per specialist treatment), and the number of affected people is also twice as high (5.8% of those with COVID-19, rather than 2.9%), long COVID would still only cost the NHS a cumulative £0.4 billion over the three-year period.

Note that all of this analysis only considers the direct costs of long COVID for the NHS, and does not include any other costs to the exchequer from, for instance, higher rates of disability benefit receipt or lower tax payments if long-COVID sufferers are forced to reduce their hours of work or drop out of the labour force entirely.

Test and Trace

The ongoing costs of Test and Trace depend heavily on the course of the pandemic, which will determine both the number of tests conducted and the number of positive tests and consequent volume of contact tracing that is required. But even if the virus recedes quickly, it is likely that the government will want to maintain some testing capacity.

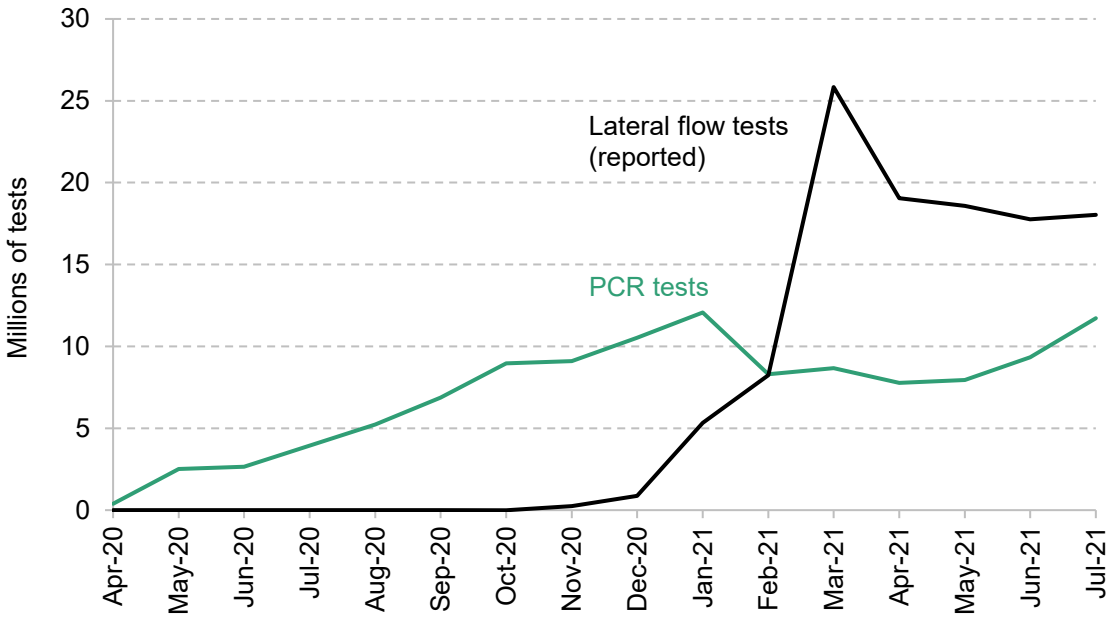
Figure 6.15 shows the monthly number of COVID-19 tests conducted in England since the onset of the pandemic. Between 20 April 2020 and 31 March 2021, 79.3 million PCR tests were conducted and we estimate that each PCR test cost £72, excluding transport and logistics costs (NAO, 2021a). The cost of each lateral flow test is harder to estimate, as many of them are not registered if they are negative, but we estimate they cost £14 each, excluding transport and logistics costs – which is within the £5–30 reported by the *Financial Times* (FT, 2020). This is likely to be an overestimate if Test and Trace had purchased stocks of tests in 2020−21 that had yet to be distributed.

In our central scenario, we assume that the unit costs of both PCR and lateral flow tests fall by 25% from 2022−23 due to efficiency savings as manufacturing is scaled up and competitive forces drive prices down. We also assume that demand for both types of test will fall dramatically as community transmission of COVID-19 falls. In particular, we assume that

demand for testing falls by 75% each year from 2021−22 onwards. This would mean that the costs associated with testing would fall to 19% of their 2021−22 level in 2022−23 (£2.5 billion), 5% in 2023−24 (£0.6 billion) and 1% in in 2024−25 (£0.2 billion). We then assume that all other Test and Trace costs fall at the same rate. Under these assumptions, total Test and Trace spending would be approximately £2.7 billion in 2022−23, £0.7 billion in 2023−24 and £0.2 billion in 2024−25.

However, these costs would be higher if unit costs do not fall and/or demand for testing decreases more slowly over time. For example, if unit costs remained constant (rather than falling by 25%) and demand for testing only fell by 25% each year (rather than 75%), Test and Trace would cost £10.7 billion in 2022−23, £8.0 billion in 2023−24 and £6.0 billion in 2024−25. This illustrates the sensitivity of the future costs of Test and Trace to the future cost of and demand for testing, which will in turn be affected by the future course of the pandemic.

Figure 6.15. Monthly number of tests conducted in the UK



Note: The figures for lateral flow tests represent only those that were recorded; the true number of tests conducted is likely to be much higher.

Source: gov.uk UK Coronavirus Dashboard.

Missed activity and waiting lists

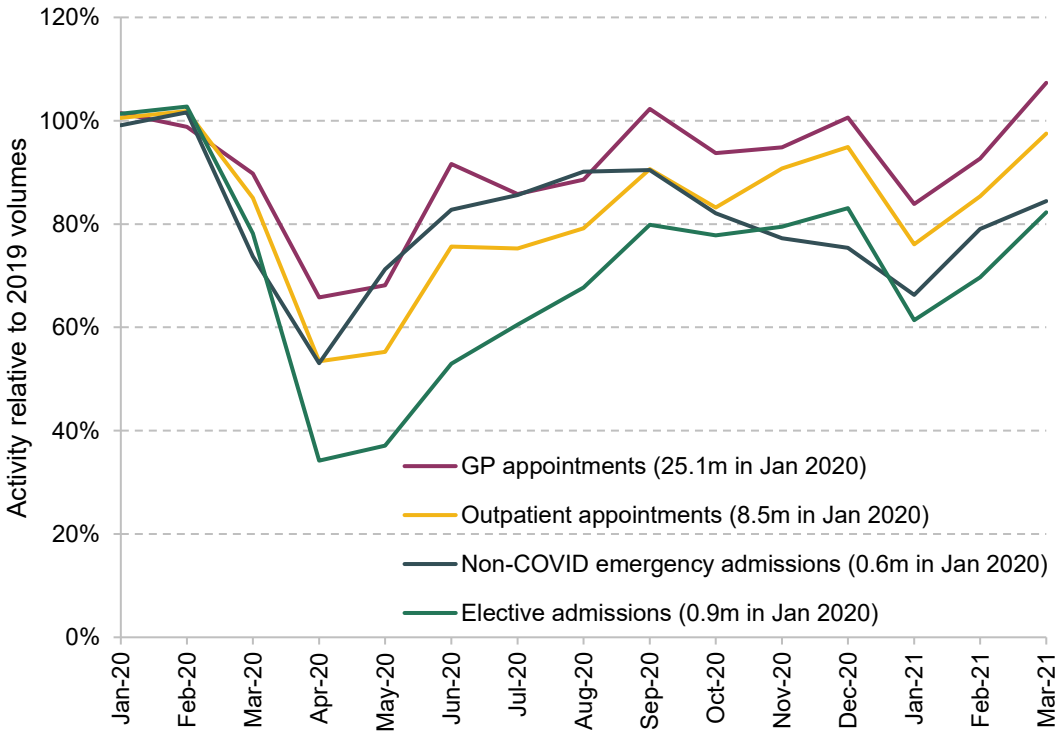
As well as the direct costs imposed by the coronavirus, the NHS faces substantial challenges in recovering from disruption to non-COVID care.

Missed activity

Figure 6.16 shows monthly hospital admissions, outpatient appointments and GP appointments in 2020 and 2021 compared with their 2019 levels. All four types of care saw large reductions, particularly during the first wave (March to May 2020), but elective activity was particularly affected, falling by 50% during this period relative to 2019. Non-primary-COVID emergency hospital admissions were less affected, but still fell by 34%. Outpatient appointments (in-person and remote) fell by 35%, mainly because many in-person appointments moved to remote appointments, as discussed in a later section. GP appointments were the least affected, only falling by 25%, at least in part because of a successful switch to telephone appointments. Notably, GP appointments in March 2021 were above the level at the same point in 2019.

Table 6.6 presents estimates of the volume and cost of missed activity in the first year of the pandemic (between March 2020 and February 2021). It shows that the NHS provided at least £10 billion less of non-COVID treatment during the pandemic. This means that the huge increases in NHS spending during the pandemic discussed earlier actually understate the true amount spent on the response to COVID-19, as the NHS not only spent more but also provided substantially less non-COVID care in that time.

Figure 6.16. Monthly NHS activity compared with 2019



Note: Non-COVID emergency admissions refer to those where COVID-19 is not the primary diagnosis.

Source: NHS Digital's Hospital Episode Statistics.

Table 6.6. Volume and estimated cost of missed activity, March 2020 to February 2021

Care type	Reduction in activity compared with 2019	Estimated cost of missed activity at 2019 prices
Elective inpatient hospital admissions	3.5 million	£4.8 billion
Emergency inpatient hospital admissions	1.5 million	£2.5 billion
Outpatient hospital appointments	20.2 million	£3.3 billion
GP appointments (estimated)	32.9 million	£1.1 billion
Total	**58.1 million**	**£11.7 billion**

Source and note: Hospital volumes calculated from NHS Digital's Hospital Episode Statistics. The unit cost of each type of hospital treatment is taken from NHS England's National Schedule of NHS Costs 2019−20. GP appointments calculated from NHS Digital's Appointments in General Practice, only including attended appointments and adjusting for incomplete coverage. The unit cost for GP appointments is taken as £33 from the Personal Social Services Research Unit's Unit Costs of Health & Social Care (2019), excluding qualification costs.

Volumes of activity fell for a number of reasons. Much elective and outpatient activity was cancelled by hospitals to free up capacity to deal with COVID-19 patients. Patients also changed their behaviour and were less likely to seek care due to fears about infection or because they wanted to 'protect the NHS' from becoming overburdened. There were likely also some genuine reductions in demand due to changes in lifestyles because of the pandemic (Burn et al., 2021).

This is not to say that the NHS will have to provide all of that care in the months and years ahead. Not all patients will return: some will have died since the start of the pandemic, others may have received treatment privately, while some will have had their ailments resolved (or have chosen to live with these health issues) without ultimately requiring hospital treatment. But some – perhaps most – of this missed activity will need to be done by the NHS eventually.

One way to measure the pressure that this puts on the NHS is the estimated cost of the activity that will need to be done. In our central scenario, we assume that 70% of missed elective patients will return, as will 10% of emergency patients, 70% of outpatient appointments and 50% of GP appointments. This implies that the NHS will need to catch up on £6.5 billion worth of activity in the coming years. As we shall discuss in the subsection after the next, it may well cost even more than this.

Waiting lists

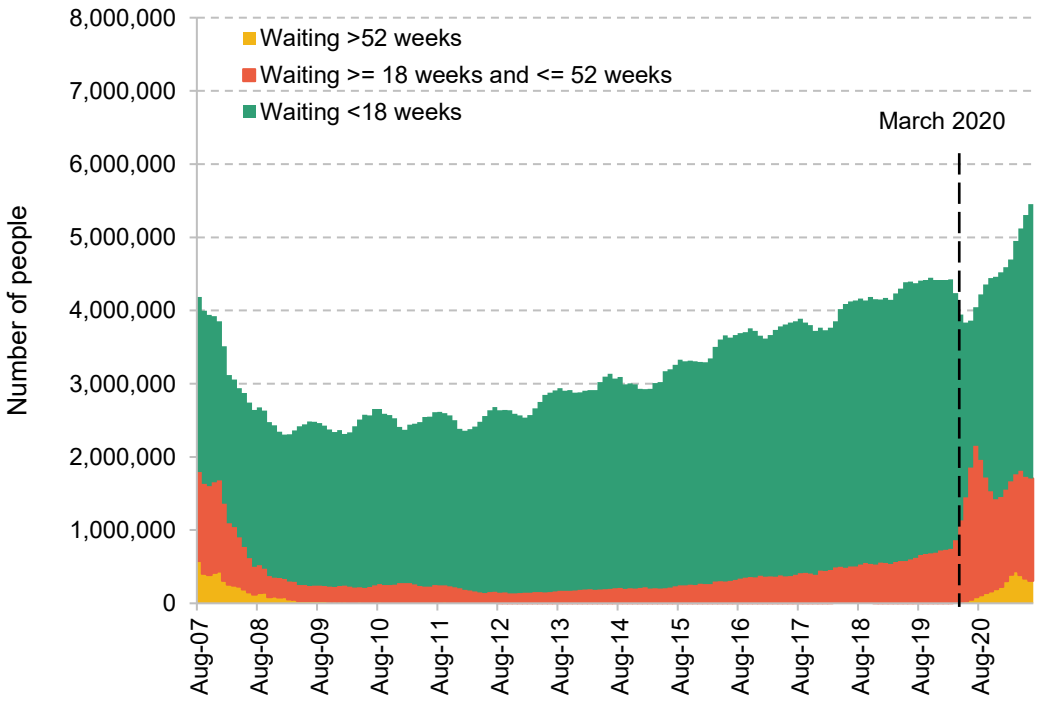
As discussed in a recent IFS Observation, this missed activity is an important determinant of how NHS waiting lists will evolve in the coming years (Stoye, Warner and Zaranko, 2021). As Figure 6.17 shows, the number of people waiting for care has risen from 4.4 million in February 2020 to 5.5 million in June 2021. There has been a particularly sharp increase in the number of

people waiting for longer than a year, from 1,600 to almost 305,000 in the same period, though this is a reduction from its peak of 436,000 in March 2021 (suggesting that the NHS is now focusing on treating the patients who have been waiting longest). Nonetheless, this rapid increase in waiting lists has caused widespread concern over the scale of the NHS 'backlog'.

However, looking just at the headline increase in the size of the waiting list understates the true effect of the pandemic. Waiting lists have grown by just over 1 million since February 2020, while, as Table 6.6 showed, there were at least 3 million fewer elective admissions and 20 million fewer outpatient appointments in just the first 12 months of the pandemic. This is because while treatment volumes fell, so did the number of people being referred onto waiting lists. We estimate that between March 2020 and May 2021, there were over 7 million fewer referrals than would have been expected if levels were the same as in 2019. This is smaller than the total amount of missed activity because some pathways involve several treatments, such as an elective admission and follow-up outpatient appointments.

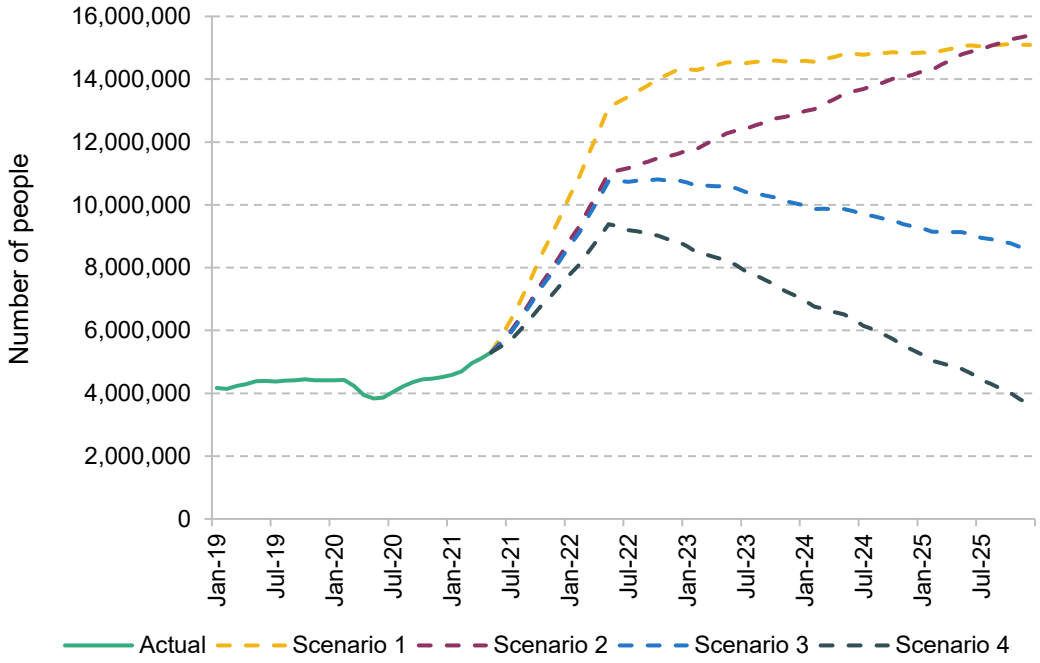
As many of the patients who missed activity, or missed being referred onto waiting lists, return, waiting lists are expected to grow rapidly. This is what led to Mr Javid's warning in July that waiting lists could grow to 13 million people (BBC, 2021a). Figure 6.18 presents several illustrative scenarios for how the waiting list could evolve over the coming years.

Figure 6.17. NHS waiting lists in England



Source: NHS Digital's RTT Waiting Times Data.

Figure 6.18. Illustrative waiting list scenarios



Source: Stoye, Warner and Zaranko (2021).

Each depends on a number of different assumptions. Scenario 1 shows what would happen if 80% of those who missed referral returned and NHS capacity was 90% of 2019 levels in 2021 and 2022, and 100% of 2019 levels from 2023 onwards. Scenario 2 shows what would happen if 65% returned and NHS capacity is limited to 95% of 2019 levels. Both scenarios show that if the NHS cannot increase capacity above 2019 levels, the waiting list will remain much higher than pre-pandemic, and could continue to grow.

Even if the NHS can boost capacity above 2019 levels – and therefore start to treat the stock of patients who missed care during the pandemic – it will still take a long time to return to pre-pandemic waiting list lengths. In scenario 3, 75% of patients return and NHS capacity is 100% of 2019 levels in 2021 and 2022 and 105% from 2023. In this case, waiting lists peak at just under 11 million through 2022 and then start to decline slowly. Scenario 4 shows that if only 70% return and the NHS can achieve 105% capacity in 2021 and 2022 and 110% capacity from 2023, waiting lists will return to pre-pandemic levels by 2025. For more detail and discussion of these scenarios and the outlook for waiting lists, see Stoye, Warner and Zaranko (2021).

Since those scenarios were published, there has been one further month of waiting list data released. In June 2021, the number joining the list rose to its highest level since the beginning of the pandemic, reaching 24% above June 2019 levels. This is consistent with some of the 'missing' patients starting to return. If 70% of those patients return over the next 12 months (as in Scenario 4 above), we would expect the number of people joining the waiting list to reach approximately 125% of 2019 levels.

The number of people receiving NHS treatment after a spell on the waiting list has now almost returned to its 2019 level (it is at 99% of its 2019 level), a massive increase compared with 86% in May 2021 and 64% in January 2021. The number of people leaving the list, which also includes those leaving for other reasons, has also risen to its highest level since the pandemic began: 94% of 2019 levels (up from 66% in January 2021). If this rapid increase in NHS capacity can continue in the coming months – so that the NHS not only reaches its pre-pandemic capacity but actually exceeds it – waiting lists are more likely to follow trajectories similar to scenarios 3 and 4, with a fast increase in the number waiting over the next 12 months as missed patients return, followed by a consistent fall in the list as supply exceeds demand and the backlog is slowly eliminated.

The time and cost necessary to catch up

The previous two subsections showed the same problem – missed care during the pandemic – from two different angles. This leads to two related questions: 'how long will it take to catch up?' and 'how much will it cost to do so?'.

As discussed, the estimated cost of the missed activity we assume will return in our central scenario is £6.5 billion.[10] However, this could easily be an underestimate of the 'true' cost. Infection control measures and staff burnout could both increase average costs of activity. But what really matters here is the marginal cost – the cost of each additional procedure. It is likely that the marginal cost will rise as the NHS tries to catch up on the missed activity and volumes exceed 100% of their 2019 levels. The NHS may need to build new hospitals, hire new staff, make greater use of agency, bank or locum staff, or use private sector capacity. We therefore think that £6.5 billion represents a conservative (i.e. low) estimate of the potential cost of catching up.

Time also matters here. The government cannot simply give the NHS an additional £6.5 billion and just expect it to catch up overnight. Increasing capacity, particularly when the system has been under so much pressure, will take time: there are material constraints to how much can be achieved in the near term. The former NHS England Chief Executive, Lord Stevens, has suggested that with enough resources, the NHS could catch up within three years (FT, 2021), but this could prove to be a relatively optimistic estimate.

To reflect the fact that ramping up activity will be highly challenging, and will likely lead to an increase in unit costs and/or require investment in infrastructure, we also allow for an additional £1 billion in our central scenario, over the three years. That would be roughly equivalent to a 15% increase in unit costs. Combined with the £6.5 billion of missed activity (under our

[10] In our central scenario, we assume that 70% of missed elective patients will return, as will 10% of emergency patients, 70% of outpatient appointments and 50% of GP appointments.

assumptions about the share of missing patients who return), that would mean £7.5 billion over the three years, or £2.5 billion per year. We estimate that with this additional funding, provided that the NHS manages to return capacity this year (2021−22) to close to 2019 levels, the NHS would be able to eliminate the backlog of missed care and return waiting lists to their pre-pandemic levels by 2025. This would be similar to scenario 4 in Figure 6.18.

This estimate is highly uncertain and sensitive to the assumptions made. The eventual costs of catch-up could be significantly higher or lower than £2.5 billion per year. If fewer patients return than we assume in our central scenario, costs would be correspondingly lower. For example, if only 50% of missed elective and outpatient activity returns (rather than the 70% assumed in our central scenario), none of the missed emergency and GP activity is ever carried out, and our unit costs assumption is left unchanged, the estimated annual cost would fall to £1.6 billion. But in the opposite direction, increasing patient volumes could lead to a larger increase in unit costs than we have assumed in our central scenario. If the same number of patients return as we assume in our central scenario, but unit costs increase by 30% rather than 15%, it could cost £2.8 billion per year to catch up. And if the NHS quickly bumps up against capacity constraints (from staffing, physical space, or something else) then it could take a lot longer than three years to clear the backlog.

Historical precedents

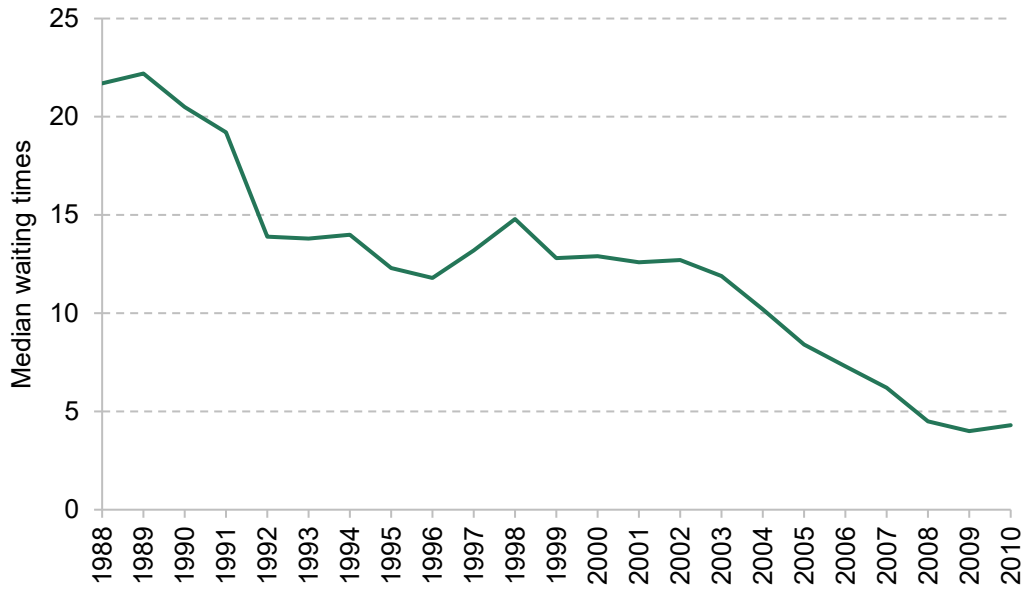
This is not the first time in its history that the NHS has had to deal with long waiting lists. This subsection draws heavily from Geoffrey Rivett's history of the NHS (Nuffield Trust, n.d.) and Richard Murray's recent piece on lessons from the 2000s for the King's Fund (Murray, 2021).

The current waiting times definition was introduced in 2007, which means that we cannot directly compare current levels to the past. The data show, however, that waiting lists were also high in the early 2000s and the 1990s. Figure 6.19 shows median wait times for inpatient care between 1988 and 2010. This only measures the time between an admission decision being made by a consultant and actual admission, rather than the current definition which is from initial referral (from a GP or hospital consultant) to the end of treatment (and therefore captures the length of the entire treatment pathway rather than the subset covered by the older definition). On this definition, the median waiting time fell from more than 20 weeks in the late 1980s to below 5 weeks by 2010.

Waiting times fell sharply between 1989 and 1992, and then broadly flatlined for the next decade. Labour's third of five key election pledges in the 1997 general election was to cut NHS waiting lists, but it took several years for median waiting times to start falling, which they then did steadily from 2002 onwards. Health funding grew rapidly during this period, by an average of 6.6% per year in real terms between 1997−98 and 2006−07, compared with 3.8% between

1988–89 and 1997–98.[11] The number of nurses and midwives grew by 14% over the period and the number of doctors and dentists grew by 48%. But as Richard Murray has cautioned, 'it's easy to put the waiting times success of the 2000s down to rapid increases in spending and staff. But this ignores the concurrent changes in productivity that also made an important contribution'.

Figure 6.19. Median waiting time (weeks) for inpatient activity, 1988–2010



Source: Department of Health's Inpatient and Outpatient Waiting Times March 2009/10.

The NHS also went through huge transformations during the 2000s. In Geoffrey Rivett's words, 'In no previous decade had such a succession of Ministers, new policies, White Papers and restructurings hit the NHS'. This included the introduction of Primary Care Trusts and Foundation Trusts, the introduction of Payment by Results, and increased use of the private sector and performance targets. An aggressive waiting times targets policy was coupled with the 'terror' of strong sanctions for poorly performing hospital managers and regular publication of waiting times for each hospital. This was successful in reducing waiting times in England (Propper et al., 2008). Under the right conditions, the NHS can – and has – cut waiting times dramatically. But given the number of changes and reforms during the period, it is difficult to draw neat and convincing lessons for the present day.

One important lesson, though, is that it takes time to increase capacity and cut waiting lists. The median waiting time for inpatient activity only started to fall in 2003, six years after Labour's

[11] Note, though, that UK health spending grew at an average rate of 6.7% per year between 1990–91 and 1993–94, a period when waiting times were also falling.

election win and three years after the publication of their NHS plan. This was despite funding in real terms increasing by a massive 7.8% in 2000−01, 8.7% in 2001−02 and 8.3% in 2002−03, before an even bigger increase of 10.8% in 2003−04. And despite funding growth slowing down after 2005−06, median waiting times continued to fall. Funding and waiting times need not move concurrently. This points to a broader lesson that can be drawn from the experience of the past few decades: funding is not the only thing that matters.

During the 2000s, health funding grew at a rate that seems unlikely to be achievable in the coming years without large tax increases: indeed, at the same time as announcing substantial increases in NHS spending in the April 2002 Budget, the then Chancellor Gordon Brown also announced increases in the rates of employee and employer National Insurance. This means that increases in productivity are going to be even more important than they were in the 2000s. The discussion now turns to potential savings and increases in productivity from the pandemic.

Potential savings

As we have shown above, the pandemic is likely to increase costs both directly and indirectly for the NHS in the coming years. However, it may also present several opportunities for savings.

The first potential saving is that excess deaths reduce demand for public services. For example, in March 2021, the OBR estimated that excess deaths would lower government state pension spending by £0.6 billion in 2020−21 and £0.9 billion in 2021−22 (OBR, 2021a). We estimate that the deaths attributed to COVID-19 during this period could save the NHS at least £0.2 billion per year between 2021−22 and 2024−25.[12] This assumes that those who died were average hospital users conditional on their age and sex, and does not adjust for the different types of treatment that patients of different ages require. In reality, those who died during the pandemic are likely to have been above average in terms of their clinical severity, and so are likely to have also been above-average users of NHS services. This saving also only includes hospital inpatient admissions and outpatient appointments, so there are likely to be additional savings from primary care, prescription costs, mental health and community healthcare services. This is therefore a very conservative estimate of the savings to the NHS.

The pandemic has also forced the NHS to change how it operates. Some of these changes will have been for the better and will remain even as the crisis ends. Even in April 2020, NHS England was encouraging NHS Trusts that the crisis was an ‘opportunity to “lock-in” beneficial changes that we’ve collectively brought about in recent weeks’ (NHS England, 2020b). The

[12] We calculate the average cost of inpatient and outpatient hospital activity for each age–sex combination in 2019 using NHS Digital’s Hospital Episode Statistics. We then sum the cost of hospital usage per year over the expected remaining lifespan for each age–sex group using ONS’s National Life Tables. We then multiply this by the number of people who died from COVID-19 in each age–sex group using ONS’s Weekly Provisional Figures on Deaths Registered in England and Wales, multiplying by the percentage of total COVID-19 deaths that were in England.

beneficial changes it listed included 'enhanced local system working' and 'new technology-enabled service delivery options such as digital consultations'. Some of the changes to how services operated during the COVID-19 emergency – such as greater generalism among hospital consultants, or changes to workforce ratios – could provide important lessons for the future. While it is easy to focus exclusively on the (many) adverse effects of the pandemic, there may also be some eventual 'upsides' for the health service.

We now consider the potential for cost savings for the NHS from digital consultations. We do not consider the impacts of this on quality of care, as this has been discussed substantially elsewhere (Horton and Jones, 2020), nor potential cost savings to patients from reduced travel, nor potential savings from the fact that digitalisation could reduce the number of missed appointments if it improves flexibility and convenience for patients.

Prior to the pandemic, about 80% of GP appointments took place face-to-face, with most of the remainder by telephone. However, from March 2020, more than 40% of GP appointments have been via telephone. There is no evidence that the fraction of video appointments has increased, and it remains less than 1% of all GP appointments. It is not clear to what extent this could save the NHS money. The available evidence suggests that pre-pandemic, telephone triages with GPs were cheaper than face-to-face appointments because they tend to be shorter, but many telephone appointments still result in subsequent face-to-face appointments (Curtis and Burns, 2019), therefore reducing the potential for cost savings.

Unlike primary care, there is seemingly the potential for substantial cost savings from remote outpatient appointments. In the year before the pandemic, less than 4% of outpatient hospital appointments took place remotely. This increased to 27% in the first year of the crisis. In 2019−20, the average cost of an outpatient attendance was £132.63 if it was in-person, but just £87.12 if it was remote (NHS England, 2021a). This does not include outpatient appointments where procedures took place which, for obvious reasons, cannot be conducted remotely.

If the NHS maintains the February 2021 proportion of remote appointments, 28%, we estimate this could save the NHS £1.0 billion per year, if the total number of outpatient appointments returned to pre-pandemic levels. In practice, it is likely that the proportion of remote outpatient appointments will fall somewhat, and that the cost saving will be smaller than estimated due to the types of appointments that can and cannot be conducted remotely. We therefore estimate that remote outpatient appointments could save the NHS £0.5 billion per year.

Staffing pressures

Burnout and pressure

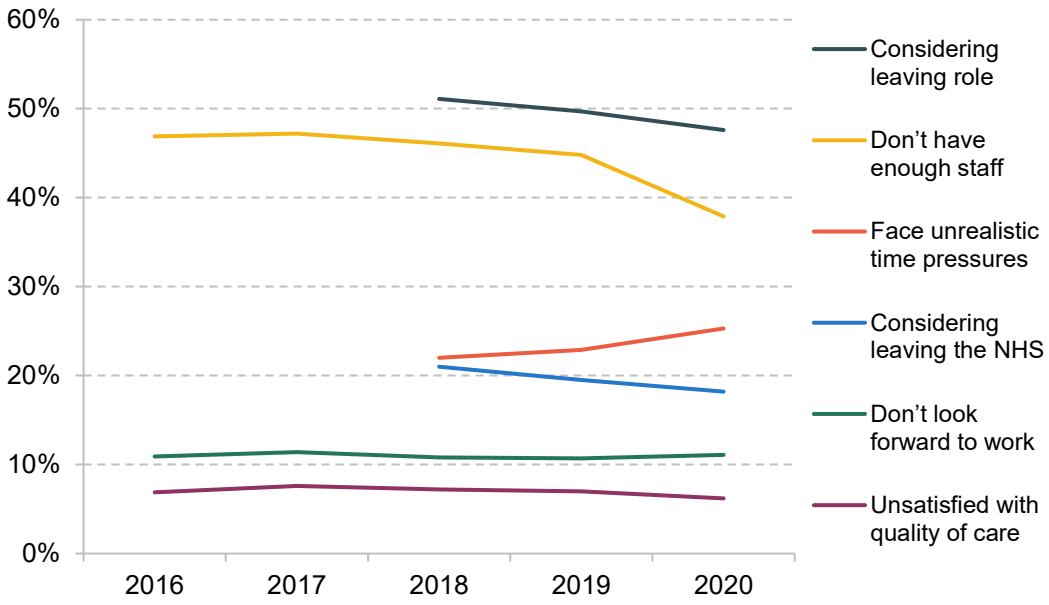
There has been widespread concern about the pressure faced by NHS staff during the pandemic. NHS Providers report that 92% of Trusts are concerned about staff well-being, stress and

burnout following the pandemic (NHS Providers, 2021). The well-being of staff can affect the capacity of the NHS in three interrelated ways. First, it may cause staff to leave the NHS or healthcare sector entirely. Second, it may cause staff to reduce the number of hours they can work, or cause them to take more sick leave. Third, it may reduce the productivity of staff when at work. All of these effects have the potential to increase the workload and pressure on staff who remain, potentially intensifying pressures if suitable replacements cannot be found.

The most representative measure of NHS staff well-being is the NHS Staff Survey. Figure 6.20 presents responses to selected questions from the annual NHS Staff Survey for 2020 and several preceding years. The responses to the 2020 survey took place in October and November 2020. For most of this period, the number of COVID-19 patients in hospital was rising, but had not yet exceeded the peak of the first wave as would happen in January 2021. This is important for putting the responses from front-line staff into context.

Perhaps surprisingly, the results of the survey do not suggest that there has been an across-the-board loss of morale amongst NHS staff. Staff are much more likely to report that they face unrealistic time pressures. But only slightly more do not look forward to work, and fewer staff are considering leaving their role or the NHS. Considerably fewer staff report that their organisation does not have enough staff and slightly fewer staff are unsatisfied with the quality of care they provide. Nonetheless, the levels of the negative responses are concerning – almost half of staff report considering leaving their role and a quarter report facing unrealistic time pressures.

Figure 6.20. NHS Staff Survey results



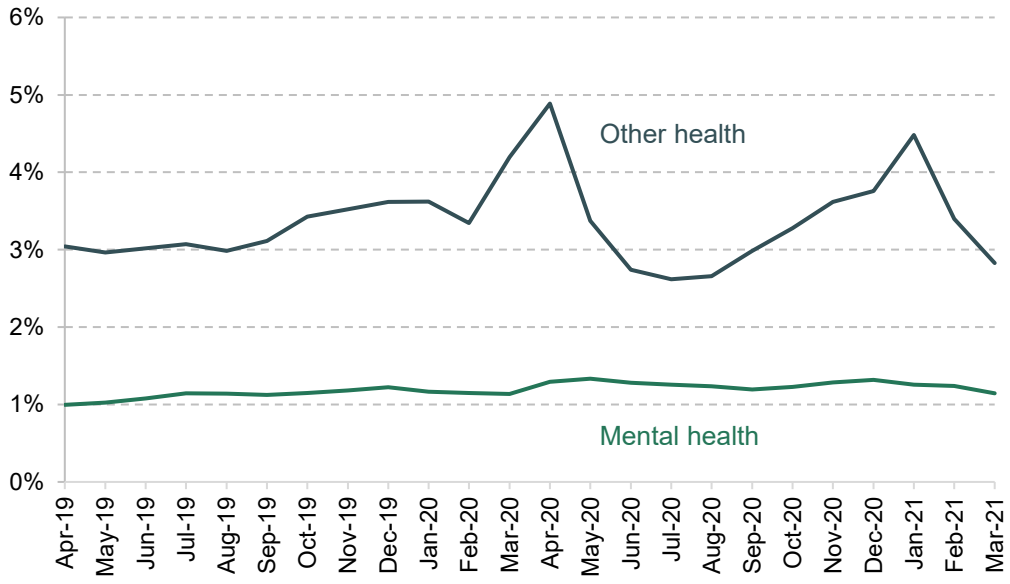
Note: 2020 survey was undertaken in October and November.

Source: NHS Staff Survey 2016–20.

There are differences between staff with different pandemic experiences. Staff who worked on COVID-19 wards during the pandemic are more likely to report that they want to leave their job, but less likely to report that they want to leave the NHS, compared with those who did not work on COVID-19 wards. Of course, there will be other differences between staff who did and did not work on COVID-19 wards, and we do not know what their intentions were before the pandemic, so the differences we now see might not be due to the pandemic.

Medical unions have also surveyed their staff members on the effects of the pandemic. The Royal College of Nursing's 2020 survey (conducted between May and June 2020, also including private hospitals) found that 36% of nurses were thinking about leaving the profession, but only 27% reported having felt the same way in 2019 (RCN, 2020). 58% of nurses reported that staff morale had worsened compared with prior to the pandemic, and only 13% reported that it had improved (NHS Pay Review Body, 2021). The British Medical Association (which represents doctors) has also frequently surveyed its members. In February 2021, 51% of respondents reported suffering from depression, anxiety, stress, burnout, emotional distress or other mental health conditions, of whom 80% reported that it was worse than pre-pandemic. 51% reported that their current level of health and well-being was worse than during the first wave, compared with just 15% who reported it was better (BMA, 2021). This suggests that even when hospitals are under less direct pressure from COVID-19 patients, the pandemic continues to have strong (and worsening) effects on well-being.

Figure 6.21. Percentage of FTE days lost to sickness



Source: NHS Digital's NHS Sickness Absence Statistics March 2021.

Another source of information about staff well-being is staff sickness rates. Figure 6.21 shows the monthly percentages of FTE days lost to mental-health-related sickness and to all other forms of sickness. Prior to the pandemic, mental health was responsible for approximately a quarter of all staff sickness absence, and caused an average of 1.13% of all days to be missed. This rose to an average of 1.25% during the pandemic. However, this may underestimate the true effect of COVID-19 if staff decided to take fewer sick days due to the urgent nature of the pandemic – which is partially supported by the lower sick rates for other health in between the waves of the pandemic.

In 2020−21, the NHS's pay bill was approximately £45.6 billion (NHS Digital, 2021d). In 2019−20, 4.5% of FTE days were lost to staff sickness (NHS Digital, 2021e). We therefore estimate that a 1% increase in staff sickness rates would cost the NHS approximately £21 million per year. In our central scenario, we assume that the pressures from the pandemic will increase staff sickness by 12.5% in 2022−23 relative to pre-pandemic, which is equivalent to an increase in mental-health-related sickness of 50% (though the pandemic may cause an increase in other forms of illness too). We then assume that this falls to 5% in 2023−24 and close to 0% thereafter. This would cost the NHS £0.25 billion in 2022−23 and £0.1 billion in 2023−24.

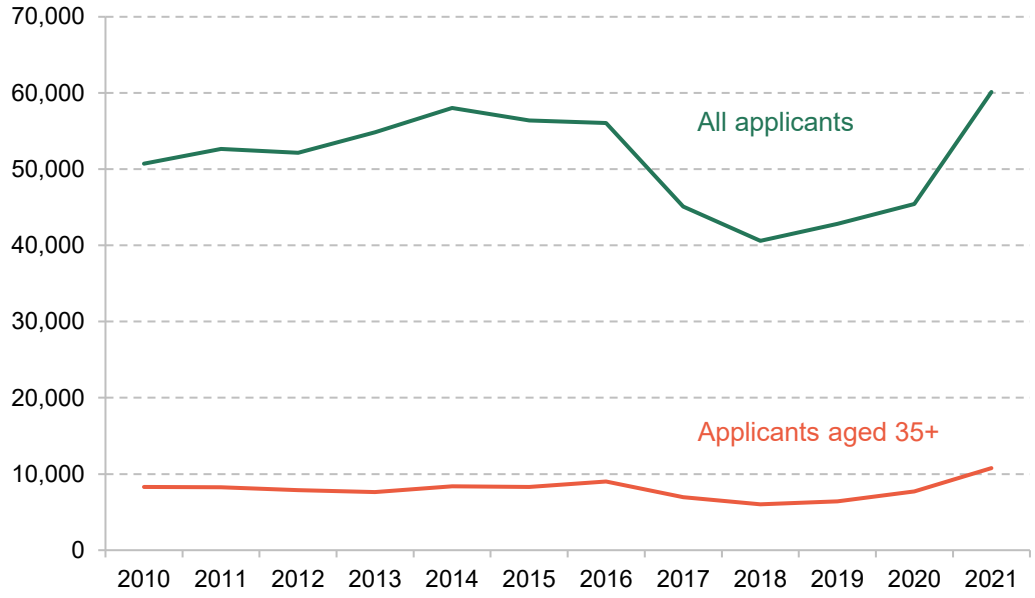
We do not quantify the other two potential costs of staff burnout – reduced on-the-job productivity and the requirement to hire new staff (at potentially higher wages if agency or temporary staff are needed) to replace staff who have decided to leave.

Recruitment

A key component of the nursing labour force is the supply of new nurses. It has been proposed that the high-profile role of the NHS during the crisis will encourage more people to join healthcare professions. Indeed, the number of people applying to nursing courses through the Universities and Colleges Admissions Service (UCAS) rose by 40% from 42,820 in 2019 to 60,130 in 2021 (Figure 6.22).

However, this is likely not only due to the pandemic, as the government also reintroduced nursing bursaries for students starting courses from September 2020. In fact, the current level of nursing applicants is not much higher than it was in 2016, the last year when the government offered nursing bursaries. In addition, public sector jobs are plausibly seen as more attractive during a recession because of their greater job security and pay stability during an economic downturn.

Figure 6.22. Number of applicants to nursing courses



Source: UCAS 2021 Cycle Applicant Figures.

Another impact of COVID-19 will be on the recruitment and retention of international staff, and in particular of nurses. In the short term, travel restrictions and other disruption to international travel may make it less attractive for nurses to travel to the UK. Even if COVID-19 recedes in the UK, this may remain a problem if COVID-19 continues to spread in the home countries of international recruits.

In the long term, the pandemic may change the relative attractiveness of the UK to international recruits. It may be that the pandemic experiences of their home countries will discourage them from emigrating, or it may be that governments decide to restrict nurse emigration in order to build domestic health capacity.

Pay

The pandemic has heightened the issues around NHS staff pay, against a backdrop of declining average real pay for both doctors and nurses over the last 10 years (as discussed in Section 6.2). The devolved governments of Northern Ireland, Scotland and Wales have all given bonuses to health and social care staff of between £500 and £735 for full-time workers for the important role they played during the pandemic. And pay is going to be an important determinant of the staffing resources available to catch up on the care that was missed during the pandemic.

As part of the pay-setting process, the government submits a proposal to independent pay review bodies, which also receive evidence from medical unions and other NHS bodies. The pay review bodies then make a recommendation on changes to pay bands, accounting for a range of factors,

including the need to recruit and retain staff, the level of NHS funding and the government's broader pay policy. The government then decides whether to accept these recommendations. This decision does not fully determine pay growth in the NHS as staff also experience pay increases as they move within and between pay bands.

In July 2021, the pay review bodies announced that they were recommending pay increases of 3% for most NHS staff and, separately, some doctors, backdated to April 2021. This was substantially higher than the government's initial proposal of 1% – which Mr Hancock stated was 'what we think is affordable' – and substantially lower than the proposals of many unions representing medical staff.

In 2020−21, the NHS's pay bill was approximately £45.6 billion (NHS Digital, 2021d). The NHS's long-term plan had assumed 2.1% pay growth (NHS, 2019), so we estimate that annual growth of 3% would cost the NHS approximately an additional £0.41 billion in 2021−22.

In our central scenario, we assume that due to similar pressures on the NHS, the pay review bodies continue to recommend a 3% pay rise in the coming years. Relative to the long-term plan, this will therefore cost the NHS an additional £0.8 billion in 2022−23, £1.3 billion in 2023−24 and £1.8 billion in 2024−25.

Indirect effects of COVID-19

We now consider two indirect effects of COVID-19. First is the effect that the pandemic and associated government public health measures have had on people's mental health. Second is the effect that the economic disruption and associated recession will have on people's mental and physical health.

Mental health

The pandemic and associated policy measures (including distancing guidelines, social restrictions and stay-at-home measures) have worsened mental health among UK adults. On one general measure, average mental health worsened by 8% at the start of the pandemic (Banks, Xu and Fancourt, 2021). This has partially recovered, but in September 2020 was still 2% below pre-pandemic levels. Even more concerningly, the number of adults experiencing moderate to severe depressive symptoms was 21% in early 2021, compared with 10% before the pandemic (ONS, 2021c).

