



Institute for Fiscal Studies

IFS Green Budget Chapter 2

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



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

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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.

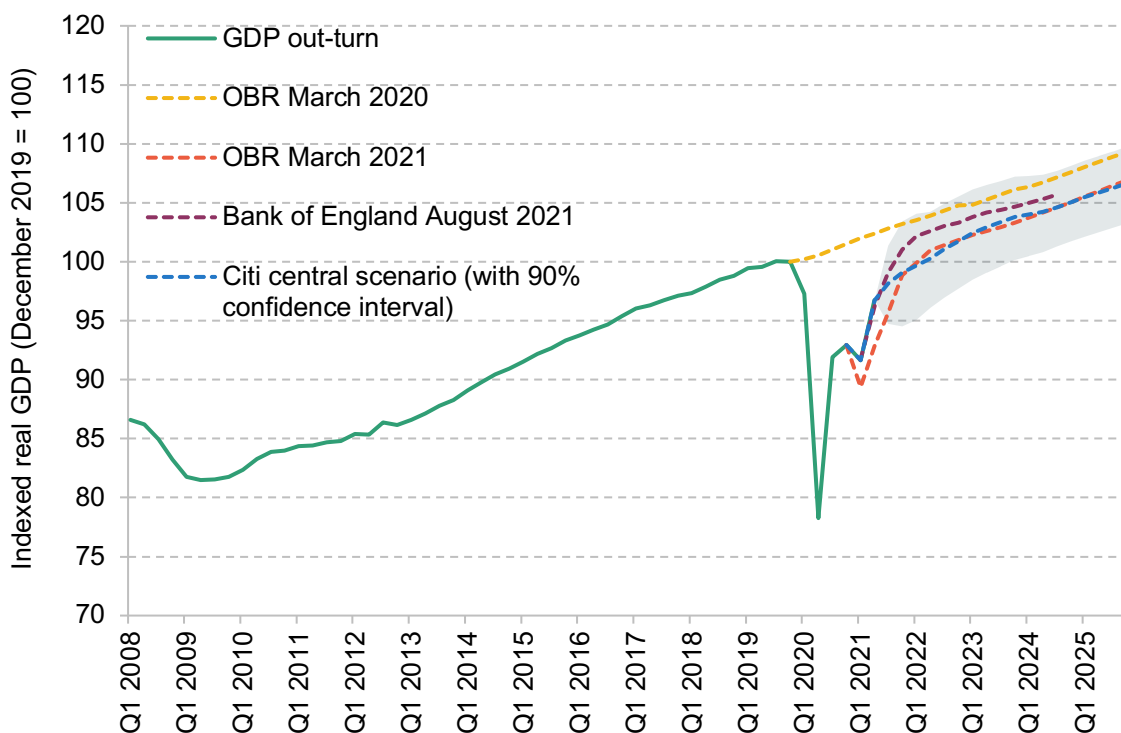
The medium-term economic recovery is likely to hinge on adjustment. Both Brexit and COVID constitute sudden, large and likely persistent structural shocks. In some areas, insolvencies and write-downs are likely as support is wound down. In others, strong sectoral growth is also likely to meet imperfect 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) level¹ 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.