At the same time as an increase in mental health problems, the pandemic has made it harder to access mental health services. The number of depression diagnoses has fallen during the pandemic (ONS, 2021d), as part of the wider disruption to primary care discussed earlier. Similarly, the number of people in contact with adult mental health services fell at the beginning of the pandemic, and has yet to recover to pre-pandemic levels (NHS Digital, 2021f). Figure

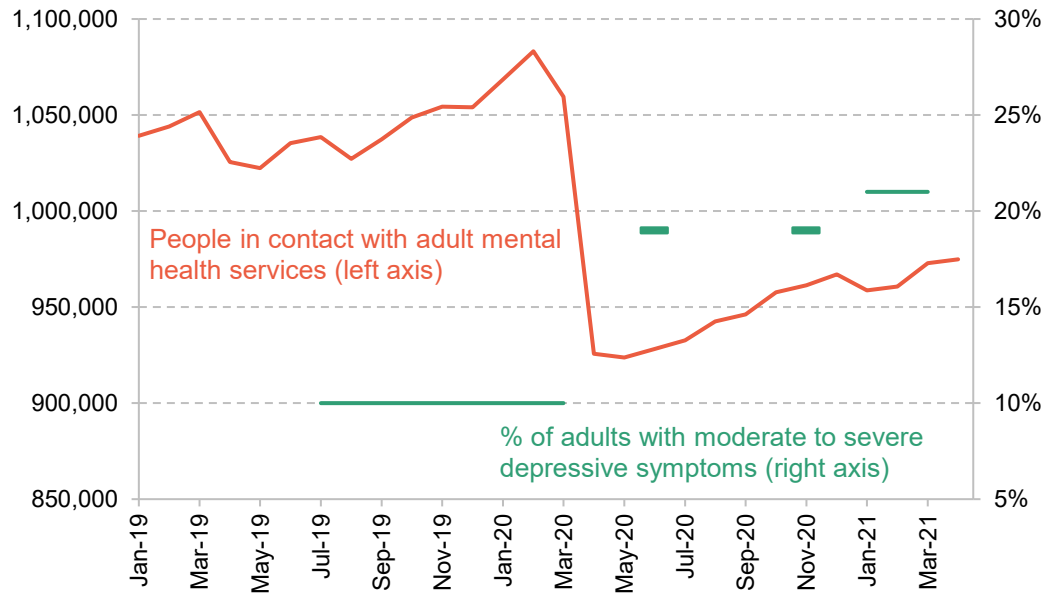
6.23 compares the decline in the number of people in contact with adult mental health services with the proportion of adults reporting depressive symptoms since the beginning of 2019.

These factors both suggest that demand for mental health services will rise in the coming years, though there is large uncertainty about the size of the increase. The Health Foundation, for example, has estimated that referrals to dedicated mental health services for adults and children could increase by an average of 11% per year for the next three years (Kraindler et al., 2020).

The Centre for Mental Health has estimated that 8.5 million adults and 1.5 million children will need mental health support over the next three to five years because of the pandemic (O'Shea, 2021). In 2019−20, 2.1 million adults and 0.8 million children were in contact with mental health services (NHS Digital, 2021g). Even if only 20% of those 10 million people were referred to mental health services, this would increase demand by about 14% for the next five years.

In 2019−20, the NHS spent £8.0 billion on mental health services (NHS England, 2021c). Although there is much uncertainty about how much demand will increase, under our central scenario we assume that increased demand for mental health services will cost the NHS £1 billion in 2021−22, 2022−23 and 2023–24 (broadly in line with a 14% increase in demand).

Figure 6.23. Change in access to and need for mental health services



Source: NHS Digital's Mental Health Services Monthly Statistics (2021), ONS's Coronavirus and Depression in Adults in Great Britain (2021).

Recessions

The pandemic has had a huge impact on the economy, with GDP falling by 19.5% in the second quarter of 2020, before partially recovering in the third and fourth quarters, and then falling again by 1.6% in the first quarter of 2021 (ONS, 2021e). The main way that this is likely to worsen health is through rising unemployment and falls in household earnings (Banks, Karjalainen and Propper, 2020). However, because of the labour market interventions (such as the furlough scheme) discussed in Chapter 9, the unemployment rate has only risen from 4% in the first quarter of 2020 to a peak of 5.2% in the fourth quarter of 2020 (ONS, 2021f) – far less than we might have expected given the scale of economic dislocation.

Therefore, although the economic shock has been larger than the financial crisis, it is far from clear that the consequential recession-related health shock will be as large. The clearest effect of the financial crisis on health was for mental health (Margerison-Zilko et al., 2016). That could also be the case this time, as pandemic-related economic disruption has primarily affected younger and lower-earning workers, who might have had more precarious mental health to begin with. However, recessions can also have impacts on physical health, and the 1.2 percentage point increase in unemployment could increase the prevalence of chronic conditions, such as cardiovascular disease and diabetes, by about 2% (Janke et al., 2020). The evidence suggests that these effects would take several years to emerge, however, and so we do not estimate the costs associated with any such increase.

Pre-existing pressures

Prior to the pandemic, the NHS was already facing a number of pressures. This was reflected in the fact that the NHS was already struggling to meet its waiting time and other performance targets pre-COVID. Central among these pressures is the UK's ageing population.

In 2018, there were 1.6 million people aged 85 or older in the UK. The ONS projects that this will rise to 1.9 million by 2025, 2.1 million by 2030, 2.6 million by 2035 and 3.0 million by 2043. Similarly, the number of pension-age people per 1,000 working-age people is predicted to rise by about 22% from 295 to 360 by 2043, and the number of annual deaths is predicted to rise by a third over the same period (ONS, 2019). This will put massive pressure on the NHS as the elderly use by far the most health services per capita, and much of lifetime healthcare spending is concentrated at the end of life.

Pre-pandemic, the OBR projected that to keep pace with demographic pressures, public spending on health would need to rise from 7.6% of national income in 2022−23 to 9.0% of national income by 2067−68. This excludes any other cost pressures (associated with, for example, new medical technologies and treatments); once those are included, the OBR projected that health spending would need to rise from 7.6% to 13.8% of national income by 2067−68 to

keep pace (OBR, 2018). Even in the nearer term, the OBR projected that health spending would need to rise to 8.0% of national income by 2025−26 and 8.8% by 2030−31. Previous IFS and Health Foundation research shows that this means health spending will need to increase 3.3% per year in real terms over the 15 years to 2033−34 just to keep up with demographic pressures (Charlesworth et al., 2018).

6.5 What might these pressures mean for NHS funding?

In the previous section, we considered a number of pressures that the NHS faces in coming years. Here, we summarise what those pressures might mean in terms of additional funding requirements over the next few years. In the next section, we compare these estimates with the latest government funding announcement.

Table 6.7 summarises our estimated costs of each pressure over the next three years relative to the existing five-year settlement. That is, it provides our estimates of how much additional funding could be required to deal with the various pressures on the NHS as a direct result of the pandemic and the knock-on consequences it has had. These estimates are, of course, highly uncertain, and different assumptions would lead to different figures. But they provide an indication of the sort of sums that might be required.

Under all the assumptions of our central scenario, therefore, we estimate that the NHS faces pressures of £9.8 billion in 2022−23, £6.9 billion in 2023−24 and £6.2 billion in 2024−25. The cost falls over time due to our assumption that the prevalence of COVID-19 declines over time, and therefore the direct impacts are smaller, though this is partially offset by the rising pay bill. We also estimate that the NHS could achieve pandemic-related savings of £0.7 billion per year, potentially reducing the net pressure to £9.1 billion in 2022−23, £6.2 billion in 2023−24 and £5.5 billion in 2024−25. That would be equivalent to 6.4% and 4.1% of pre-existing plans for the NHS England resource budget in 2022−23 and 2023−24, respectively.

An important conclusion of this analysis is the quantification of the likely relative cost of different pressures in our central scenario. COVID-19 patients, vaccinations and long COVID are unlikely to cost the health service more than £1 billion per year. PPE, Test and Trace, and infection control are likely to have high costs initially, but these should decline quickly assuming the number of COVID-19 cases falls away. The cost of catching up on missed activity and mental health demand are more likely to remain for the whole period. In the case of staff pay rises, costs will rise significantly over time as the cumulative gap between 3% annual pay growth and 2.1% growth widens.

The estimates also show that even if prevalence of COVID-19 falls to zero (and so there is no need for Test and Trace, and no costs associated with the treatment of COVID-19 patients), the NHS would also still face substantial cost pressures from the ongoing mental health impacts of the pandemic, the prevalence of long COVID, the likely need for future pay rises, and the costs of catching up on missed care.

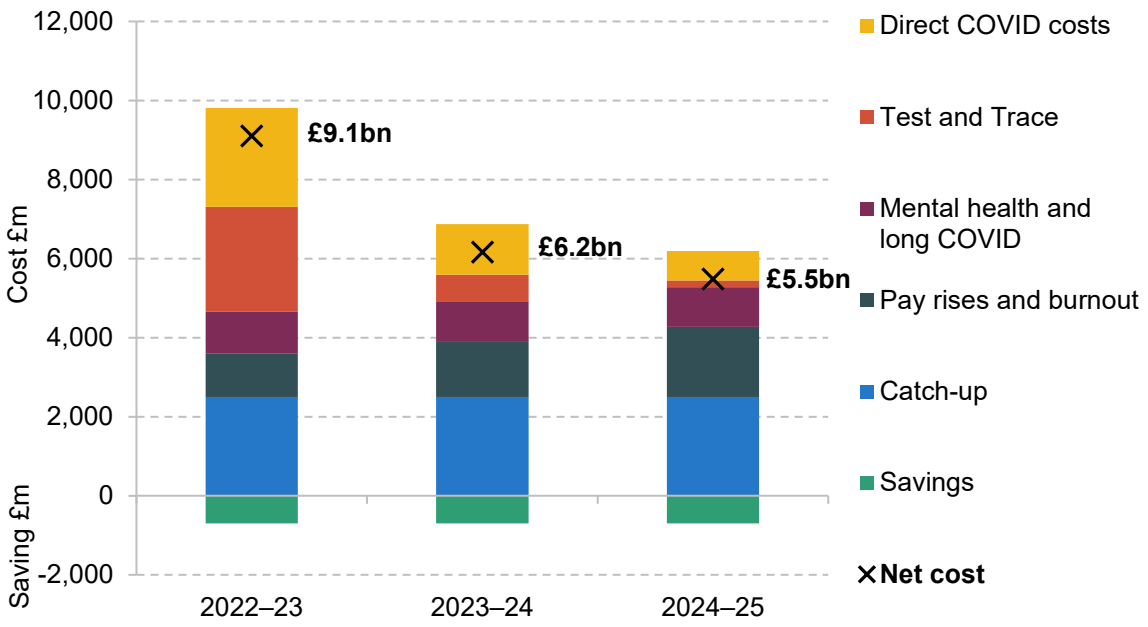
Table 6.7. Our central scenario for new NHS pressures (£m, nominal terms)

£ million	2022–23	2023–24	2024–25
COVID-19 patients	180	50	10
Infection control	880	590	290
PPE	1,150	350	150
Vaccinations	290	290	290
Long COVID	60	30	10
Test and Trace	2,660	670	170
Mental health	1,000	1,000	1,000
Catching up on missed activity	2,500	2,500	2,500
Staff burnout	250	100	0
Pay rises	840	1,290	1,770
Total additional expenditure	**9,810**	**6,860**	**6,190**
Mortality savings	200	200	200
Telemedicine savings	500	500	500
Total savings	**700**	**700**	**700**
Net additional expenditure	**9,110**	**6,160**	**5,490**

Note: All figures are estimates and are highly sensitive to the underlying assumptions made – see the text for details. Figures are rounded to the nearest £10 million, and may not sum due to rounding.

Source: Authors' calculations using all sources in Section 6.4.

Figure 6.24. Our central scenario for new NHS pressures



Note: Direct COVID costs are COVID-19 patients, PPE, infection control and vaccinations.

Source: Authors' calculations using all sources in Section 6.4.

These estimates are broadly similar to those produced by other organisations. In July 2021, the OBR estimated that pandemic-related pressures on health spending could be £7 billion per year between 2022−23 and 2024−25, with a small decline each year (OBR, 2021b). Our total estimated cost is only slightly higher than this, despite including several areas not considered by the OBR, but is more front-loaded.

In November 2020, the Health Foundation, in response to the Spending Review, estimated that total spending pressures for DHSC would be £11 billion in 2022−23 and £10 billion in 2023−24 (Kraindler et al., 2020). In August 2021, the Nuffield Trust estimated that NHS Trusts, a subsection of expenditure we have examined, face overspends of at least £4.7 billion in 2022−23 and £4.2 billion in 2023−24 (Nuffield Trust, 2021). In September 2021, NHS Confederation and NHS Providers published a joint report estimating that NHS Trusts would incur an additional £4.6 billion of costs in 2022−23, and estimated that they could require around £5 billion for other pressures, taking the total needed to £10 billion (NHS Confederation and NHS Providers, 2021). In short, there is wide agreement that the NHS faces substantial challenges and that meeting them will require additional funding of at least several billion per year.

6.6 The government's September 2021 announcement

On 7 September, the Prime Minister announced the government's 'Build Back Better' plan for health and social care (HMG, 2021c). This included an NHS recovery plan, adult social care reform and increased taxation to fund these changes. In this section, we first analyse the announced increases in NHS funding and then consider whether these will be enough to meet the pressures we outlined in Section 6.5.

What was announced?

The announcement included new resource (day-to-day spending) budgets for DHSC and NHS England. The headline increases to the DHSC budget were £11.2 billion in 2022−23, £9.0 billion in 2023−24 and £10.1 billion in 2024−25 (a total of £30.3 billion over the three years). Just over half of this money, £15.8 billion over the three years, is planned to go directly to NHS England, leaving £14.5 billion for everything else. A further £5.4 billion is earmarked for adult social care, which leaves £9.1 billion for other DHSC programmes over the three-year period.[13]

Figure 6.25 summarises the new NHS England funding settlement (which, as explained above, accounts for just over half of the newly announced funding). In the first two years, 2022−23 and 2023−24, the NHS receives additional money on top of its pre-COVID settlement. This comes to £6.6 billion in 2022–23 and £3.6 billion in 2023−24, on top of the previously agreed funding settlement. The pre-COVID settlement extended to 2023−24, so the announcement for 2024−25, a budget of £160.1 billion, represents entirely 'new' money in the sense that there is no pre-existing baseline for it to be compared against.

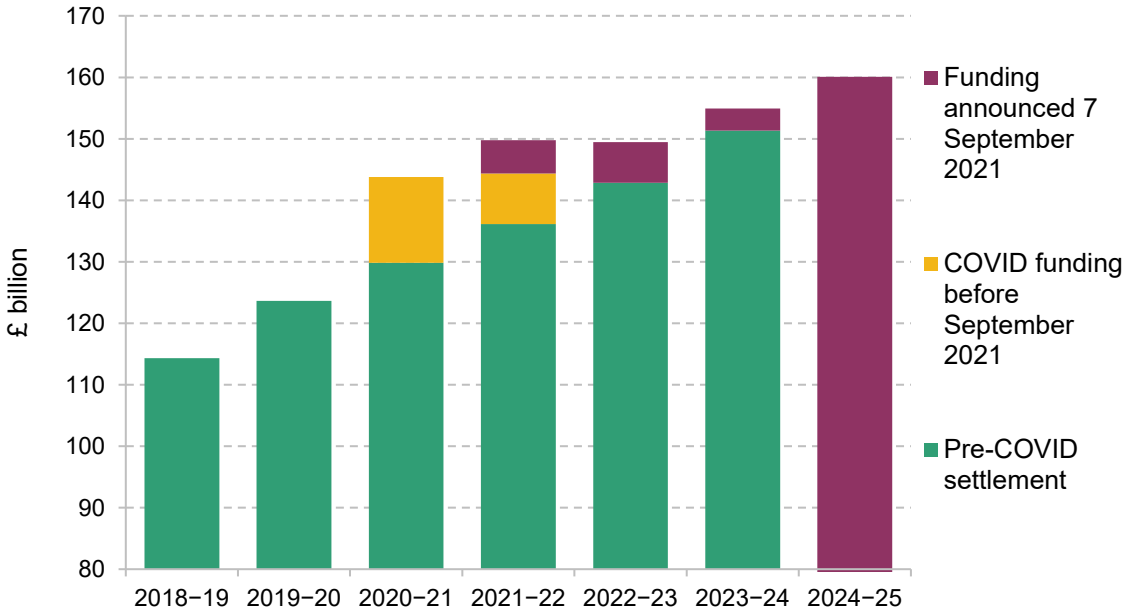
Figure 6.25 shows that the new funding settlement is more generous than the one it replaces, to the tune of £6.6 billion in 2022−23 and £3.6 billion in 2023−24. But, importantly, the new settlement for 2024−25 implies that the NHS England budget will return to its pre-pandemic spending trajectory. Under the funding settlement that pre-dated the pandemic, NHS England funding was planned to grow at an average real annual rate of 3.9% over the five years between 2018−19 and 2023−24.[14] Over the six-year period from 2018−19 to 2024−25, funding is still set to grow at an average real annual rate of 3.9%. That would suggest an extension of the long-term plan, and thus a similar amount of NHS funding to what might have been expected pre-COVID.

[13] The 7 September announcement also included funding to compensate public sector employers for the cost associated with the increase in employer National Insurance contributions, but this funding is in addition to the DHSC numbers discussed here.

[14] Note that this exceeds the 3.4% real-terms increases announced by Theresa May in 2018 due to top-ups to the budget since then, and changes to the inflation forecast (lower inflation means that the same cash budgets imply faster real-terms growth).

This implies minimal additional virus-related spending on the NHS after that point. Note that 3.9% average growth is slightly above the long-run average of 3.6% growth in UK health spending discussed earlier, and well above the 1.2% per year seen between 2009−10 and 2018−19, but well below the average 6.0% seen under the Blair and Brown governments.

Figure 6.25. NHS England resource funding under September 2021 settlement



Source: HM Treasury's PESA 2021, DHSC's 2020–21 Revised Financial Directions to NHS England, HMG's Build Back Better: Our Plan for Health and Social Care (September 2021).

Is it enough?

This begs the question: is it enough? Will this additional funding be enough to meet short-term COVID pressures, enough to return the service to its pre-pandemic level, or enough to 'build back better' and return to meeting constitutional targets that were being missed pre-pandemic?

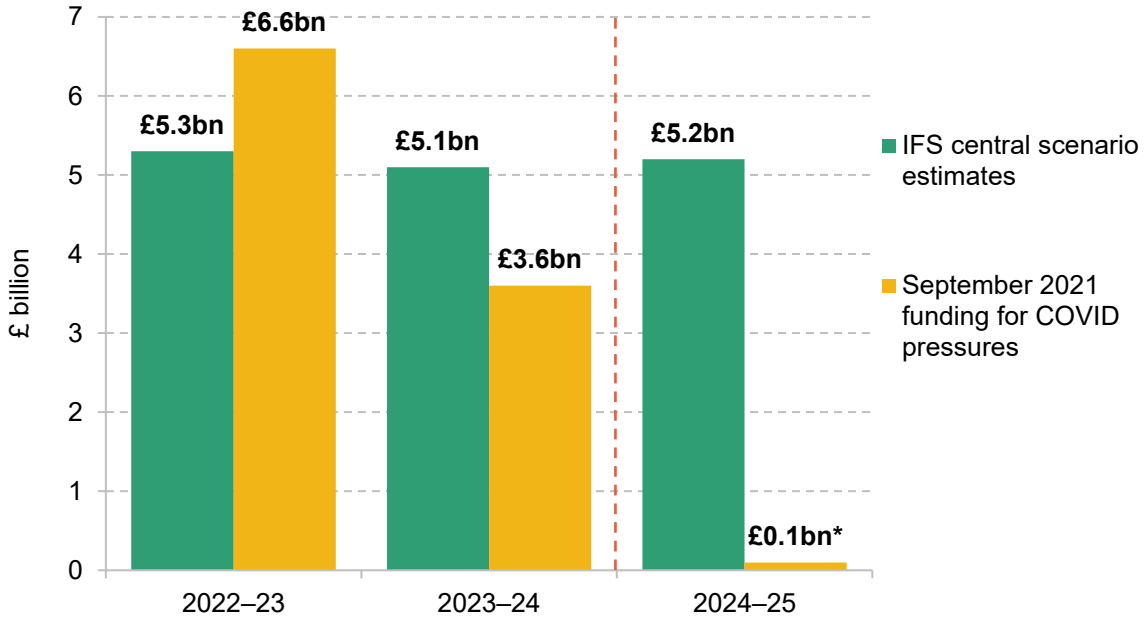
NHS England

We first consider 2022−23 and 2023−24, where the new funding can be viewed as a top-up to pre-pandemic plans, and thus genuinely 'additional' funding to deal with pandemic-related pressures. In our central scenario, we estimate that the pressures on *overall* health spending will amount to around £9.1 billion in 2022−23 and £6.2 billion in 2023−24. Within that, NHS England faces pressures of £5.3 billion in 2022−23 and £5.1 billion in 2023−24 (the remainder is for non-NHS items such as Test & Trace and procurement of PPE). The government's new funding announcement gives NHS England £6.6 billion and £3.6 billion over those two years: almost exactly what our central scenario suggests the NHS would need in total (£10.4 billion under our estimates, compared with £10.2 billion announced). This is shown in Figure 6.26. We

therefore judge that, based on our analysis, the government has provided enough funding in the next two years for the NHS to meet the pressures it faces.

The pre-COVID NHS settlement only went to 2023−24 which makes it harder to evaluate the funding announced for 2024−25. The figure was announced as £5.6 billion of 'additional' funding, but this assumes that NHS funding would have stayed constant in real terms compared with 2023−24. The pre-COVID plan increased NHS funding in real terms each year to account for growing demand due to demographic pressures and other cost pressures. If we instead assume that funding would have grown in real terms by 3.6% in 2024−25 (the long-term average rate, and close to average growth under pre-COVID plans), the NHS's budget would have been £160.0 billion in that year. This is almost exactly the figure that has been announced by the government (£160.1 billion). That suggests that the NHS budget is to return to its pre-pandemic trajectory, implying next-to-nothing in the way of additional virus-related funding (just £0.1 billion, under our assumed counterfactual, as shown in Figure 6.26).

Figure 6.26. Estimated NHS COVID pressures compared with new announcement



* This assumes that NHS England funding would have grown in real terms by 3.6% in 2024−25, in line with the long-run historical average and the 2018 NHS funding settlement. Relative to a counterfactual where NHS spending was held flat in real terms between 2023−24 and 2024−25, the government's latest announcement equates to a £5.6 billion funding increase (which is the figure used in government documents).

Source: Authors' calculations using all sources in Section 6.4 and HMG's Build Back Better: Our Plan for Health and Social Care (September 2021).

In our central scenario, we estimate that COVID pressures will cost the NHS £5.2 billion in 2024−25. Given that the government appears to have provided virtually nothing in that year for virus-related costs, this suggests that the NHS may not have sufficient funding in the medium term to meet the pressures placed upon it. That could mean that additional funding is required from 2024−25 – and history suggests that NHS spending plans are more often than not topped up (Zaranko, 2021) – or that funding may need to be found from elsewhere in the NHS budget.

One of the key purposes of this increased funding, alongside dealing with direct COVID pressures, is to deal with the backlog of elective treatment that has built up during the pandemic. As part of that, the government has announced that with this additional funding, the NHS should aim to deliver 30% more elective activity in 2024−25 than it was doing pre-pandemic, and that once the NHS has recovered from the pandemic, activity should be the equivalent of 10% higher than under the NHS Long Term Plan (HMG, 2021c).

We estimate that the government's target to increase NHS capacity to 10% above the level in the NHS's Long Term Plan would be enough to return waiting lists to pre-COVID levels within three or four years. And in our central scenario the increase in NHS funding would be sufficient to achieve this for the first two years. But with little additional funding in 2024−25 relative to the NHS Long Term Plan, it is hard to see how the NHS could maintain these large increases in volumes into the medium term. Even with extra funding, a boost to capacity on that scale will still be highly challenging, given long-standing staffing shortages and the potential need for ongoing infection control measures. If these constraints bite, and the NHS struggles to increase capacity by the desired amount, it could take longer to deal with the elective care backlog. And if they cause marginal costs of providing care to increase then even more additional funding would likely be needed to clear the backlog.

Other parts of the DHSC budget

Some COVID expenditure, in particular Test & Trace and PPE procurement, is funded from DHSC's budget directly rather than via NHS England. In our central scenario, we estimate that that this will cost DHSC £3.8 billion in 2022−23, £1.0 billion in 2023−24 (£4.8 billion over the first two years) and £0.3 billion in 2024–25 (taking it to £5.1 billion in total). To compare with the government's latest plans, we assume that the additional £5.4 billion for adult social care is spread evenly over the three years (i.e. £1.8 billion in each year). That would leave £2.8 billion and £3.6 billion for other DHSC programmes in the first two years: £6.4 billion in total, more than the £4.8 billion that we estimate would be needed. That could allow for spending increases on areas not considered in detail in this chapter, such as the new UK Health Security Agency. But in the medium term, any spare funding could be siphoned off to meet any shortfalls in NHS funding.

In sum, then, the new funding announced by the government looks to be sufficient to meet the pressures on the NHS and other parts of the health system over the coming two years. This is, of course, highly uncertain and dependent on the future path of the pandemic, but looks to be 'about right' in scale. In 2024−25, however, the latest plans seem to imply that the NHS will return to its pre-pandemic growth path, which suggests minimal additional funding for pandemic pressures. At this point, it would be a surprise if the Chancellor, or his successor, did not find themselves following the time-honoured tradition of topping up the NHS budget.

6.7 Conclusion

The NHS has faced huge pressures during the pandemic. Appropriately, this led to huge emergency increases in funding for NHS services, PPE procurement and vaccines, and for new bodies such as NHS Test and Trace. Although there are now far fewer COVID-19 patients in hospital than in earlier waves of the pandemic, this does not mean that the NHS is out of the woods. Even if COVID-19 disappeared tomorrow, its consequences for the health service – such as patients suffering from long COVID, increased demand for mental health services, the cost of catching up on missed activity, and concerns around staff burnout – would still remain for years to come.

We estimate that dealing with these pandemic-related pressures could require additional funding to the tune of £9 billion in 2022−23, £6 billion in 2023−24 and £5 billion in 2024−25. These estimates are subject to huge uncertainty, and reasonable people could disagree with our assumptions, but they indicate the broad scale of the challenge ahead. £21 billion spread over three years is a large but manageable amount – especially when placed in the context of overall NHS spending, and when compared with the £34 billion cash increase announced by Theresa May in 2018.

These estimates also provide a sense of where the largest cost pressures are likely to arise. Some of the largest estimated costs are those associated with catching up on missed activity, dealing with increased demand for mental health services, and the ongoing costs of Test and Trace while community transmission of COVID-19 remains high. Many of the direct pressures of COVID-19 – such as the treatment of patients with COVID-19 and/or long COVID – are likely to come with a smaller price tag than some of the indirect pressures caused by the pandemic.

Using this analysis, we can provide an assessment of the adequacy of the government's latest funding announcement. In our judgement, the newly announced settlement should be enough to meet pandemic-related pressures over the next two years. These figures are highly uncertain, and there is a chance that our central scenario turns out to be too optimistic (if, for instance, there is a worse-than-usual flu pandemic this winter, or a vaccine-resistant COVID-19 variant emerges).

In that case, these sums could prove to be insufficient, and the Chancellor will therefore need to continue to be prepared to provide more funding in the short term, should circumstances require it.

While the newly announced funding might suffice in the near term, the medium-term picture looks very different. The latest NHS spending plans appear to allow for virtually no additional virus-related funding in 2024−25 (or, if they do, it would likely need to be found from other parts of the NHS budget). Given the pressures that the NHS was already facing pre-pandemic, and given the historical tendency for NHS spending plans to be topped up, an upwards revision to the spending totals pencilled in for 2024−25 is the most likely eventual outcome. And even with this week's announcement and with or without any future top-up, the next few years will still be highly challenging given the risks of staff burnout, long-standing staffing shortages and other capacity limitations.

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7. What's happened and what's next for councils?

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Key findings

1 Driven by cuts in central government funding, **English councils' non-education spending per resident fell by almost a quarter in real terms between 2009–10 and 2019–20**. Most of this cut was in the early part of the 2010s, when deep cuts to grant funding were combined with a cash-terms council tax freeze. The lack of a council tax freeze in Wales, as well as smaller cuts to grant funding and Welsh councils using their ability to shift funding from education budgets, means that **Welsh councils' non-education spending per resident fell by more like a tenth over the decade**.

Impact of the pandemic

2 **Overall, the £10.4 billion in additional funding provided by the UK government more than compensated English councils for their estimated in-year COVID-19-related financial pressures in 2020–21.** However, most funding was provided on the basis of relatively rough, up-front needs assessments, and councils were only partly compensated for losses in their incomes, which varied widely. As a result, **underlying the aggregate 'over-compensation', many councils, and particularly shire district councils, were 'under-compensated'**. In contrast, the Welsh Government provided most funding on the basis of *ex-post* claims from councils, which channelled more money to those councils that reported the greatest financial impacts, but could have reduced their incentives to control costs and generate income.

3 **Additional funding is also being provided to councils in 2021–22 to help address the pandemic – but the funding announced so far will likely be insufficient to meet the COVID-related pressures.** In England, around £3.8 billion has been provided to meet higher expenditures and non-tax income losses, but councils forecast that such pressures amounted to £3.2 billion in

the first half of the year alone. We estimate that English councils could face a shortfall in their COVID-19 funding this year of £0.7 billion. This suggests **the government will likely have to provide English councils with additional funding for the second half of this financial year**. The Welsh Government will also likely have to extend its COVID-19 financial pressures compensation scheme, which expired at the end of September.

Medium-term outlook

4 The COVID-19 pandemic is likely to continue to affect councils' spending and income-generating capacity over the next few years. Even as these pressures (hopefully) abate, councils will still face underlying growth in service demands and costs. Under our central projections, English councils would need a £10 billion increase in revenues between 2019–20 and 2024–25 to maintain service levels. **If grant funding for councils moves in line with what current overall spending plans imply, council tax increases of 3.6% a year would be needed to close the funding gap** across the sector as a whole by 2024−25, increasing the average council tax bill by £160 (£77 in real terms) over the next three years. However, **councils will likely face large funding gaps over the next two years without additional grant funding** – unless COVID-19-related spending pressures almost entirely abate by the end of this year. And **uncertainty about the financial outlook is significant, with more of a risk of higher pressures than lower pressures**, not least due to the potential for further significant disruption and long-term impacts from COVID-19**.**

5 **This uncertainty means that setting firm plans for council funding for the next three years is an impossible task.** Instead, the Chancellor and DLUHC should consider setting a baseline amount of funding (plus principles for council tax increases), with a commitment to top this up in later Budgets (or even between Budgets) if necessary. That would allow councils to plan spending on their core services with some degree of certainty, provide them with a degree of assurance that funding will be forthcoming to deal with future COVID-19 surges and potential lockdowns, and minimise the risk of 'locking in' funding that may not actually be needed if COVID-19 pressures abate.

Reforms to funding, and devolution

6 England – unlike Wales – also lacks an up-to-date and coherent system for assessing how much different councils need to spend and how much they can

raise themselves via local taxes. For instance, the allocation of social care funding this year was still based on local populations in 2013. Yet since then, there have been dramatic changes in population: for example, the population of Tower Hamlets has grown by 21%, compared with a 2% decline in Blackpool. **The repeatedly delayed 'fair funding review' aims to address this and should be completed.** Numerous important decisions on the specifics need to be taken separately from the Spending Review, but **it will be easier to transition to the new system if the Chancellor greases the wheels with additional funding** given the potential large cuts some councils could otherwise face. A sensible outcome to the fair funding review would have advantages for the Treasury: by making it easier to target grant funding where it is most needed, it would help reduce the total amount that would need to be provided to councils in future fiscal events.

7 Council tax also needs to be revalued and reformed**, which could contribute to the government's levelling-up agenda**, by ending the current situation where poorer households and poorer parts of the country face taxes that are much higher shares of their properties' values. Unfortunately, the UK government seems to have set itself against reform. The Chancellor should use the opportunity of the Spending Review to at least signal a willingness to reverse this short-sighted decision. If he does not, England could be left behind by Wales and Scotland where welcome reforms to council tax are definitely on the agenda.

8 The UK government has signalled its desire to agree more devolution deals with English councils, with a particular focus on the shire county areas of England that have largely missed out on devolution so far. To help ensure both voters and the Whitehall machinery understand the division of powers in different parts of England, **the government should develop a number of devolution 'packages' rather than have completely bespoke arrangements for each area**, and ensure there is a straightforward and up-to-date central hub for information on what is devolved where.

Social care

9 Perhaps the most significant upcoming reforms for English councils are those planned for the adult social care system. These include a more generous means test, a lifetime cap on the costs people may have to pay privately, and a new right for those paying privately to have their council organise their care – and pay the lower rates councils negotiate with providers. **The £5.4 billion of**

funding the government is providing over the next three years to help roll out these reforms is unlikely to be sufficient to deliver its ambitions in full.

10 **By the second half of the 2020s, the reforms could require up to an additional £5 billion *every year*.** The proposals also leave unaddressed several other concerns with the current adult social care system – including low pay levels for social care workers, and highly stringent needs assessments, which contributed to large falls in the numbers deemed to need social care services in the 2010s. Addressing these issues too would cost billions more per year, and adult social care is likely to remain a financial headache for councils and the Chancellor for years to come.

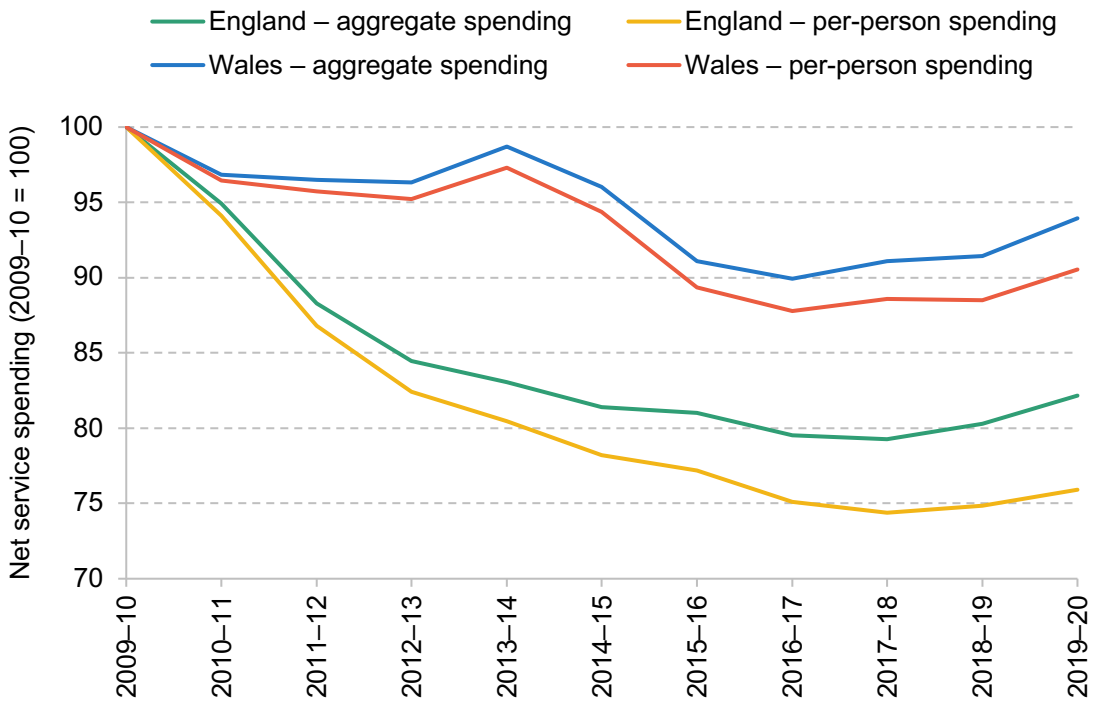
7.1 Introduction

The 2010s were a decade of major financial change for local government across the UK. In England, for example, combined revenues from government grants and local taxes fell by 15% in real terms between 2009–10 and 2019–20, in turn leading to an 18% real-terms fall in spending on non-education services (see Figure 7.1). After accounting for population growth, the fall in spending per person was even larger: nearly a quarter (24%).

Most of these cuts in England took place during the first half of the decade when large cuts to central government grants were combined with financial incentives for councils to freeze their council tax in nominal terms (hence reducing council tax in real terms by 8.5% over the six years between 2009–10 and 2015–16). Since 2015–16, cuts to general grant funding have continued, but significant above-inflation increases in English council tax rates (9% between 2015–16 and 2019–20, undoing previous reductions), combined with increases in grant funding specifically targeted at social care services, have offset most of this. Councils' net service spending was broadly flat over the second half of the decade as a result.

Cuts to local government funding have been smaller in the rest of the UK. In Wales, for example, spending on non-education services in 2019–20 was around 9% lower per person than in 2009–10 – a cut less than half the size of that seen in England. This reflects several factors including: larger council tax increases (up 22% in real terms since 2009–10 in Wales, compared with no change in England); the fact that NHS funding was less highly prioritised in Wales than in England in the early 2010s, freeing up more funding for Welsh councils; and the fact that Welsh school pupil numbers have not increased like in England, allowing more of Welsh councils' budgets to be allocated to non-education services.

Figure 7.1. Councils' real-terms net service spending, England & Wales (2009–10 = 100)



Note: See appendix A to Harris, Hodge and Phillips (2019) for details on adjustments made in England to exclude spending for police, fire and rescue, national park and education services, and other adjustments made to ensure consistency over time. See Siôn (2021) for Wales. Changes in aggregate spending account for general inflation (measured by the GDP deflator); per-person figures additionally account for population growth.

In both England and Wales, cuts in grant funding have meant an increased reliance on council tax revenues. For example, council tax revenues accounted for almost half of non-education funding in England in 2019–20, up from 40% in 2009–10 (and just over a third if we adjust for changes in how bills covered by means-tested discounts for low-income families are recorded).

The 2020s were due to be a decade of both continuity and change for local government. In terms of funding levels, 2020–21 was set to see the largest increase in funding for English councils for well over a decade: £2.8 billion, or 6.6%, in cash terms if all councils increased their council tax by the maximum allowed. This would have more than outpaced underlying increases in costs and demands, and therefore allowed councils to improve the sustainability or quality of services in at least some areas (Harris, Hodge and Phillips, 2019). Similarly, Welsh councils' overall spending power was set to increase by 4.8% – again, the largest increase in more than a decade.

In the end, of course, the UK government's fiscal response to the COVID-19 pandemic meant that the increase in funding was even larger last year. On top of previously planned increases, councils in England received around £10 billion of additional financial support specifically to

address the in-year financial impacts of the COVID-19 pandemic, and those in Wales received £0.7 billion.

Councils are being provided with additional COVID funding this year (2021−22), but in England, forecast costs between April and September will absorb nearly all of this, and in Wales, the main financial support scheme finished at the end of September. Moreover, based on the spending envelopes set out by the UK government in advance of the Spending Review, the financial outlook is likely to be very challenging. In particular, the figures imply an average real-terms *cut* in funding for unprotected departments – such as the Department for Levelling Up, Housing and Communities (DLUHC)[1] which funds English councils – of approximately 2.5% in 2022–23, which would not be undone until 2024–25 (see Chapter 5).

Significant reforms to councils' funding arrangement – including to how funding is allocated between councils in England, and to council tax in Wales – are also planned in the next few years. Councils' service responsibilities are also set to see changes, with the aim of further devolution, especially to English counties, and repeatedly delayed plans for adult social care funding finally set to be rolled out. Each of these changes will help tackle issues with current funding and service arrangements but will require careful planning and implementation. And while many of the key decisions will be taken outside the Spending Review and annual budget cycle, the decisions made by the Chancellor – for example, on overall local government funding – could help or hinder these reforms, while their successful implementation could help generate more bang for the Chancellor's buck.

The rest of this chapter proceeds as follows. Section 7.2 looks at the short-term impact of the COVID-19 pandemic on English and Welsh councils' finances, given the additional central government funding they have been provided with. Section 7.3 looks at the medium-term financial outlook, suggesting a tricky trade-off between council tax rises and cuts to service provision – especially in more deprived parts of England – unless more central government funding is forthcoming. Section 7.4 highlights why it is vital to complete the so-called 'fair funding review' for English councils, and discusses the potential for reform to council tax, which is on the table in Wales and should be in England too. Section 7.5 discusses the prospects for further devolution to English councils. Section 7.6 examines the key issues for perhaps the most significant upcoming change of all for English councils: reform of adult social care services. Section 7.7 concludes. In addition, details of the funding streams we count in our analysis of the short-term financial impact of the COVID-19 pandemic and the assumptions underlying our medium-term financial projections can be found in Online Appendix 7A. Online Appendix 7B includes further short- and medium-term analysis.

[1] DLUHC was until recently called the Ministry of Housing, Communities and Local Government (MHCLG).

7.2 The short-term impact of the COVID-19 pandemic on councils' funding

We start by examining the impacts of the COVID-19 pandemic on councils' finances in 2020–21 and 2021–22. This updates our previous analysis for England (Ogden and Phillips, 2020a, 2021) and extends it to Wales. This provides important context for the upcoming Spending Review and subsequent Local Government Finance Settlements and fiscal events, because of the potential for certain short-term impacts to persist, but also because lessons can be drawn for the response to future crises.

Councils have played a key role in helping deliver much of the public sector response to the pandemic. They have taken on new public health responsibilities to tackle the virus, playing an integral role in enforcing restrictions and contact tracing, and more recently in encouraging take-up of vaccines. They have also stepped in to support local businesses and residents, providing practical help to vulnerable families and those shielding, paying grants to local businesses and providing emergency accommodation for rough sleepers. The need for personal protective equipment (PPE) and social distancing has increased unit costs for a range of services, while demand for some services – particularly adult social care for those discharged from hospital – has risen.

The wider economic effects of the COVID-19 pandemic have also meant a decline in revenues from local taxes, although accounting rules mean that these only started affecting councils' budgets from April 2021. Reductions in income from sales, fees and charges (SFCs) as households and consumers used fewer paid-for services such as parking, leisure and cultural facilities, and trade waste schemes had a more immediate impact and one which has varied significantly across councils given their vastly differing reliance on such income.

The impact of COVID-19 on English councils in 2020–21

Focusing first on English councils, their latest estimates are that in total they spent £6.4 billion more than planned as a result of the COVID-19 pandemic in 2020–21 (MHCLG, 2021a). Half of this (£3.2 billion) related to adult social care, mostly in the form of additional funding for private sector providers to meet rising unit costs and higher reported demand, with a further 11% (£0.7 billion) spent on public health services (mostly for COVID-19 testing, contact tracing and outbreak planning). Councils also estimate that they faced costs of a further £0.5 billion associated with forgone savings or delays to projects, and that their non-tax income (from SFCs associated with their services, or commercial ventures, for instance) was £2.8 billion lower than they otherwise would have expected. This takes their total estimates of in-year pressures on their budgets in 2020–21 to £9.7 billion, as shown in Table 7.1, or £171 per person. This is approximately 17% of their pre-COVID net spending on non-education services.

Table 7.1. COVID-related financial pressures and government support for English councils in 2020–21

Pressure or support	Financial impact on councils (£bn)
Additional spending on adult social care	3.2
Additional spending on public health	0.7
Additional spending on other services	2.5
Forgone savings and delays	0.5
Lost income from sales, fees and charges	2.1
Lost commercial and other non-tax income	0.7
Total pressures	**9.7**
Non-ringfenced grants from DLUHC	4.6
Grants for public health	1.8
Support for adult social care providers	1.4
Other government grants	0.8
Estimated compensation for lost sales, fees and charges income	1.3
Other non-grant support	0.6
Total government support	**10.4**
Net financial impact on councils	**+0.7**

Note: Includes only in-year pressures reported by general-purpose authorities, based on councils' latest published forecasts. Other non-grant support includes reimbursement of costs from NHS clinical commissioning groups, recovery of costs through the benefit system and support through the Coronavirus Job Retention Scheme.

Source: See Online Appendix 7A for methodology and sources.

In addition, councils raised less than initially expected from council tax and business rates. As well as compensating for much of this loss, government also provided additional funding to allow councils to increase the generosity of discounts to council tax bills for low-income households. These losses, and the government support, are not included in our main estimates of financial pressures or support in 2020–21, as accounting rules mean that these did not affect councils' main budgets until this financial year (2021–22).

Councils received substantial additional support from government in response to these in-year pressures.[2] This included additional grant funding of £8.5 billion, of which just over half

[2] A full breakdown of this funding, and details of our assumptions, are available in Online Appendix 7A.

(£4.6 billion) was non-ringfenced funding from DLUHC to meet general financial pressures. The rest was largely to fund additional public health responsibilities (£1.8 billion) and support adult social care providers (£1.4 billion), with smaller amounts targeted at other services (such as homelessness prevention and home-to-school transport) and to provide cash and in-kind support directly to vulnerable households (such as those shielding). Moreover, we estimate councils will have received a further £1.8 billion of non-grant support, including around £1.3 billion in compensation for lost sales, fees and charges income – taking total government support in 2020–21 to £10.4 billion.

In aggregate, this support more than compensated English councils for the pandemic-related pressures they reported, to the tune of £0.7 billion across the sector as a whole. Of course, even if councils were 'over-funded' on average, this does not mean every individual council was, given that the COVID-19 pandemic impacted different councils differently. For example, as of December 2020, 35% of councils forecast increases in expenditure and losses in non-tax income in 2020–21 of more than 20% of their pre-COVID spending, while another 24% forecast a combined impact of less than 10% of their pre-COVID spending (National Audit Office, 2021).[3] Some of this variation is likely to reflect councils having made different assumptions about the course of the pandemic over the remainder of the financial year. However, it will also reflect genuine differences in spending and income pressures driven by factors outside of councils' immediate control: differences in socio-economic characteristics, the progression of the pandemic (and the more localised approach to restrictions in Autumn 2020), and their reliance on different income sources (such as SFCs and commercial income), for instance.

The government could have based its financial compensation plans directly on each council's estimates of the financial impacts of the COVID-19 pandemic. However, it instead chose to base most funding on formula-based needs assessments,[4] and to only partially compensate for reported shortfalls in SFCs income,[5] in order to ensure that councils still had an incentive to control their spending and maximise their income (albeit less of one than if they bore lost income in full). Of course, this approach also meant that councils facing above-average increases in spending and, in particular, above-average shortfalls in SFCs income were more likely to be left with a funding shortfall. For example, shire district councils – the lower tier of local government in shire county areas – on average faced forecast financial pressures of £46 per person, and received government support of only £34, leaving them with a shortfall of £12 per

[3] Unfortunately, DLUHC has not published council-level figures based on councils' final year-end estimates.

[4] Several different methodologies were used to allocate general grant funding during the course of 2020–21 (see Phillips (2020)). Eventually, a bespoke needs assessment was undertaken based on the relationship between the additional COVID-19 spending forecast by councils and their population and deprivation levels. Other grants were subject to separate needs assessments (e.g. public health funding was initially based on historical public health needs assessments but later simply on population).

[5] In particular, the scheme compensated councils for 75% of losses above 5% of pre-COVID forecasts for the period April 2020 to June 2021, covering around 60% of lost SFCs income.

person. This 'unfunded pressure' reflects their high reliance on SFCs, especially from parking and culture & leisure facilities, and is equivalent to 6.6% of their average pre-COVID budgets.[6]

In addition to the general financial support schemes available to all councils, DLUHC has allowed those facing particular financial difficulties to borrow to help cover day-to-day spending via 'capitalisation directives' (usually borrowing is only allowed for capital investment). These councils are: Croydon, Luton, Nottingham, Peterborough, Wirral, Eastbourne and Bexley (for both 2020–21 and 2021–22); Redcar & Cleveland (for just 2020–21); and Slough and Copeland (for just 2021–22).

In some cases, the support has been very substantial: Eastbourne's £12.8 million of borrowing is equivalent to three-quarters of its pre-COVID adjusted revenue expenditure, while Croydon's £120 million is equivalent to 32% of its pre-COVID adjusted revenue expenditure. Specific factors have played a role: Croydon had invested in a property development company which had hit problems; Redcar & Cleveland was recently subject to a ransomware attack; Luton owns Luton Airport; and Eastbourne relies significantly on income from tourism and conferences. However, our risk and resilience dashboard, published last year, suggests that most of the councils subsequently requiring support shared one or more of the following features: low levels of reserves, high debt servicing costs, and high reliance on at-risk SFCs, commercial and investment income (Ogden and Phillips, 2020b).

Two councils (Croydon and Slough) have issued so-called Section 114 notices, which are issued when a council is unable to balance its budget (including via use of reserves) and suspends all non-essential expenditure. The only other council to issue such a notice in over two decades was Northamptonshire in 2018. The significant amounts of financial support provided by DLUHC will have averted many more councils from having to issue such notices. In June 2020 (at which point approximately £4.2 billion of funding had been announced), for example, the BBC reported that at least five councils anticipated having to issue a Section 114 notice (BBC, 2020). However, this funding could have been better targeted and thus used more efficiently. It remains the case that a more general relaxation of borrowing rules and *ex-post* compensation of financial losses – as suggested by IFS researchers (from Phillips (2020) onwards) and, in the latter case, akin to what has happened in Wales – could have allowed the government to more closely target financial support to those councils facing the biggest financial impacts. This is an important lesson for the response to future crises. As we hopefully move into the 'recovery' phase from the COVID-19 crisis though, formula-based grant funding, combined with councils' usual tax and capital borrowing powers, is probably the best approach given the potential for more significant

[6] As shown in Figure 7B.1 in Online Appendix 7B, other types of council have received more COVID funding than their estimated financial pressures, although the scale of this 'over-funding' varies from only £4 per capita on average in London to £28 per capita in shire counties.

differences in the scale and nature of recovery measures that will be undertaken by different councils.

Impact in England in 2021–22

Turning to the current financial year, 2021–22, the government has so far announced grant funding to address COVID-19 financial pressures of approximately £3.6 billion.[7] In addition, the SFC compensation scheme was extended to partially cover income shortfalls up until June, potentially providing an additional £200 million of funding. This would take the total value of financial support to address in-year COVID-19 pressures in 2021–22 to £3.8 billion.

This is just over one-third as much funding as was eventually provided to English councils in 2020–21. In part, this is likely to reflect the not unreasonable expectation that there will be a lower level of disruption to councils' services and income-generating activities than in 2020–21 as a result of the vaccination programme and reopening of the economy. It is also possible that government is again taking an incremental approach to funding, and may announce further funding later in the year as evidence of whether it is needed becomes available, drawing on remaining funds in the Chancellor's 'COVID-19 Reserve'.[8]

However, many of the financial pressures faced by councils last year – including increases in the cost of adult social care services, contact tracing and outbreak control measures, and reduced income from parking and leisure facilities – will have persisted. As with the health and school systems, new demands for areas such as children's services and homelessness prevention may have arisen as lockdown has eased and temporary measures to limit evictions have expired.

Councils' latest estimates of the scale of pressures they will face in 2021–22 suggest that the funding provided so far will not be sufficient. As of May, councils expected to incur additional expenditure of just under £1.4 billion between April and June and just over £0.9 billion between July and September: £2.3 billion in total over the first half of 2021–22 (MHCLG, 2021a). Together with forecast losses of non-tax income of £0.9 billion, this takes councils' forecasts of pressures between April and September 2021 to just under £3.2 billion, around one-third of their estimates for 2020–21 as a whole. This would use up 84% of the COVID-related funding announced so far, meaning there is very little room left for any pressures to persist beyond September 2021. Indeed, for shire district councils, estimated financial pressures from the first

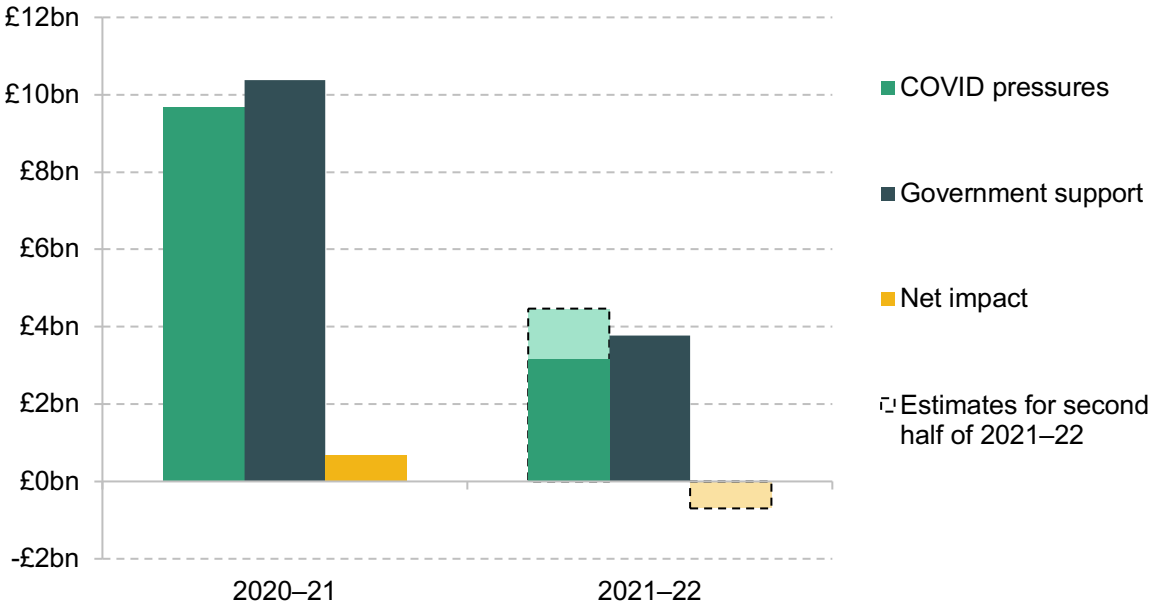
[7] A full breakdown of this funding, and details of our assumptions, are available in Online Appendix 7A.
[8] Indeed, this funding includes a Household Support Fund worth £421 million to English councils, which the government announced on 30 September 2021.

half of the year (£15 per person) are already estimated to significantly exceed the funding provided for the full financial year (£10 per person).[9]

If total pressures persist for the rest of the year at half of the level forecast for the second quarter (July to September), the total funding gap facing the sector as a whole would be £0.7 billion over 2021–22 (as shown in Figure 7.2), or £12 per person. If they instead persisted at the same level, the total funding gap would be £2.0 billion, equivalent to £35 per person. This strongly suggests that the Chancellor is likely to need to provide additional funding to English councils to cover COVID-19-related pressures in the second half of this financial year.

However, a second potential source for understanding COVID pressures in 2021–22 is councils' budgets for the year, as we may expect forecasts for ongoing costs to now be reflected in their regular budget processes. This paints a rather different picture.

Figure 7.2. Estimated net impact of in-year COVID pressures and government support for English councils, in 2020–21 and 2021–22



Note: For 2021–22, the dark green bar shows forecast COVID-related financial pressures for the first half of the financial year. The paler dashed areas show estimated impact on council finances if financial pressures persist during the second half of 2021–22 at half the level forecast for the second quarter (July to September). Government support in 2021–22 includes funding announced as of 30 September 2021, and an estimate of SFCs compensation.

[9] Figures for other council types can be found in Figure 7B.6 in Online Appendix 7B.

Councils' budget returns suggest they expect to spend an additional £350 million on COVID-19-related measures in public health and adult social care in 2021–22 (MHCLG, 2021b). These figures are significantly lower than reported in councils' COVID-19-specific financial returns, which relate just to the first half of 2021–22. Moreover, the growth in budgeted total service spending since 2019–20 is broadly in line with pre-crisis trends, suggesting little upwards pressure as a result of the COVID-19 pandemic.[10] That would suggest, on the face of it, that councils may already have sufficient funding for the remainder of 2021−22.

There may be several reasons for the discrepancy between these two data sources. First, whereas councils' initial budgets were set in March 2021, their COVID-19-specific forecasts date from May. If expectations about the continuing impact of the pandemic on councils' services worsened over these months, councils may have revised their spending estimates up. Second, additional funding of £0.8 billion was announced during March, April and May, and our analysis last year suggests councils updated their spending forecasts when new funding was announced (Ogden and Phillips, 2020a). Third, councils may be budgeting to make significant cuts to some non-COVID-19 spending. Responding to a National Audit Office survey in December 2020, 94% of single-tier and county councils and 81% of district councils stated that they expected to reduce spending on some services in order to balance their 2021–22 budgets (National Audit Office, 2021). Finally, whereas their budget returns are subject to strict legal requirements, their COVID-specific forecasts are not certified or audited. It is therefore possible that councils have over-forecast expenditures in these returns given that they have previously been used as an input into decisions by the government on whether to provide councils with additional funding.

Thus, while councils' specific COVID-19 forecasts suggest the Chancellor may need to stand ready to provide English councils with additional funding to meet ongoing COVID-19 financial pressures in the second half of this financial year, their formal budgets are less clear on this need.

The impact in and lessons from Wales

Like their English counterparts, Welsh councils have had to contend with increased spending and reduced revenue-raising capacity as a result of COVID-19.

However, the main mechanism by which funding was provided to compensate for these impacts has been very different from that in England. Rather than relying on *ex-ante* estimates of spending needs, councils in Wales have retrospectively submitted returns to the Welsh Government detailing actual expenses and income losses incurred in a range of areas. A 'Hardship Fund' has then compensated for 100% of qualifying expenditure and income loss

[10] See Online Appendix 7A for a comparison of 2021–22 budgets with 2019–20 out-turn spending.

claims, with £452 million paid out in respect of non-education claims in 2020–21.[11] By design, this arrangement has ensured that compensation equals councils' self-reported funding needs. To the extent that they consistently and accurately report these needs, this both provides Welsh councils with greater insurance than their English counterparts, and targets funding to where it was most needed. However, it also provides a stronger incentive for Welsh councils to overstate their funding needs (as the funding they receive directly depends on their stated needs) and means weaker incentives to control expenditures and maintain incomes (as any reduction in spending or increase in income would be offset by lower compensation).

The fact that reductions in SFCs have been fully rather than partially compensated for means Welsh councils were provided with £46 per person to address non-tax income losses in 2020–21, compared with £23 in England. Including an additional £138 million of ringfenced formula-based grant funding to address the impact of the COVID-19 pandemic on non-education services, the additional funding provided to Welsh councils was approximately 7% (£14) higher per person than that provided to English councils – although this includes funding provided following a decision by the Welsh Government to improve social care workers' pay and conditions.[12]

The Welsh Government was able to provide this greater degree of support for councils partly because of its lower costs for other areas of pandemic-related spending in 2020–21. Having received a COVID funding guarantee based on a population share of planned UK government spending in England, the Welsh Government allocated substantially less per person towards procurement of PPE and the devolved element of the Test, Trace and Protect programme (Ifan, 2021; Audit Wales, 2021). This meant that the Welsh Government was able to allocate relatively more funding to councils (and business support), and in addition was allowed to carry forward almost £500 million of funding into 2021–22 to bolster this year's COVID-19 response, as a result of HM Treasury waiving the usual limits on funding transfers between years.

Turning to the current year, formula-based COVID-19-related grants totalling £36 million had been allocated at the time of the final Welsh Local Government Finance Settlement, with the potential for top-ups during the year. However, the Hardship Fund has continued to be the primary means of supporting council finances during the first half of the financial year. An

[11] The Hardship Fund functioned as the primary means of supporting the adult social care sector, funding the response to excess deaths, providing homelessness support and helping with general council finances. It was later expanded to cover the costs of schemes set up in-year, including self-isolation payments to individuals and enhanced statutory sick pay for care workers. Education-related expenditure, funding and income losses for Welsh local authorities have been excluded from the analysis in this section to maintain consistency with the analysis on England.

[12] The Welsh Government provided councils with £47 million (equivalent to £15 per person) to improve care workers' pay and conditions through a one-off £500 bonus payment and statutory sick pay enhancements. A further £735 bonus payment for all health and social care workers was announced in March 2021.

initial allocation of £206 million has been made available by the Welsh Government to cover income losses and additional costs incurred up until the end of September, which would equate to £160 million for non-education services if the distribution is the same as in 2020–21. Like in England, this is around a third as much funding as was provided through the Hardship Fund in 2020–21.

Also as in England, it is likely that the Welsh Government will have to provide further support for the second half of this financial year, given it has so far confirmed funding for the Hardship Fund only up until September. It would seem to have at least some scope to do this: when its First Supplementary Budget was published in June 2021, it included £1.3 billion in unallocated day-to-day spending for 2021–22.

However, unless HM Treasury again bypasses the usual budgetary arrangements, the Welsh Government will have only limited flexibility to carry forward any unspent funds into 2022–23. From next year, funding for Welsh councils will, as for their English counterparts, depend very much on the upcoming Spending Review.

7.3 The medium-term outlook for council funding

In the Spending Review, the Chancellor is expected to set out plans for public service spending for the three years to 2024–25. These plans will in turn affect the level of central government grant funding available to councils across the UK.

It is clear that funding for councils will need to rise in real terms if councils are to maintain service provision. Even before the pandemic, they faced a range of spending pressures, stemming from demographic changes, increases in wage costs, and difficulties in raising the productivity of often labour-intensive services. The Office for Budget Responsibility is also clear that even after the immediate public health risks have abated, the pandemic is likely to leave behind a legacy of medium-term pressures on public services (OBR, 2021a).

In this section, we consider how English and Welsh councils' funding requirements are likely to change over the medium term, given changes in the likely demand for and costs of providing council services. We also consider the different ways in which councils may be able to fund this spending and, in England, the implications for different parts of the country of relying on council tax to increase overall funding levels. Full details of the assumptions underlying our projections can be found in Online Appendix 7A.

The medium-term outlook for English councils

Changes in spending needs can reflect changes in the demand for council services (e.g. the number of people in care homes funded by councils) and changes in the 'unit costs' of delivering those services (e.g. the cost per care home resident). While both can be affected by the policies of central and local government, such as eligibility rules and service standards, we focus in this section on the spending required to deliver the same level of service as in 2019–20.

As discussed above, councils' spending needs increased massively in 2020–21 as a result of the COVID-19 pandemic, and forecasts suggest they will remain substantially elevated in 2021–22. In future years, we assume there will be some ongoing impact on councils' finances as a result of the health and economic impacts of the pandemic.[13] However, these pressures seem likely to fall significantly over time, and we assume they fall to £1.5 billion in 2022–23 and almost disappear by 2024–25 (as shown in Figure 7.3). There remains considerable uncertainty over this profile, and survey evidence suggests there is not consensus across the sector as to when councils' finances are likely to recover.[14]

While the impact of the COVID-19 pandemic on council finances may recede over time, other demand and cost pressures will continue. We assume that demand for most council services, which are 'universal' and available to all residents, rises in line with projected population growth, which averages 0.5% a year over the period.[15] Other demographic trends – the ageing population, the survival of people with more complex social care needs for longer, and increases in the number of children requiring protection or care – mean demand for adult and children's social care services are likely to grow more quickly. Drawing on projections by Wittenberg, Hu and Hancock (2018), we assume demand for adult social care grows by 2.2% a year, and that growth in demand for children's social care services moves part-way back from recent rapid growth towards longer-run trends and averages just over 2.0% a year (four times the rate of overall population growth). The costs of delivering services are also likely to increase over the next few years, reflecting slow growth in productivity, increases in average earnings, and planned increases in the National Living Wage (NLW). In particular, we assume general inflation and wage pressures increase costs by an

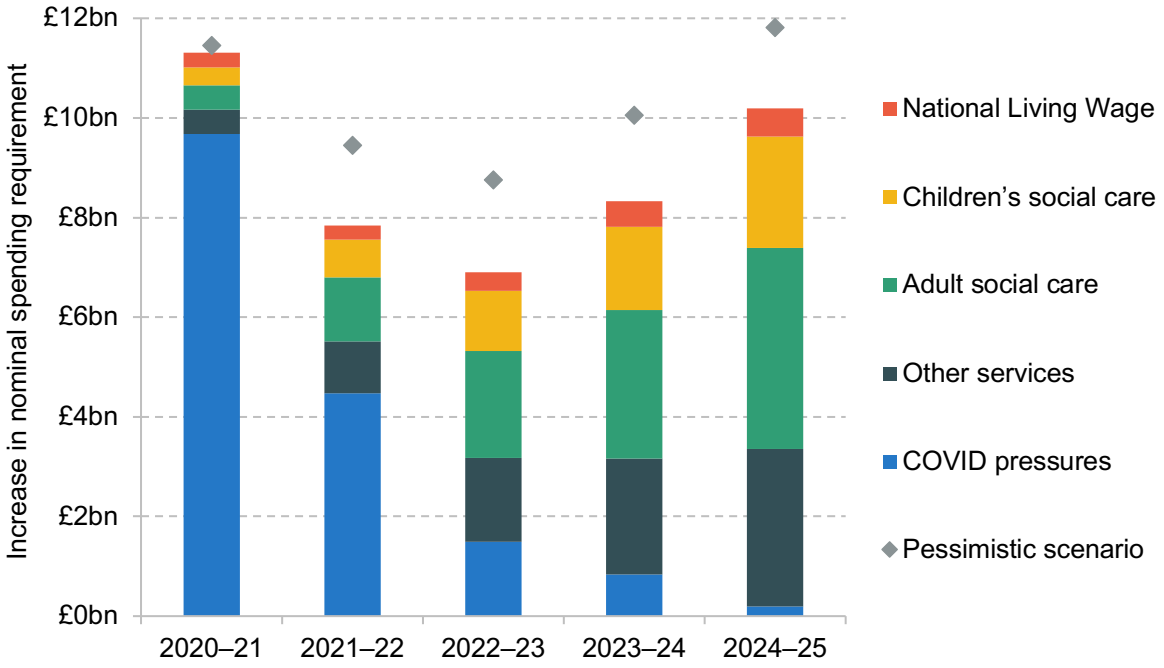
[13] Councils are likely to see increases in demands for some services, as residents affected by repeated lockdowns, job losses or rent arrears may be in greater need of support to avoid homelessness or to retrain, and the implications of long COVID for council services are still poorly understood. Some changes to how services are delivered – such as the use of PPE in social care settings – may continue, increasing unit costs. If any changes in shopping or commuting habits persist, councils' income from some sales, fees and charges (such as parking) may not fully recover for several years (increasing their net spending on services).

[14] Of those responding to a survey in December 2020 / January 2021, around half of councils did not expect their finances to recover until at least 2023–24. This includes 6% of single-tier and county councils and 17% of districts expecting this to be 2025–26. A further 27% and 35% of councils respectively indicated they did not know when their finances may return to pre-COVID levels. (National Audit Office, 2021, p. 63.)

[15] In its submission to the Spending Review, the Local Government Association (2021a) assumes demand for 'other services' (and especially housing and homelessness services) to grow substantially faster than the population, implying an increase in the population's need for these services.

average of 2.1% each year, accounting for £5.6 billion (55%) of the increase in spending required by 2024–25. We estimate the additional impact of planned increases in the NLW to be £0.6 billion by 2024–25, via direct impacts on wages in the adult social care sector.[16]

Figure 7.3. Increase in English councils' spending requirement relative to 2019–20 (£ billion)



Note: Spending requirement measures the expected cost to councils of delivering the same level of services to their residents as they did in 2019–20. 'Other services' includes all non-education services councils provide, except for adult and children's social care.

Source: See Online Appendix 7A for details of assumptions and sources.

Together, these various pressures mean that our central projection is for English councils to need to spend £10.2 billion more in 2024–25 than they did in 2019–20 to maintain service provision levels. This increase of 20.5% is equivalent to an average annual increase of 3.8%, or 1.9% in real terms.

Of course, the assumptions underlying this are uncertain, and the pressures facing councils could be several billion higher, or somewhat lower, than this. For instance, if productivity in the adult social care sector declines slightly over time (as it is estimated to have done historically), children's social care demand continues to rise at recent rates (by 2.6% a year) rather than

[16] The direct impact on councils' own labour costs is minimal as local government pay scales have been set so that the lowest rung is some way above the level of the NLW. If the pay of all directly employed staff were increased in line with the the the NLW (which would be required to fully maintain differentials), we estimate this could add an additional £1 billion per year to councils' labour costs by 2024–25.

moving back towards longer-run trends, and some COVID pressures are more persistent, English councils could need a further £1.6 billion in 2024–25 (shown as the 'pessimistic scenario' in Figure 7.3).

Reforms to adult social care services announced on 7 September will also increase councils' spending. As discussed in more detail in Section 7.6, we have doubts over whether the £5.4 billion the government is set to provide between 2022−23 and 2024−25 as these reforms are rolled out will be sufficient to meet its aims in full. However, we abstract from both the additional responsibilities and funding for now, in effect assuming that councils will make improvements to provision in line with the government's aims using the funding that has been made available. In that case, the £5.4 billion would not help address underlying demand and cost pressures,[17] but neither would additional unfunded pressures arise.

But how could £10 billion of revenue be found by 2024−25?

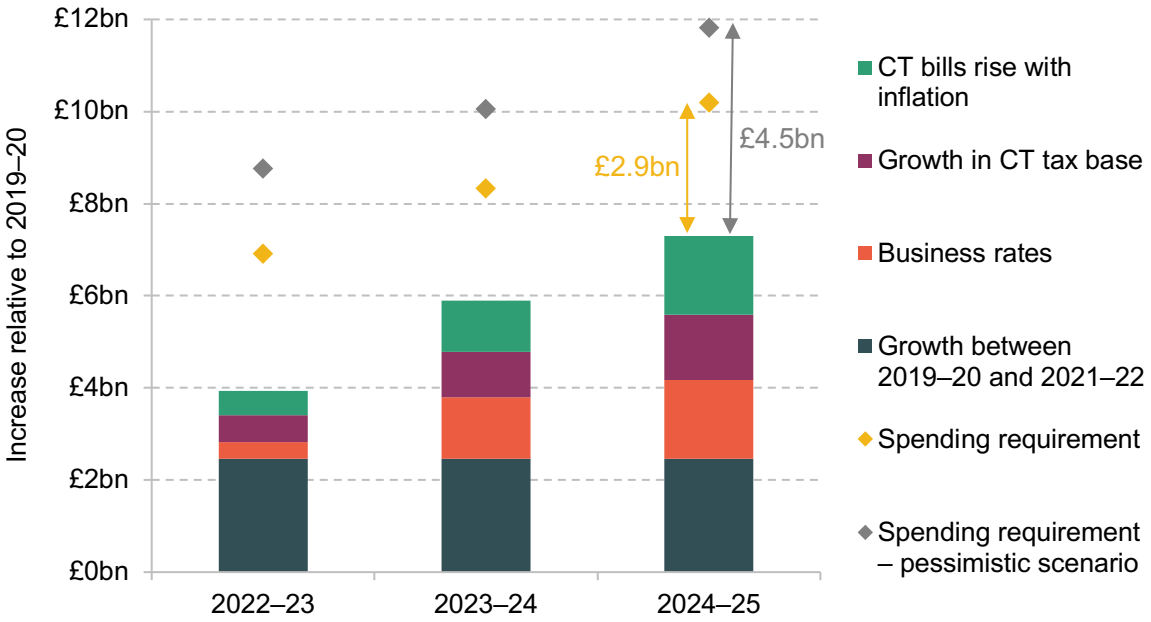
Some of the required growth has already been achieved: English councils' budgets for 2021−22 suggest their revenue from council tax, business rates and non-COVID central government grants will have increased by £2.5 billion (4.9%) compared with 2019–20.[18] The majority of this increase (£1.8 billion) is attributable to a rise in council tax revenues, as a result of large above-inflation increases in average council tax bills.

Without any change in policy, we might expect growth in business rate revenues to have increased revenues by a further £1.7 billion by 2024–25, and growth in the council tax base (effectively the number of properties liable for council tax) to raise another £1.4 billion. If council tax bills were increased in line with forecast CPI inflation (i.e. held fixed in real terms), which the OBR forecasts will average 1.9% a year, this would bring councils an additional £1.7 billion in 2024–25. Together, this would amount to an increase in revenues of £7.3 billion, leaving councils £2.9 billion short of what they would need to maintain service provision under our central scenario, and £4.5 billion short under our more pessimistic scenario, as shown in Figure 7.4.

[17] Indeed, the government's plan for health and social care states: 'We expect demographic and unit cost pressures will be met through Council Tax, social care precept, and long-term efficiencies; the overall level of Local Government funding, including Council Tax and social care precept, will be determined in the round at the Spending Review in the normal way' (HM Government, 2021, para. 36).

[18] With a further £3.7 billion of COVID-19-related funding on top, as discussed in Section 7.2.

Figure 7.4. Projected increase in councils' revenues and spending requirement since 2019–20 (£ billion)



Note: Assumes council tax bills rise each year with the OBR's forecast for consumer price inflation, and government grant funding is fixed in cash terms after 2021–22. Growth between 2019–20 and 2021–22 reflects actual changes in councils' revenues over these two years, including growth in the council tax base and levels, a decline in retained business rates revenues and an increase in grant funding.

Source: Authors' calculations. See Online Appendix 7A for details of assumptions and sources.

How could further funding be raised? Increases in business rates bills are legally capped at the rate of inflation, and while the government could increase the proportion of revenues councils get to keep (indeed, it has been planning to do so, as discussed in Section 7.4), when it has done so previously it has reduced its grant funding by the same amount. This means that there are two main ways under the current local government finance system to raise additional revenues and avoid a funding gap and cuts to service provision:

1 **Above-inflation council tax rises.** Since 2011, the government has effectively capped council tax rises by requiring a council to win a local referendum if it wishes to increase its council tax by more than a set percentage. In recent years though, it has allowed those councils with social care responsibilities to increase council tax bills by 4% or 5%.[19] As a

[19] Such councils have been allowed to increase bills by 2%, the revenues from which are unringfenced, and (since 2016–17) have been permitted an additional 'social care precept', typically a further 2% or 3%, the revenues of which have been formally ringfenced to fund adult social care services. Shire district councils, the lower tier of local government in shire county areas, have been allowed to increase their bills by 2% or £5, whichever is the greater.

result, the average band D council tax rate has increased by an average of 4.2% a year since 2015–16, 2.4% above inflation.

2 **Additional government grant funding.** The scope for increases in grant funding will be determined by the departmental expenditure limits (DEL) for departments paying grants to councils – most notably DLUHC and, via the Public Health Grant, the Department of Health and Social Care – set by the Chancellor at the upcoming Spending Review. As discussed in Chapter 5, the overall spending envelope pencilled in by the Chancellor implies that, on average, the DELs for 'unprotected' departments – including DLUHC – will decrease by 2.6% in nominal terms in 2022–23. They are then expected to grow by 4.4% in 2023–24, and to rise substantially by 10.8% year-on-year in 2024–25 (8.5% above inflation) as the growth in NHS funding slows.[20]

There is a clear trade-off between funding increased council spending through council tax rises (which directly affect billpayers) and providing additional grant funding to councils (instead of to the NHS or other service areas). For instance:

- **If councils' grant funding follows the same profile as the average 'unprotected' DEL**, councils could expect their grant funding to fall next year, but to be receiving an additional £1.4 billion in grants in 2024–25.[21] In that case, focusing on that final year, council tax bills would need to be 11.2% higher in cash terms in 2024–25 than they are in 2021–22 to meet our central projection for councils' spending needs. This could be achieved through **annual council tax increases of 3.6% each year** for the next three years, similar to the maximum allowed rises in recent years for social care authorities. This would increase the average council tax bill paid by households by £160 (£77 in real terms).
- However, recent history shows that spending on the NHS is usually higher than planned (Zaranko, 2021). **If the NHS requires top-up funding and the government returns to its previous commitment on overseas aid spending**, councils could expect only £0.3 billion more grant funding in 2024–25 than they received this year if such funding moved in line with the average unprotected resource DEL.[22] This would imply **council tax bills would have to rise by 4.7% each year**. The average council tax bill would have to be £211 higher (£128 higher in real terms) in 2024–25 than it is now.
- Even if councils do receive an additional £1.4 billion in grants by 2024−25 (as implied by the Chancellor's latest spending plans, in the absence of any future top-ups for the NHS), the cost and demand pressures facing councils could be higher. **If councils' spending**

[20] This is based on spending totals implied by the March 2021 Budget, accounting for existing spending commitments which 'protect' the budgets in some areas (such as the NHS and schools), the consequences of changes for devolved budgets (the Barnett consequentials) and the impact of recent fiscal announcements.

[21] This excludes the additional grant funding to pay for social care reforms discussed above and in Section 7.6.

[22] This assumes the NHS requires a top-up of £5.1 billion in 2024−25, and the government returns to its previous commitment of spending 0.7% of gross national income on overseas aid that year, reducing the resource DEL of 'unprotected' departments. See Chapter 5 for full details.

requirements instead grow in line with our pessimistic scenario, council tax bills would need to rise much more quickly to avoid councils facing a funding gap in 2024–25 – by the equivalent of **5.3% a year** in each of the next three years, increasing the average council tax bill by £240 (£156 in real terms).

If the government caps council tax bills at a level insufficient to meet spending pressures given the grant funding provided, councils will face a 'funding gap' and have to cut back at least some services. Some illustrative potential scenarios, based on our central projections for spending needs, are provided in Table 7.2. For instance, if councils with social care responsibilities are allowed to increase their council tax by 4% a year (and other councils 2% a year), and grant funding moves in line with average 'unprotected' DELs, our central projections imply that councils would have just more than enough funding to maintain service provision in 2024–25 (row 2). However, there would be a funding gap in each of the two years before that, given our assumption that COVID-19 pressures will persist (but shrink over time) and the much tighter short-term trajectory for unprotected DELs. For example, the projected funding gap for 2022−23 would be £2.7 billion under this scenario, equivalent to almost 5% of councils' projected spending needs.

Table 7.2. Combinations of changes in council tax bills and grant funding, and the resulting funding gaps for English councils, 2022–23 to 2024–25

	Scenario for council tax bills	Scenario for government grant funding	Projected spending needs less revenues (i.e. 'funding gap')		
			2022–23	2023–24	2024–25
1	Rise by 2% each year, with no additional increase for social care	Rises with the overall envelope for 'unprotected' departments	£3.2bn	£2.2bn	£1.4bn
2	Rise by 2% each year, plus an extra 2% 'social care precept'	Rises with the overall envelope for 'unprotected' departments	£2.7bn	£1.0bn	–£0.3bn
3	Rise by 2% each year, plus an extra 2% 'social care precept'	Rises with the overall envelope for 'unprotected' departments, but the NHS receives a £5.1 billion top-up in 2024–25 and ODA returns to 0.7% of national income in 2024–25	£2.7bn	£1.0bn	£0.7bn

Note: Central spending needs projections. ODA is official development assistance.

Source: Authors' calculations. See Online Appendix 7A for details of assumptions and sources.

The table also shows, unsurprisingly, that the funding gap would be larger each year if council tax increases were capped at 2% (row 1), and would be larger in 2024–25 if additional money was provided to the NHS and overseas aid in that year, reducing the amount available to increase councils' grant funding (row 3). The funding gap would still decrease over the next three years as COVID-19 pressures abate, but would grow in the longer term (as underlying demand and cost pressures drive trends).

It is important to note that these projections are subject to significant uncertainty. For example, if councils' spending needs rose in line with our more pessimistic scenario, then the funding gap in each scenario would be higher – by £1.9 billion in 2022–23, £1.7 billion in 2023–24 and £1.6 billion in 2024–25.

This uncertainty means that setting firm plans for grant funding and council tax increases for the next three years is an impossible task. Instead, the Chancellor and DLUHC should consider using the Spending Review and subsequent Local Government Finance Settlement to set a baseline amount of grant funding and principles for council tax increases that they consider sufficient to meet underlying demand and cost pressures over the Review period. As in the one-year 2020 Spending Round, some temporary funding to address COVID-19-related financial pressures could also be provided for the coming financial year – with a commitment to top up funding in later Budgets (or even between Budgets) if necessary. That would allow councils to plan spending on their core services with some degree of certainty, provide them with a degree of assurance that funding will be forthcoming to deal with future COVID-19 surges and potential lockdowns, and minimise the risk of 'locking in' funding that may not actually be needed if COVID-19 pressures abate.

Variation in council tax revenue-raising capacity across England

Should the Chancellor rely on additional grant funding or higher council tax bills to meet spending pressures? The answer to this question is inherently political, involving views on issues such as which parts of the population tax increases should fall on, which public services should be prioritised, and how much government borrowing is appropriate. However, one factor that will need to be borne in mind is the fact that differences in the tax bases and levels of different councils mean that a given percentage increase in council tax levels raises very different amounts in different parts of England.

For instance, whereas more than 50% of properties in the North East are in the lowest council tax band (band A), fewer than 10% of properties in the South East or London are, reflecting differences in property prices when council tax was introduced in the early 1990s (although these differences are now even bigger (Adam et al., 2020a)). This means a given level of council tax (usually quoted as the tax applied to a band D property) will raise less revenue in the North East than in the South East or London. However, while properties in London are less likely to be

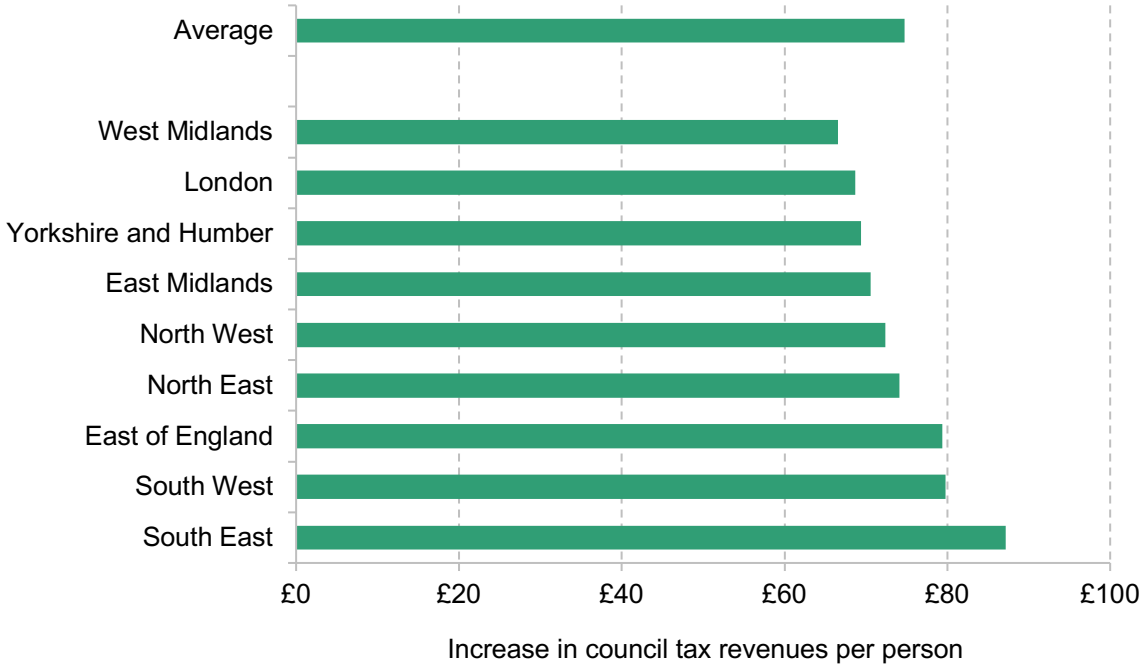
in a low tax band, councils in London set relatively low council tax levels: the average council tax bill on a band D property was £1,622 in London in 2021–22, compared with £1,898 across England as a whole. This means that a given percentage increase in council tax levels raises relatively less, compared with areas where existing levels are higher.

Together, these factors – as well as differences in the share of households eligible for discounts (such as for single adults), exemptions (such as for students) or means-tested reductions in council tax bills – drive notable differences in the revenues that can be raised through council tax rises across the English regions, and between more and less deprived areas. For example, Figure 7.5 shows that continuing to allow councils with social care responsibilities to increase their bills by 4% a year and others by 2% a year would raise an additional £87 per person in the South East by 2024–25, but only £69 in London and £67 in the West Midlands. Similarly, the same council tax rises would raise £89 per person on average in the least deprived tenth of council areas by 2024–25, compared with only £61 per person in the most deprived tenth of council areas.

This means that to fund the same growth in spending, councils in poorer areas would need to make larger-than-average percentage increases to council tax bills, which in turn would mean bigger increases in the bills levied on properties in any given council tax band, than councils in richer areas. Alternatively, they would be less likely to be able to meet their spending pressures and hence more likely to have to cut back on service spending. If the government wanted to avoid this outcome, it would have to increase the grant funding it provides to councils in poorer areas by more to offset their lower revenue-raising capacity. This is something it has done in recent years – cutting their grants by less when grants are being cut across the board, and increasing them by more when they are being increased across the board (Ogden and Phillips, 2020c).

But the government has baulked at cutting grant funding to richer areas while increasing it in poorer areas, which it might have to do if overall grant funding is broadly flat. If it does not overcome this squeamishness, councils in poorer areas may find themselves facing particular financial difficulties if the Chancellor decides council tax should continue to take nearly all the strain in meeting English councils' growing spending needs (Amin-Smith, Phillips and Simpson, 2018b).

Figure 7.5. Increase in English council tax revenues per person between 2021–22 and 2024–25 if council tax levels are allowed to rise by 4% for councils with social care responsibilities and by 2% for other councils, by region and by deprivation level



Note: Council tax revenues are by upper-tier local authority area, so in shire areas include revenues due to both the shire county and shire districts.

Source: OBR, 2021b; MHCLG, 2019, 2021d; ONS, 2020, 2021. Figures for historical average tax base growth in each area provided by officials from MHCLG.

The funding outlook for Welsh councils

A tricky trade-off between grant funding increases, council tax increases and cuts to service provision will also face the Welsh Government and councils over the next few years.

Our central projection for Welsh councils' underlying (non-COVID) spending needs are for an increase of £817 million (21.4%) between 2019−20 and 2024−25. This increase is equivalent to 3.9% each year, slightly faster than the growth in spending requirements for English councils (3.8%), with larger assumed increases in demand for children's social services only partially offset by Wales's slower population growth.[23]

Accounting for increases in unit costs because of inflation and higher wages, children's social care spending needs are projected to increase by 6.2% a year in cash terms, adult social care spending needs increase by 4.5% a year, and other services by a more modest 2.5% a year. In addition, some pandemic-related costs and income losses are likely to persist into 2022–23 and beyond, but, as in England, we assume these almost fully abate by 2024–25.

Turning to funding, as in England, the outlook for Welsh councils' grant funding will be informed by the upcoming Spending Review. If the Chancellor sticks to his indicative spending plans, the Welsh Government's core (non-COVID) funding is projected to grow by 3.9% a year, on average, over the period to 2024–25 (Ifan, 2021). Three further assumptions are made in order to project the grant funding available to Welsh councils:

1. the Welsh Government uses projected consequentials from NHS spending in England to fund equivalent services in Wales, and passes on projected consequentials from school spending in England to Welsh councils in full;[24]
2. an additional £106 million a year is passed on to councils from 2022–23 as a result of the new health and social care levy (assuming the proceeds are split between NHS Wales and councils according to the same ratio as in England) but this is met by new responsibilities and cannot be used to fund existing pressures;
3. other grant funding for councils grows in line with the rest of the Welsh budget.

Despite the slightly higher spending requirements for non-education services, the medium-term financial outlook for Welsh councils may be less challenging than that in England because of both demographics and differences in the way councils are funded in Wales. First, the school-age

[23] Demand for children's social care is assumed to increase by 3.8% a year in Wales, in line with recent trends. If we instead assumed the same growth in demand as in England (2.0%), non-education spending pressures would be expected to grow at a slower rate of 3.5% each year between 2019–20 and 2024–25.

[24] The Welsh Government typically pledges to pass on funding received as a result of increases in English health spending to the Welsh NHS. Welsh councils fund nearly all state schools in Wales, with the vast majority of this funding being from their unringfenced Revenue Support Grant.

population in Wales is projected to fall by 2% between 2019–20 and 2024–25 but the Welsh Government will receive its population share of funding increases for English schools – where pupil numbers are expected to remain broadly flat – under the Barnett formula. Of course, any cost savings will depend on the extent to which decreased demand for school places feeds through into lower inputs, such as the size of the schools' workforce. Nevertheless, since most funding for schools is provided to councils as part of their general grant funding, councils in Wales could potentially fund pressures in other service areas using funding that is notionally for schools. In this context, when education spending is included, Welsh councils' spending needs are projected to grow by a more manageable 3.1% a year (in nominal terms), under our central projections.

Table 7.3. Combinations of changes in UK government spending plans and schools consequentials scenarios and the resulting funding gaps for Welsh councils, 2022–23 to 2024–25

	Scenario for UK government spending plans	Scenario for schools consequentials	Projected spending needs less revenues (i.e. 'funding gap')		
			2022–23	2023–24	2024–25
1	March 2021 spending envelope, plus September announcements	Treated as general council funding	£34m	£36m	–£1m
2	As in row 1	Passed on to schools in full	£319m	£335m	£310m
3	As above, but English NHS receives a £5.1 billion top-up in 2024–25 and ODA returns to 0.7% of national income in 2024–25	Treated as general council funding	£33m	£36m	£126m
4	As in row 3	Passed on to schools in full	£319m	£335m	£437m

Note: Council tax bills are assumed to grow by 2.0% each year in all scenarios.

Source: Authors' calculations. See Online Appendix 7A for details of assumptions and sources.

In such a context, annual council tax increases of 2.0% for the next three years would be sufficient to avoid a funding gap for Welsh councils in 2024–25,[25] much smaller than the increases in England (3.6%). Central government grants are a particularly important source of revenue for Welsh councils – accounting for 80% of total revenues compared with 17% in England. As a result, the funding outlook for Welsh local authorities is more sensitive to changes in central government

[25] This assumes that councils could reallocate any funding received as a result of Barnett consequentials received in respect of English schools spending that is not needed by Welsh schools to other services from 2020–21 onwards. If we instead assume that they are only able to shift such funding from 2022–23 onwards, the increase in council tax would have to be 4.7% a year.

funding and, by implication, UK government spending plans than for their English counterparts. As shown in Table 7.3, councils would still face a small funding gap in the intervening years (row 1).

However, like in England, there is significant uncertainty. As well as the potential for both COVID-19 pressures to persist to a greater extent and underlying demands and costs to rise more, Welsh Government and UK government policy will matter. For example, if the Welsh Government required councils to pass on funding triggered by schools spending in England to Welsh schools in full, Welsh councils would be unable to transfer funding to help meet their other spending pressures. In that case, annual council tax increases of 2.0% would imply a funding gap of £310 million (equivalent to 4.0% of their funding requirement) in 2024–25 (row 2). Bills would need to increase by 8.3% a year to avoid a funding gap in the final year. If, as discussed in Chapter 5, the NHS requires top-up funding and the UK government returns to its previous commitments on overseas aid spending, Welsh councils would face a funding gap of £437 million (equivalent to 5.6% of funding requirements) in 2024–25 if council tax bills rose by only 2.0% a year (row 4). Council tax bills would need to rise by 10.6% a year to meet spending needs in 2024–25 under this scenario combination.