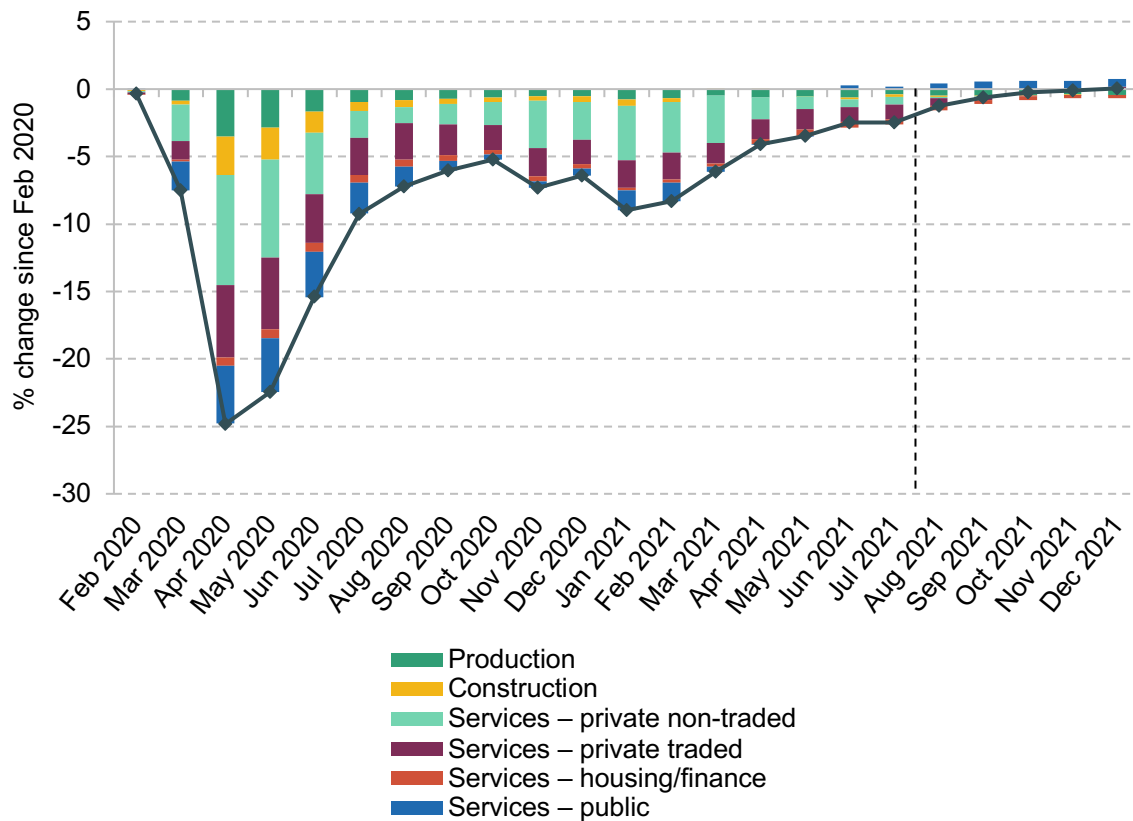
First, output fell by less than expected in the first quarter of 2021. We had expected output to fall by roughly 5% quarter-on-quarter as a result of strict nationwide lockdown measures announced on 4 January; the BoE and OBR expected reductions of around 4%. However, output actually fell by just 1.4% – 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.

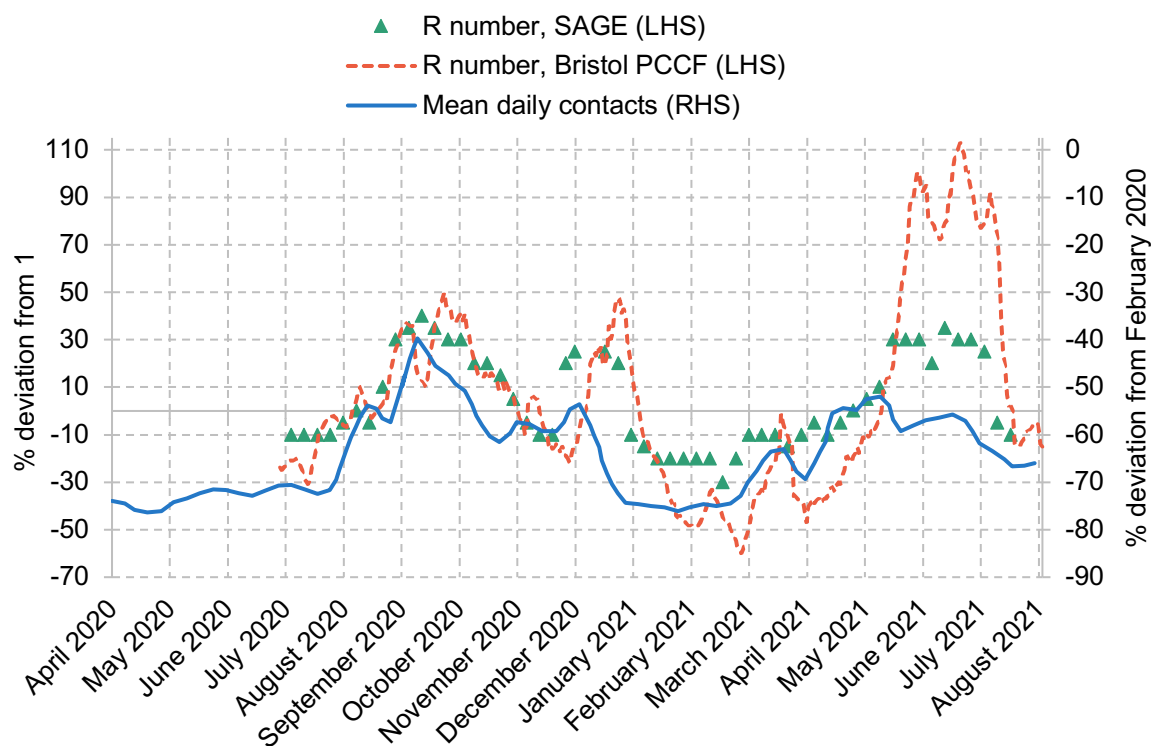
The direct economic consequences of the pandemic depend on three factors: (1) the spread of the virus; (2) the impact of associated non-pharmaceutical interventions; and (3) the response of private (and public) economic actors. We condition our baseline forecasts on the assumption widespread lockdowns 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 ‘ r_0 ’ 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.