7.4 Funding reform

As well as a potentially challenging outlook for funding *levels*, councils in England and to some extent Wales are set to face important reforms to their funding *systems* and to the scope and nature of their service responsibilities over the next few years. In England, long-delayed reforms to how funding is allocated between councils may begin to be implemented in 2023, something which is long overdue but will involve a range of challenges, not least how to transition to new allocations, which could in some cases differ from current ones by 10%, 20% or even more – and especially so in what could be a tight funding environment. And while the UK government unfortunately seems unwilling to reform the absurdly out-of-date council tax in England, the Welsh Government is committed to its reform, with the aim of making the system 'fairer' and more progressive: details are expected soon.

Many of the key decisions will be taken outside the Spending Review and Budget. However, the decisions the Chancellor takes on funding allocations, and his openness to reform of England's local tax system, will play a key role in determining both the ambition of reforms and the potential to smooth their introduction with extra cash. At the same time, reforms that enable funding to be better targeted at areas where it is most needed while maintaining councils' financial incentives to boost growth and tackle spending needs will help ensure the biggest bang for the Chancellor's buck.

The English fair funding and business rates retention reviews

England currently lacks up-to-date formulas for assessing the relative spending needs of different councils. This has had unfortunate consequences during the COVID-19 pandemic.

In particular, it meant that the government used estimates of spending needs from 2013–14 (calculated using formulas initially devised in the mid 2000s) to allocate the first tranche of COVID-19 funding to English councils last April[26] and to allocate social care funding to councils in the 2021–22 Local Government Finance Settlement (MHCLG, 2021c). Since 2013–14, the overall and older adult populations have changed in drastically different ways in different council areas, and other factors (such as the health and wealth of residents) will have changed also, so such estimates are increasingly arbitrary and unrelated to contemporaneous needs (Phillips, 2020). For example, while the overall population of Tower Hamlets is estimated to have increased by 21.3% between mid 2013 and mid 2020, that of Blackpool is estimated to have fallen by 2.3%, while the change in the number of adults aged 80 or over is estimated to vary between –13.4% in Barking & Dagenham to +35.6% in Hart in Hampshire.

There is also currently no agreed method to weight the spending needs assessments for each service area to arrive at an overall assessment, or to calculate the revenue-raising capacity of each council. Of course, reasonable people will disagree on the weights and how much to offset differences in how much councils can raise themselves. But the lack of a framework such judgements can be plugged into means that England currently lacks a rational basis for allocating funding between councils, and a way of properly addressing the concern illustrated in Figure 7.5 above: that spending needs and revenue-raising ability are generally negatively correlated (so that, for example, poorer areas typically have both higher needs and lower revenue-raising capacity).

It was not meant to be like this. The so-called ‘fair funding’ and business rates retention reviews were launched in late 2015, with the following aims:

- to update the formulas and approaches used to assess English councils’ relative spending needs and ability to raise revenues via council tax;
- to design and implement a simple and transparent system of allocating funding between councils that takes account of these assessments, with appropriate transitional arrangements at the point of introduction and when assessments are updated; and
- to reform the Business Rates Retention Scheme (BRRS) to facilitate a move from 50% retention of marginal increases/declines in revenue to 100% retention, in order to provide

[26] The guidance note explaining the allocation of the first £1.6 billion of additional funding has been deleted by the government. However, as discussed in Phillips (2020), 85% was allocated in line with councils’ assessed relative need for adult social care spending as of 2013–14.

councils with stronger financial incentives to support local growth. This included changes to how the scheme treats reductions in revenue as a result of successful business rates appeals, how revenues are shared between different tiers of local government, how insurance and redistribution mechanisms work, and the powers councils have to vary rates bills.

Initially, the aim had been to begin using the chosen formulas, funding system and reformed business rates retention scheme in April 2019. However, this was progressively delayed to April 2020, April 2021 and then April 2023 at the earliest. Plans to move to 100% business rates retention were also watered down to 75% retention after the Bill required to implement 100% retention was not resurrected following the snap 2017 general election – and a final decision on whether to go ahead at all is still to be taken.

It is understandable that the government chose not to finalise and implement the reviews during the ongoing COVID-19 crisis: both it and councils have had many more pressing things to do than consult on, respond to and finalise quite technical changes to funding arrangements. Potentially significant changes to funding could also be particularly disruptive and difficult to respond effectively to in the midst of a major crisis. It also makes sense to delay making final decisions on the future of the BRRS until the fundamental review of business rates themselves that has been commissioned by HM Treasury has been completed (HM Treasury, 2020).

However, it is vital that the fair funding review is completed so that future funding allocations can be made on a more rational basis that reflects councils' contemporaneous circumstances – not their historical (and potentially very different) circumstances. It is therefore important to ask: what are the key issues that need to be considered if the fair funding review and business rates retention reviews are to be completed? While decisions on these will be led by DLUHC rather than the Chancellor, there will be important two-way interactions between the outcomes of these reviews and the Spending Review. Clarity on the government's thinking on funding reform – even if full details are unavailable – would help councils plan for the future (Local Government Association, 2021a).

Choosing the balance between incentives and redistribution

There is no single 'right' answer to how the new funding system should be structured or how much different councils should receive. In particular, there is a trade-off between redistributing funding in line with the updated estimates of councils' spending needs, and providing councils with financial incentives to boost their revenues and to address the factors that drive spending needs. Many of the key decisions to be taken in the review relate to this trade-off, including:

- **Whether, at the point of implementation, funding is distributed so as to reflect 100% or some lower fraction of the differences between councils' estimated spending needs and their revenue-raising capacities.** Note that even a full initial redistribution of funding, if credibly one-off, would not have implications for the financial incentives that councils face to boost revenues and tackle spending needs in future.
- **The extent to which funding is redistributed in subsequent years to reflect changes in revenue-raising capacities and assessed spending needs.** The choices made here *will* affect the incentives councils face – the greater the extent to which increases in revenue-raising capacity and falls in assessed spending needs lead to reductions in funding, the weaker the incentive councils have to achieve these goals. There is therefore a trade-off between providing incentives and allocating funding on an ongoing basis in line with needs. How to balance these is partly a subjective question about priorities, but should also reflect the extent to which councils can influence their revenue-raising capacity and the drivers of spending needs.

The technical details of such arrangements will matter both for the incentives that councils will face and for the funding specific councils will receive. In its most recent consultations on the fair funding and business rates retention reviews, the government makes both sensible suggestions that help make the trade-off between incentives and redistribution less onerous, and some suggestions with more questionable rationales (MHCLG, 2018a, 2018b).[27] The final decisions taken will have implications for the wider public finance landscape too: the better the system targets funding at the councils that need it (while maintaining incentives as far as possible), the less funding the Chancellor will have to provide overall to the sector in the Spending Review or subsequent fiscal events.

Two examples help illustrate this. First, the consultation documents propose to take account of projected population growth when estimating spending needs but not when estimating revenue-raising capacity. This would penalise areas with declining populations – which are likely to be disadvantaged or struggling in other ways – and benefit those with rapidly growing populations. Second, a decision needs to be taken on whether to update the weights applied to different spending areas in overall funding decisions over time. This matters because one might expect adult social care needs, for example, to rise rapidly because of an ageing population, whereas this will not be the case for all other service areas. Accounting for such differences in projected spending need by service would channel additional funding to councils projected to see relatively large increases in their spending needs, but would not affect their incentives to tackle the factors driving these spending needs.

[27] Full responses to these consultations by IFS researchers can be found in Amin-Smith, Harris and Phillips (2019) and Amin-Smith and Phillips (2019).

Transitioning to the new funding system

Decisions the Chancellor makes could also ease or hinder transition to the new funding system and allocations.

By the earliest date the reviews will be implemented (April 2023), there will have been no proper system for redistributing funding between councils for at least 10 years. There will also have been a decade or more of accumulated business rates growth, and significant changes in the socio-economic characteristics of different council areas. Together, this means that the changes in funding allocations when the reviews are implemented could be very large for some councils. A range of analyses suggest that councils in inner London in particular could see large falls in funding following the fair funding review, given relatively large declines in their levels of deprivation in recent years, likely changes in the factors the new formulas will account for, and the reintroduction of a system accounting for council tax revenue-raising capacity (Phillips, Harris and Amin-Smith, 2018; Local Government Association, 2020). The redistribution of growth in retained business rates since 2013–14 when the new system is introduced will also see some councils lose a substantial part of their funding. For example, as of 2019–20, we estimate that eight councils (seven shire districts and the City of London) received at least 20% more funding than they would have if above-inflation business rates growth had been distributed in line with existing spending needs assessments. A further 52 (including 51 shire districts) are estimated to have received between 10% and 20% more.

Cutting councils' funding by such large amounts overnight would likely cause significant difficulties, especially for those councils with limited reserves that could be used to smooth the adjustment. Transitional arrangements will therefore be needed to implement funding cuts over a period of years. The government faces two key choices: the pace at which the transition should take place; and how to fund the transitional payments for losers from the reviews. The former should certainly be guided by the scale of funding changes the reviews eventually result in: bigger changes should have longer transitions. For the latter, the government faces a choice of whether to phase in increases in funding for the winners, perhaps in order to make the transitional scheme revenue-neutral (which is how transitional protection works for business rates taxpayers, for instance). Alternatively, it could top-slice funding from its overall budget for local government funding, spreading the cost across the entire local government sector. This would allow winners to benefit from their gains more quickly, but would mean that the losers would be implicitly funding part of the transition scheme. In either case, the trade-offs will be easier the more funding the Chancellor provides to DLUHC either in the Spending Review or in subsequent fiscal events.

How to account for COVID-19 and other major changes

As discussed above, the COVID-19 crisis has affected and is likely to continue affecting the spending needs and revenue-raising capacity of local government, necessitating continued

increases in grant funding from central government if very large increases in council tax or cuts to service provision are to be avoided. But the crisis has affected, and will likely continue to affect, different councils in different ways. For example, differences in disease prevalence and population vulnerability to disease may have led to different changes in the need for social care services across England. On the income side, different degrees of reliance on income from SFCs will mean that any medium- to long-run effects of the COVID-19 crisis on these sources of revenue will differentially affect the relative need for additional funding across different types of places.

This is a challenge for the fair funding review as the 'new' spending needs formulas will not easily be able to account for such changes. The development of formulas for social services, for example, has been a complex process, and has utilised data from several years before the COVID crisis. And even for the simpler formulas that are planned to be used for other service areas, for which data from 2020–21 could potentially be used to make updates, it is not clear that this would be appropriate: spending patterns in 2020–21 may be even less informative about future spending needs than pre-COVID patterns.

Rather than try to update spending needs formulas now, the government should instead update both the formulas and the assessments of relative spending needs (and local tax revenue-raising capacity) more frequently in future than it has previously been minded to. This would, of course, have implications for the financial incentives councils face, but the trade-off between incentives and redistribution will have changed if the changes in needs and revenue-raising capacity are larger and less under councils' control than normal.

As discussed in more detail in Section 7.6, the government will also have to consider how to update how it assesses councils' relative needs for adult social care spending, which could be quite different under a reformed system of care. This will likely require a bespoke calculation in advance of the introduction of changes, before being integrated into the general needs assessment process when formulas are more fully updated post-implementation.

Whether to increase councils' share of business rates revenues

Changes in the commercial property market that have been accelerated by the COVID-19 crisis might also prompt the government to reconsider plans to increase the rate of local business rates retention from its current 50% to 75%. Retail vacancy rates have increased substantially (British Retail Consortium, 2021) and shifts to online shopping and home working are likely to prove at least somewhat persistent (Alvarez & Marsal, 2020; Felstead and Reushke, 2020), potentially reducing demand for high-value commercial property and especially so in some city centres. Any resulting demolition or conversion of commercial property would lead to a decline in business rates revenues, necessitating additional grant funding.

As previously mentioned, HM Treasury is also conducting a fundamental review of business rates as a tax, which could potentially result in changes that make it less attractive as a source of revenue for local government. For example, efforts to make tax bills more responsive to the economic cycle would make revenues more volatile for councils, while changes to the tax base (e.g. to focus on land values rather than property in order to avoid discouraging investment) could mean rates retention provides less of an incentive for councils to support property development. A decision on whether to progress with increases in the rate of business rates retention should therefore take account of the result of this broader review, which is likely to be influenced by the Chancellor.

Reform of local taxation

Business rates are not the only local tax that need reform, though. Council tax, the other major tax collected and retained by local government, has been almost unchanged in its near-30 years of existence. In England it is still based on the same property values it was when it was first introduced: values as of April 1991. While Wales has used updated estimates of property values since 2005−06, these April 2003 values are now almost 20 years out of date as well.

In two reports last year, IFS researchers set out the case for and potential impact of revaluing and reforming council tax in England and Wales (Adam et al., 2020a, 2020b). Revaluing and particularly reforming England's council tax so that it is proportional (or at least less regressive) with respect to property value could contribute to the government's levelling-up agenda, reducing average bills across the Midlands and North and indeed much of the South West and parts of the East and South East far from London, while increasing average bills in London and its environs.[28] More proportional council taxes would also on average benefit households with lower incomes, those headed by younger adults, and those containing someone on disability benefits in both England and Wales.

Unfortunately, the UK government – like its recent predecessors – seems disinclined to revalue let alone reform council tax, despite its large majority (which makes beneficial but politically difficult changes easier), and public support from a number of its northern MPs and Conservative-leaning think tanks.[29] In a letter to the Fairer Share campaign, which argues for

[28] This would depend crucially on central government funding for different councils being reallocated in line with the updated property valuations and council tax system. If this funding were not adjusted, each council would need to raise as much council tax as now if it wanted to maintain spending. This means while some households would see their bill go up and others go down, the average bill charged by each council would be unchanged.

[29] See, for example, the letters by Kevin Hollinrake (https://www.conservativehome.com/platform/2020/09/kevin-hollinrake-conservatives-must-consider-a-proportional-property-tax.html), and John Stevenson (https://www.conservativehome.com/platform/2021/02/john-stevenson-property-tax-reform-is-key-to-levelling-up-the-country-and-the-conservatives-electoral-chances.html), as well as articles in the Daily Telegraph (https://www.telegraph.co.uk/news/2020/12/11/launching-property-research-group-mps-fight-reform-outdated/) and on Conservative Home (https://www.conservativehome.com/platform/2020/12/sam-robinson-the-case-for-comprehensive-property-tax-reform-is-long-standing-and-crystal-clear.html).

reform of council tax and stamp duty land tax, Jesse Norman, until recently Financial Secretary to the Treasury, argues that a revaluation would be 'expensive', 'controversial' and any values could be perceived as 'unfair or inconsistent as a result of in-year or regional disparities in the property market'.[30] Unless we plan to use 1991 values for evermore, the nettle of revaluation will eventually have to be grasped, with further delay meaning that the changes in bills at the eventual revaluation may be even larger. The 1991 values currently used are also even more clearly unfair and inconsistent – not only do they reflect in-year or regional disparities in the property market as of 1991, they bear increasingly little relation to property values that have changed very differently in different parts of the country over the last 30 years. Moreover, advances in computing mean automated valuation processes can significantly reduce the costs associated with valuing most properties. The UK government's timidity on this issue is therefore disappointing, especially given the focus it claims to place on reducing geographical inequalities. It means that council tax reform is unlikely to feature in this autumn's Spending Review and Budget (or indeed subsequent Budgets) – but it undoubtedly should.

In contrast, the Welsh Government has committed to reform of council tax to make it 'fairer' and less 'regressive'. The First Minister of Wales has highlighted it as an 'early priority' for the Senedd term that started in May 2021,[31] and recently suggested it could form part of a planned deal between Welsh Labour and Plaid Cymru.[32] Just how radical the reforms will be remains to be seen; however, the First Minister has said options such as replacing council tax with a land value tax or revaluing and making council tax more progressive, as analysed in the aforementioned IFS report (which was commissioned by the Welsh Government), are on the table.[33] Furthermore, Plaid Cymru supports a revaluation and moves to make council tax proportional to property value, also citing the IFS report in its 2021 Senedd election manifesto (Plaid Cymru, 2021).

The impact of Welsh reforms on the debate in England will depend not just on their nature, but also on their implementation and the political reaction to this. The political controversy around the fact that many more properties went up bands rather than down bands in Wales's 2005 revaluation (because the band thresholds were set in advance of the valuations, and prices were rising very rapidly) was likely a factor in the then UK government shelving plans for revaluation in England. A move towards a more proportional property tax would mean many more winners than losers, especially among those with low to moderate incomes. But some households – including a small number of low-income households living in highly value properties – could

[30] See https://fairershare.org.uk/response-to-fairer-share-from-jesse-norman-mp/.
[31] See https://www.wrexham.com/news/fairer-council-tax-early-priority-for-this-term-says-first-minister-204520.html.
[32] See https://www.bbc.co.uk/news/uk-wales-58618177.
[33] See https://www.thenational.wales/business/19385758.mark-drakeford-wants-council-tax-reform-tourism-levy/.

see very large increases in bills. Transitional arrangements and mitigation measures (such as deferral schemes) will therefore be particularly important for the successful implementation of reform in Wales – and whether the reforms catalyse or stymie reforms elsewhere in the UK.

7.5 Devolution deals

While we are unfortunately unlikely to see changes to local taxes in the upcoming Spending Review, changes to the areas of public spending under local government control may feature. In particular, the UK government has already highlighted devolution of additional responsibilities and associated funding streams to English councils as a key element of its 'levelling-up agenda'. This agenda is likely to be at the heart of the upcoming Spending Review, with plans expected to be set out in detail in a separate White Paper this autumn.

The last several years have seen a series of devolution deals agreed between the UK government and councils or new 'combined authorities' (covering groups of councils), largely but not exclusively in urban areas. The responsibilities and funding devolved are agreed on a case-by-case basis and vary between areas, but typically cover adult education, business support, and elements of employment support, transport funding, planning and economic development. Specific examples include:

- the Greater Manchester Combined Authority, whose various deals cover: a devolved and consolidated transport budget; bus service franchising; strategic and spatial planning; housing investment; adult education; business support; selection of projects for EU funding; joint commissioning of the Work Programme; involvement in decisions over prison and probation services; oversight of an integrated health and social care system; and the retention of 100% of business rates revenue growth (compared with a standard 50%);[34]
- the North of Tyne Combined Authority,[35] whose deal covers: adult education and the integration of skills and employment programmes; and agreement to collaborate with central government on international trade and investment, digital infrastructure and low-carbon energy;[36]
- the West Midlands Combined Authority, whose two deals cover: a devolved and consolidated transport budget; bus service franchising; adult education; business support; joint commissioning of Work Programme support for those hardest to help into employment;

[34] https://www.gov.uk/government/publications/devolution-to-the-greater-manchester-combined-authority-and-transition-to-a-directly-elected-mayor.
[35] Which covers Newcastle-upon-Tyne, North Tyneside and Northumbria.
[36] https://www.gov.uk/government/publications/north-of-tyne-combined-authority-devolution-deal.

and the retention of 100% of business rates revenue growth (compared with a standard 50%);[37]

- Cornwall Council, whose deal covers: bus service franchising; selection of projects for EU funding; agreement to collaborate with central government on reshaping further and adult education; integrating business support; promoting energy efficiency and making best use of publicly owned buildings and land; the potential integration of health and social care (although how this differs from the integrated care systems now in place across England is unclear); and the retention of 100% of business rates revenue growth (compared with a standard 50%).[38]

Estimates of the total quantum of funding devolved or subject to new joint commissioning arrangements are unfortunately unavailable, perhaps reflecting the complex and ad-hoc nature of arrangements.[39] However, allocations have been published for 'single pot' investment funding provided alongside devolution deals (around £250 million per year across the areas with deals) and, for those areas with metro mayors, from the Transforming Cities transport fund (just over £1 billion between 2018–19 and 2022–23, out of a total of £2.45 billion across England).

The former Secretary of State for Housing, Communities and Local Government, Robert Jenrick, recently wrote to English councils and combined authorities stating that they will be invited to approach the government with proposals for new or expanded devolution deals.[40] No details have yet been given on what specific responsibilities and funding may be devolved but Mr Jenrick's letter suggests two key objectives from further devolution: supporting economic recovery from the COVID-19 crisis and the government's 'levelling-up agenda' by focusing on powers and plans related to the economy and skills; and improvements in governance and service delivery efficiency and cost-effectiveness, including via joint-working, merger of services and merger of councils.

The letter also highlights there will be a focus on devolution to county areas, very few of which have agreed a deal so far. Deals will not be predicated on particular modes of local governance (e.g. directly elected mayors) or the merger of councils, but 'the nature and appropriateness of proposed governance structures will impact on the nature of the deal and the types of powers and flexibilities provided in a deal'. This suggests that by linking powers to governance and local government structures, the government may wish to incentivise (rather than mandate) changes. New unitary authorities are due to be created next year in Cumbria, North Yorkshire and

[37] https://www.gov.uk/government/publications/west-midlands-devolution-deal.
[38] https://www.gov.uk/government/publications/cornwall-devolution-deal.
[39] One of the areas for which figures are available is adult education: £810 million in 2020−21 (https://www.gov.uk/government/publications/adult-education-budget-devolved-grant-determination-letters-2021).
[40] See https://www.lgcplus.com/politics/devolution-and-economic-growth/exclusive-jenrick-sets-out-framework-to-widen-devolution-beyond-cities-15-07-2021/.

Somerset,[41] and plans are being mooted by county councils in Oxfordshire and Surrey, and district councils in the south of Essex.[42]

Until more detailed information is made available, it is difficult to say much about the potential impact of devolution on English councils or policy outcomes. A number of existing devolution deals have been evaluated, but lack credible strategies for identifying what would have happened in the absence of devolution.[43] One issue that should be addressed for both existing and any future deals is ensuring that there is clarity about what is being genuinely devolved (versus involving collaboration and consultation) and that up-to-date information is available on progress with devolution (deals often highlight ambitions to 'explore'). It is vital for accountability purposes that the electorate know which tiers of government to engage with and hold to account for different service areas. It has been difficult to find clear information about these issues when putting this analysis together, which suggests that there is some way to go in ensuring clarity.

It is also important to note that there may be a trade-off between the extent to which deals are bespoke (and based on local priorities, capacity and accountability processes) and the extent to which the electorate can understand how responsibilities are divided and shared between tiers of government in their area. Complex, bespoke arrangements may also increase the costs for central government departments and agencies in managing their interactions with local government in different parts of the country. It may therefore be useful for the government to develop a number of devolution 'packages' rather than completely bespoke deals for each area. As highlighted in a recent report from the House of Commons Housing, Communities and Local Government Committee (2021), this could be formalised in a 'framework for devolution', identifying the objectives of devolution, and the associated various packages of powers and funding streams that are considered suitable for devolution to help achieve these objectives.[44]

[41] See https://www.gov.uk/government/news/next-steps-for-new-unitary-councils-in-cumbria-north-yorkshire-and-somerset.

[42] See https://cratus.co.uk/unity-on-unitaries-the-drive-to-set-up-more-unitary-authorities.

[43] See, for example, Cornwall Council, CIOS LEP and Kernow CCG (2019) and Greater Manchester Independent Prosperity Review (2018).

[44] The report suggests that underlying such a framework should be a presumption in favour of devolution, with all policy areas potentially devolvable unless a clear and strong rationale for central control can be articulated. Furthermore, it suggests that such an approach could be formalised by adopting the 'reserved powers' model used for devolution to Northern Ireland, Scotland and Wales, where powers are automatically devolved unless explicitly reserved to the UK government. Whether such an approach is tenable is unclear though: the UK government will continue to have an interest and likely want to implement policies and spend money directly in areas such as transport, skills and local economic development. It may be easier to coordinate with local government, and avoid costly duplication or gaps in provision, if certain areas are explicitly recognised as 'shared powers'.

7.6 Reform of adult social care services

The council service that is likely to see the most significant reforms in England over the next few years is adult social care. Presently, this is subject to both a stringent care needs assessment and means-testing. Cuts to funding during the 2010s saw councils progressively raise the level of care needs someone must have to be eligible for support, contributing to a 30% fall in the numbers receiving care in their own home between 2009–10 and 2013–14 (Crawford, Stoye and Zaranko, 2021), despite the older-age population increasing.[45] The asset limits used in means tests are low and have been frozen for several years: those with assets of £23,250 or above must pay for their care costs in full irrespective of their income (although the definition of assets excludes the primary residence if care is being provided at home or a spouse or dependant still resides there). And those with sufficient assets and income can face potentially huge costs if they require costly social care for a long period of time. This is in contrast to those requiring costly medical care, which is provided free of charge by the NHS, irrespective of one's income or assets.[46]

Reforms and the quantum of funding

Reforms announced on 7 September mean council-funded adult social care services in England will still be subject to an initial means test (HM Government, 2021). However, this test will be substantially more generous: the upper asset threshold will be increased to £100,000 (from £23,250) from October 2023, meaning those with assets up to that level will be entitled to some support with their care costs if their incomes are insufficient. The threshold to be potentially eligible for full support (depending on one's income) is also increasing to £20,000 (from £14,250). At the same time, a lifetime cap of £86,000 will be placed on the amount any individual has to pay for personal care, subject to that care being deemed necessary as part of a council care needs assessment. Once eligible costs exceed £86,000, an individual's council will pay in full for any further personal care costs deemed necessary irrespective of their assets or income – although funding for accommodation and food for those in care homes will still be means-tested, and there will be the option of topping up the personal care services deemed necessary by their council. In total, the government estimates that around 150,000 adults in England will be entitled to state-funded support at any one time as a result of these two changes once they are fully rolled out.

[45] Changes to how care recipients are classified for statistical purposes in 2014–15 prevent longer-run comparisons, but numbers in receipt of care have been broadly stable since then – although in the context of an ageing population, this still represents a fall in the share of older adults receiving care.

[46] The NHS also funds some social care services on a non-means-tested basis as part of its Continuing Healthcare programme. This is available to those who are assessed by their NHS Clinical Commissioning Group as requiring both healthcare (such as services from a nurse) and social care (such as assistance with daily activities), and for which the majority of the care they require is 'focused on addressing or preventing health needs'.

The government also announced £5.4 billion of funding between 2022–23 and 2024–25 to begin the roll-out of these reforms, and help pay for several other initiatives including:

- £0.5 billion for workforce development and support, via additional certified training, a focus on mental health well-being, and efforts to improve recruitment and retention of staff.
- Investment in housing adaptations and supported housing, to support more people to live independently.
- Increased delivery of advice, support and respite services for informal carers caring for family and friends.
- The ability for those paying privately for care to ask their council to organise their care services at the same price the council pays care providers for services. As of 2016–17, for example, the Competition and Markets Authority (2017) estimated that those paying privately for a care home paid 41% more, on average, than councils for the same care home. While subsequent increases in fees paid by councils are likely to have narrowed this gap somewhat, this still suggests a significant saving for care users. We might therefore expect high take-up of this offer, and hence a significant new administrative burden for councils.
- Increases in the amount councils pay providers for services to reflect the fact that there will be less scope for cross-subsidy from those paying privately, given more will be entitled to council-funded care and those paying privately will be able to access the lower council-negotiated rates.

Taken together, this is a big ask from a funding package averaging £1.8 billion a year – around 11% of councils' net spending on adult social care services in 2019–20. Indeed, reports suggest that the costs of the more generous means test and care cost cap may amount to £2.5 billion up to the end of 2024–25 (Local Government Association, 2021b), meaning less than £1 billion a year for the other mooted increases in service provision. This is in the context of a shortfall between what councils pay for social care packages and industry estimates of minimum benchmark fees that would allow for cost recovery and what they deem an 'appropriate' profit. This shortfall was estimated at £1.34 billion across England in 2018–19 (Ogden, Phillips and Spiliotis, 2020) – a figure that increasing demand and the planned expansion in eligibility for council-funded care will almost certainly push up in future.[47] It therefore seems unlikely that the funding will be sufficient to meet the government's aims in full over the next three years.

Furthermore, the government has not published estimates of how much the reforms will cost in the longer term. However, costs will grow as more people reach the care cost cap, and the Health Foundation has previously estimated that the costs of a similar cap and higher capital threshold would amount to around £2 billion a year in today's prices once fully rolled out (Idriss et al., 2021). This excludes any increase in fees paid to providers, and the other aforementioned

[47] Even in the absence of the planned reforms, the cost was projected to grow to £1.7 billion per year by 2023–24.

improvements, which taken together could eventually push costs towards £5 billion a year, almost three times the average annual funding planned over the next three years.

The government plans to fund the reforms via earmarked tax increases – specifically, a new and unnecessarily complex 'health and social care levy' levied on employers, employees and the self-employed, and higher dividend tax rates (Johnson et al., 2021). Between 2022–23 and 2024–25, this will raise a net £36 billion,[48] most of which will go to the NHS to increase its capacity, in part to treat a backlog of care resulting from disruption due to the COVID-19 pandemic. The Chancellor seems to hope that more of the funding will be available for social care services in the longer term, although history suggests that the NHS is likely to require further budget top-ups in later years, potentially making that difficult (Zaranko, 2021).

Without further increases in central government funding to pay for the reforms, councils would face the unenviable choice between very large council tax increases (potentially requiring winning local referendums), cuts to other services, and failure to improve adult social care services in the way the government and the electorate will expect. Even if the funding required for the reforms announced is made available, adult social care services are likely to remain a financial and policy challenge for councils and the government, for three main reasons.

First, the government has been explicit that underlying demand and cost pressures – due to a growing and ageing population and rising labour costs, for example – will have to be funded from councils' core resources, consisting of revenues from council tax and business rates and existing central government grants. These pressures are likely to amount to more than 5% a year in cash terms (over 3% a year in real terms) and, as discussed in Section 7.3, the outlook for council funding over the next few years looks challenging, even if council tax continues to increase by 4% a year.

Second, while there is funding for workforce development, there is no funding for higher pay for social care workers, which an increase in provision and demand for care workers in the context of a tightening labour market may require. Each 1% increase in wages would cost over £200 million across the adult social care sector as a whole, for example, with 50–60% of this currently being associated with council-funded care (although that share will increase as a result of the reforms).[49] And, for example, the Department of Health and Social Care has estimated that raising the pay of adult social care workers to at least the bottom of the main NHS pay scale would cost around £1.2 billion per year (NHS Pay Review Body, 2021).

[48] The gross revenues are forecast to be approximately £41 billion, but just over £5 billion of this is estimated to be due from public sector employers, who will be compensated with higher funding allocations.
[49] Authors' calculations using Skills for Care (2020) data.

Third, there is no funding to enable councils to relax care needs assessments alongside the changes to financial means testing. The Health Foundation has also estimated that a funding boost of 10% to expand provision could increase the number of people in receipt of long-term care by 25% relative to current forecasts (the average cost per additional recipient would be much lower than the average cost of existing recipients as they would have less severe needs, on average), undoing around half of the decline in the number in receipt of care during the 2010s (Idriss et al., 2021). This would cost approximately £2.3 billion a year in today's prices in 2023–24, rising to £2.8 billion by 2030−31. Moreover, the Local Government Association (2021a) estimates that addressing all unmet care needs could cost £6 billion per year. Without sufficient funding, we could instead see councils respond to the costs of more generous means-testing by further tightening needs tests.

The government is still planning to publish a full adult social care White Paper later this autumn. This will flesh out the plans for the reforms already announced and, alongside the Spending Review, hopefully provide an indication of if, and if so how, the government will address underlying demand and cost pressures, low pay, and stringent care needs assessments.

Funding allocations and the role of councils

The government will also have to develop and consult on a method for how to allocate additional funding across councils. Existing social care spending needs assessments – which are already in dire need of updating, as discussed in Section 7.4 – will be unsuitable as they are predicated on the existing means-tested system. In particular, a higher share of the costs of reforms will be in parts of England where higher levels of income and wealth mean more people currently pay for their care privately. And these differences can be stark – as of 2017, for example, approximately 22% of older adults in care homes in the North East of England were paying in full themselves, compared with around 40% in the rest of the North and 62% in the South East of England (Jarrett, 2018).

The government may not have to start from scratch with this: allocation formulas for both a cap (albeit set at £72,000) and higher asset floor for those requiring residential care in a care home (albeit set at £118,000) were estimated by Vadean and Forder (2018) for a previous failed attempt to reform the adult social care system. These formulas could potentially be updated to account for the new cap and threshold levels at relatively low cost, although a full update (including using new data on care users and fees too) would be costlier and more time-consuming.

With people across the entire country paying the same 'health and social care levy', it also seems likely that government and public expectations for more consistent standards and eligibility criteria across councils will intensify. However, as highlighted by Amin-Smith, Phillips and Simpson (2018a), there is a tension between a desire for greater consistency in social care

services across England, and local government funding reforms over the last decade, which have shifted the emphasis from redistribution according to needs towards greater local revenue retention to provide incentives for revenue growth. If this tension is not addressed, councils with high and/or rising needs for adult social spending and low and/or falling revenue-raising capacity will either be unable to meet expected standards of social care services, have to cut back other services, or have to substantially increase local tax rates (which might require winning a local referendum).

One way to address the tension would be, as part of the fair funding and business rates retention reviews discussed in Section 7.4, to halt any further move towards making funding dependent on local revenue-raising capacity. The government could also potentially partially reverse course by more frequently and more fully updating the redistribution of funding as councils' spending needs and local revenue-raising capacities change.

Another way would be to move towards providing a much larger share of social care funding to councils in the form of needs-based and ringfenced funding. This is the approach effectively taken with schools funding in the mid 2000s, and would build on the growing pot of social care funding that is already ringfenced, including the Better Care Fund, Improved Better Care Fund and, soon, the proceeds of the health and social care levy. However, that would effectively remove over one-third of what councils currently spend from local control, reducing residents' say in local spending decisions. Of course, if we want greater consistency in the provision of social care services across England then a reduction in local discretion is more or less a given.

Such a change would also likely see some areas of England receive big increases and others big decreases in their relative levels of funding given that historically assessments of spending need and actual spending have only been relatively weakly correlated (Phillips and Simpson, 2017). This means any move to needs-based ringfenced funding would need to be slowly phased in to help ensure efficient adjustments are made. To the extent that this weak correlation reflects shortcomings in needs assessments or differences in efficiency as opposed to differences in service offerings, centrally determined needs-based funding might not even lead to smaller differences in service provision than existing arrangements.

At an operational level, both the newly published plans and the Health and Social Care Bill (2021–22) envision councils maintaining their central role as commissioners of the majority of state-funded social care services in England. However, they will have to work in partnership with local health bodies as part of Integrated Care Systems to agree joint priorities and integrated approaches to health and social care. To enable this, the Health and Social Care Bill will make it easier to collaborate in this way by removing legal restrictions on formal joint decision-making boards and pooled budgets that currently exist as part of the commissioner–provider split within the NHS.

The aims of integration are laudable: helping ensure people receive the most appropriate care from the provider and in the setting best suited to deliver it; earlier intervention and a focus on preventative care; and a reduced burden for health and social care recipients and their informal carers in coordinating their care. These aims will be supported by ensuring every adult in England has a single digital health and social care record to be used by the NHS, councils and social care providers. But integration is likely to take several years and significant effort and up-front investment from the government, NHS, councils and care providers as new formal structures and assurance regimes are put in place, and new collaborative working arrangements developed and put into practice.

Evidence on the extent to which integration could improve outcomes and/or reduce costs (e.g. via less-costly early intervention) is limited, and the evidence that does exist is mixed at best. For example, a review commissioned by the Department for Health (Mason et al., 2015), which examined 38 integration schemes from eight countries, found no evidence of a sustained reduction in hospital use from any of them, and in only three found a statistically significant reduction in broader secondary healthcare service usage. Of the 24 schemes for which health outcomes were evaluated, only five saw statistically significant improvements overall. Based on this and other evidence, the National Audit Office (2017) concluded that the government had 'not yet established a robust evidence base to show that integration leads to better outcomes for patients'. More recently, evidence from the devolution and integration of health and social care to Greater Manchester suggests that performance fell relative to the rest of England for most health usage and outcome indicators tracked, despite additional funding to aid integration (Williams, 2021).

Mason et al. (2015) found that poor outcomes from integration often result from difficulty in properly integrating budgets, from differences in performance frameworks and priorities, and from difficulties in linking information systems – issues the Health and Social Care Bill (2021−22) aims to tackle. However, the evidence available to date suggests that the Chancellor should not bank on savings from integration making a significant contribution to tackling the rising costs of health and social care services, and hence the need for additional funding for English councils.

7.7 Conclusion

Pre-COVID, 2020–21 was meant to be something of a financial turning point for English councils, with a sizeable boost in funding set to allow a modest expansion in service provision after a decade of austerity. Welsh councils were also set to see the biggest increase in funding in more than a decade.

In the end, the increase in funding and spending has been several times greater than anticipated as councils saw increased costs and demands and took on new responsibilities as a result of the COVID-19 pandemic. Analysis suggests that across the sector as a whole, the government provided slightly more than enough funding for English councils to address the in-year financial pressures resulting from the pandemic. In Wales, councils were compensated for most pressures on the basis of their own estimates of the scale of those pressures. However, it seems likely that later this year and almost certainly in future years, the Chancellor will have to stump up more cash for English councils to address both underlying spending pressures and the longer-term effects of the COVID-19 pandemic if he wishes to avoid an ongoing need for very large council tax rises and/or renewed cuts to service provision. The Welsh Government will likely need to do the same, although falling pupil numbers in Welsh schools may allow Welsh councils to reallocate some funding to areas with rising demand such as social services.

Reliance on council tax would raise several issues. First, more deprived areas can raise less via council tax than more affluent areas, and England currently lacks a coherent system for redistributing grant funding to compensate for this. The delayed fair funding review is designed to help tackle this, though, and concluding it should be a priority. Second, council tax is increasingly out of date and regressive with respect to property values. Increases in it fall relatively heavily on low- to middle-income households and in parts of England where property prices are low and/or have increased less than average in the last 30 years. The Chancellor could help address both issues: by providing councils with additional funding to more easily smooth the potentially large changes in funding resulting from the fair funding review; and by utilising the greater freedom of action a large majority brings to tackle the politically difficult but eventually necessary revaluation and reform of council tax. The Welsh Government has already committed to some reforms, although their nature and scale are not yet clear. The political reaction to them will matter for England too, as it could help persuade or dissuade the UK government from following suit east of Offa's Dyke.

Uncertainty about the path of the pandemic, its long-term effects, and the resulting impacts on councils' revenues and spending requirements makes setting firm funding plans for the next three years an impossible task. That suggests using the Spending Review to allocate a baseline amount, assuming some medium-term financial impacts of the pandemic (e.g. modest increases in unit costs and demand, and some additional funding for test and trace schemes), but to top up funding in later Budgets (or even between Budgets) if necessary. That will allow councils to plan spending on their core services with some degree of certainty, provide them with a degree of assurance that funding will be forthcoming to deal with future COVID-19 surges and potential lockdowns, and minimise the risk of 'locking in' funding that may not actually be needed.

At or around the time of the Spending Review, White Papers on 'levelling up' and social care reform are promised and will matter greatly for councils.

Spending on 'levelling up' is likely to be a focus of the Chancellor's narrative at the Spending Review, and further devolution of spending related to skills and economic development seems likely, especially to the shire county areas that have largely missed out so far. In doing this, it will be important to be clear how much money is 'new' and how much is rebadged or from existing centralised spending. And while there may be benefits of agreeing bespoke devolution arrangements with different areas, it may make sense for devolution deals to draw from a limited menu of options to help ensure clarity to both local electorates and the Whitehall machinery.

The main elements of planned reforms to the adult social care system – a more generous means test, a lifetime cap on what individuals must pay themselves, and the right to request councils to organise privately funded care – were published on 7 September. However, the funding promised by the government over the next three years – an average of £1.8 billion a year – to help roll out these reforms and fund other improvements in services is unlikely to be enough to deliver these ambitions in full. The Chancellor seems to hope that more of the revenues from the health and social care levy will be available for social care from 2025–26 onwards, by which point the aim is to have addressed COVID-19-related NHS backlogs – but experience suggests shifting funding from the NHS may be difficult to achieve.

Without further increases in central government funding to pay for these reforms, councils would face the unenviable choice between very large council tax increases (potentially requiring winning a local referendum), cuts to other services, and failure to improve adult social care services. And even if additional funding is forthcoming, other issues – such as raising the pay of social care workers, and relaxing the needs assessments to undo some of the previous reductions in the numbers receiving care – would cost billions per year more. Adult social care services are therefore likely to remain a headache for both councils and the Chancellor for years to come, unless substantial additional funding is found in the upcoming Spending Review.

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8. Tax policies to help achieve net zero carbon emissions

Stuart Adam, Isaac Delestre, Peter Levell and Helen Miller (IFS)[1]

Key findings

1 **Greenhouse gas emissions produced on UK soil fell 38% between 1990 and 2018 – the fastest per-capita reduction in the G7.** Over half of the reduction came from electricity getting cleaner. Emissions from international aviation more than doubled over this period.

2 **Emissions reductions will have to accelerate to reach the net zero target.** Emissions fell by an average of 1.4% of 1990 levels per year between 1990 and 2018. They will need to fall by an average of 3.1% of 2018 levels per year from 2018 to reach net zero in 2050. This will be difficult; **many low-cost opportunities to reduce emissions have already been exploited**.

3 The net zero target is based on emissions produced in the UK. **But consumption emissions are 37% higher than production emissions and have fallen by less (29%) since 1990.**

4 There are many policies that implicitly place a tax on some greenhouse gas emissions. **Overall tax rates on emissions vary wildly, including by the source of the emissions and the type of end user.** The incentives to cut emissions are therefore highly uneven. Electricity and road fuel are taxed relatively heavily per tonne of CO_2 equivalent emissions, while emissions from households' gas use and expensive personal flights are effectively subsidised relative to other forms of consumption. **This makes reducing carbon emissions more costly than it needs to be.**

[1] The authors would like to thank Przemyslaw Karpisz and Eu-Wayne Mok for excellent research assistance when writing this chapter.

5 **Renewable electricity generators receive large subsidies, paid for through substantially higher electricity prices.** The government is choosing to support specific emerging technologies, even when more cost-effective options are currently available. This approach may pay off in the long run but entails risks.

6 **The spending of the highest-income tenth of households has a carbon footprint which is, on average, more than three times as large as that of the lowest-income tenth of households.** However, the spending of poorer households is more carbon-intensive, meaning that, to the extent that policies which put a cost on emitting greenhouse gases are passed on to consumers, these costs will tend to take up a bigger share of poorer households' budgets. These policies include ones that affect the price of electricity (which has increased by over three-quarters in real terms in the past 15 years) and gas.

7 **There are clear distributional concerns with increasing the cost of emissions.** There are ways to compensate low-income households, but some households are difficult to reach: **even among low-income households, there is large variation in energy use, for example**.

8 The decision to focus energy efficiency subsidies on low-income and vulnerable households in 2013 led to a collapse in delivery of insulation projects through government schemes. **When combined with the effective subsidy for domestic gas consumption, this gives most households weak incentives to improve their energy efficiency.** Recent attempts at more general energy efficiency schemes have been short-lived and ineffective.

9 **International collaboration would help the UK reach its net zero goal.** Without it, it would be harder to apply carbon prices to international aviation. And it is difficult to see how abatement incentives can be increased for energy-intensive businesses without something – such as a carbon border tax – to tackle the risk they will relocate to countries with looser environmental policies. Seeking and facilitating international policy agreement should be a clear focus of the UK government's efforts.

8.1 Introduction

The UK has set an ambitious, legally binding target to reduce net greenhouse gas (GHG) emissions that arise from UK-based activities to zero by 2050. The 'net' in this target allows for positive emissions so long as they are offset by the removal of greenhouse gases from the atmosphere.

This chapter discusses: the progress the UK has made towards the target and the challenges ahead; the main tax and subsidy policies that have been implemented to discourage GHG emissions and encourage renewable electricity generation; the distributional concerns related to making emissions-generating activities more expensive; and the policy issues that face the Chancellor.

In Section 8.2, we show that the UK has made relatively good progress to date. UK-based GHG emissions have come down by around two-fifths since 1990 – implying a faster per-capita reduction than in any other G7 country. However, the path to net zero will require the UK to accelerate the pace of emissions reductions significantly. Moreover, most of the reduction so far has come from just three industries: energy supply, industrial processes and waste management. Home heating, land transport and agriculture have seen very small reductions to date and will pose a major challenge going forward. Aviation emissions have risen a lot since 1990, although they have stabilised in more recent years. Unlike other countries, the UK has chosen to include its share of international aviation and shipping emissions in its target, thereby making the target more comprehensive but also more ambitious.

Another challenge relates to the emissions embedded in imports. In line with international practice, these are simply ignored for the purpose of the target – i.e. the UK could reach 'net zero' but its consumption of imported goods could still be associated with a high level of emissions. This is a significant issue: emissions associated with UK consumption (including imports and excluding exports) are currently 37% higher than production-based emissions (the basis of the target).

This underlines that the challenge of climate change is a global one. The UK could reach its net zero target and that would have only a marginal effect on total global emissions – it might even increase them if UK policies lead to emissions-generating activities moving to countries with looser environmental policies. One policy solution that is currently being discussed as a way to reduce consumption-based emissions and prevent emissions from simply relocating across borders is to add a tax on imports based on their embedded GHG emissions. The European Commission has proposed a specific Carbon Border Adjustment Mechanism. This would require (or at least function more successfully with) wider international coordination. While we focus mainly on domestic policies in this chapter, the UK's role in helping to design international

polices, generating new technologies, and helping encourage mitigation in other countries will be vitally important for tackling global emissions.

There is a wide range of policies – including regulations, bans, grants and planning rules – that the government uses to influence GHG emissions. We summarise in Section 8.3 the main tax and subsidy policies the government operates to try to curb GHG emissions in a number of key sectors and we show in Section 8.4 how these translate into implicit taxes on GHG emissions from various sources and a set of subsidies for renewables. Rather than adopting a uniform carbon price across sectors, successive governments have introduced a patchwork of policies that tax or discourage emissions in various ways. The overall effect is far from transparent and often inconsistent. In summary, existing policies act, in most cases, to increase the cost of generating emissions when burning fossil fuels (either directly – for example, in some manufacturing processes or as transport fuels – or in the generation of electricity) or when creating landfill (which produces methane) – but the extent of the disincentive varies enormously according to the source of the emissions. There are also large subsidies for renewable electricity generation which are directly funded through charges on electricity supply.

In the case of both the taxes and the subsidies, it may superficially look like the government is simply placing a price (through taxes and subsidies) on emissions and allowing market forces to determine the cheapest ways to cut emissions. In fact, to a very large degree, the government is effectively choosing where to incentivise the greatest reduction in emissions and which renewable technologies to support (in recent years, this has involved concentrating support on offshore wind generation). One of the major policy trends over the last decade has been a much more interventionist approach to determining the UK's energy mix. Picking winners in this way may help emerging technologies mature and become more cost effective, but carries risks.

One of the biggest concerns with designing policies to tackle climate change is, justifiably, their distributional consequences. The large increase in the price of electricity over the last 15 years partly reflects the impact of the government's climate policies. By itself, this will have been regressive – low-income households spend proportionately more on energy, although these households also receive help with their energy bills and in installing energy efficiency improvements. The recent increases in gas prices, and the hardship they may cause, starkly illustrate the importance of these issues when considering measures such as applying higher taxes to domestic gas. Setting a clear path for policy in this area, alongside temporary assistance, would give households and businesses time to adjust to permanently higher gas prices. Schemes that compensate people for permanently higher prices can be designed to protect the poorest while still incentivising emissions reductions, but some types of households will be difficult to target help towards. We discuss this in Section 8.5.

Dealing with GHG emissions is a difficult area of government policy. There is a large amount of uncertainty, including about what the most appropriate target is, how technology (such as carbon capture and storage) will develop in future, how to design policies, and what effects they will have. Various governments have made a choice about how far, and by when, to reduce UK net emissions (choices that implicitly contain judgements as to how the costs of emissions reductions should be shared across generations). Choices have also been made – at least implicitly – about how to achieve the emissions reductions to date. We cannot say exactly how the burden of policies will have been shared across different types of households, but they will, ultimately, have been borne by households. Many more choices lie ahead. We discuss some of the options faced by the Chancellor in the Conclusion (Section 8.6), where we argue that policy decisions should be taken actively, with care, and subject to scrutiny. They will shape living standards for decades to come.

8.2 Progress towards the UK's net zero target

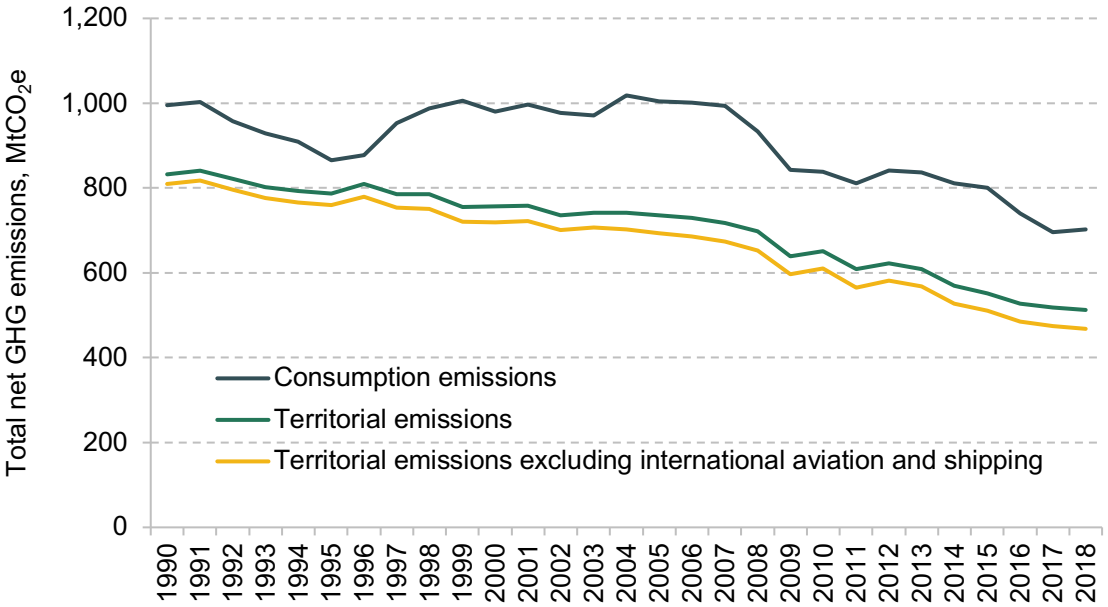
Total emissions since 1990

The UK's emissions have fallen steadily since 1990, even as its economy and population have grown. However, the extent to which they have fallen depends on exactly how GHGs are measured. Figure 8.1 shows the UK's net total GHG emissions under three definitions (in this and later figures, total emissions are measured in tonnes of *CO_2 equivalent (CO_2e)* so as to include other greenhouse gases such as methane, nitrous oxide and hydrofluorocarbons).

Since the 1992 UN Framework Convention on Climate Change, national emissions have been reported on a production (or territorial) basis – i.e. based on emissions that take place on a country's soil. This means that national emissions targets are conventionally set according to this measure. This definition includes emissions generated in producing goods and services for export to other countries and from the burning of fossil fuels that are imported, while excluding emissions embedded in imports and emissions generated when burning the fossil fuels that a country exports.[2] It also excludes emissions from international aviation and shipping. The UK's territorial emissions on this definition fell by 42% between 1990 and 2018.

[2] In principle, the UK could be viewed as responsible for both of these excluded sources of emissions. Since the UK exports roughly the same quantities of fossil fuels as it imports, the exclusion of emissions associated with exported fossil fuels is less important for the UK's current emissions, though it would affect how they changed over time. The UK became a net exporter of primary oils in 2020, for the first time since 2004, but remains (barely) a net importer of natural gas (Department for Business, Energy and Industrial Strategy, 2021a).

Figure 8.1. Annual production- and consumption-based GHG emissions in the UK, 1990–2018



Note: $MtCO_2e$ refers to megatonnes of carbon dioxide equivalent.

Source: Territorial emissions are from table 8.1 in Department for Business, Energy and Industrial Strategy (2021a), and international aviation and shipping emissions are from table 6.1 in the same source. Consumption emissions are from Department for Environment, Food and Rural Affairs (2021).

In April 2021, the UK unilaterally chose to include its share of international aviation and shipping emissions, alongside these territorial emissions, in its net zero target.[3] This addition serves to make the UK's target more ambitious than it already was, and especially so given these sectors are relatively hard to decarbonise. On this measure, which is now the most relevant for judging the UK's progress towards its 'net zero' target, emissions have fallen slightly more slowly – by 38% since 1990.

However, the UK's net zero target is still primarily based on territorial emissions and this raises a problem: stricter environmental regulation or higher environmental taxes in the UK might drive polluting activities offshore and increase the UK's imports of carbon-intensive goods. This would help the UK achieve its own targets, but without reducing global emissions, which are, of course, what ultimately determine the amount of global warming. We return to discuss the policy implications of possible 'carbon leakage' in Section 8.4.

[3] These emissions are calculated using fuel sales in the UK (Climate Change Committee, 2020a).

Figure 8.1 also shows the UK's emissions on a consumption-based measure which captures all emissions generated in the production of goods and services ultimately consumed in the UK.[4] The first thing to notice is that the UK is a net importer of carbon – the emissions related to UK consumption are greater than those from production in the UK. This is unsurprising as the UK is a net importer of goods and a net exporter of services and this is likely to continue to be the case in future. The second thing to notice is that consumption-based emissions fell by 29% over the period 1990−2018: a large fall but a significantly smaller reduction than either measure of production-based emissions. The exclusion of imported emissions in the UK's targets has therefore served to flatter the UK's progress in reducing its consumption-based carbon footprint over the last few decades. In particular, consumption-based emissions were relatively stable until the start of the recession induced by the financial crisis, even as production-based emissions fell. In 2008–09, consumption emissions began falling more rapidly – primarily due to a fall in emissions embedded in imports. They have fallen at a rate similar to production-based emissions since.

International comparisons of emissions

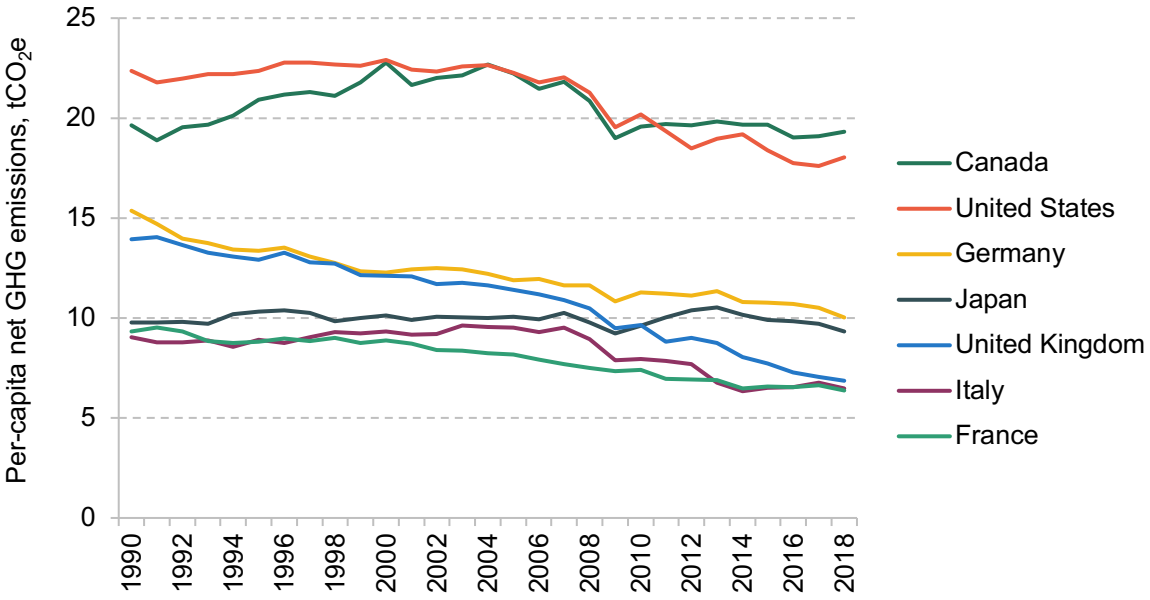
The UK's emissions reductions, at least when measured on a production basis, have been relatively rapid when compared with other rich countries. Figure 8.2 shows that per-capita emissions from UK production fell faster over the period 1990–2018 than those for any other country in the G7. Here we use an internationally comparable measure of emissions, which excludes emissions from international aviation and shipping. In 1990, the UK's per-capita emissions under this measure were in the middle of the G7: similar to Germany's, and around 50% higher than in France and Italy. By 2018, the UK had closed most of the gap with the lowest-emitting G7 countries. In that year, net GHG emissions from UK-based activities were 6.9 tonnes of CO_2 equivalent per person compared with 6.5 tonnes in Italy and 6.4 tonnes in France. This compares with per-capita emissions of 18 tonnes per person in the US and 19 tonnes per person in Canada.

Territorial emissions by source

To understand what drove the fall in the UK's emissions over this period, Figure 8.3 shows the breakdown of UK territorial emissions by source. Table 8.1 shows the percentage changes in emissions for each sector, and their contribution to the overall reduction in emissions between 1990 and 2018.

[4] A further difference between the consumption and territorial emissions measures shown in Figure 8.1 is that the consumption measure is also residency-based, and thus includes emissions associated with UK residents that take place abroad, while excluding emissions from overseas visitors in the UK. Estimates of residence-based production emissions are also published but the difference between these and territorial emissions is small (Office for National Statistics, 2019).

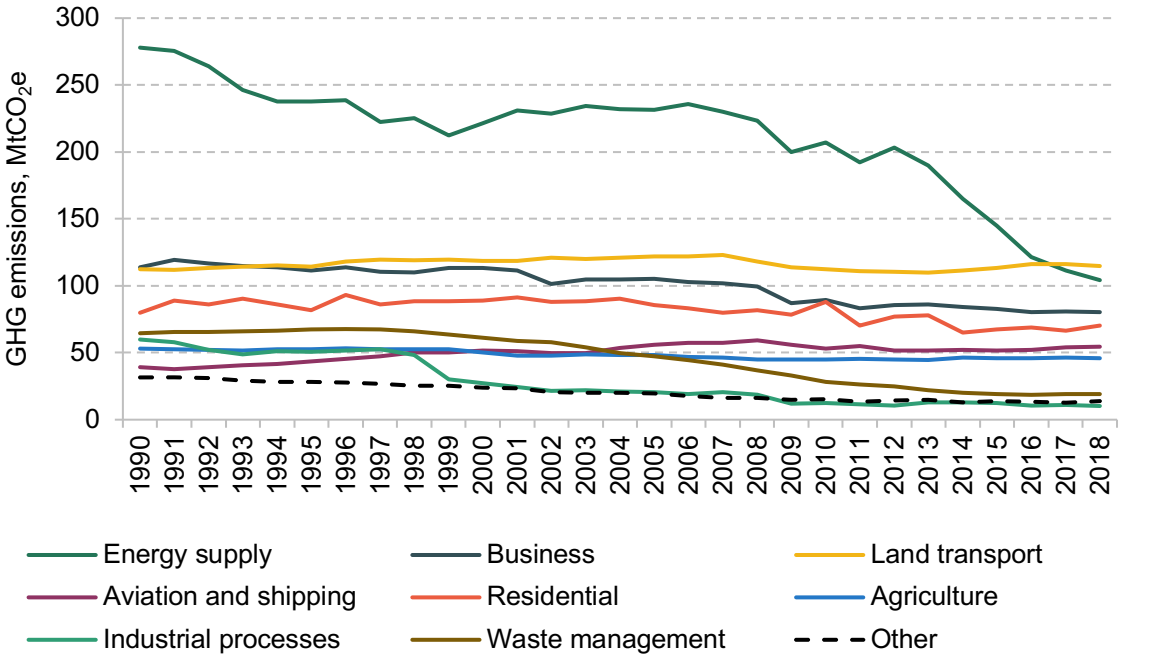
Figure 8.2. Per-capita annual territorial GHG emissions in G7 countries, 1990–2018



Note: Emissions include land use, land use change and forestry. They do not include emissions from international aviation and shipping. tCO_2e refers to tonnes of carbon dioxide equivalent.

Source: Authors' calculations using data from OECD.

Figure 8.3. Annual GHG emissions by source, 1990–2018



Note: The category 'other' includes the public sector and land use. $MtCO_2e$ refers to megatonnes of carbon dioxide equivalent.

Source: Department for Business, Energy and Industrial Strategy, 2021a.

Table 8.1. Size of changes in emissions by source

Sector	Share of emissions, 2018 (%)	% change between 1990 and 2018	Contribution to fall in total emissions (%)
Energy supply	20.3	–62.5	54.2
Industrial processes	2.0	–82.9	15.5
Waste management	3.7	–70.5	14.2
Business	15.7	–29.4	10.4
Other	2.7	–56.6	5.6
Residential	13.7	–12.4	3.1
Agriculture	8.9	–13.6	2.3
Land transport *of which:*	22.4	1.9	–0.7
passenger cars	*13.4*	*–5.2*	*1.2*
light-duty vehicles	*3.9*	*70.2*	*–2.6*
heavy goods vehicles	*3.9*	*–1.6*	*0.1*
buses	*0.6*	*–37.8*	*0.6*
rail	*0.4*	*–8.9*	*0.1*
other road	*0.2*	*20.9*	*–0.1*
Aviation and shipping *of which:*	10.6	38.3	–4.7
military	*0.3*	*–69.5*	*1.2*
domestic navigation & fishing	*1.2*	*–29.1*	*0.8*
international shipping	*1.5*	*–3.0*	*0.1*
domestic aviation	*0.4*	*20.8*	*–0.1*
international aviation	*7.1*	*136.0*	*–6.6*
Total	**-**	**–38.4**	**-**

Note: Numbers may not sum due to rounding. The category 'other' includes the public sector and land use.

Source: Department for Business, Energy and Industrial Strategy, 2021a.

Three broad trends stand out clearly. First, there were large reductions in emissions from energy supply, industrial processes and waste management – these three industries accounted for 84% of the reduction in overall UK emissions since 1990. Second, emissions from land transport have remained stable since 1990, meaning that it has become the largest single source of emissions

(22.4% in 2018). Third, emissions from aviation and shipping are unusual in that they have increased (by 38% since 1990) – although it should be noted that emissions from this source have fallen since 2008 and that 2018, the latest year in the figure, precedes the COVID-19 pandemic.

By far the most important contributor to the overall fall in emissions between 1990 and 2018 (accounting for 54% of the total reduction) was **energy supply**, whose emissions fell by 63%, with much of this decline occurring post-2010. This reflects the rapid decarbonisation of electricity generation (the total amount of electricity generated actually increased slightly over this period).[5] In the 1990s, these reductions reflected a move away from coal-fired generation, which is particularly carbon intensive, and which fell from 72% of electricity generation in 1990 to 32% in 2000 and then to 5% in 2018 (Department for Business, Energy and Industrial Strategy, 2020). Coal's share was replaced by electricity from gas-fired generation (whose share increased from below 1% in 1990 to 39% in 2000 and to 40% in 2018) and renewables (whose share increased at first slowly from below 2% in 1990 to nearly 3% in 2000 but then rapidly, to reach 33% in 2018).[6] The share from nuclear generation remained stable at around 20% over the whole period. The recent growth in renewable generation reflects strong policy incentives to switch towards low-carbon sources of electricity, as we discuss below.

Another source that saw large emissions reductions and powerful fiscal incentives to reduce emissions was **waste management**. Emissions from this source, which are mainly methane emitted from biodegradable waste sent to landfill, fell by 71% between 1990 and 2018, meaning that this sector accounted for 14% of the total drop in national emissions over this period.[7]

There was also a substantial reduction in emissions associated with **industrial processes**, which saw a decline in emissions of 83% from 1990 to 2018. Much of this reflects the reduction in emissions of nitrous oxide and fluorinated gases associated with the petrochemicals industry, due to plant closures and the installation of abatement technologies (Department of Energy and Climate Change, 2011). Indeed, the sharp 38% reduction in GHG emissions from industrial processes that occurred in 1999 is almost entirely due to the introduction of abatement technologies in just two plants (Salway et al., 1999). A disproportionate share of remaining emissions from this sector come from lime and cement production, which is particularly carbon

[5] Between 1990 and 2019, gross electricity generation increased by less than 2%. See page 27 of Department for Business, Energy and Industrial Strategy (2020).

[6] In 2019, the coal share had fallen further to 2% of electricity generated while the share of renewables further increased to 37%.

[7] In 2017, 20MtCO_2e was emitted by the waste treatment sector. 92% of those emissions came in the form of methane emitted by biodegradable waste decomposing in landfill. See page 232 of Climate Change Committee (2019a).

intensive, and which accounted for 53% of industrial emissions in 2018 (Department for Business, Energy and Industrial Strategy, 2021a).

Emissions from **agriculture** have fallen by a more modest 14% since 1990. Much of the emissions from this sector come from methane associated with livestock (mostly cattle) and nitrous oxide emissions caused by fertilisers.[8] Policy changes that had the effect of reducing these emissions include changes in EU agricultural subsidies that 'decoupled' agricultural subsidies from output and served to reduce livestock numbers, as well as regulations on the use of nitrogen-based fertiliser. Unlike other sectors, agriculture is not covered by mitigation policies such as the new UK Emissions Trading Scheme. Agricultural production also remains supported by 'direct' payments to farmers, which are based on the amount of land they maintain, and various tax advantages. Post-Brexit reforms to agricultural subsidies will see a shift away from direct payments and towards incentives for environmentally-friendly forms of land use, although the details and potential scale of the decarbonisation incentives are yet to be spelled out.

Residential emissions only fell by a relatively small amount over this period (by 12% between 1990 and 2018). These are almost exclusively due to 'residential combustion' from home heating and cooking (through burning gas in boilers and the like). This sector has seen some improvements, mostly due to improved boiler standards, but the uptake of insulation measures, including cost-efficient ones such as loft insulation, has so far fallen short of government ambitions (Climate Change Committee, 2019a, 2020b). Take-up of insulation and other energy-saving measures through government-sponsored schemes has also fallen since 2013. We discuss this further in Section 8.4.

Emissions from land transport and aviation & shipping are notable in that they saw *increases* over this period. Emissions from **land transport** increased marginally, by 1.9% since 1990, making it the largest single source of emissions in 2018. Emissions from cars, buses, heavy goods vehicles and rail declined from 1990 to 2018, but these falls were more than offset by increases in emissions from light-duty vehicles, which increased by 70% over the period. Emissions from road transport per mile driven also fell, reflecting increases in fuel efficiency.[9]

Emissions from **aviation and shipping** increased much more rapidly, by 38% since 1990. These increases were mainly driven by increases in emissions associated with international aviation, whose emissions increased by 136% between 1990 and 2018 (mostly during the 1990s when

[8] In 2018, 16.5MtCO_2e of agriculture emissions were due to 'enteric fermentation' from cattle and a further 5.2MtCO_2e came from cattle waste. The equivalent figures for sheep were 4.0MtCO_2e and 0.1MtCO_2e respectively (table 1.2 in Department for Business, Energy and Industrial Strategy (2021a)).

[9] Vehicle miles driven increased by 36% from 1993 to 2018 while emissions increased by only 0.30% over the same period (Department for Transport, 2021a).

emissions almost doubled).[10] Emissions from international aviation are, of course, likely to have fallen with the COVID-19 pandemic, and it is uncertain how quickly the sector will recover in the coming years.

Not all emissions from these sources need to be brought to zero to achieve the UK's net zero target. Emissions can be positive in some sectors provided they are offset by negative emissions, either through natural sequestration (such as planting more trees) or artificial carbon capture and storage (CCS) technologies. In 2018, retaining forest land, converting land to forests and grassland, and using harvested wood products led to negative emissions of 24 million tonnes of CO_2e (equivalent to 5% of total emissions, up from 3% in 1990).[11] While use of artificial CCS technology is growing, and there are demonstration projects in the UK, its use remains limited globally.[12]

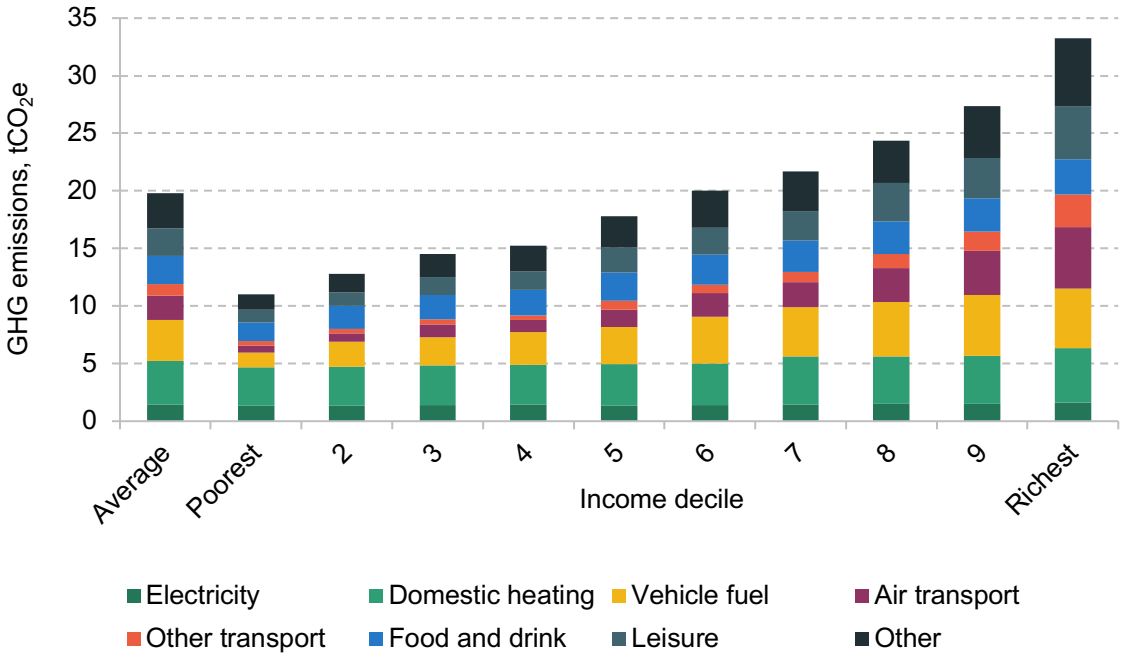
Consumption emissions by use

The above statistics relate to emissions associated with production taking place in the UK. As we noted earlier, an alternative is to look at the total emissions generated when making the goods and services that the UK consumes. Most of these emissions are associated with final consumption by households (77% in 2018); the remaining emissions are due to investment demand (such as plant and machinery), non-profit organisations, changes in firm inventories and government consumption (Department for Environment, Food and Rural Affairs, 2021).

Figure 8.4 shows GHG emissions associated with different household consumption uses in the UK (e.g. the annual emissions embedded in household purchases of food and drink) in 2018 across household income deciles. It also shows the composition of consumption emissions for the average household.[13] These figures include all emissions in the supply chain of a particular product – for example, emissions associated with transporting food and drink products to supermarkets will be included in the carbon emissions associated with purchasing food and drink products.

[10] See table 6.1 in Department for Business, Energy and Industrial Strategy (2021a).
[11] Table 1.2 in Department for Business, Energy and Industrial Strategy (2021a).
[12] The current estimated annual abatement capacity from large-scale CCS is around 40MtCO_2e globally (International Energy Agency, 2021).
[13] We assign emissions to different households according to expenditure reported using the Living Costs and Food Survey. This requires us to assign emissions to foreign and domestic package holiday spending. We use the national accounts to break out the share of spending on these holidays that goes on air, bus and rail travel under the assumption that domestic package holidays involve no flights and international package holidays involve no bus or rail transport. The remainder of spending on package holidays is assumed to go on hotel stays.

Figure 8.4. Annual GHG consumption emissions by net household income group, 2018



Note: Household incomes are equivalised using the modified OECD scale. tCO_2e refers to tonnes of carbon dioxide equivalent.

Source: Authors' calculations using the Living Costs and Food Survey 2018 and Department for Environment, Food and Rural Affairs (2021).

The average household's annual consumption-based carbon footprint was 19.8 tonnes of CO_2e in 2018, and the largest contributors to this were domestic heating and vehicle fuel (accounting for 19.2% and 17.9% of households' consumption emissions respectively). Other household goods and services accounted for 15.5% of households' average consumption-based carbon emissions, while food and drink accounted for 12.4%. Air transport accounted for 10.8% of households' average consumption-based carbon footprint.

The consumption of higher-income households generates a larger carbon footprint on average than the consumption of poorer households. Households in the richest income decile have a consumption-based carbon footprint of 33.3 tonnes on average compared with just 11.0 for households in the poorest income decile. While emissions from electricity, domestic heating, and food and drink are relatively similar across households at different points in the income distribution, richer households tend to have much higher emissions associated with vehicle fuel, air transport, leisure goods and services, and other household spending. For example, the richest households' emissions from air transport are around nine times greater than those for the poorest tenth of households.

Despite richer households' consumption having a greater carbon footprint, lower-income households are associated with 22% more CO_2e emissions per pound of spending, largely

because a greater share of poorer households' spending goes on electricity, heating and food. We discuss the carbon *intensity* of different households' spending in Section 8.5.

The path to net zero

The UK will need to reduce emissions at a faster rate than it has done since 1990 to reach its net zero target. Emissions fell by an average 1.4% of 1990 levels per year between 1990 and 2018 (an annual rate of decline of 1.7%). They will need to fall by an average 3.1% of 2018 levels each year from 2018 to reach net zero in 2050.

There are good reasons to think that future reductions will not be as easy as past ones, as possibilities for low-cost emissions reductions are exhausted. Indeed, the vast majority of the carbon reductions have occurred in sectors, such as energy supply and waste management, where incentives to decarbonise are already strong and low-carbon technologies already exist. But now the total emissions from these two sectors, which together accounted for 68% of the reduction in territorial emissions since 1990, account for just 24% of remaining emissions. Future reductions in greenhouse gases to reach the net zero target will therefore predominantly need to come from other sources. Moreover, within the power sector, relatively low-cost changes, such as switching from coal-fired electricity generation to gas-fired, have already happened. Future decarbonisation within this sector, which will require further significant growth in the share of renewables and nuclear power, is likely to be more expensive. It will also have to take place in an environment where population growth and the electrification of transport and heating are pushing up overall electricity demand (Department for Business, Energy and Industrial Strategy, 2019).

8.3 Current taxes and subsidies

Economists have long argued that a key policy step in tackling climate change is to place a tax (or equivalent) on GHGs. Ideally, the tax should be proportional to the level of emissions. This would incentivise individuals and businesses to cut emissions and ensure that emissions were cut first in cases where the benefits of the emissions-creating activity or the costs of cutting emissions were lowest. Box 8.1 discusses the economics behind the idea of taxing emissions.

Box 8.1. Tackling climate change with tax

GHG emissions, and the climate change they cause, are classic examples of market failure. Individuals and businesses do not face the full costs of the emissions they create and so, left to their own devices, choose to emit more than is optimal for society as a whole.

Economists have long argued that the best way to address this problem is to put a price on emitting greenhouse gases so that individuals and firms face the full costs of their decisions. This can be done through either a carbon tax or a cap-and-trade scheme such as the UK Emissions Trading Scheme. A carbon price would provide firms and households with the right incentives to avoid carbon-intensive activities, and to invest in the development and deployment of low-carbon technologies.

To take one example, a carbon price of £50 per tonne of CO_2 emitted would give households and businesses an incentive to undertake all abatement activities that cost less than £50 per tonne of CO_2 saved. The attraction of a *uniform* carbon price across the whole economy is that it avoids a situation where one sector that faces a relatively high carbon price ends up making expensive reductions in emissions while another that could reduce emissions more easily does not do so. A uniform carbon price allows a given level of total abatement to be achieved at lowest cost to the economy as a whole. It would leave firms and households in a position to decide themselves how to reduce their emissions in the most efficient way without the government needing to work out and specify which emissions should be reduced, where and how.

Because a price on GHG emissions would change many incentives – over what to buy, how to invest and where to innovate – once it is in place, if correctly set, there would be no need to make other parts of the tax system 'green' to encourage consumers or businesses to change their behaviours further. Not every tax needs to entail green incentives for the tax system as a whole to be green: we should pick the tool most suited to the task. Attempting to use every tax to encourage emissions reductions would not only add needless complexity to the tax system but also create stronger incentives to reduce emissions in some ways than others – an unnecessarily costly way to tackle climate change.

There are some caveats to this conclusion. In particular, there may be a number of other market failures that call for other policies in addition to, or instead of, a uniform carbon price.

- Some consumers and businesses may **not respond to price signals** well because those signals are not prominent to the people making decisions, or they focus excessively on the up-front costs of large investments (such as energy efficiency improvements) rather than longer-run savings from lower running costs. Clearer information can help guide consumers to making better decisions in these cases, and where the 'right' behaviour is clear, regulations can avoid people needing to take (potentially 'wrong') decisions at all.

- **Constraints on borrowing** might prevent households and businesses from making cost-effective investments, if they cannot meet short-run costs with their own funds. Targeted subsidies or government (or government-backed) loans can be used to address these problems.

- Different groups may **not be able to coordinate** on particular outcomes. For example, a switch to electric vehicles requires simultaneous investments and innovation in charging infrastructure and battery technologies as well as in the cars themselves. This creates a chicken-and-egg problem, with

different firms waiting for each other before investing themselves (Aghion et al., 2014). Moreover, each additional electric car on the road likely reduces the costs of others switching to electric cars by allowing the industries involved to achieve greater economies of scale or to 'learn by doing'. Left to their own devices, too few consumers might switch to electric cars even with a carbon price. The government can correct these sorts of problems by playing a coordinating role – which could include using targeted subsidies, direct government provision, regulations, or setting a higher carbon price in particular sectors.

- Other issues arise when there is **incomplete information**. For example, landlords or those about to sell their homes will have less incentive to invest in energy efficiency if tenants or prospective buyers cannot verify what they have done. Mandatory reporting of energy efficiency performance can help address this particular problem.

- Additional complications arise in an international environment where different countries set different (or no) carbon prices. Setting a high carbon price for tradable goods might lead to **carbon leakage**. From the perspective of a single country, this might justify setting lower prices for carbon-intensive sectors that face greater international competition or which are more likely to relocate, although this outcome would be far worse than ensuring that carbon emissions are priced appropriately on an international level. We discuss this alongside other possible responses to this problem in Section 8.4.

A further concern is that carbon pricing can have undesirable distributional consequences: for example, hitting lower-income households harder than higher-income ones and hitting disabled people more than others. These effects can be mitigated through other well-designed government policies targeted to benefit groups who would disproportionately be affected. We discuss this in Section 8.5.

Concerns about the distributional consequences of pricing carbon emissions often lead governments to subsidise low-carbon alternatives instead. In this chapter, we discuss subsidies for renewable energy and home energy efficiency (there are also others – for example, for electric cars). These subsidies provide incentives to decarbonise, and it is easy to see their appeal to governments which might otherwise have to raise taxes on vulnerable groups. However, such subsidies have a number of downsides. They cost the government money instead of raising it, and so must be funded through higher taxes elsewhere. In addition, the government must decide what to subsidise. This might mean it has to pick the future technologies most likely to succeed, with the inherent risk it will choose poorly. Since only some low-carbon activities are subsidised, it encourages a switch to subsidised activities more than reducing emissions in other (potentially easier) ways, making abatement more costly overall. Indeed, in some cases, subsidies might not lead to carbon savings at all. For example, subsidies for energy efficiency measures that save households money might lead them to use *more* heating or other carbon-intensive goods and services, or subsidies might lead some people to buy electric cars rather than cycling or using public transport, undermining some of the environmental gains.

While there are reasons to deviate from a uniform carbon price, deviating comes with its own disadvantages (not least a risk of distorted incentives, additional complexity and greater susceptibility to lobbying and special pleading). The default should be to tax carbon in a uniform way unless there are compelling reasons to do otherwise.

The UK operates a patchwork of taxes, levies and obligations that (directly or indirectly) impose costs on some GHG emissions. Here we outline those policies that impact incentives to emit in four key sectors: energy, waste management, road transport and aviation. In Section 8.4, we show how the policies combine to create a set of implicit taxes on GHG emissions and a set of subsidies for renewable electricity generators.

The list of policies and the amount of revenue they raise are presented in Table 8.2.

The closest that the UK comes to an explicit emissions tax is the **UK Emissions Trading Scheme (UK ETS)**. The UK ETS is a cap-and-trade scheme, requiring businesses to buy permits (which are limited in number) for each tonne of GHGs they emit, with permit prices determined in a market. However, the UK ETS is far from comprehensive, applying only to emissions from electricity generation and other energy-intensive industries (29% of all UK emissions).[14] And just under half of permits are allocated for free, with a more generous free allocation for businesses deemed to be at risk from overseas competition (an issue we return to in Section 8.4) and businesses in the aviation sector.[15] The scheme's antecedent is the EU ETS, which it replaced in January 2021. The UK and EU schemes are extremely similar, the primary difference being that businesses in the UK can no longer trade allocations on a Europe-wide basis. One further difference is that the UK cap on total permit issuance is set at 5% below the UK's expected notional share of the EU ETS cap each year – i.e. it is attempting to reduce emissions at a faster rate than under the EU ETS.

The UK ETS is supplemented by the narrower **Carbon Price Support (CPS)**, which imposes a further flat rate cost (currently £18 per tonne of CO_2e) on emissions, but is limited solely to electricity generators. Applying to businesses more widely is the **Climate Change Levy (CCL)**, which is charged on businesses' use of electricity, gas and coal but with some exceptions and with large discounts available for energy-intensive businesses.[16] Unlike the UK ETS and CPS,

[14] In 2019, the UK's EU ETS participants emitted just under 130 million tonnes of CO_2 equivalent, compared with total UK territorial emissions of 455MtCO_2e (Department for Business, Energy and Industrial Strategy, 2021e).

[15] UK domestic flights, flights between the UK and Gibraltar, and flights from the UK to the European Economic Area (EEA) fall within the scope of the UK ETS.

[16] Fuel and electricity used for electricity generation, passenger transport (such as trains), and metallurgical and mineralogical processes (such as steel production) are all exempt from the CCL. Energy-intensive businesses have the option to enter into voluntary climate change agreements that allow businesses to access large CCL discounts (in 2021–22, these discounts are 92% for electricity and 83% for gas and coal) in return for committing to increase energy efficiency or reduce carbon emissions.

the CCL is not explicitly linked to emissions, although efforts are currently being made to make rates better reflect the relative emissions intensity of gas and electricity.[17]

Electricity markets are also subject to three further policies which impose a tax on electricity suppliers in order to fund subsidies for low-carbon electricity generation. The most recent of these schemes is **Contracts for Difference (CFDs)**, through which the government subsidises renewable electricity generation (to different degrees over time and across different technologies) by guaranteeing renewable energy generators a set 'strike price' for the electricity they produce. CFDs are paid for through a tax on electricity suppliers based on electricity sold. CFDs were preceded by the **Renewables Obligation (RO)** – under which electricity suppliers were effectively obligated to provide a subsidy to renewable generators by purchasing government-created Renewables Obligation Certificates (ROCs) from renewable generators. The **Feed-In Tariff (FIT)** funds small-scale renewable generation with a levy on electricity suppliers. Both the RO and FIT schemes have been closed to new applicants but still operate with respect to projects that secured support prior to closure. In the case of all three schemes, the charges that fund the subsidies are untethered from emissions in the sense that all electricity (including renewable electricity) is taxed at the same rate. Taking the three schemes together, the value of the subsidies to renewable generators (and therefore the cost imposed through the taxes on electricity supply that are used to fund them) is forecast to be £11 billion in 2021–22. 26% of this relates to the CFD scheme, with the remainder accounted for by the two legacy schemes. These policies are described in greater detail in Box 8.3 in Section 8.4.

The RO, CFDs and FIT, along with the CCL, all include substantial discounts for 'energy-intensive businesses'. Broadly, these are businesses that use relatively large amounts of fossil fuels. But the exact definition varies across policies.

One additional subsidy operated by the government is the **Capacity Market**. This provides a mechanism whereby subsidies are auctioned to electricity generators who are not in receipt of CFDs or the RO (e.g. gas-fired power plants) to ensure the provision of sufficient electricity generation capacity. These subsidies are paid for via a levy on electricity suppliers known as the **Capacity Market Supplier Charge (CMSC)**.

[17] The 2021–22 CCL rates for electricity, gas and coal are 0.775p per kWh, 0.465p per kWh and 3.64p per kg respectively. In recent years, the rate of CCL on electricity has been lowered relative to gas. See HM Revenue and Customs (2020b).

Table 8.2. Emissions-related policies and associated revenues

Policy	Forecast revenue (2021–22, £bn)	Value of subsidies (2021–22, £bn)
UK Emissions Trading Scheme (UK ETS)	1.3	
Carbon Price Support (CPS)	0.5	
Climate Change Levy (CCL)	1.6	
Contracts for Difference (CFDs)	2.9	2.9
Renewables Obligation (RO)	6.5	6.5
Feed-In Tariff (FIT)	1.6	1.6
Warm Home Discount (WHD)	0.4[a]	0.4[a]
Energy Company Obligation (ECO)	0.7[a]	0.7[a]
Capacity Market Supplier Charge (CMSC)	1.1[b]	1.1[b]
5% rate of VAT on energy bills	–5.0[c]	
Fuel duties	26.4	
Renewable Transport Fuel Obligation (RTFO)	1.8[d]	1.8[d]
Air passenger duty (APD)	3.7[e]	
Landfill tax	0.7	

[a] 2019–20 figure.
[b] 2020–21 figure.
[c] Revenue figure for reduced 5% rate of VAT on domestic fuel refers to 2019–20.
[d] Figure for 2021 calendar year.
[e] 2019–20 figure. Forecasts show depressed APD revenue for later, pandemic-impacted, years.

Note: The ONS does not classify payments made by energy suppliers to renewable generators under the FIT, or costs imposed on fuel suppliers as a result of the RTFO, as tax revenue.

Source: ETS, CPS, CCL, CFDs, RO, fuel duties, APD and landfill tax from Office for Budget Responsibility (2021). Revenue figure for FIT from Office for Budget Responsibility (2019). WHD from Ofgem (2020a). ECO from Department for Business, Energy and Industrial Strategy (2018). VAT 5% rate from HM Revenue and Customs (2020a). RTFO from Department for Transport (2021b). CMSC from LCCC (2021a).

A further set of energy market policies are aimed at helping households with their energy bills. The **Warm Home Discount (WHD)** imposes an obligation on energy suppliers to provide rebates to the winter energy bills of certain low-income and vulnerable customers, while the **Energy Company Obligation (ECO)** requires energy companies to provide eligible households with energy efficiency improvements to their homes. Because these obligations are imposed on energy suppliers in proportion to their market share, both policies impact the incentives associated with electricity and gas consumption by taxing increases in energy supply. Alongside policies placing upward pressure on energy prices, there is a reduced **5% rate of VAT** on

domestic energy, which acts in the opposite direction – effectively subsidising households' energy use relative to other activities.

In terms of total revenue raised, by far the largest tax discussed in this chapter is not in the energy market, but in the transport fuels sector. **Fuel duties** levied on petrol and diesel are forecast to raise £26.4 billion in 2021–22.[18] Because the tax is levied directly on each litre of fuel purchased, the amount charged is directly proportional to emissions. In addition to fuel duties, the **Renewable Transport Fuel Obligation (RTFO)** requires fuel suppliers to supply a certain percentage of their fuel in the form of renewable fuel (such as bioethanol and biodiesel, which are commonly mixed with petrol and diesel respectively) or else cover any shortfall by buying tradable permits which are issued to suppliers of renewable fuel.

Unlike fuel used by motorists, the jet fuel used by most passenger aircraft is exempt from fuel duties. Adding to this tax advantage, VAT is charged at a 0% rate on airline tickets. **Air passenger duty (APD)** is charged, per passenger, on all passenger flights setting out from the UK.[19] There are higher rates charged on long-haul flights and on business and first-class tickets, but APD is not linked to the emissions associated with a given passenger.[20] Domestic flights and outbound flights from the UK to the EEA are subject to the UK ETS.

To disincentivise emissions from waste disposal, the UK imposes a **landfill tax** on each tonne of waste disposals.[21] The main rate of landfill tax has been increased substantially since its introduction, with the largest rises occurring between 2004–05 and 2014–15 when it increased from £15 to £80 per tonne, and now stands at £96.70 per tonne.

It should be noted that the above is far from a comprehensive inventory of UK climate change policy, which includes (amongst other things) a large body of regulation and bans on some activities as well as other tax incentives.[22] In that sense, the extraordinary degree of complexity that characterises UK emissions policy is understated by the brief summary provided above. Indeed, there are a number of taxes not mentioned here that, to varying degrees, act to change the incentives of consumers or businesses to reduce emissions. Just in the area of motoring, for example, vehicle excise duty is levied annually on car ownership, and in the year a new car is

[18] Unlike some other taxes discussed in this chapter, there is an argument to be made that fuel duties should be set with a view to addressing the costs imposed on society not only by motorists' GHG emissions but also by harms such as congestion and noise pollution – at least in the absence of other taxes that are better targeted at those harms. As Adam and Stroud (2019) discuss, the shift to low-emission vehicles will therefore require careful consideration of how better to gear future motoring taxes towards addressing the remaining costs.

[19] Flights to the Scottish Highlands and Islands and long-haul flights from Northern Ireland incur a £0 rate of APD.

[20] Long-haul flights are defined as flights to countries whose capital city is more than 2,000 miles from London. The exception is Russia, where destinations east of the Urals are considered long-haul.

[21] Landfill tax was devolved to Scotland in April 2015 and to Wales in April 2018. In both cases, rates have remained aligned with those in England and Northern Ireland.

[22] See Helm (2017) for a discussion of the regulatory landscape.

bought the duty is higher for higher-emission cars; the taxation of company cars also varies with the car's emissions, while London's congestion charge and Ultra Low Emission Zone discourage driving and encourage the purchase of low-emission vehicles.[23]

Many of these taxes will have an effect on reducing emissions, but they are not closely targeted at emissions: for example, vehicle excise duty discourages car ownership but does nothing to encourage car owners to drive their cars less, while the congestion charge and Ultra Low Emission Zone only discourage certain specific journeys. Our focus in this section and the next is on those taxes that are most closely linked to GHG emissions, though the division is not a neat one: air passenger duty is only loosely related to a flight's emissions, for example, while landfill tax depends on the volume of waste rather than the GHGs it emits (other than a single distinction between 'active' waste and 'inert' waste, with the latter subject to a much lower tax rate).

8.4 Implicit taxes on GHG emissions and subsidies for renewables

In this section, we set out how the policies described above, taken together, affect the overall implicit tax that is imposed on the emission of GHGs. We then discuss the subsidies for renewable electricity generators and how these vary across different technologies and we give an overview of policies aimed at improving the energy efficiency of housing.