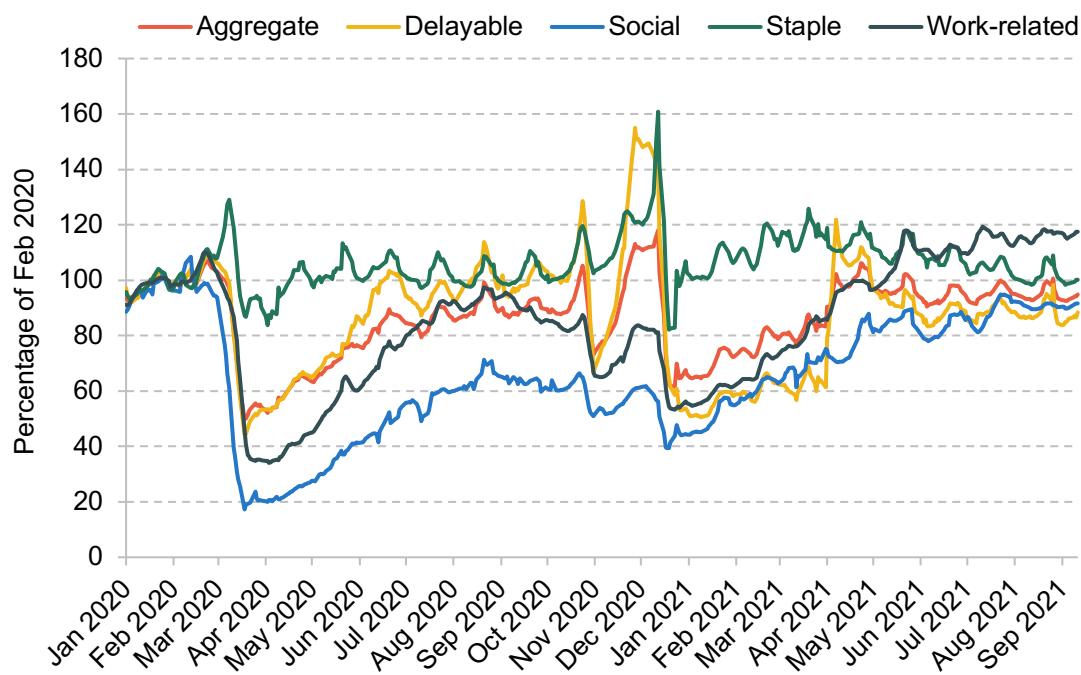
The implication of the arguments above is that full economic normalisation is still some months away. Instead, either some lingering caution limits economic activity (and case numbers), or more economic activity and associated increases in cases will still weigh on sentiment and drive

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 normal¹⁰ – 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>.