The implicit taxes set out in this section describe the amount of tax that is paid on an extra ('marginal') tonne of CO_2 equivalent emissions. It is important to realise that this differs from the concept of an *average tax rate* and that the figures set out in this section do *not* capture the overall burden of taxes imposed on, say, electricity bills. The purpose of imposing a cost on emissions is to create an incentive for individuals and firms to shift to less emissions-intensive consumption and production – for instance, by making driving more costly, we might expect more journeys to be carried out by train. With this in mind, the implicit tax rates we describe are defined relative to goods on which the standard 20% rate of VAT is charged. In other words, if a good incurred a 0% rate of VAT, we consider it to be taxed at a negative rate (effectively a subsidy). This is intended to reflect that fact that, *relative to other goods* on which the standard rate of VAT is charged, a financial incentive has been created to consume the zero-rated good. Details of the methodology used to calculate implicit tax rates can be found in Online Appendix 8A.

[23] Adam and Stroud (2019) discuss motoring tax in detail.

While the implicit carbon taxes we show cover the main effects of the government tax and subsidy policies described in the previous section, they do not comprehensively cover how all government policies affect all possible forms of GHG emissions. We note, for example, that there are some major forms of emissions that are not taxed at all, either directly or indirectly, in the UK. These include emissions embedded in imports and emissions related to land use and agriculture. The GHG content of agricultural produce – such as the methane related to cows – is not only untaxed but in most cases zero rated for VAT (and therefore tax favoured relative to other forms of spending).

Implicit taxes on GHG emissions from gas and electricity use

Table 8.3 summarises which types of end user are impacted by the energy market policies described in Section 8.3.[24]

Table 8.3. Coverage of energy market policies across end users

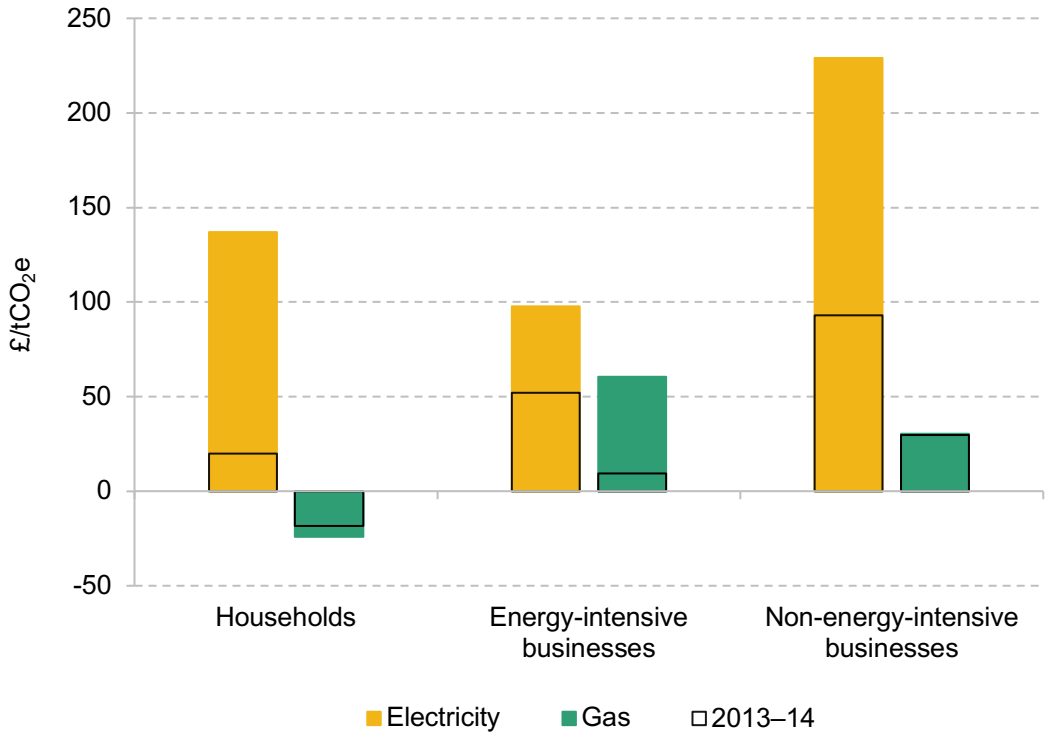
User / Energy source	ETS	CPS	CCL	CFDs	RO	FIT	WHD	ECO	VAT at 5%
Energy-intensive businesses									
Electricity	✓	✓	~	~	~	~			
Gas	✓		~						
Non-energy-intensive businesses									
Electricity	✓	✓	✓	✓	✓	✓			
Gas			✓						
Households									
Electricity	✓	✓		✓	✓	✓	✓	✓	✓
Gas							✓	✓	✓

Note: ~ indicates there is a discount. ✓ indicates where a policy effectively taxes (or subsidises, where shaded red) consumption by a particular end user (e.g. household electricity consumption is effectively taxed by the CFDs because electricity supplied to households attracts a per-MWh levy).

[24] We do not include the Capacity Market Supplier Charge which by itself raises the cost of electricity. This is because we are not able to account for the subsidy provided to generators through the Capacity Market (whose value likely differs across different modes of generation), and are therefore not able to capture the full incentive effects of this policy.

As discussed in the previous section, most of the taxes that impact incentives to engage in GHG-emitting activity are not true carbon taxes. The levy that funds CFDs, for instance, imposes a tax on the supply of all electricity, regardless of how it was generated. This fact, coupled with the patchwork nature of tax design in the sector, is what leads to different types of businesses facing incentives to abate in different ways and to different degrees, and that leads to significant variations in the incentives faced across both end users and fuel types. Figure 8.5 demonstrates some of this variation, by showing the stark differences in implicit taxes by both end user (households, energy-intensive businesses or non-energy-intensive businesses) and the form in which energy is consumed (electricity or gas). Not all emissions incentives are captured in the taxes set out in the figure. For instance, alternative, low-carbon, forms of electricity generation are also subsidised, providing further incentives to reduce emissions associated with electricity generation – a point we return to in greater detail below.

Figure 8.5. Implicit tax rates on GHG emissions in the energy market, by end user (2021–22)



Note: Figures for electricity refer to electricity generated from the burning of natural gas. Implicit taxes encompass charges made as a result of the UK ETS, CPS, the CCL, CFDs, the RO, FITs, the WHD and the ECO. Allocations of free ETS permits are ignored. An implicit tax of zero is taken to include the standard VAT rate of 20%. Additional VAT paid as a result of levies' increasing retail prices is included in the final implicit tax/subsidy figure. 'Energy-intensive businesses' excludes electricity generators. 2013–14 values expressed in 2021–22 prices.

Source: Authors' calculations. See Online Appendix 8A for details. For 2013–14 figures, see figures 6.2 and 6.3 in Advani et al. (2013).

As a point of comparison, the government publishes estimates of the carbon price that it believes would be necessary to achieve the UK's carbon reduction commitments. For the 2021 calendar year, the central estimate (around which there is much uncertainty) of this price is £245/tCO_2e.[25] This price, which is used in policy appraisal, suggests that – if accurate – all of the implicit carbon taxes we discuss are below the level that would be required to achieve net zero (although it should be remembered that these are not the only incentives to reduce carbon emissions – there are, for example, also subsidies for renewables).

We described in Box 8.1 how a uniform carbon price could help ensure that emissions reduction was carried out in the least costly way. As is clear from Figure 8.5, taxes in the energy market are far from uniform. For example, while the GHG content of household gas consumption receives an implicit subsidy of £24/tCO_2e, the emissions associated with the consumption of gas-generated electricity by non-energy-intensive businesses is implicitly taxed at a rate of £229/tCO_2e (to place these numbers in context, the annual electricity and gas consumption of the average household is associated with emissions of just over 5tCO_2e, as shown in Figure 8.4). It is almost certain that variations of this magnitude damage efficiency, leading to costly emissions abatements being prioritised over those that could be carried out more cheaply.

There are two key points to note about how implicit carbon taxes vary within the energy market:

- **GHG emissions associated with electricity use are taxed more heavily than GHG emissions from burning gas**

In general, GHG emissions associated with electricity face heavier implicit taxation than those associated with the burning of natural gas – largely as a result of the numerous levies on electricity supply used to fund renewable electricity generation. For domestic users, the implicit tax on increasing emissions through gas consumption is actually negative as a result of the preferential 5% rate of VAT charged on household energy bills. It seems likely that this has contributed to the fact (outlined in Section 8.2) that direct GHG emissions from households have reduced relatively little over the last 30 years.

This pattern of implicit taxation is at odds with the government's desire for households to move away from using gas and towards using electricity for heating (e.g. by switching away from gas boilers to electric heat pumps). A possible reason for not taxing domestic gas is that it would disproportionately hit certain households. However, there are ways to mitigate these effects with

[25] In theory, the level of a carbon tax should be set equal to the amount of social damage caused by the emission of an additional tonne of CO_2 equivalent (the theory underpinning carbon taxes is discussed in Box 8.1). In practice, calculating such a figure is extremely challenging. Department for Business, Energy and Industrial Strategy (2021c) sets out the government's method of calculating the price needed to reach the UK's net zero target and suggests that the 'true' number may lie anywhere between £122 and £367, which is a ±50% sensitivity range.

tax revenues while preserving incentives to reduce emissions – an issue we address in greater detail in Section 8.5.

The carbon content of energy consumed by households is taxed at lower rates than for most businesses (specifically those deemed not energy intensive). This results both from the fact that the CCL applies to the gas and electricity consumption of businesses (but not households) and from the fact that businesses do not receive the VAT discount on energy bills available to households.

- **Energy-intensive businesses face lower implicit carbon taxes than other businesses on electricity use (but higher implicit taxes on burning gas)**

Taxes on electricity are substantially lower for energy-intensive businesses than for their non-energy-intensive counterparts, with the gap having grown since 2013–14. This means that the businesses that use the most energy per unit of output – and therefore contribute disproportionately to the country's total emissions – face a *smaller* incentive to change their production methods. The key justification for this is that higher taxes on energy-intensive businesses could lead these industries to relocate abroad, resulting in carbon leakage. This could occur if: (i) higher energy charges would greatly increase these firms' costs and (ii) these firms operate in tradable sectors.

Carbon leakage is a valid concern. But addressing it through lower taxes has costs. A key downside is that it greatly dampens the marginal incentive to reduce GHG emissions in exactly the industries where they are highest. The UK (and EU) also tries to prevent carbon leakage by giving out free ETS permits. These free allocations are effectively cash handouts, which businesses would lose if they relocated abroad. This maintains marginal incentives to reduce emissions through improving energy efficiency or switching to cleaner energy, but means that other taxes need to be higher in order to bring in a given level of government revenue. Free allocations also dampen the incentive to abate by simply cutting output, since doing so could mean that businesses receive fewer free permits in future. Both of these approaches to reducing carbon leakage also require governments to decide which sectors are at risk of shifting abroad in response to higher energy costs. An alternative approach that is receiving policy interest at the moment is to place a tax on the embedded emissions of imports (see Box 8.2).

Energy-intensive firms also pay *higher* implicit taxes on burning an extra unit of gas. This is because these firms tend to be covered by the UK ETS while other firms are not. Of course, this might not result in greater carbon leakage if many of their permits are freely allocated, but it is a striking inconsistency. The higher implicit tax on gas gives these firms a greater incentive to cut their gas use than non-energy-intensive businesses, although again doing this by reducing their output could reduce their future entitlement to free permits.

Box 8.2. Carbon Border Adjustment Mechanism

As we have discussed, two ways to avoid carbon leakage are to allocate at-risk firms with free permits within a cap-and-trade scheme or to charge them lower tax rates on their emissions. Both would reduce firms' incentives to relocate. However, both of these approaches also undermine incentives to abate in affected sectors.

Another approach to preventing taxes in a country leading to emissions-generating activities simply moving abroad is to place a tax on imports according to their embedded and untaxed GHG emissions (or 'carbon' content). Under such a tax, there would be no tax-induced incentive for a UK producer that is selling to UK consumers to move production abroad and import into the UK, and they would not face unfair competition from a producer in a location with lower taxes on GHG emissions. There would also be no need for free permit allocations or for lower taxes on energy-intensive activities, meaning that all firms would face the right marginal price signal to cut their emissions. A border carbon tax would also give other countries an incentive to price carbon in their own tax systems.

In practice, there are a number of difficulties with operating such a tax, and a number of choices to be made. A key difficulty is that the carbon content of imports and the amount of tax already paid are not easy to measure. This is especially true for products created in more than one country and where the origin country has implicit taxes on emissions (such as the levies used to fund CFDs) rather than explicit ones (such as the ETS). Another important question is how to treat exports: in particular, whether to take one's own exports out of carbon taxation at the same time as bringing imports into tax. If exports are not given a rebate from tax, there will be an incentive for energy-intensive, exporting producers to move production to a lower-taxed country. Higher taxes could, therefore, still lead to carbon leakage. If (at least some) exports instead get a rebate for carbon taxes paid, there will be a lower incentive to cut emissions. There is also some debate about the compatibility of both taxes on imports and rebates for exports with international trade rules.

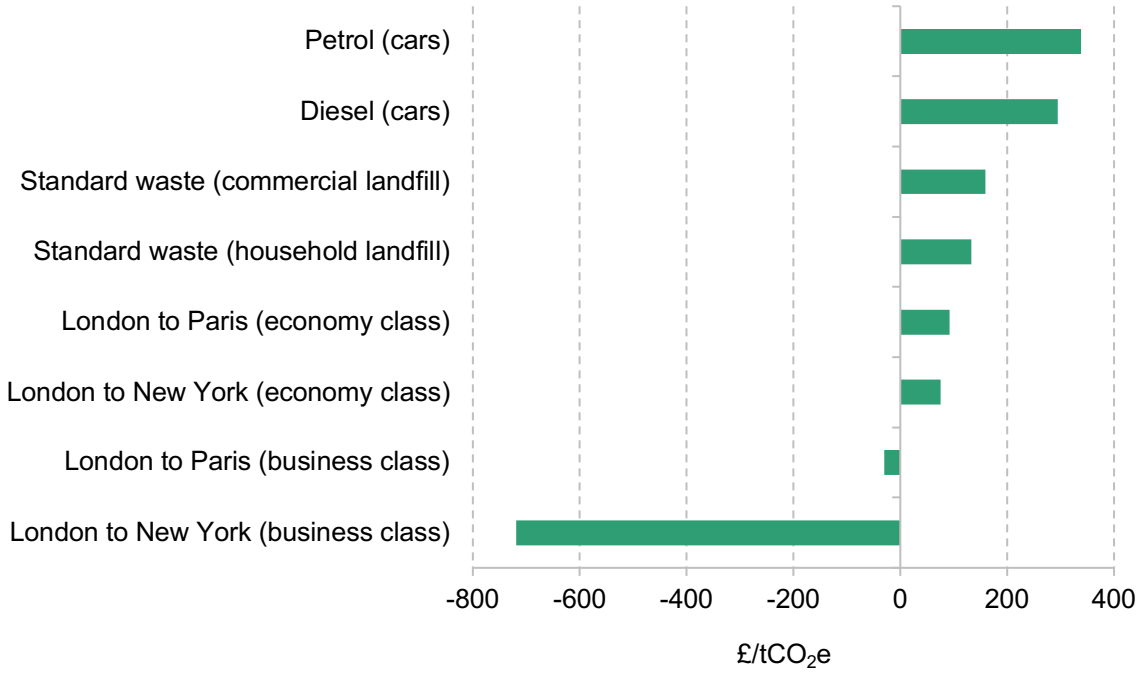
In July 2021, the European Commission published a specific proposal for a **Carbon Border Adjustment Mechanism** (CBAM) to apply to the imports (into the EU) with the highest associated emissions (European Commission, 2021a, 2021b). If adopted – which would require approval by both the European Parliament and the Council – the CBAM would, from 2023, require importers of such goods to report the direct and indirect (embedded) emissions and any carbon-related tax paid abroad for all imports. This would represent a significant increase in reporting requirements. Additional tax would only start to be due from 2026 when importers of cement, iron and steel, aluminium, fertilisers and electricity would need to buy 'CBAM certificates' to cover the carbon emissions created in the production of the imports. The price of the certificates would correspond to the price of GHG emissions under the EU's ETS. An importer would need fewer CBAM certificates to the extent that they could demonstrate that tax had already been paid in the country of origin. If the CBAM was introduced, free permits under the EU ETS would be phased out.

The UK government has also indicated that it is considering a possible tax on imported emissions (UK Parliament, 2021).

Taxes on emissions from fuel, aviation and waste

As well as taxing emissions in the energy sector, government policy creates implicit taxes on GHG emissions associated with fuel used for transport, aviation and waste management. A selection of these implicit taxes are shown in Figure 8.6.[26]

Figure 8.6. Implicit taxes on GHG emissions related to fuel, waste and aviation (2021–22)



Note: Includes charges made as a result of fuel duties, the RTFO, the landfill tax, APD and the UK ETS. An implicit tax of zero is taken to include the standard VAT rate of 20%. Additional VAT paid as a result of an increased carbon price is included in the final implicit tax/subsidy figure. Implicit taxes for aviation refer to tickets purchased by individuals, not businesses.

Source: Authors' calculations. See Online Appendix 8A for details.

In one sense, implicit taxes in these sectors are not directly comparable to those in the energy market (or, for that matter, to each other) because they are often aimed at addressing other social costs of particular activities besides carbon emissions, as we discuss. Nevertheless, it is notable that, as in the case of implicit tax rates in the energy market, the implicit tax rates levied on waste and aviation (although not on petrol and diesel) are considerably below the £245/tCO_2e that the Department for Business, Energy and Industrial Strategy estimates to be consistent with the net zero target.

[26] The figure does not produce a comprehensive list of all of the sources of emissions related to transport fuels, aviation and waste management that are taxed. There is a range of other policies, such as subsidies for fuel used by bus services and a fuel duty discount on 'red diesel' used, for example, by farmers.

In Section 8.2, we showed that **land transport** is now the UK's largest source of emissions, and that emissions from this source have been slowly increasing. Petrol and diesel used in road transport attract high taxes per unit of GHG emissions. Indeed, each kilogram of CO_2e emitted from burning these fuels is taxed at a higher rate than the emissions associated with even the most heavily taxed uses of gas and electricity. This primarily reflects the high rates of fuel duties.[27] It should be borne in mind, however, that motoring is associated not just with GHG emissions, but also with other social costs (accidents, local air pollution and most importantly congestion). While there is a strong case for other forms of taxation to address the social costs of congestion in particular – as these vary hugely by time and place – in the absence of such taxes, these other social costs may explain the high rates of duty per tonne of CO_2 equivalent (Adam and Stroud, 2019).

While taxes on petrol and diesel are relatively high, they have not, unlike implicit taxes on the GHG content of electricity, been rising over time. In fact, fuel duties have been falling in real terms for around a decade, from 71p per litre in 2010 to 58p in 2021 (2021–22 prices).

As we saw in Section 8.2, **international aviation** saw a very large increase in GHG emissions from 1990 to 2018. Under current policy, commercial passenger flights are zero rated for the purposes of VAT and incur no fuel duties on purchases of jet fuel (current international agreements largely prohibit taxes on fuel for international flights). Counterbalancing this advantageous tax treatment are charges imposed by APD and the UK ETS (which only covers emissions from outbound flights to EEA destinations). Although a higher rate of APD is payable on long-haul travel, it is far from directly proportional to the GHG emissions from different flights.

Figure 8.6 shows the net impact of these policies for both economy- and business-class tickets on two example flights – London to Paris (short haul) and London to New York (long haul). In both cases, the prices refer to purchases by an individual rather than a business, a relevant distinction because businesses are permitted to reclaim VAT paid on their costs. Emissions are taxed most heavily for short-haul, economy-class flights. As the cost and distance of flights increase, the implicit subsidy provided by VAT zero-rating quickly starts to outweigh the effects of higher rates of APD. The result is that air travel – particularly on long-haul routes and in premium classes – is heavily tax favoured relative to other emissions-generating activities. Of course, much of the additional cost of a premium-class flight may be argued to derive from on-board services (such as premium catering) as opposed to the additional emissions associated with increased space. The key point that Figure 8.6 is drawing attention to, however, is not that

[27] There are other tax incentives to purchase more fuel-efficient vehicles, most notably the higher rates of first-year vehicle excise duty for cars with higher emissions (and no charge for electric vehicles). These incentives are not included in Figure 8.6.

aviation emissions are being directly subsidised (transatlantic flights are not subject to any form of direct carbon tax), but rather that, *relative to consuming another product or service*, buying a business-class ticket to New York (and the emissions associated with such a purchase) is strongly incentivised by the tax system.

Finally, emissions associated with **landfill** are implicitly taxed through the landfill tax which, as we have noted, has increased significantly in recent years at the same time as emissions associated with landfill have fallen dramatically. This tax may also relate to other social costs, such as water pollution. As shown in Figures 8.5 and 8.6, the tax rates associated with landfill emissions are now comparable in size to those from household consumption of gas-fired electricity. Notably, however, emissions associated with landfill incineration remain relatively lightly taxed. Emissions from municipal landfill incinerators are, for example, not covered under the UK ETS.

Subsidies for renewable and low-carbon generation

The government provides substantial subsidies to low-carbon and renewable electricity generation. These take various forms. For example, nuclear generators historically received significant help with the (large) costs of decommissioning. New nuclear plants are expected to meet their own decommissioning costs, although this might simply lead to higher subsidies being paid to generators via other means.

As with the variation in taxes, the variation in subsidies means that the incentive to produce low-carbon energy varies significantly across technologies and over time.

There are three subsidy schemes that pay renewable generators per megawatt-hour (MWh) of electricity that they produce. All are paid for by either explicit or implicit taxes on electricity supply (including that produced from renewables). The schemes are summarised in Box 8.3. Only the Contracts for Difference (CFD) scheme is available to future generation capacity, but the two legacy schemes – the Renewables Obligation (RO) and the Feed-In Tariff (FIT) – account for most of the current subsidy. Of all subsidised renewable electricity generation in 2020–21, 21% received support under the CFD scheme and 71% received support under the RO.[28] Of the £11 billion of subsidies given to renewable generators in 2020–21, £2.9 billion relates to the CFD scheme and £6.5 billion (more than twice as much) to the RO. The FIT accounts for the remaining subsidies.

[28] Department for Business, Energy and Industrial Strategy (2021f), LCCC (2021b) and Ofgem (2020b). Note that these figures assume that total FIT generation in 2020–21 (for which published figures are not yet available) remains the same as in 2019–20.

Box 8.3. Subsidies for renewable electricity generation

Contracts for Difference (CFDs) is a scheme through which the government guarantees that a low-carbon electricity generator will receive a set 'strike price' for the electricity it produces. These CFDs usually have a 15-year duration (although the Hinkley Point C nuclear power plant was awarded a 35-year CFD), during which time the government pays the generator the difference between the agreed strike price and the prevailing market price for electricity.[29]

CFDs are awarded through auctions in which the government specifies which types of technology are allowed to bid and which other technologies they are competing against. In the first round of auctions (in 2015), bidders competed in two separate auctions – one for 'established technologies' (such as solar and onshore wind generation) and a second for 'less established technologies' (such as offshore wind and tidal).[30] The two subsequent auction rounds (in 2017 and 2019) were open only to less established technologies. As a result, 90% of the capacity covered by CFDs to date is made up of offshore wind and remote island generation. The government is using CFDs not simply to subsidise renewable electricity generation but to choose which types of technologies should be added to the UK energy grid.

The Renewables Obligation (RO) – the precursor to CFDs – was closed to new applicants in 2017, but continues to operate for generators who secured contracts before this date.[31] The RO operates by giving *Renewables Obligation Certificates (ROCs)* to electricity generators for each megawatt-hour of renewable electricity they produce and requiring electricity suppliers to buy ROCs for each MWh of electricity they supply to consumers (with an 85% discount for energy supplied to energy-intensive industries).[32] Renewable electricity generators receive a subsidy by selling ROCs to energy suppliers. The size of the subsidy has varied by technology type since 2009 when the government began giving more ROCs per MWh to technologies that it wished to support more generously.

Feed-In Tariffs (FITs) provide subsidies to small-scale renewable energy generation – such as through solar panels on houses – installed before April 2019. The subsidies are considerably more

[29] If the market price is above the strike price, the difference is paid by the generator to the government.

[30] The full list of 'established technologies' is onshore wind, solar photovoltaic (>5 megawatts), energy from waste with combined heat and power (CHP), hydro (>5MW and <50MW), and generation from landfill or sewage gas. The full list of 'less established technologies' is offshore wind, wave and tidal, advanced conversion technologies, anaerobic digestion, dedicated biomass with CHP, and geothermal. In auction round 3, remote island wind (>5MW) was added to this list.

[31] Generators accredited under the RO before (on or after) 26 June 2008 will receive support until 2027 (2037).

[32] A supplier with insufficient ROCs is required to make a 'buyout' payment for each uncovered MWh of electricity (the buyout price was £50.05 in 2020–21). After meeting administrative costs, the remainder of the resulting buyout fund is paid back to suppliers in proportion to the number of ROCs that each surrendered.

generous per MWh than those offered under the RO or CFD schemes.[33] The cost of subsidies is borne by all electricity suppliers (with a discount related to electricity provided to energy-intensive businesses).[34] For individuals in receipt of FITs in a non-business capacity (i.e. when generating electricity mainly for use in their own home), subsidy income is (like other home production) exempt from income tax.

The closure of the FIT scheme to new applicants from April 2019 followed significantly higher take-up than had been anticipated by the government, leading to concerns that the high per-MWh cost of the scheme was placing an increasingly onerous burden on electricity consumers (National Audit Office, 2016b). No replacement scheme was put in place following its closure, meaning that subsidies are no longer available to support new small-scale renewable generation projects in the UK.

Figure 8.7 gives a sense of the variation that we have seen in subsidies that apply per MWh to date. What matters for considering the incentive to generate an additional MWh of renewable electricity from a given plant is the difference between the subsidy received and the tax paid. The figure therefore shows the net average subsidy paid to generators using various technology types for each MWh of subsidised electricity.[35]

There are two important things to note about the pattern of subsidies. First, the figures reflect the average net subsidies that are currently being given and not necessarily the choices that the government will make in future. Much of the variation in Figure 8.7 reflects the legacy of the RO and FITs, which entailed different levels of support for different technologies from what is currently available under the CFD scheme. For example, in the most recent CFD auction round, onshore wind generators were not offered the opportunity to receive a subsidy.

Second, the extent to which the subsidies vary across technologies is a result of deliberate government choices to favour 'emerging' over 'established' technologies. Under the RO scheme, the government strongly favoured wave and tidal technologies: this is the primary factor driving the high subsidy rate shown in Figure 8.7. Offshore wind was also favoured in the two most recent rounds of CFD auctions (in which onshore wind and solar, for example, were

[33] Small scale is defined as up to 5 megawatts of capacity, or 2 kilowatts for combined heat and power (CHP) generators. FITs are available for five renewable technology types: solar, wind, CHP, hydro, and anaerobic digestion. The subsidy is received for a period of between 20 and 25 years. The average subsidy paid to solar generators subsidised under the RO and CFDs was £78/MWh in 2019–20, while the average FIT subsidy in the same year was £167/MWh (Ofgem, 2020b; LCCC, 2021b; Department for Business, Energy and Industrial Strategy, 2021f).

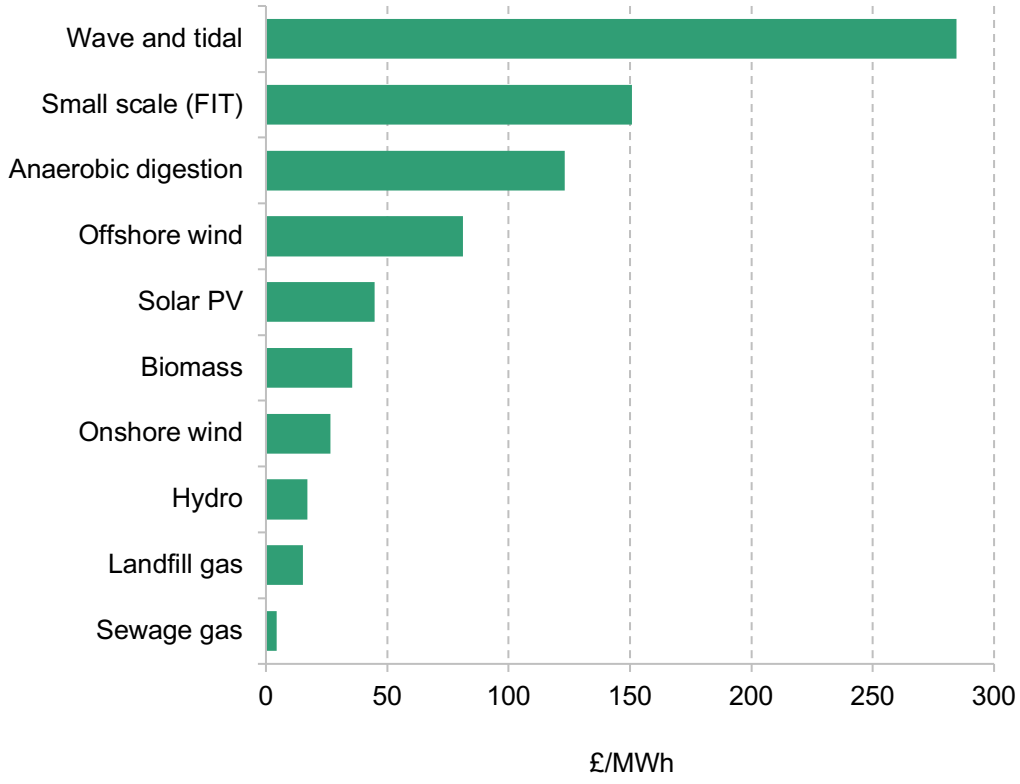
[34] FIT subsidies are initially paid by a generator's electricity supplier but the cost is ultimately shared between all large energy suppliers (those with at least 250,000 customers) in Great Britain – the FIT is not available in Northern Ireland – in proportion to their market share through a process known as 'levelisation'. An 85% discount is applied to electricity supplied to energy-intensive industries when calculating suppliers' levy liability.

[35] As above, we do not include the Capacity Market Supplier Charge here.

prevented from bidding). So far, nuclear power has not been included in these schemes and so is not included in the graph – effectively, there is a net tax per MWh produced by current nuclear plants. However, the government has negotiated a bilateral CFD contract for the construction of the Hinkley Point C power plant, which is much more generous than the recent contracts awarded for other forms of electricity generation.[36]

One of the major policy trends in the past decade has been the move towards a much more interventionist approach to subsidising renewable electricity generation (the RO was uniform across technology until 2009 and CFDs were initially available to a broader range of technologies). There has also been a shift towards giving much more long-term certainty to those investing in renewables – for example, through providing guaranteed strike prices for the output of those winning CFD auctions and by setting a floor price for carbon in the electricity sector.

Figure 8.7. Net average subsidy by renewable type (2020–21)



Note: Includes all subsidies provided through CFDs, FITs and the RO. Figures are given net of implicit taxes on electricity. VAT avoided as a result of the subsidy is included in our final figures.

Source: Authors' calculations. See Online Appendix 8A for details.

[36] The Hinkley Point C contract lasts for 35 years rather than the usual 15. The current value of the strike price agreed for the project (£106.12) was below the average strike price awarded in auction round 1 (£120.70), but above that for auction rounds 2 and 3 (£74.36 and £48.32 respectively). See LCCC (2021c).

These changes mean that the government, rather than purely the market, is shaping the future of the UK's energy mix. Without subsidies or with uniform subsidies (rather than the selective subsidies summarised by Figure 8.7), the grid would look very different and electricity would almost certainly be cheaper – by backing less established technologies, the government is choosing technologies that lead to more expensive electricity. The logic of this directed approach has been to foster the emergence of technologies whose costs might fall in the future as firms 'learn by doing' and the industry increases in scale. There is indeed some evidence for this in, for example, rapidly falling costs for offshore wind generation (International Energy Agency, 2019). Such an approach, however, carries risks. The main problem is that we do not know whether the government is actually picking the technologies that are best placed to allow the UK to achieve net zero at the lowest possible cost. Should small-scale generation (of the type supported by the FIT) be encouraged more than onshore wind and should either be encouraged more than nuclear? What proportion of the grid should be renewable, and what is the best mix of technologies? These are choices that the government is making under its current approach.

The government has already indicated that in the next set of CFD auctions, established technologies will be allowed to bid again and offshore wind will be given a separate auction from other 'less established technologies' (allowing the latter to win more subsidies). Whatever other choices the government makes about future subsidies, they will be extremely important. They should be taken with care and made as transparently as possible.

Subsidies for energy efficiency in homes

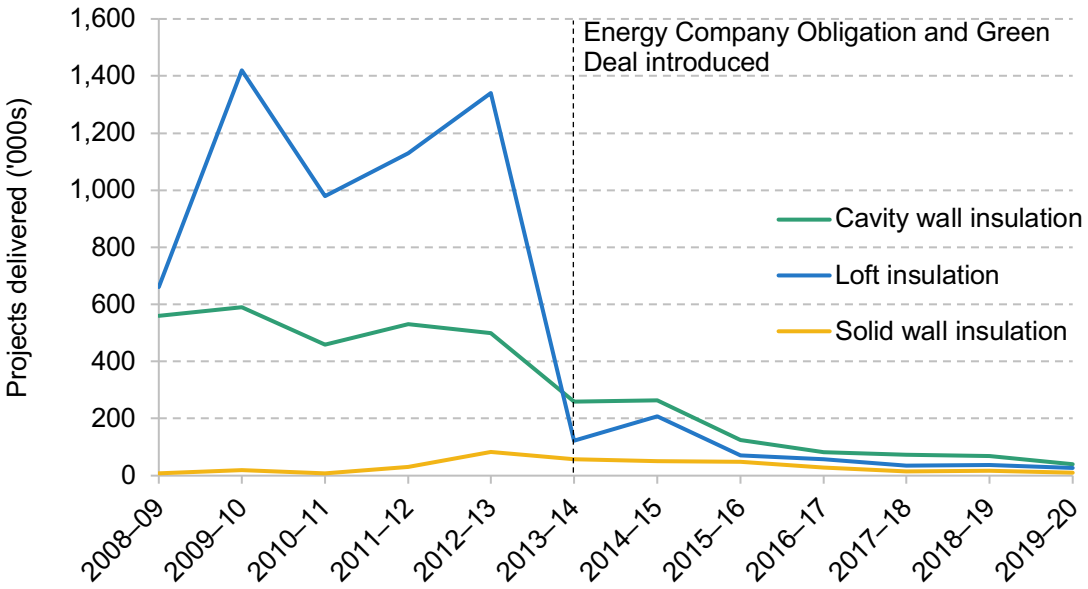
The government has for many years operated a range of schemes to encourage households to adopt energy efficiency improvements such as insulation, double glazing and replacing old boilers. Prior to 2013, the government's primary tool for achieving this was the **Carbon Emissions Reduction Target (CERT)**, which imposed an obligation on large gas and electricity suppliers to deliver specified carbon savings by retrofitting existing homes with energy efficiency improvements (primarily insulation and lighting). CERT's sister programme, the **Community Energy Savings Programme (CESP)**, meanwhile, imposed a similar obligation but focused exclusively on those living in certain low-income areas. The **Warm Front** scheme provided grants for energy efficiency measures to households at risk of fuel poverty. In 2013, the government refocused these obligations on poorer and 'hard-to-treat' households by replacing CERT, CESP and Warm Front with the new ECO. This greatly restricted the number of households that were eligible for support. From September 2018, ECO became entirely focused on low-income or otherwise vulnerable households.

Initially, households that did not receive assistance under the ECO were offered unsubsidised loans through the so-called **Green Deal**, which could be repaid through their energy bills. The idea was to facilitate cost-saving energy efficiency improvements with limited public subsidy or costs imposed on energy companies (which could be passed through to household bills).

However, the scheme's complexity and lack of financial incentives meant it suffered from low take-up, improving a mere 14,000 homes before being effectively closed in 2015 (National Audit Office, 2016a).

Figure 8.8 shows the number of insulation projects of different types that have been delivered through the schemes since 2008–09. When, in 2013, the government introduced the ECO and the Green Deal, there was a dramatic reduction in the number of home insulation projects carried out under government-sponsored schemes. This is despite the fact that many homes still lack effective insulation (Climate Change Committee, 2019b).

Figure 8.8. Insulation projects delivered through government schemes in Great Britain



Note: Includes all projects delivered through CERT, CESP, Warm Front, ECO and the Green Deal.

Source: Table 8.3 in Department for Business, Energy and Industrial Strategy (2021d) and table 4.3 in Department of Energy and Climate Change (2015).

The Green Deal closed in 2015, leaving a gap in incentives to install energy efficiency improvements for the majority of households who are not eligible for support under the ECO or other similar schemes.[37] This gap has not been filled. Combined with the relatively generous tax treatment of domestic gas we discussed above, this means that current policy gives most households little additional incentive to reduce their greenhouse gas emissions by investing in energy efficiency measures. The stop–start nature of subsidies in this area has also hindered sustained investment and training in the sector. A Green Homes Grant was introduced as a stimulus measure in October 2020, providing homes with vouchers to cover much of the cost of

[37] See Environmental Audit Committee (2021) for descriptions of other, current energy efficiency policies. Devolved administrations operate their own schemes but these also tend to focus on low-income households and areas.

energy efficiency improvements using accredited suppliers. However, this scheme ended in March 2021 with a significant underspend, as accrediting for the scheme proved costly and complex, and businesses saw little reason to scale up their operations and train new staff for such a short-lived programme (Environmental Audit Committee, 2021). While other schemes to support household energy efficiency are being introduced or scaled up, these continue to focus on hard-to-treat and low-income households.

8.5 Distributional effects of climate change policies

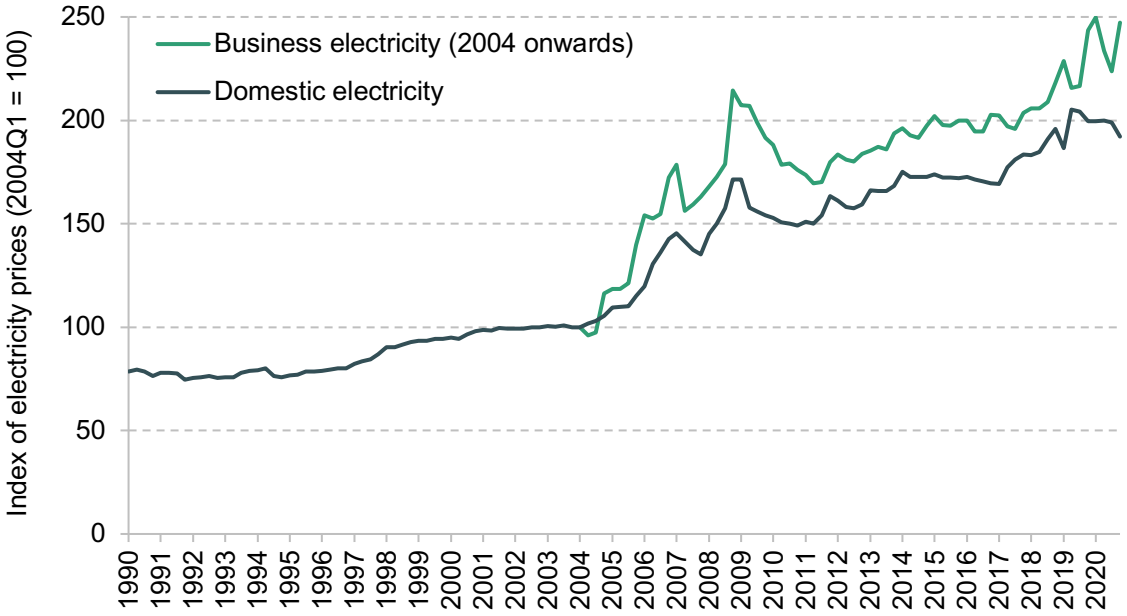
Meeting the UK's climate goals will entail significant costs for households whether as taxpayers, billpayers, shareholders, workers in carbon-emitting industries or consumers of carbon-intensive products. A key question is how these costs will be shared between different types of households.

Who has paid for policies so far?

The policies described in Section 8.3 are already pushing up the price of electricity and fuel paid by households and businesses.

Figure 8.9 shows the real price of electricity (adjusted to reflect changes relative to the Consumer Prices Index, CPI) from 1990 to 2020 for households and from 2004 to 2020 for businesses (as we do not have data for firms before this date). From 1990 to 2004, household electricity prices rose by 31% in real terms. From 2004 to 2020, electricity prices rose by 93% for households and by 133% for businesses. Much of these dramatic increases in electricity prices were undoubtedly the result of increases in levies to pay for renewable energy subsidies, obligations to source from more costly renewable sources, and taxes on carbon emissions from the energy sector. The Climate Change Committee (CCC) estimates that around two-fifths of the increase in household electricity prices between 2004 and 2016 was due to climate change policies (with most of the remainder driven by rising wholesale fuel prices) (Climate Change Committee, 2017). The importance of climate change policies in driving electricity prices is likely to have increased since these estimates were made, as the costs of government schemes have risen. It is also likely to be greater for businesses; as Section 8.4 showed, implicit carbon taxes are much higher for businesses' electricity use.

Figure 8.9. Real electricity prices for domestic use (1990–2020) and business use (including the Climate Change Levy; 2004–20)



Source: Authors' calculations using series D7BT and D7DT from Office for National Statistics (2021), and Department for Business, Energy and Industrial Strategy (2021b).

Higher domestic electricity prices will disproportionately hit low-income households, who devote a larger share of their spending to electricity (although, as we noted in Section 8.3, these households have also benefited from schemes to improve their energy efficiency, and the Warm Home Discount directly reduces their energy bills).[38] The share of households' spending going on fuel duties does not vary as clearly with income as the budget share of electricity, but is lower for the top and bottom income deciles than for those in the middle of the income distribution (Adam and Stroud, 2019). However, knowing the effects of, for example, rising domestic electricity prices on households, or the amount different households spend on fuel duties, does not tell us all we need to know to understand the full distributional impacts of charges for electricity supply and fuel taxes. The full effects of policies that address climate change – including indirect effects – are much harder to quantify and assign to different income groups. For example, the higher cost of electricity to businesses will ultimately be passed through to households by affecting the prices of goods and services they buy, as well as wages and profits – and these changes will have different impacts on different households. The same is true for other

[38] Energy *bills* fell from 2008 to 2016 even as energy prices continued to rise (Climate Change Committee, 2017). The CCC attributes this to improved energy efficiency over this period, although it is difficult to know how much of this can be attributed to government policy.

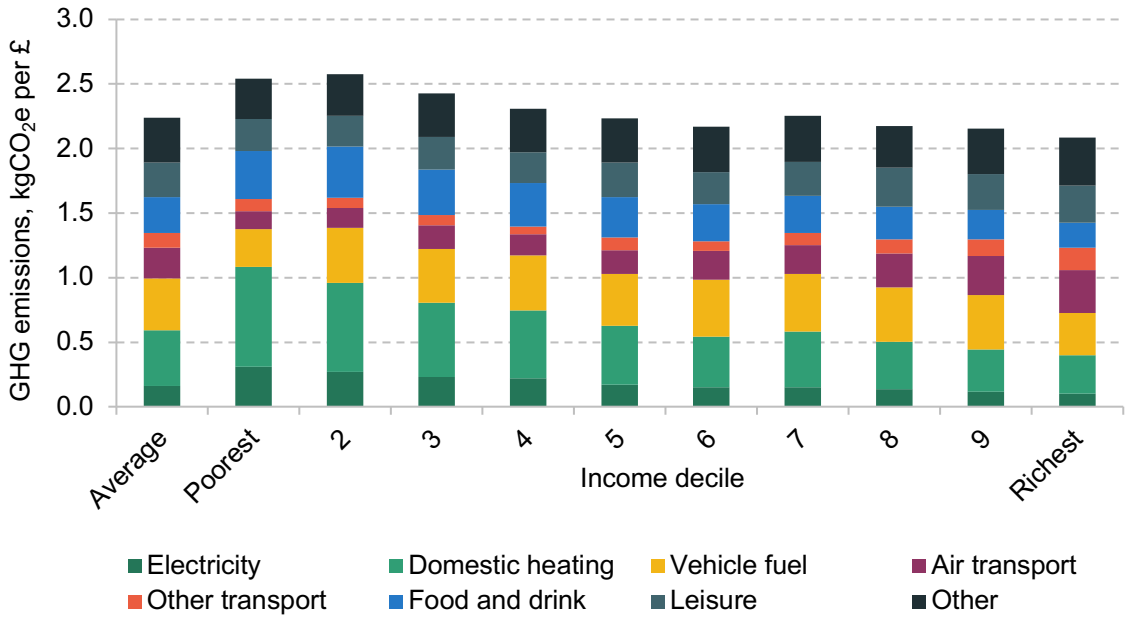
taxes or regulations that raise the cost of emissions or production, which will not only change prices and wages, but also change the types of jobs and products that are available.

Understanding the full distributional impacts of achieving the net zero target, accounting for all these different channels, is difficult. A recent review by HM Treasury highlighted risks to low-paid workers in particular occupations – such as plant and machine operatives – who are more likely to work in carbon-intensive industries (HM Treasury, 2020). However, the shift to a low-carbon economy is also likely to create new jobs in areas such as home insulation, land management and innovation. Understanding the net effects of all these changes on different households is an important outstanding question.

How might increases in the cost of emissions affect different households?

To get an idea of how increases in the cost of GHG emissions might, in general, be passed through to high- and low-income households (assuming such policies are ultimately fully passed through to consumer prices), Figure 8.10 shows GHG emissions associated with each pound of consumer spending. As with Figure 8.4, this captures all of the emissions embedded in the products consumers buy, regardless of where they occurred in the supply chain. The figure also breaks these emissions down by product group.

Figure 8.10. Average GHG emissions per pound of spending by net equivalised income decile, 2018



Note: Household incomes are equivalised using the modified OECD scale. $kgCO_2e$ refers to kilograms of carbon dioxide equivalent.

Source: Authors' calculations using the Living Costs and Food Survey 2018 and Department for Environment, Food and Rural Affairs (2021).

While we saw in Section 8.2 that richer households tend to have higher GHG emissions, Figure 8.10 shows that the GHG intensity of their spending is lower than that of poorer households. This matters because households with more GHG-intensive spending patterns will be proportionally more affected by policies that increase the cost of GHG emissions. Lower-income households are associated with more CO_2 equivalent emissions per pound of spending – 2.5 kilograms per pound in the bottom income decile compared with 2.1kg in the richest decile – largely because a greater share of poorer households' spending goes on electricity, heating and food. As Section 8.2 showed, electricity generation, home heating and agriculture continue to be amongst the largest sources of GHG emissions. Reaching net zero will require further policies in these areas, and these can be expected to hit low-income households disproportionally. These households are also likely to have greater difficulty financing the up-front costs of energy efficiency improvements or other lifestyle changes, even if these changes could save money in the long run. This would amplify the costs for this group.

The accounting in Figure 8.10 includes emissions that took place abroad and which would not be affected by domestic UK policies that increased the cost of GHG emissions. It also tells us nothing about how the demand for different sorts of workers will be affected by the transition to net zero, and how this might affect household incomes. These factors could amplify or mitigate the implied impact of decarbonisation on different income groups. Nonetheless the figure provides grounds for concern that policies aimed at abating emissions will have a disproportionate impact on low-income households. Other differences in exposure across groups – for example, between those in different age groups, or those with and without disabilities – are also important to consider.

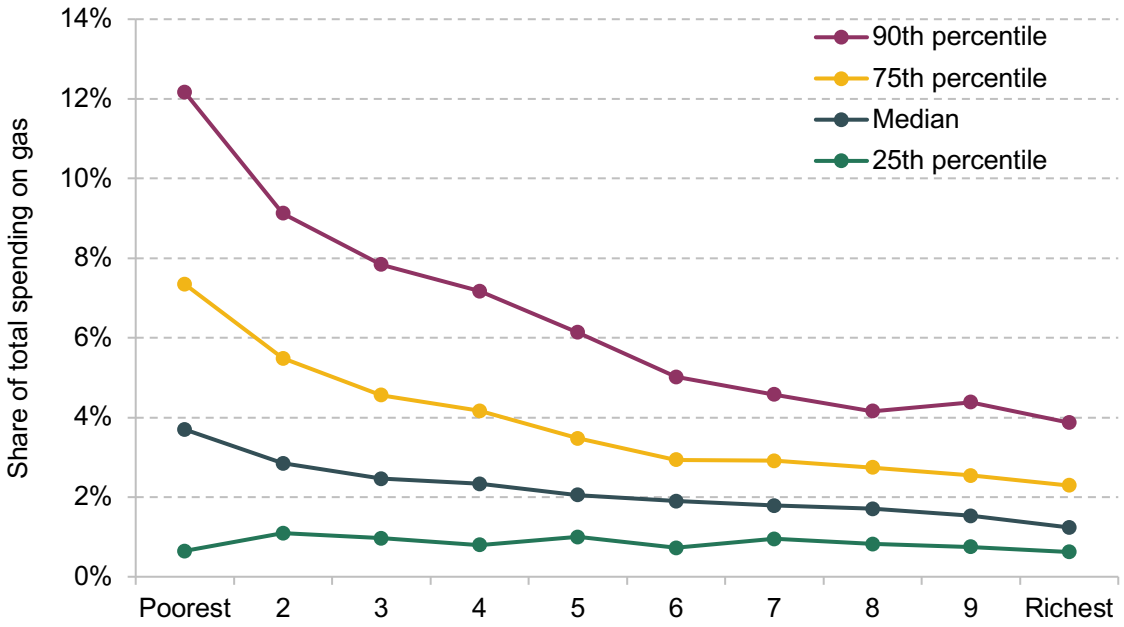
Possible ways to compensate those most affected by policy

What can be done about concerns that policies to achieve net zero will disproportionately affect those on low incomes for example? A standard response from economists is to note that taxes aimed at tackling climate change would also raise revenue, and that these revenues (or revenue from general taxation) could be used to compensate those groups that are most adversely affected by the costs of decarbonisation. For example, suppose the government decided to address residential emissions through increasing taxes (such as VAT) on gas used for domestic heating. The revenues from these taxes could be used to lower taxes, increase benefit rates or increase spending on public services, in a way that disproportionately benefited lower-income households while preserving their incentive to reduce gas consumption.

However, Figure 8.11 shows why such compensation needs to be designed carefully. It shows the distribution of the share of spending on domestic gas within each household income decile. It shows not only that low-income households tend to devote a greater share of spending to gas, but that there is also substantial variation in budget shares *within* income groups. Within the bottom decile, for example, household budget shares on gas vary from 1% at the 25th percentile

to 4% at the median (50th percentile), 7% at the 75th percentile and 12% at the 90th percentile. The wide gap between households at the median and the 90th percentile is indicative of a small proportion of 'hard-to-help' households with particularly high gas consumption. A compensation scheme targeted only at low-income households would not necessarily reach this group, and schemes based too closely on factors related to gas consumption could lead to perverse incentives to increase energy use. Other indicators such as age, family type or disability could in principle be used alongside incomes to improve the targeting of compensation measures (which could, for example, include increases in different state benefits or pensions).[39]

Figure 8.11. Distribution of share of total spending on gas by net equivalised household income decile, 2018



Note: Household incomes are equivalised using the modified OECD scale.

Source: Authors' calculations using the Living Costs and Food Survey 2018.

Whether or not the government tackles emissions through taxes and formal compensation policies in this way, it will (at least implicitly) be making many choices about how to share the cost of emissions reductions between different groups of consumers and taxpayers.

In cases where the government subsidises low-carbon technologies or insulation or anything else aimed at tackling climate change, decisions need to be made about how these subsidies are funded. These will entail distributional consequences, as does the decision to use such subsidies rather than taxes or prices to incentivise behaviour change in the first place. Regulations also do not sidestep choices about who is ultimately paying for polices: they still impose costs on

[39] See Advani and Stoye (2017) for a discussion of different possible compensation schemes.

different households even if the way they do so is sometimes opaque (and they also do not raise revenues that can be used to compensate households afterwards).

8.6 Conclusion

The UK's net zero target is an ambitious goal. Achieving it will require substantial investments in new infrastructure and the rapid development and deployment of new technologies. The costs of this transition will be substantial; of course, if enough countries reduce greenhouse gas emissions sufficiently, there will also be large benefits. It is important that policies be carefully designed to achieve the transition at the lowest possible cost and in a manner that has acceptable distributional outcomes.

The most striking feature of the current UK policy landscape is that there are many overlapping policies, especially in the energy sector. Well-intentioned as the policies may be, their complex, piecemeal structure creates inconsistent incentives to reduce GHG emissions. Incentives to abate vary dramatically across and within sectors and across fuel types and end users, without good reason. Incentives range from positive encouragement to burn gas for home heating and to take expensive personal flights, to strong disincentives related to businesses' electricity use, and even stronger disincentives to burn petrol or diesel. Different schemes incentivise different types of abatement to differing degrees. This approach of effectively (and in some cases probably inadvertently) varying the incentives to reduce emissions compromises efficiency – emissions will not be reduced in the lowest-cost way. Ultimately the inconsistency of the taxes on GHG emissions increases the costs of the transition to net zero.

Successive governments have also subsidised renewable electricity generation and done so in ways that mean that it is Whitehall (and not the market) that is determining which technologies are developed and brought onto the UK grid. These substantial bets on the future success of particular technologies that are currently too expensive to be viable without large amounts of government support come with both upside and downside risks.

Climate change policy is a complex area, not least because domestic policy is being used in the face of an international problem and there will be hard-to-measure but important distributional consequences. But the direction of travel that is needed is clear. Although not sufficient on its own, the main aim should be a more uniform effective tax on emissions, set at a level consistent with the UK's emissions targets.

If the government were willing to be ambitious, it could look to replace a raft of existing policies with a single carbon tax, or with an emissions trading scheme that was extended to cover all emissions. There would be major benefits to having a much smaller, simpler set of policies that produced a consistent set of incentives to reduce GHG emissions. Even without going that far,

the government could reform existing policies to move towards a more uniform effective tax rate on emissions. In some areas the government is moving in that direction: closing the gap between Climate Change Levy rates for gas and electricity, for example. But there is much more that could be done.

There is certainly scope to extend the ETS well beyond the 29% of emissions it currently covers, even if it never covers all emissions. The European Commission has proposed extending the EU ETS to fuel for transport and heating buildings, for example. It would also be desirable to link the UK ETS to the EU ETS to allow emissions reductions to take place where it is easiest, which was the government's (and the Climate Change Committee's) preferred option when leaving the EU but so far shows little sign of happening.[40]

The biggest challenges are the areas where emissions are not taxed, or are even subsidised – domestic use of gas, aviation, food production and imports – and land transport, which is now the largest source of emissions.

Perhaps the most important, and in some ways the most challenging, is domestic energy, and particularly domestic use of gas. The government could at least remove the effective subsidy provided by the reduced VAT rate for domestic energy – and ideally go much further, imposing a serious tax on emissions. The political obstacles to this are obvious, as the Conservative government of the 1990s discovered when it tried and failed to do it. Such a reform would in all likelihood need to be accompanied by a compensation package to address its distributional consequences and by additional measures to help households improve their energy efficiency and move away from gas boilers. The government currently provides subsidies for energy efficiency improvements that are focused on poorer households. Recent attempts to reintroduce more general incentives to apply energy efficiency measures have been short-lived and poorly implemented. Giving advance notice of tax rises would give households a chance to plan and take whatever steps they need to.

Another major inconsistency is the treatment of aviation. Taxes on aviation are low relative to its emissions, particularly for long-haul flights. There is no tax on aviation fuel, no VAT on flights, and flights outside the EEA are not included in the ETS. Air passenger duty is too low to offset this and is not well targeted at reducing emissions. Moving to a sensible system for taxing aviation would be much easier as part of an international agreement – and seeking such an agreement should be a clear focus of the UK government's efforts. Bringing aviation within the (EU and then UK) ETS was a welcome start, but there is much more to do.

[40] See Ares (2021).

Unlike aviation, land transport emissions have only risen slightly; but they are a much larger (indeed, the largest) component of the UK's GHG emissions. Road transport is one area where the UK does impose a substantial carbon tax, in the form of fuel duties (though other aspects of motoring taxation, such as the annual vehicle excise duty, are poorly designed). But we lack a serious strategy for motoring taxation. Despite apparently wanting people to move over to low-emissions cars, the government has frozen fuel duties for more than a decade (a real-terms cut of almost 20% since 2010–11) – but never as a stated long-term policy, typically announcing one more year's freeze with inflation uprating assumed to recommence thereafter. And if people do stop driving petrol and diesel cars, the government has not said whether it is content to see the current £40 billion a year of motoring tax revenues dry up and have virtually no tax at all levied on motoring despite the other harms – notably congestion – that it causes. The government should set out how it plans to tax low-emissions driving in the long term while incentivising the take-up of lower-emissions cars in the short term. In our view, the goal should be a system of road pricing that varies by time and place, perhaps with a simpler flat-rate tax per kilometre driven as a stepping-stone. The government should move towards that as quickly as possible. Switching to low-emissions cars could be encouraged via a subsidy for scrapping old cars which depends on emissions in the same way as the tax on buying new cars, and via investment in infrastructure such as charging points that makes alternatively fuelled vehicles a more attractive proposition.[41]

Agriculture is supported by subsidies and tax advantages and its emissions are not covered by decarbonisation incentives such as the ETS. Post-Brexit reforms to agricultural subsidies will give farmers greater incentives to cut output and manage their land in more environmentally-friendly ways (including by contributing to decarbonisation). However, the details of the new regime for subsidies are yet to be spelled out, and so it is unclear how far they will incentivise emissions reductions. This is also an area where the government must be careful about imported emissions: reducing UK farm output and increasing food imports would not necessarily be better for the environment. If we are thinking about the UK's contribution towards climate change more broadly than a territorial emissions target, then policy towards UK food consumption might be at least as important as policy towards UK agricultural production.

More widely, the UK could look at how it treats emissions embedded in its imports. For now, the government continues to provide preferential treatment for energy-intensive industries to reduce the risk of carbon leakage. If it continues to do so, it should review which businesses should qualify. It is hard to see why we should have different definitions of energy-intensive industries for the CCL and the levy that funds CFDs, and why the industries that receive free ETS permits should be different from both of those: it would seem more sensible to use a

[41] See Adam and Stroud (2019) for further discussion.

consistent definition across the board based on exactly where the risk of carbon leakage lies. Rather than continue to favour industries at risk of carbon leakage, the government could consider bringing in a border tax on emissions embedded in imports – like the CBAM the EU is considering – though that is not without problems of its own. This is clearly an area in which international coordination would be particularly valuable.

Whichever specific policies the government chooses, it should aim not only for greater consistency, but also for clear and credible long-term guidance. We will need policies in place for decades to come; policy stability will help businesses and households to plan and make efficient adjustments. It is important that the government conveys a clear sense of direction which in turn will help foster long-term investments and innovation.

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9. Employment and the end of the furlough scheme

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Key findings

1 The furlough scheme is ending at the end of September. At a gross cost of almost £70 billion since March 2020, it has meant that rises in unemployment and falls in headline employment have been considerably smaller than during the recession between 2008 and 2011, when there was a far larger fall in GDP. **Despite this success, significant challenges remain in the labour market.** These include additional job losses when the furlough scheme ends, low re-employment rates for those made redundant, and high levels of vacancies in some sectors.

2 The latest figures from HMRC show **1.6 million people were still furloughed in late July 2021**, and 900,000 of these were fully furloughed. The highest furlough rates remain in industries severely affected by social distancing rules, such as accommodation & food and arts & entertainment. Rates in these sectors should come down following the easing of COVID-related restrictions.

3 However, **around 1.1 million people furloughed in July were in industries less affected by the easing of restrictions**. For example, 110,000 employees remained furloughed in construction and 160,000 remained furloughed in manufacturing. These people are particularly at risk of job losses as the scheme winds down. Concerningly, **around half live in households without another working adult, and a third neither have a degree nor live with another working adult**. These people are susceptible to persistently low living standards should they be made unemployed.

4 **Despite the furlough scheme, around 200,000 people were made redundant per quarter between April 2020 and June 2021 (1 million in total)**, compared with only 110,000 per quarter in the year before the pandemic. We find that 56% of them found new employment within six months

of redundancy, down from 66% prior to the pandemic. However, **for Londoners, those aged 50+ and those without degrees, the chances of re-employment were much lower**, with six-month re-employment rates at 44%, 35% and 49% respectively. **This is concerning, since these groups are also disproportionately likely to still be furloughed.** This compounds concerns about these groups being particularly at risk of long-term unemployment.

5 **Trends affecting workers aged 60+ are especially worrying**: among those made redundant during the pandemic, 58% were not in, or searching for, work six months later, compared with just 38% among those made redundant in the three years prior to the pandemic. **There is a risk that older workers made unemployed after furlough may drop out of the labour force altogether.**

6 While the fall in the re-employment rate for redundant workers compared with pre-pandemic is worrying, it is worth noting that **the re-employment situation is not as bad as it was between 2007 and 2010**, when only 51% of redundant workers found re-employment within six months. Given the degree of economic disruption during the pandemic, rates of re-employment have remained remarkably high – even before the most recent relaxation of restrictions in July.

7 Concerns about unemployment are tempered by a **record number of vacancies, which reached 1,034,000 between June and August 2021**. There are a number of factors driving this, including: the furlough scheme discouraging job moves across firms; certain jobs becoming less attractive during the pandemic; and reductions in numbers of workers from the European Union. However, **there is mismatch between the regions and industries with high vacancy rates and those with high rates of current or potential unemployment**. This implies some need for 'labour reallocation', particularly towards the transport and retail sectors, and potentially across regions too.

8 **London appears hard-hit on multiple fronts.** Despite comprising 14% of all employees, Londoners comprised 19% of those furloughed in July 2021 and 16% of redundancies during the pandemic. Among those made redundant, just 44% of Londoners had found new work six months later, compared with 58% for those living in the rest of the UK. Finally, while the number of UK-wide vacancies in September 2021 was 24% higher than in September 2019, the equivalent figure for London was just 8%.

9 Young people who left full-time education during the pandemic initially struggled to find work. **Among those who left full-time education in Summer 2020, only 63% were in work 3–6 months later – down from 75% in 2019. However, 9–12 months after leaving education, their employment rates had risen substantially, falling back into line with those of pre-pandemic cohorts.** Given this recovery, coupled with the extensive pipeline of Kickstart jobs for young people, government resources and attention might be better focused on supporting other groups, such as older workers and those living in London.

9.1 Introduction

The Coronavirus Job Retention Scheme, more commonly known as the furlough scheme, is probably the highest-profile of all the government support schemes introduced during the COVID-19 pandemic. Announced in March 2020, the scheme was initially planned to run until June 2020. It has since been extended multiple times, but it will come to an end in September 2021. Under the scheme, private sector employers could furlough their employees, with the government paying 80% of pre-tax salary up to £2,500 per month. Prior to August 2020, employers could furlough employees at no cost to themselves. Since August 2020, there has been a cost to employers (which has risen significantly in Summer 2021 – see Table 9.4 later).

As shown in Figure 9.1, at its peak in early May 2020, 8.9 million people were furloughed. Take-up has since fluctuated, with a second peak emerging during the third nationwide lockdown in January 2021. Since then, there has been a gradual decline as public health restrictions on economic activity have been eased. The latest statistics from the end of July show 1.6 million still on furlough, 700,000 of whom were working part-time on 'flexible furlough' (HM Government, 2021a).

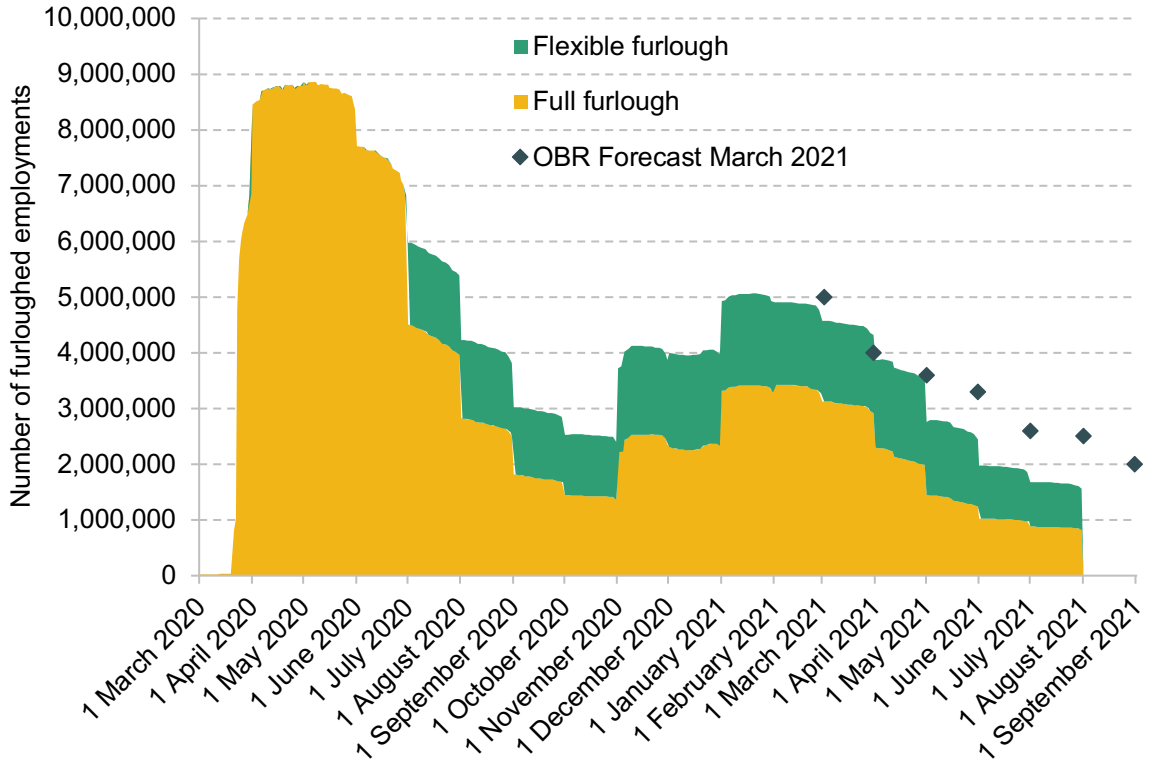
The huge numbers of people on the scheme (a total of 11.6 million employments have been furloughed at some point since March 2020) have meant that the cost to the exchequer has been enormous, with a total gross cost of £68.5 billion between March 2020 and mid August 2021 (HM Government, 2021a). The effectiveness of the scheme is most obviously seen in changes in the employment and unemployment rates during the pandemic, both of which were relatively muted compared with during the global financial crisis (GFC). For example, the unemployment rate rose from 3.8% in 2019Q4 to a peak (so far) of 5.2% in 2020Q4: significantly less than the peak of 8.5% during the GFC. Meanwhile the employment rate fell by around 1.9 percentage points from late 2019 to late 2020, considerably less than the 2.9 percentage point fall seen between 2008 and 2011. Both unemployment and employment have improved since the start of

this year, with ONS estimates of payrolled employees rising to 29.1 million in August 2021, up from 28.1 million in November 2020 (Office for National Statistics, 2021a). The furlough scheme can therefore be seen as a policy success, albeit one that had a gross cost of almost £70 billion.

It is unclear how the labour market will respond to the ending of the furlough scheme at the end of September, and whether there will be a large number of new jobseekers at that point. The latest independent forecasts, summarised by HM Treasury, predict an average unemployment rate of 5.3% at the end of 2021, with forecasts ranging between 4.5% and 5.8% (HM Government, 2021b). These forecasts all exceed the current (May–July 2021) unemployment rate of 4.6%.

This forecasted rise in unemployment sits alongside additional concerns about unfilled vacancies. These have become widespread across certain sectors, such as food & accommodation and IT & digital services. They have also been particularly well documented for heavy goods vehicle drivers, since they have led to supply chain difficulties for many firms.

Figure 9.1. Number of employments furloughed, March 2020 to July 2021



Note: OBR forecasts from the March 2021 Economic and Fiscal Outlook are plotted for the last day of each month.

Source: HMRC furlough data, March 2020 to July 2021.

The main aim of this chapter is to set out some of the key challenges facing the labour market, particularly around employment, in the coming year. We examine how the current government policy responses face up to these challenges, and what options may be available to policymakers in light of these findings.

We start in Section 9.2 by examining the types of people who remained on the furlough scheme in July 2021 (the latest point at which data are available). To shed light on their prospects should they lose their job, we then analyse re-employment rates amongst employees who have already been made redundant during the pandemic. This includes an examination of the characteristics of the people who have lost their jobs already, as well as the types of people for whom it has been hardest to find new work. Our analysis suggests older workers may be a particular group of concern: we explore this in detail and discuss the extent to which government employment policies are sufficiently tailored to them.

We then consider in Section 9.3 how the number and type of job vacancies have changed over the last two years, and how these trends may be important for people finding new jobs. We explore potential reasons for the very high levels of vacancies seen in some sectors, such as transportation and hospitality.

In Section 9.4, we examine the prospects for young adults who have left education during COVID-19, focusing on those who left school or university in Summer 2020. We examine how difficult it has been for them to find work both 3–6 months and 9–12 months after graduation, as well as the characteristics of the jobs they have found. Section 9.5 concludes.

9.2 Who is affected by the end of the furlough scheme?

With the furlough scheme soon ending, some of those who were on furlough in Summer 2021 will lose their jobs. In order to examine the *type* of workers who appear most at risk, we examine the composition of those furloughed as of July 2021 (the latest data available). Table 9.1 shows the absolute number and the percentage of furloughed employees by industry, region, gender, age bracket, education group, and number of working adults in the household.

Note and source for Table 9.1

Note: Industry, region, gender and age categories are constructed using HMRC data, which are available up to July 2021. Education and household work status are constructed using the Labour Force Survey (LFS), since such disaggregation is unavailable in the HMRC data. We use LFS data for June 2021 (the latest available) to construct estimates of the composition of those employed/furloughed. We then apply these splits to the headline HMRC furlough number to infer the respective furlough rates/numbers.

Source: Authors' calculations using UK Quarterly Labour Force Survey 2021Q2 and HMRC Furlough Statistics July 2021.

Table 9.1. Furlough rates and composition, June/July 2021

Category	Furlough rate	Number furloughed	Composition of furloughed	Composition of employed
Overall	**5%**	**1,560,000**	**100%**	**100%**
By industry				
Agriculture, mining and utilities	2%	10,000	1%	2%
Construction	9%	110,000	7%	4%
Manufacturing	7%	160,000	10%	8%
Retail and transport	6%	340,000	22%	20%
Accommodation and food	15%	260,000	17%	6%
Professional and administrative	6%	400,000	26%	25%
Arts and entertainment	15%	70,000	4%	2%
Other (including public sector)	2%	200,000	13%	33%
By region				
London	8%	300,000	19%	14%
Rest of UK	5%	1,270,000	81%	86%
By gender				
Male	6%	820,000	53%	50%
Female	5%	730,000	47%	50%
By age				
18–24	5%	150,000	10%	11%
25–29	5%	150,000	10%	11%
30–39	5%	360,000	23%	24%
40–49	6%	340,000	22%	22%
50–59	5%	340,000	22%	22%
60+	7%	210,000	13%	10%
By education				
Without degree	7%	970,000	62%	51%
With degree	4%	590,000	38%	49%
By household work status				
In a h.h. with another working adult	5%	740,000	47%	55%
Only working adult in household	6%	830,000	53%	45%

Note and source: See previous page.

The aggregate furlough rate of 5% of employees in July 2021 masks considerable heterogeneity between groups. Unsurprisingly, furlough rates are much higher in some industries, particularly those hit hardest by lockdowns and other public health restrictions (Blundell et al., 2020). For example, 15% of those employed in accommodation & food and arts, entertainment & recreation were still furloughed in July 2021. Around 6% of those employed in professional and administrative industries were on furlough in July 2021 – similar to the economy-wide average. However, because these industries (which include scientific and technical industries, finance, business services and real estate) are such large employers, they represent a quarter of all people furloughed (400,000).

Around two-thirds of those on furlough do not have a degree, over half are the only working adult in their household, and just over a third neither have a degree nor live with another working adult. This is concerning, since these groups tend to be more vulnerable to economic shocks. Those without degrees have lower earnings (Blundell, Green and Jin, 2016), lower savings, less job market security (Clark and Postel-Vinay, 2009) and in the past have suffered higher unemployment rates during recessions, while those without additional earners in the household are less likely to have a second income stream to fall back on. Hence, if made redundant, these workers are at risk of persistently low living standards, particularly as the support provided by universal credit is considerably less generous than that provided by the furlough scheme (Cribb and Waters, 2021). This is compounded by the ending of the £20 per week universal credit uplift at the end of September 2021.

We also find that employees living in London and workers aged 60 and above are disproportionately likely to be furloughed, and have been throughout the pandemic. The high furlough rate amongst older workers is potentially troubling: if made redundant, many of these workers might never return to employment, as was the case during the 2008−09 recession in the United States (Coile and Levine, 2011).

Finally, we also find that in Summer 2021, young employees were no more likely to be furloughed than average. This represents a remarkable change compared with earlier in the pandemic. For example, in June 2020, 43% of 18- to 24-year-old employees were furloughed, compared with 26% of 45- to 54-year olds.

While useful in offering a comprehensive breakdown, Table 9.1 relies on data available only up to July 2021, and so does not account for the fact that many of those furloughed are in industries that have recently ‘opened up’, following the removal of most nationwide COVID-related restrictions on 19 July 2021. In particular, the accommodation & food and arts & entertainment industries are expected to bounce back strongly this year (Barclays Corporate, 2021).

Table 9.2. Furlough rates and composition of those furloughed, for those not working in industries most affected by COVID restrictions, June 2021

Category	Furlough rate	Number furloughed	Composition of furloughed	Composition of employed
Overall	**4%**	**1,090,000**	**100%**	**100%**
By industry				
Agriculture, mining and utilities	2%	10,000	1%	2%
Construction	9%	110,000	10%	5%
Manufacturing	7%	160,000	15%	9%
Retail and transport	6%	240,000	22%	17%
Professional and administrative	5%	370,000	34%	29%
Other (including public sector)	2%	200,000	18%	38%
By region				
London	5%	170,000	16%	13%
Rest of UK	4%	920,000	84%	87%
By gender				
Male	4%	490,000	45%	50%
Female	5%	600,000	55%	50%
By age				
18–24	5%	100,000	9%	9%
25–29	4%	130,000	12%	12%
30–39	3%	190,000	17%	25%
40–49	5%	280,000	26%	23%
50–59	4%	250,000	23%	23%
60+	7%	140,000	13%	8%
By education				
Without degree	6%	630,000	58%	48%
With degree	4%	460,000	42%	52%
By household work status				
In a h.h. with another working adult	4%	530,000	49%	56%
Only working adult in household	5%	560,000	51%	44%

Note and source: See next page.

Note and source for Table 9.2

Note: Industries that are most likely to benefit from the loosening of COVID-related restrictions are defined by Standard Industrial Classification (SIC) codes: accommodation/food (major SIC code: 9); arts/entertainment/recreation (18); air transport (51); travel/tour operators (79); non-food, non-pharmaceutical, and non-internet retail (minor SIC codes: 4719; 4730–4772; 4776–4789). These industries are therefore excluded from this analysis.

Source: Authors' calculations using UK Quarterly Labour Force Survey 2021Q2 and HMRC Furlough Statistics July 2021.

To take account of this, Table 9.2 presents the characteristics of furloughed workers after stripping out those industries that are most likely to recover.[1] Overall, these workers number around 0.5 million, leaving 1.1 million workers furloughed in industries less affected by the reopening. These workers warrant particular concern, since the fact their industries are less likely to have benefited from the reopening makes them particularly at risk of job loss following the end of the furlough scheme.

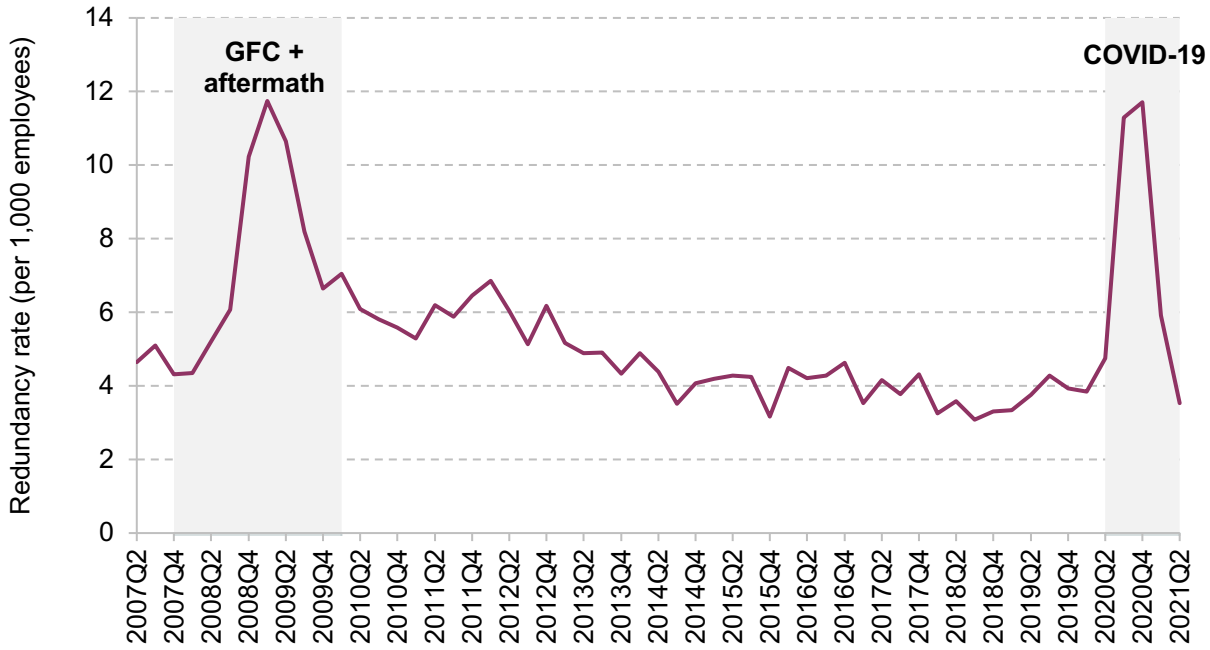
Even when we focus on this subgroup of workers, most of the patterns documented in Table 9.1 remain. In particular, almost 60% of furloughed employees in these industries do not have a degree, around half live in households without another working adult, and a third neither have a degree nor live with another working adult. They are also disproportionately likely to be older: around 13% of those furloughed in these industries are aged 60 or above, compared with 8% among the employed. We ought to be doubly concerned about these workers: not only are they more likely to be made redundant, they are also more likely to have persistently low living standards should they lose their job.

How have redundancies changed during the pandemic?

To shed further light on the likelihood of furloughed people being made redundant, we first document how redundancy rates have changed throughout the pandemic. Despite the furlough scheme helping to protect millions of jobs, redundancies ran at a much higher rate during the pandemic than during the decade preceding it, as evidenced by the sharp uptick in Figure 9.2. In the third and fourth quarters of 2020, redundancy rates per 1,000 employees increased to 11.3 and 11.7 respectively – around the same level as at the height of the GFC, and almost three times higher than pre-pandemic. In total, this implies that around 1 million employees have been made redundant during COVID: about 200,000 per quarter between 2020Q2 and 2021Q2. This is significantly higher than in 2019 – the year before the pandemic – when redundancies per quarter numbered around 110,000. However, it also shows that by 2021Q2, the redundancy rate had fallen back to less than 4 per 1,000 employees, below its 2019 level.

[1] These are: accommodation and food, arts and entertainment, air travel, tourism, and non-food, non-pharmaceutical, and non-internet retail.

Figure 9.2. Redundancy rate per thousand employees, 2007–21



Note: Shaded areas highlight periods of elevated redundancy rates, associated with the global financial crisis (GFC), the recession and its aftermath and with the COVID-19 pandemic.

Source: UK Quarterly Labour Force Survey, 2007Q2–2021Q2.

Compared with people made redundant in the three years prior, redundancies during the pandemic have been disproportionately borne by employees under the age of 30 or over the age of 60. Workers in London have also been particularly affected, with their contribution to overall redundancies rising from 12% to 16% (Table 9.3). Those working in professional and administrative jobs were also more likely to be made redundant, probably because office-based workers were particularly hit by COVID-related restrictions.

Redundancies during COVID were also more likely to be the result of employers cutting staff rather than going out of business. For instance, 18% of redundancies during COVID were the result of employers closing down, compared with 26% in the three years prior. This is perhaps unsurprising, given the government has invested significant resources in keeping businesses afloat during the pandemic.

Importantly, the high redundancy rates in late 2020 occurred alongside changes to the furlough scheme. When the furlough scheme was first introduced in March 2020, employers could furlough their employees at essentially no cost. The government would contribute 80% of employees' salaries, and cover their employer National Insurance contributions and default minimum employer's automatic enrolment pension contributions, and employers were not obliged to make any payment to furloughed employees. This likely explains why redundancy rates remained low and unchanged from the pre-pandemic period in the second quarter of 2020.

Table 9.3. Composition of those made redundant: global financial crisis (GFC), pre-COVID and COVID-19 pandemic

Category	GFC (2007Q4–2010Q1)	Pre-COVID (2017Q1–2019Q4)	COVID (2020Q2–2021Q2)
By industry			
Agriculture, mining and utilities	2%	2%	2%
Construction	12%	15%	9%
Manufacturing	16%	9%	8%
Retail and transport	20%	22%	24%
Accommodation and food	7%	5%	3%
Professional and administrative	26%	26%	33%
Public sector	13%	17%	15%
Arts and entertainment	2%	2%	2%
Other	2%	2%	4%
By region			
London	10%	12%	16%
Rest of UK	90%	88%	84%
By gender			
Male	65%	56%	55%
Female	35%	44%	45%
By age			
18–24	19%	12%	13%
25–29	13%	10%	13%
30–39	23%	22%	20%
40–49	22%	21%	21%
50–59	18%	26%	23%
60+	6%	9%	10%
By education			
Without degree	76%	60%	60%
With degree	24%	40%	40%
By household work status			
In a h.h. with another working adult	77%	72%	73%
Only working adult in household	23%	28%	27%

Source: UK Quarterly Labour Force Survey, 2007Q4–2021Q2.

Table 9.4. Monthly employer cost of keeping an employee, during and after furlough

	Date	Pay: £16,200 (35 hours p.w. on NLW)	Pay: £24,900 (median)	Pay: £37,800 (75th percentile)
During furlough (fully furloughed, not working)	Mar – Jul 2020	£0	£0	£0
	Aug 2020 – Jun 2021	£110	£231	£412
	Jul 2021	£245	£439	£727
	Aug – Sept 2021	£380	£646	£1,042
After furlough (working)	After Sept 2021	£1,460	£2,306	£3,562

Note: Authors' calculations based on the 2021−22 tax and automatic enrolment system. NLW is National Living Wage. Median and 75th percentile earnings are based on 2019 ASHE annual pay. We consider employer costs to be wage/salary, employer National Insurance contributions and employer pension contributions. We assume that employers make minimum employer pension contributions. The Apprenticeship Levy, and any other costs of employment, are not considered.

However, this changed from August 2020, when employers were required to start paying National Insurance and pension contributions. The cost implications of this were not trivial: as Table 9.4 shows, this cost employers £231 per month for an employee earning £24,900 per year (the median pre-pandemic annual salary). As the financial burden of keeping on employees increased, redundancy rates spiked. They then fell sharply in quarters 1 and 2 of 2021, most likely because employers influenced by the change had already made their employees redundant. The fact that a previous reduction to the generosity of the furlough scheme coincided with such a marked change in the redundancy rate raises concerns about a similar thing happening once the furlough scheme ends.

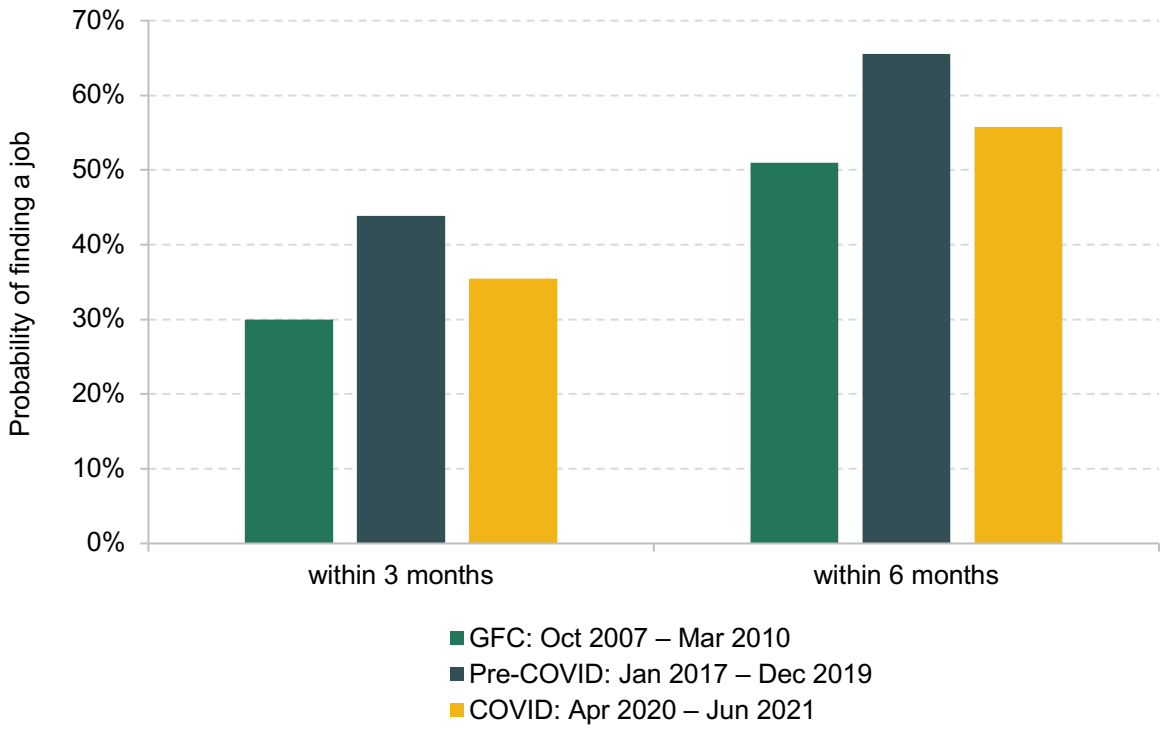
These concerns are heightened by the fact that, as the furlough scheme ends, the increase in financial cost of keeping an employee is much bigger than the previous increase in August 2020. As Table 9.4 shows, this cost has already increased since Q2 2021: in July 2021 and August 2021, employers were obliged to pay 10% and 20% of furloughed workers' salaries, respectively. This meant that for a worker earning £24,900 (the median), the monthly cost to their employer of keeping them on furlough increased from £231 in June 2021 to £439 in July and £646 in August. Once the scheme ends completely, the cost of keeping on a worker earning £24,900 per year will rise to £2,306 per month after September 2021. Of course, this rise in costs is counterbalanced by the employer getting work from the employee in return, which was not the case for those fully furloughed after the previous changes to the scheme.

How easily have those made redundant found new employment?

To examine the prospects of at-risk workers should they be made redundant, we examine the re-employment rates of employees who have already been made redundant during the pandemic. Figure 9.3 shows that employees who were made redundant between April 2020 and June 2021 have fared worse than those made redundant in the three years 2017–19. For instance, an employee made redundant since April 2020 had a 36% chance of finding a new job within three months of redundancy and a 56% chance of finding one within six months, compared with 44% and 66% before the pandemic. Though significantly lower, it is worth noting that the situation is not as bad as it was between 2007 and 2010, when the three- and six-month job re-employment rates for redundant employees were 30% and 51% respectively.

However, these aggregate figures mask considerably different prospects for different groups of employees. Figure 9.4 shows the proportion of redundant employees who have found new employment within six months, split by their characteristics. People with a degree who have been made redundant during the pandemic have fared comparatively well, with their re-employment rates broadly similar to the three years before (68%). This stands in sharp contrast to people made redundant without a degree, who only had a 49% probability of finding new employment within six months – down from 64% prior to the pandemic.

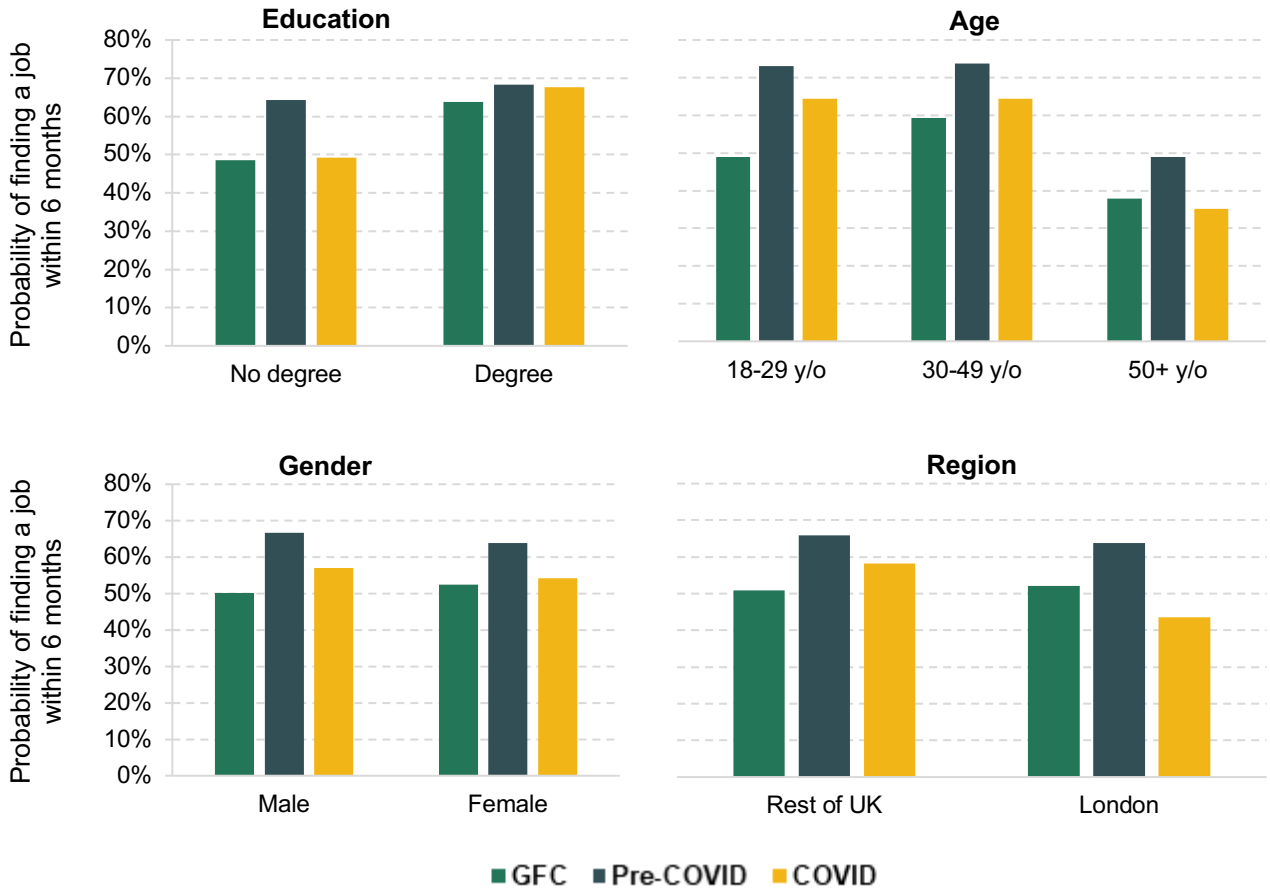
Figure 9.3. Re-employment rates amongst those made redundant



Note: Re-employment is measured as either finding a new employee job or starting working as a self-employed worker after having been made redundant.

Source: Quarterly and Longitudinal Labour Force Surveys, 2007Q4–2021Q2.

Figure 9.4. Six-month re-employment rates for redundant employees, by education, age, gender and region



Note: Re-employment is measured as either finding a new employee job or starting working as a self-employed worker after having been made redundant.

Source: UK Longitudinal Labour Force Survey, 2007Q4–2021Q2.

There are not major differences between the re-employment rates of men and women. However, those living in London fared comparatively worse during the pandemic: they are 15 percentage points less likely to have found a job within six months after being made redundant than those living in the rest of the UK (44% versus 58%). The pandemic era also reveals a striking age profile: workers aged 18–29 and 30–49 had a 64% probability of re-finding employment after redundancy, compared with just 35% for over-50s. While older workers generally have a harder time re-finding employment after redundancy, the discrepancy between groups was much larger during COVID than it was both before COVID and during the global financial crisis.

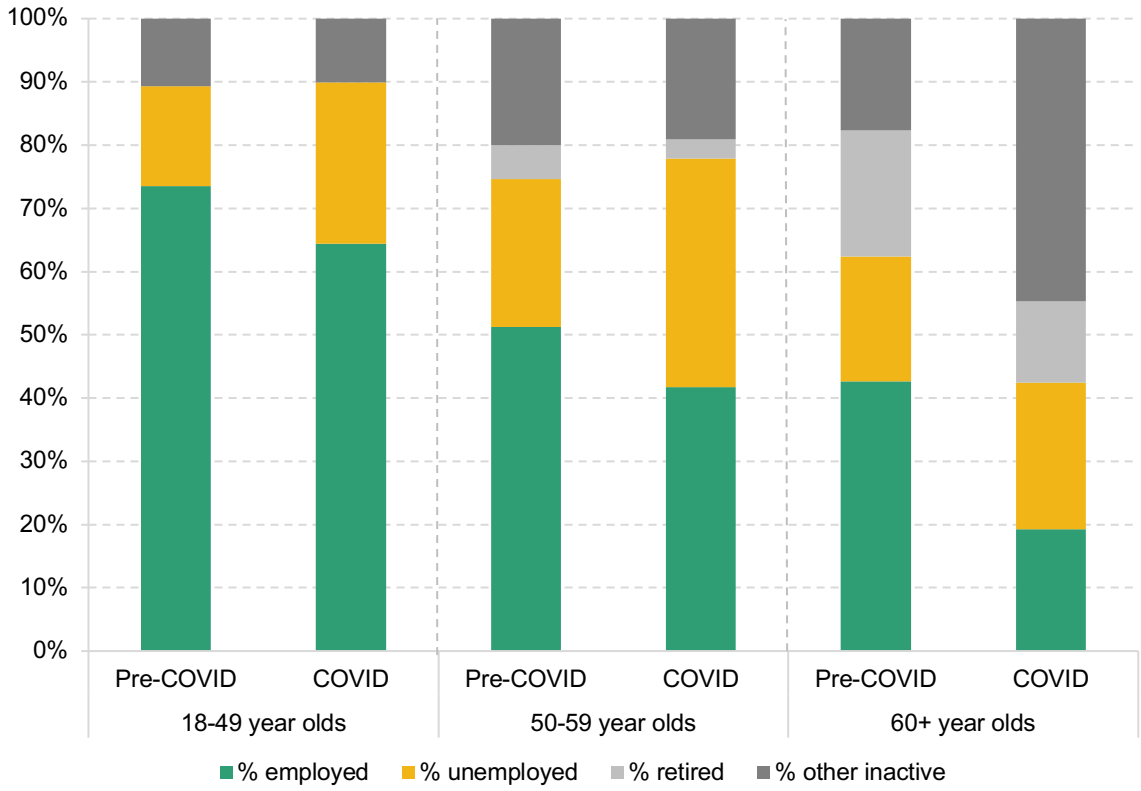
This compounds the concerns documented earlier that older people, those without a degree and those living in London are disproportionately at risk of redundancy in the coming months, due to their higher rates of furlough. Figure 9.4 shows that, among those who have already been made

redundant during the pandemic, these groups also appear to be less able to find new employment, and hence are particularly at risk of longer-term unemployment.

How easily have older employees made redundant found new employment?

Figure 9.5 focuses on older employees in particular, examining the six-month transitions amongst those made redundant. We compare those made redundant during the pandemic with those made redundant in the three years prior to the pandemic (2017–19), and separate out 50- to 59-year-olds and those aged 60+. We also show data for 18- to 49-year-olds as a comparison point.

Figure 9.5. Economic activity of older employees made redundant, within six months of losing job



Note: Pre-COVID period is January 2017 to December 2019. COVID period is April 2020 to June 2021.

Source: UK Quarterly Labour Force Survey, 2017Q1–2021Q2.

Overall, we see that during COVID, all age groups are less likely to be employed six months after being made redundant than prior to the pandemic, mirroring the findings of Figure 9.4. However, employees aged 60 and over are not only less likely to find new employment during the pandemic, but they are also more likely to be economically inactive (i.e. neither in paid work nor searching for work, represented by the combined shades of grey in Figure 9.5). Taking these

bars together ('retired' and 'other inactive'), 58% of redundant employees aged 60+ were economically inactive six months after being made redundant during the pandemic, compared with just 38% before the pandemic. Many of these employees may be exiting the labour force altogether. In comparison, there has been no change in transitions towards inactivity for redundant employees aged 18–49 and 50–59, compared with before the pandemic.

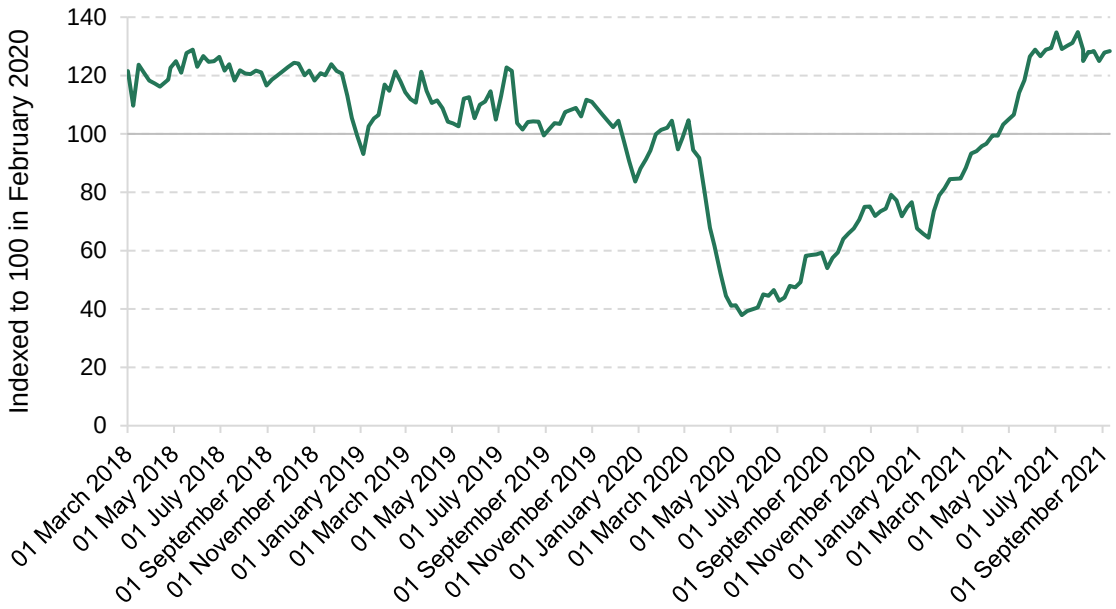
At present, the government has several schemes to help unemployed employees find jobs. For older workers, the most relevant is the 'Restart' scheme, which provides tailored support for universal credit claimants who have been out of work for 12–18 months. However, since it has no specific age mandate, there is a risk that it is insufficiently tailored to the specific needs of older workers. For example, older people might be less willing to retrain, since they have less time left in the labour market to reap dividends from this investment. Also, the scheme does not target the specific problem presented by workers aged 60+: the transition to inactivity. Since these people are not searching for jobs, they are unable to claim universal credit or new-style jobseeker's allowance, and hence are not eligible for the Restart scheme. Given this, one potential change would be to make the Restart scheme available to all people out of work, not just those on universal credit or new-style jobseeker's allowance.

Finally, since Restart is only targeted at those out of work for at least 12 months, this would mean that older workers who lost their jobs as the furlough scheme ended could only become eligible for Restart at the start of October 2022. At this point, their appetite for labour market re-entry may have diminished, and they may have lost valuable skills that would make their re-entry easier. Given these shortcomings, the government ought to consider more targeted advice to older workers earlier in their spell of unemployment, to mitigate the risk of them leaving the labour market altogether.

9.3 The recovery in vacancies and the prospects for re-employment

Until recently, the re-employment rates of those who were made redundant were not helped by low demand from employers for new workers. This is shown in Figure 9.6, which shows the average number of online job adverts, indexed to 100 in February 2020. The number of vacancies fell by more than 60% from early February 2020 to May 2020. This is corroborated by the ONS Vacancy Survey, which finds a similar fall – from 800,000 open vacancies at the end of 2019 to only 340,000 in the second quarter of 2020 (Office for National Statistics, 2021b). This fall was much larger, and sharper, than that seen in 2008 during and after the financial crisis.

Figure 9.6. UK online job adverts, 2018–21, indexed to 100 in February 2020



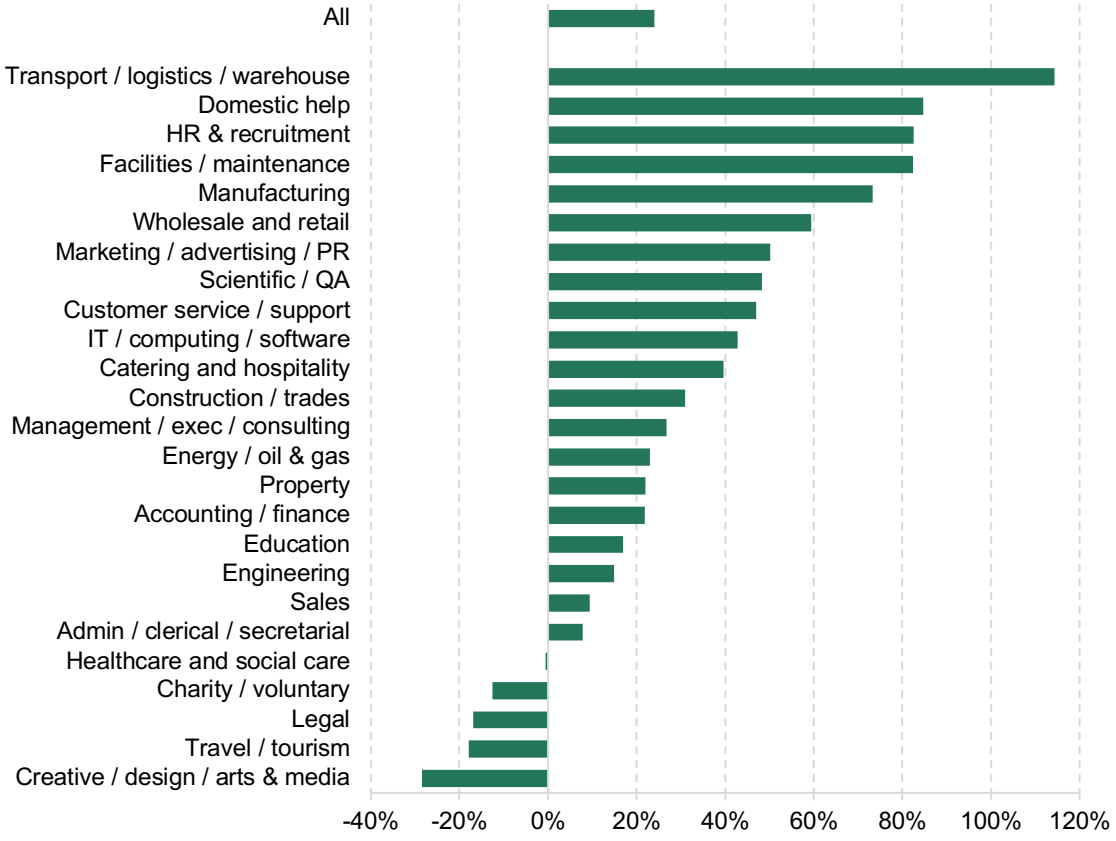
Source: ONS online job advert estimates, from Adzuna.

However, since the second quarter of 2020, the number of online job adverts has bounced back dramatically: by June 2021, the average number of job adverts was 25–30% above the level seen in February 2020. Again, this is corroborated by the ONS Vacancy Survey, which reported a record average of 1,034,000 vacancies between June and August 2021 (Office for National Statistics, 2021b).

To assess how the current profile of vacancies compares with that before the pandemic, Figure 9.7 shows the growth in online job adverts between mid September 2019 and mid September 2021. We use the same months as comparison points to account for any seasonality in employers' hiring decisions. The graph shows remarkable heterogeneity across industries. The biggest rise has been in 'transport/logistics/warehouse' with 114% growth, and domestic help (85%). There are very high growth rates in other large sectors, including wholesale and retail (59%) and catering and hospitality (40%), which were both severely affected by lockdowns and social distancing but have since bounced back strongly. In comparison, the number of online job adverts in late August for creative, legal, and the charity or voluntary sector are all at least 10% lower than their levels in 2019.

There is also substantial heterogeneity in vacancies across regions (Figure 9.8). The largest growth in vacancies has been in the North East (71% growth compared with September 2019), East Midlands (44%) and Yorkshire and Humberside (38%). In comparison, South East England and Northern Ireland (12% growth) and particularly London (8%) stand out as areas with low growth in comparison with the national average.

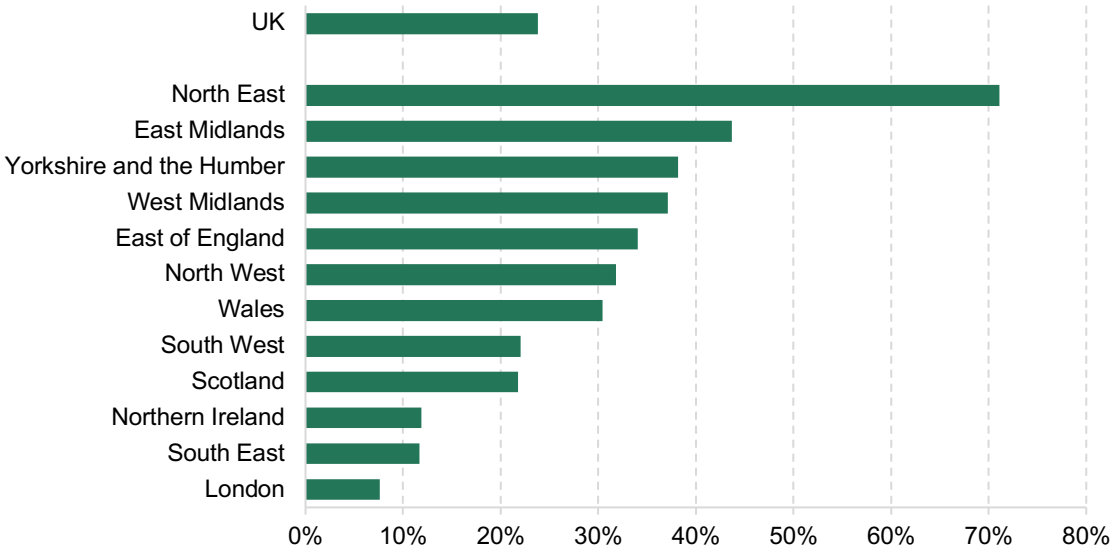
Figure 9.7. Growth in online job adverts between mid-September 2019 and mid-September 2021, by industry



Note: These industries are based on Adzuna 'categories' and do not reflect SIC categories.

Source: ONS online job advert estimates, from Adzuna.

Figure 9.8. Growth in online job adverts between mid September 2019 and mid September 2021, by region



Source: ONS online job advert estimates, from Adzuna.

Potential drivers of high levels of vacancies

These headline figures provide some concrete statistics behind widespread news reports of large numbers of unfilled vacancies in particular sectors, especially road transport (which have reportedly been causing supply chain issues) and food and accommodation.[2] Though it is difficult to provide general reasons behind the large growth in vacancies – since many are caused by occupation- or industry-specific problems – we nonetheless identify three potential drivers, and discuss the extent to which they apply to different industries.

One possibility is that the furlough scheme has been 'freezing' the labour market in a way that is discouraging workers from moving from their old jobs to new opportunities. This would explain why some industries, such as food and accommodation, have simultaneously high furlough rates and levels of vacancies. With the increased employer contributions needed to keep furloughed people furloughed in July and August, and the ending of the scheme in September, this channel is unlikely to be important during the autumn and winter.

A second possible reason is that some industries – in particular, food and accommodation – may have become considerably less attractive for workers during the pandemic. As the supply of workers willing to work in an industry falls, this should push up the market wage for these jobs. However, if firms are slow to react, they might continue to try to hire at pre-pandemic wages – leading to a shortage of workers willing to take these jobs and many unfilled vacancies. If this is the case, in the long run, wages should rise to compensate for the (perceived or real) disadvantages of working in these sectors, incentivising workers to fill these jobs. Alternatively, some of these jobs might never re-emerge.

Third, there has been a reduction in the overseas-born population during the pandemic due to a combination of lost jobs, being furloughed, and a desire to be closer to family during a difficult time. Thwaites (2021) estimates that around half a million migrants left the UK between the first and third quarters of 2020 – about 5% of the migrants in the UK. A large proportion of these are likely to be from the European Union. In addition, changes to immigration rules due to Brexit mean that it is considerably harder for many EU citizens to come to the UK to work since January 2021. This effectively amounts to a reduction in labour supply, which may have helped drive the current spike in vacancies.

There is some suggestive evidence that this last factor may be important in explaining some, but not all, of the current patterns. Table 9.5 shows the vacancy growth between June–August 2019 and the same months in 2021, by industry. It also shows the proportion of employees in 2019 working in these industries who were born in current EU member states. On average, 8% of

[2] See, for example, https://www.bbc.co.uk/news/uk-wales-58341916 and https://www.bbc.co.uk/news/57810729.

employees in 2019 were born in the EU. However, in a number of key industries with high vacancy growth, the proportion is much higher. For example, in 2019, 15% of accommodation and food services workers were born in the EU, as well as 10% of those working in administrative and support services. In addition, many of the industries with relatively low vacancy growth – such as finance and insurance – had average, or lower than average, proportions of employees from the EU prior to the pandemic. Though there are exceptions to the pattern, this analysis nonetheless suggests that reductions in the number of people from the EU could be contributing to higher vacancy rates in certain sectors. As above, wages in these sectors could rise in order to attract sufficient workers or, alternatively, some of these jobs might never re-emerge.

Table 9.5. Vacancy growth (2019–21) and fraction of employees born in European Union, 2019, by industry

Industry	Vacancy growth (June–August 2019 to June–August 2021)	Share of employees born in EU, 2019
Overall	**25%**	**8%**
Construction	48%	7%
Administrative and support	44%	10%
Accommodation and food	41%	15%
Manufacturing	39%	11%
Information and communications	38%	8%
Transport and storage	31%	11%
Arts, entertainment, recreation	30%	5%
Public administration	26%	3%
Health	20%	6%
Professional and scientific	20%	9%
Education	14%	6%
Finance and insurance	9%	8%
Wholesale and retail	4%	9%

Note: Small industries excluded due to low sample size in the LFS. Sorted by vacancy growth 2019 to 2021.

Source: Authors' calculations using ONS Vacancy Survey and Labour Force Survey 2019.

To what extent do high vacancies allay concerns about unemployment?

On the face of it, high vacancies appear to lessen the threat of unemployment once the furlough scheme ends. However, a key issue will be whether the vacancies are in jobs that are suitable, in terms of skills and locations, for jobseekers. To examine this issue, Costa Dias et al. (2021) construct measures of 'opportunities', which count both vacancies in one's own occupation and area, and vacancies in other occupations weighted by the frequency with which people have transitioned towards them in the past. For example, a retail store worker could potentially search for work as a delivery driver as well as another retail post, whereas they are less likely to get a new job as an accountant or teacher. Differences in the ease of transition are accounted for by the weights.

With this measure in hand, Costa Dias et al. then compare how the number of opportunities compares with the number unemployed or furloughed across different sectors and demographics. This comparison offers a helpful indication as to whether current vacancies are sufficient for the potential number of jobseekers that might be looking for them.

Figure 9.9. Unemployed or furloughed workers per opportunity in June 2021, relative to pre-pandemic, by demographic group

Note: Shows the number of unemployed or furloughed workers who would usually compete for the same jobs as workers in each demographic group, divided by the new job opportunities for workers in that group, relative to June 2019.

Source: Adzuna vacancy data and Labour Force Survey. Reproduced from figure 4.4 in Costa Dias et al. (2021).

Importantly, Costa Dias et al. find that the number of unemployed workers per opportunity *increased* in most sectors, including retail staff, administrative workers and IT professionals. This implies that, despite the high level of vacancies, workers made redundant in these industries after furlough will find it *harder* to find a job than before the pandemic – due to increased competition for jobs. While there are important exceptions to this trend – such as road transport drivers and bar staff – this analysis ultimately dampens the initially optimistic outlook of record vacancies.

Costa Dias et al. (2021) also find evidence of heterogeneity in competition for new job opportunities amongst different demographic groups. As shown in Figure 9.9 (reproduced from figure 4.4 in their paper), competition looks higher for women than for men, and for middle-aged people compared with those younger or older than them – a rare piece of (relatively) good news for older workers. The graph also shows that opportunities look better for those without degrees, as there are relatively fewer potential jobseekers per potential vacancy.

In summary, these findings have important implications for the results documented in Section 9.2. On the one hand, the fact that opportunities look better for those without degrees and older workers partially offsets concerns that these people appear at greater risk of unemployment following the ending of furlough. On the other hand, the fact that London has exhibited the lowest vacancy growth of any region compounds concerns about the prospects of longer-term unemployment in the capital. Londoners have been hit on multiple fronts: they are more likely to be furloughed, have endured higher rates of redundancy, have been less likely to re-find employment when made redundant, and – as this section has shown – live in a region with the lowest growth in vacancies.

9.4 How has COVID affected the labour market prospects of recent graduates?[3]

How easily did those who left full-time education in 2020 find jobs?

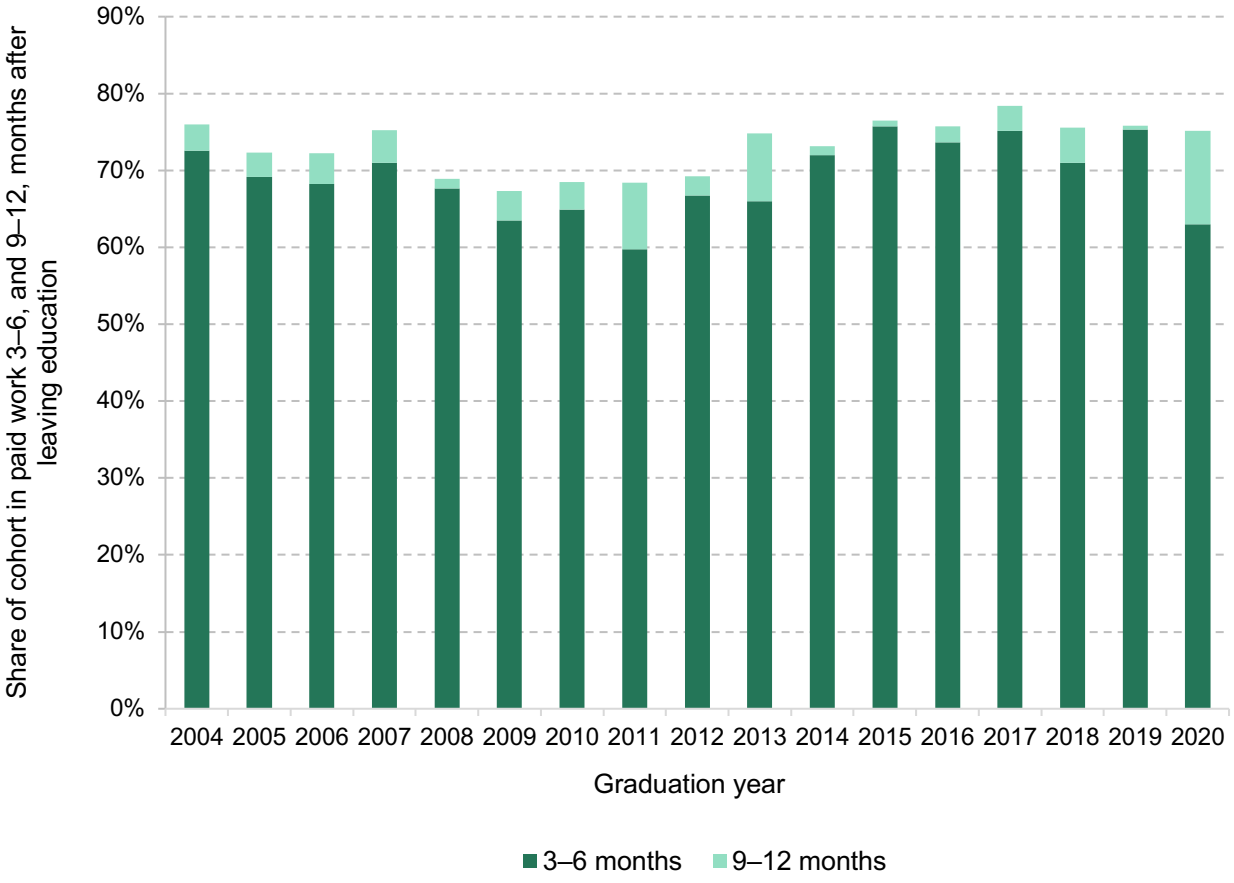
Each year, hundreds of thousands of young adults leave education and enter the labour market. The experiences of those who left education during the pandemic are particularly important to understand. First, the tail end of their education was significantly disrupted, as a result of school closures, distance learning and exam cancellations. Second, a substantial body of literature shows that leaving education during a recession has persistently negative impacts on employment rates and earnings. This has been shown in the UK (Burgess et al., 2003; Cribb,

[3] Throughout this section, 'graduation' refers to leaving school (including a sixth form college) or university (including a further education college for people aged 19+) – unless stated otherwise.

Hood and Joyce, 2017), the US (Altonji, Kahn and Speer, 2016) and Norway (Liu, Salvanes and Sørensen, 2016), among other countries. Though every recession is different, there is a risk of the COVID-19 downturn inflicting long-lasting harm to the employment prospects of young adults.

To understand the challenges facing young adults who left education during the pandemic, we focus predominantly on the cohort that graduated in Summer 2020. While another cohort graduated during COVID in Summer 2021, we do not have Labour Force Survey (LFS) data beyond June 2021, and so cannot similarly infer their post-graduation employment rates. However, we bring in our vacancy analysis to discuss the extent to which the experiences of those who graduated in 2021 might be similar to or different from those of people graduating in 2020.

Figure 9.10. Employment rate of education leavers, 3–6 months and 9–12 months after leaving education, 2004–20



Note: Employment includes both employees and the self-employed. 'Graduation' refers to leaving school (including a sixth form college) or university (including a further education college for people aged 19+).

Source: Quarterly Labour Force Survey, 2004Q4–2020Q4 and 2005Q2–2021Q2.

Figure 9.10 shows, for different summer-graduating cohorts, the share of young adults who were in paid work 3–6 months[4] and 9–12 months[5] after leaving full-time education. The experiences of the 2020 cohort are striking: 3–6 months after leaving education, only 63% were in paid work – down from 75% in 2019. The fall was particularly pronounced for university graduates, who saw their employment rates 3–6 months after leaving education fall from 80% to 62%. These experiences are perhaps unsurprising, given the low number of vacancies between October and December 2020 documented in Section 9.3.

Of course, things have changed markedly since then, with redundancies returning to pre-pandemic levels and headline vacancies reaching record highs. These improvements in the labour market led to a drastic change in the experiences of the '2020 cohort': 9–12 months after they left education, 75% were in paid work – broadly the same as for the cohorts that left education in the years immediately before the pandemic. Overall, this improvement in employment rates for people who left education in 2020 is encouraging, as it allays concerns about them suffering from a protracted lack of employment opportunities.

What type of jobs did those who left full-time education in 2020 find?

However, while employment rates improved throughout early 2021 for people who recently left education, there remain concerns about the *type* of jobs that they found. Figure 9.11 shows, for people in paid work 9–12 months after leaving full-time education, the percentage working part-time (less than 30 hours per week), the percentage working in partially skilled or unskilled occupations, and the percentage with the same job that they held during school or university. All of these get at different measures of 'job quality', since unskilled work is usually less well paid, part-time work is generally less well paid and offers less chance for on-the-job training, and jobs that students or pupils are able to get while studying are also likely to be less well paid and may not require their recently acquired skills.

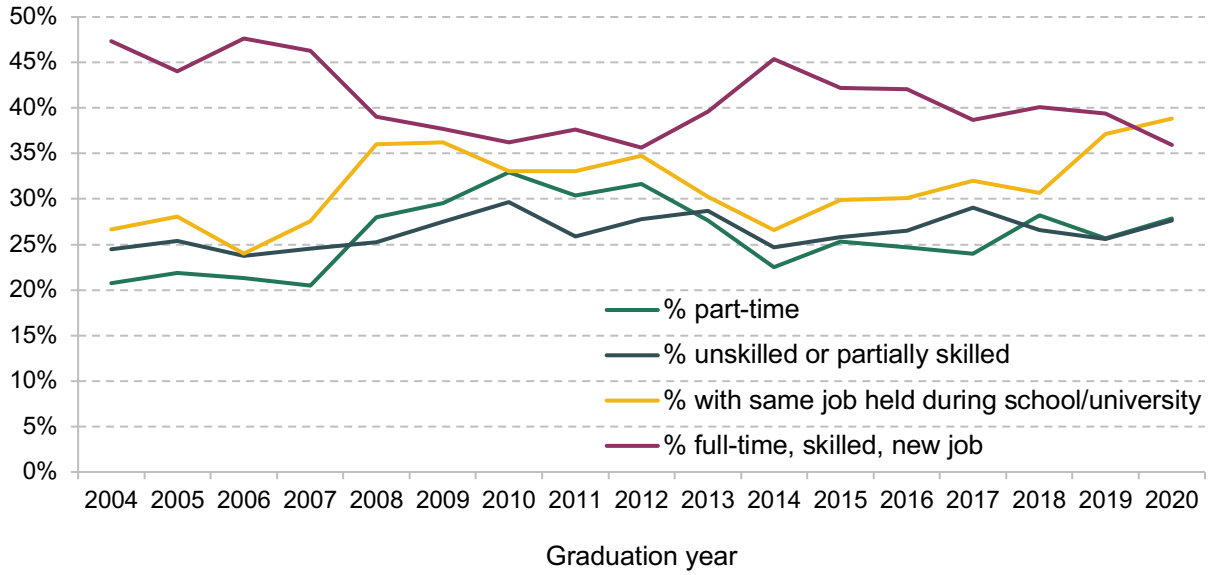
While the cohort of people who left education in 2019 seem a natural comparison group, there is a concern that their 9–12-month post-education experiences may have been affected by the early wave of the pandemic. Given this, the 2018 cohort may represent the safest comparison. Compared with this group, those who left education in 2020 were 8 percentage points more likely to have held on to the same job (39% versus 31%). In addition, the percentage of education-leavers working in full-time, skilled, new jobs fell from 40% to 36%, although there were also falls in this measure prior to the pandemic, between 2014 and 2019. This point

[4] We measure 3–6-month experiences using Q4 data, which cover October to December. To identify those who graduated the previous summer, we condition on people under the age of 25 who are the same age as the age at which they left full-time education.

[5] We measure 9–12-month experiences using Q2 data of the following year, which cover April to June. To identify those who graduated the previous summer, we condition on people under the age of 25 who are the same age as or one year older than the age at which they left full-time education.

notwithstanding, Figure 9.11 suggests that the jobs that were attained by the 2020-graduating cohort were on average of slightly worse quality than those attained by the cohorts before, and more similar to the ones attained by those who graduated during and shortly after the global financial crisis. This could have negative implications for both their take-home pay and the amount of on-the-job training they are likely to be receiving, and therefore their career progression in the future.

Figure 9.11. Job characteristics of graduates (school and university leavers) in paid work, 9–12 months after leaving education



Note: Part-time defined as working fewer than 30 hours in a usual week. Unskilled or partially skilled based on Registrar General's social class. Percentage who have the same job as held during school or university is based on reporting the same employer for at least a year.

Source: Quarterly Labour Force Survey, 2005Q2–2021Q2.

This summer (2021), there has been another cohort of young people graduating into the labour market. While we do not have LFS data beyond June 2021 for these people – and hence cannot observe their transition into the labour force – there are several reasons to think that their experiences will be different from those of the 2020 cohort. Most importantly, there are much higher rates of vacancies, meaning they are less likely to struggle to find jobs in the 3–6 months after leaving education. For school leavers, this is likely reinforced by the fact that record numbers of 18-year-olds opted to go to university this summer rather than enter the labour force. In September 2021, 272,500 18-year-olds are heading for university – a 7% increase on 2020 (BBC News, 2021).

Policy response

Concerned about prospects for young people struggling to find work, the government has launched the 'Kickstart' scheme. Launched in September 2020 and running until December

2021, it is very similar to the Labour government's 'Future Jobs Fund' introduced during the Great Recession in 2009. While it was swiftly scrapped by the coalition government, a subsequent evaluation suggested this programme was successful in helping young people find jobs (Department for Work and Pensions, 2012).

Kickstart subsidises the hiring of young people (aged 16–24) on universal credit. To be eligible, employers must declare that the Kickstart job is a new job and that they will consider making it permanent. The programme covers 100% of the age-relevant National Minimum Wage for 25 hours a week for six months, as well as associated employer National Insurance contributions and automatic enrolment pension contributions. Employers also receive a one-off payment of £1,500 to support the job (which could include supporting training costs). As of 31 August 2021, 63,000 people had started Kickstart jobs, and over 2,500 were starting one each week (HM Government, 2021c). Over 155,000 job placements have been approved and made available through the scheme (Hansard, 2021). The government should consider extending eligibility to those young people who are not on universal credit but are on contributory out-of-work benefits (new-style jobseeker's allowance and new-style employment and support allowance).

Another policy that predominantly targets younger workers is the lump-sum payments made to incentivise employers to take on new apprentices. These payments were increased to £3,000 per new apprentice between April and September 2021, up from between £1,500 and £2,000 before then. In addition, the 'lifetime skills guarantee' was announced in Autumn 2020; this provided full funding for Level 3 (A-level-equivalent) college courses for people without equivalent qualifications.

Given the extensive support already available to younger workers, coupled with record numbers of vacancies (at least in many occupations), there is a strong case that any additional government resources that are made available might be more effectively targeted at other groups. As outlined in Section 9.2, older workers appear in particular need of support, given their high furlough rates, low re-employment rates and increasing transition towards inactivity.

With this being said, the fact that a lower proportion of recent graduates are working in new, skilled, full-time jobs does represent a cause for concern. This is especially so given the degree of mismatch between opportunities and potential jobseekers highlighted in Section 9.3, which presents a case for policies focused on retraining to help people move sectors or on encouraging firms to provide jobs that include training. At present, recent graduates are less likely to be receiving training, given the decreasing proportion in full-time, new jobs. To combat this, the government ought to consider continuing the incentive payments to encourage apprenticeships, which are currently set to end at the end of September.

9.5 Conclusion

The furlough scheme has meant that, while millions of people have been away from their jobs during the pandemic, the falls in employment and rises in unemployment have been relatively muted compared with during and after the 2008 financial crisis. With the scheme now ending, many forecasters expect a rise in unemployment between now and the end of 2021 – albeit a small one compared with historical recessions. Rather than the sheer number of people at risk of unemployment, the key concern for the months ahead is that the types of people whose jobs are most at risk are those particularly likely to find a period of unemployment difficult. Almost 60% of those who appear to be most at risk – because they were still on furlough in July 2021 in industries less likely to have benefited from lockdown easing – have lower (non-university) levels of education, and just over half (52%) are the only working adult in their household and are therefore less likely to have a financial cushion to support them. Many of them will rely on universal credit at least for a while, at a point where the '£20 per week uplift' is also being ended.

These workers' prospects are not helped by the fact that, during the pandemic, people made redundant have typically found it harder to re-find employment than during the three years before. This is especially the case for those without a degree, those living in London, and those aged 50 and over. The fact that these groups are also disproportionately likely be furloughed raises concerns about the prospects of longer-term unemployment, at least for some groups. Workers over 60 present an additional concern: their increased transition towards economic inactivity. There is a risk of some of these people leaving the labour force altogether, with consequences for both the health of the economy and the welfare of these individuals, both now and through retirement.

Of course, many jobseekers will benefit from the increased vacancy rates that have been seen in Spring and Summer 2021. Candidate explanations for this spike in vacancies include the furlough scheme 'freezing' the reallocation of labour, some jobs becoming less attractive during the pandemic, and reductions in the numbers of EU nationals working in the UK. While high vacancies typically allay concerns about unemployment, the industries with the highest number of vacancies are not the ones with the highest numbers of unemployed or furloughed workers (who face risks of unemployment in the future). To address this mismatch, sectoral or geographical labour reallocation policies may be needed in the coming years. In particular, given the high rates of furlough, lower re-employment rates following redundancy and lower rates of vacancies, London might be a particularly important place to focus resources to help jobseekers.

The experiences of those who left full-time education in Summer 2020 are mixed. On the one hand, the proportion in work 3–6 months after graduating fell to the lowest level in nearly 10 years, while the jobs secured by those in employment looked, on average, to be of slightly lower

quality than prior to the pandemic. On the other hand, their prospects looked much better 9–12 months after graduation (i.e. in 2021Q2), with employment rates for this group broadly returning to pre-pandemic levels. Given there are currently record numbers of vacancies, coupled with an extensive pipeline of jobs provided by the Kickstart programme, government resources might be better targeted at other groups, such as older workers, those living in London, and those in industries at risk of unemployment following the end of furlough.

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Abbreviations

A&E	Accident and Emergency
AEF	Aggregate External Finance
AME	annually managed expenditure
APD	air passenger duty
ASC	adult social care
ASHE	Annual Survey of Hours and Earnings
AWE	average weekly earnings
BBC	British Broadcasting Corporation
BBLS	Bounce Back Loan Scheme
BCC	British Chambers of Commerce
BEA	Bureau of Economic Analysis
BEIS	Department for Business, Energy and Industrial Strategy
BICS	Business Impact of COVID-19 Survey
BIS	Bank for International Settlements
BLS	Bureau of Labor Statistics
BMA	British Medical Association
bn	billion
BoE	Bank of England
BoJ	Bank of Japan
bp	basis point(s)
BRRS	Business Rates Retention Scheme
CAO	Cabinet Office, Government of Japan
CBAM	Carbon Border Adjustment Mechanism
CBI	Confederation of British Industry

CCC	Climate Change Committee
CCC	Clinical Commissioning Group
CCL	Climate Change Levy
CCS	carbon capture and storage
CDC	Centers for Disease Control and Prevention
CDEL	capital departmental expenditure limits
CERT	Carbon Emissions Reduction Target
CESP	Community Energy Savings Programme
CFDs	Contracts for Difference
CHAPS	Clearing House Automated Payments System
CHP	combined heat and power
CIPFA	Chartered Institute of Public Finance and Accountancy
CJRS	Coronavirus Job Retention Scheme
CMSC	Capacity Market Supplier Charge
CNBS	National Bureau of Statistics of China
CO_2	carbon dioxide
CO_2e	carbon dioxide equivalent
CPI	Consumer Prices Index
CPIH	Consumer Prices Index including owner-occupiers' housing costs
CPIX	CPI excluding energy, housing services, education and financial services
CPS	Carbon Price Support
CT	computerised tomography
CTRS	Council Tax Reduction Scheme
DCMS	Department for Culture, Media and Sport
DEFRA	Department for Environment, Food and Rural Affairs
DEL	departmental expenditure limits
DfE	Department for Education
DfID	Department for International Development
DfT	Department for Transport
DHSC	Department of Health and Social Care

DLUHC	Department for Levelling Up, Housing and Communities
DMO	Debt Management Office
DWP	Department for Work and Pensions
EA	euro area
ECB	European Central Bank
ECDC	European Centre for Disease Prevention and Control
ECO	Energy Company Obligation
EEA	European Economic Area
EOTHO	Eat Out to Help Out
ESRC	Economic and Social Research Council
ETS	Emissions Trading Scheme
EU	European Union
FCDO	Foreign, Commonwealth and Development Office
FE	further education
Fed	Federal Reserve
FIT	Feed-In Tariff
FMI	financial management information
FOI	freedom of information
FRA	Fiscal Responsibility Act 2010
FSBR	Financial Statement and Budget Report
FT	*Financial Times*
FTE	full-time-equivalent
G7	Group of Seven countries: Canada, France, Germany, Italy, Japan, UK, US
GDP	gross domestic product
GFC	global financial crisis Great Financial Crisis
GfK	Growth from Knowledge
GHG	greenhouse gas
GNI	gross national income
GP	general practitioner
GVA	gross value added

HGV	heavy goods vehicle
h.h.	household
HM	Her Majesty's
HMG	Her Majesty's Government
HMRC	Her Majesty's Revenue and Customs
HMT	Her Majesty's Treasury
IATA	International Air Transport Association
IFS	Institute for Fiscal Studies
IMF	International Monetary Fund
ISM	Institute for Supply Management
ISTAT	Istituto Nazionale di Statistica (Italian National Institute of Statistics)
IT	information technology
k	thousand
kg	kilogram(s)
$kgCO_2e$	kilograms of carbon dioxide equivalent
kWh	kilowatt-hour
LA	local authority
LFS	Labour Force Survey
LHS	left-hand side
m	million
M	month
MHCLG	Ministry of Housing, Communities and Local Government
MM	month on month
MoJ	Ministry of Justice
MPC	Monetary Policy Committee
mRNA	messenger RNA
$MtCO_2e$	megatonnes of carbon dioxide equivalent
MW	megawatt
MWh	megawatt-hour
NAO	National Audit Office
n.d.	not dated

NDR	non-domestic rates
NHS	National Health Service
NHST&T	NHS Test and Trace
NIHR	National Institute for Health Research
NLF	Nuclear Liabilities Fund
NLW	National Living Wage
NMC	Nursing and Midwifery Council
OBR	Office for Budget Responsibility
ODA	official development assistance
OECD	Organisation for Economic Cooperation and Development
Ofgem	Office of Gas and Electricity Markets
ONS	Office for National Statistics
p	pence
PAYE	Pay-As-You-Earn
PCR	polymerase chain reaction
PESA	Public Expenditure Statistical Analyses
PHE	Public Health England
PMI	Purchasing Managers' Index
PPE	personal protective equipment
PPI	producer price index
ppt	percentage point(s)
PRGT	Poverty Reduction and Growth Trust
PSND	public sector net debt
p.w.	per week
Q	quarter
QE	quantitative easing
QQ	quarter on quarter
R&D	research and development
RA	revenue account
RCN	Royal College of Nursing
RDEL	resource departmental expenditure limits

RHS	right-hand side
RKI	Robert Koch Institute
RO	Renewables Obligation
ROC	Renewables Obligation Certificate
RPI	Retail Prices Index
RTFO	Renewable Transport Fuel Obligation
RTI	Real Time Information
RTT	referral to treatment
SAGE	Scientific Advisory Group for Emergencies
SDRs	Special Drawing Rights
SEISS	Self-Employment Income Support Scheme
SEPE	Servicio Público de Empleo Estatal (Spanish public employment service)
SFC(s)	sales, fees and charges
SIC	Standard Industrial Classification
SNB	Swiss National Bank
SR	Spending Review
tCO_2e	tonnes of carbon dioxide equivalent
TFP	total factor productivity
TFS	Term Funding Scheme
TFSME	Term Funding Scheme for small and medium enterprises
TME	total managed expenditure
TTP	Test, Trace & Protect
UC	universal credit
UCAS	Universities and Colleges Admissions Service
UK	United Kingdom
UN	United Nations
US	United States
VAT	value added tax
vs	versus
WHD	Warm Home Discount
WTC	working tax credit

WW1	First World War
YY	year on year
ZLB	zero lower bound