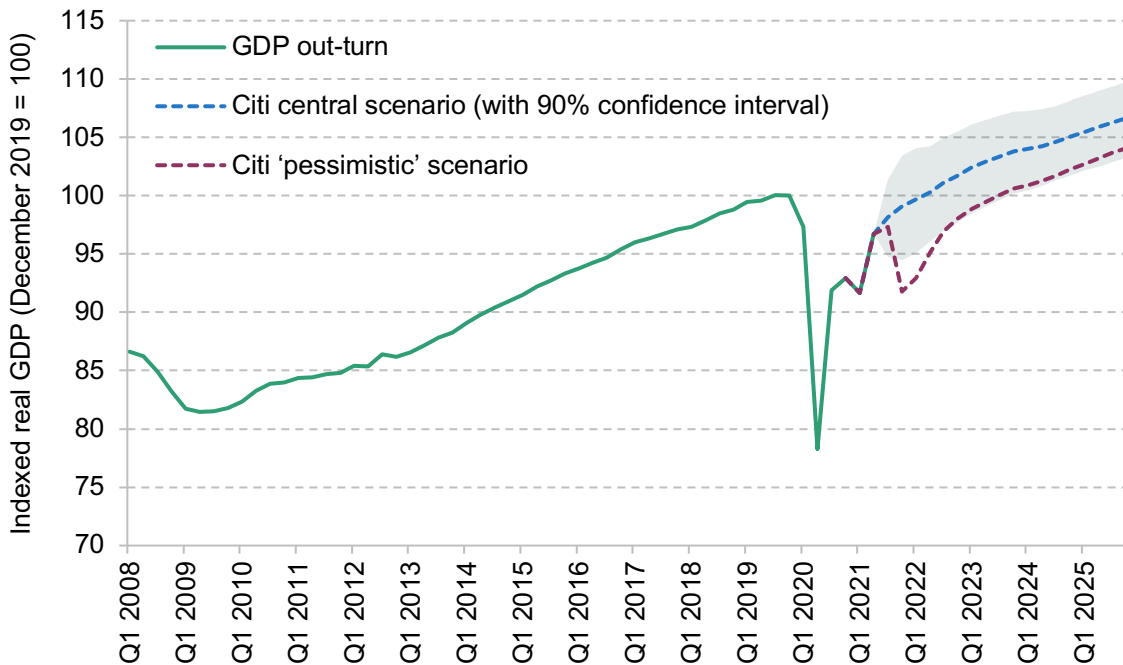
conditioning our forecasts on the assumption that these direct effects dissipate fully through the spring and early summer of 2022.

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.

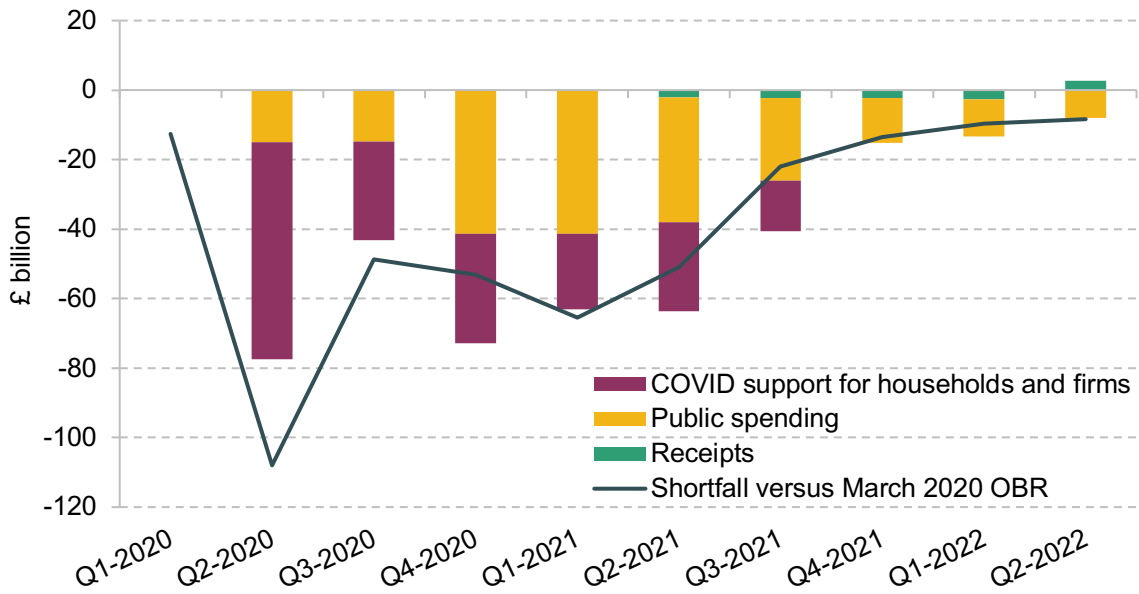
Broadly, we would expect a sharp fall in output given the scale of the rebound in Q2 and Q3 of 2021. However, the level of output would still likely prove a little higher than in Q1 – reflecting ongoing economic adjustment. Firm failures may be greater given balance sheet impairments to date. The subsequent 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.

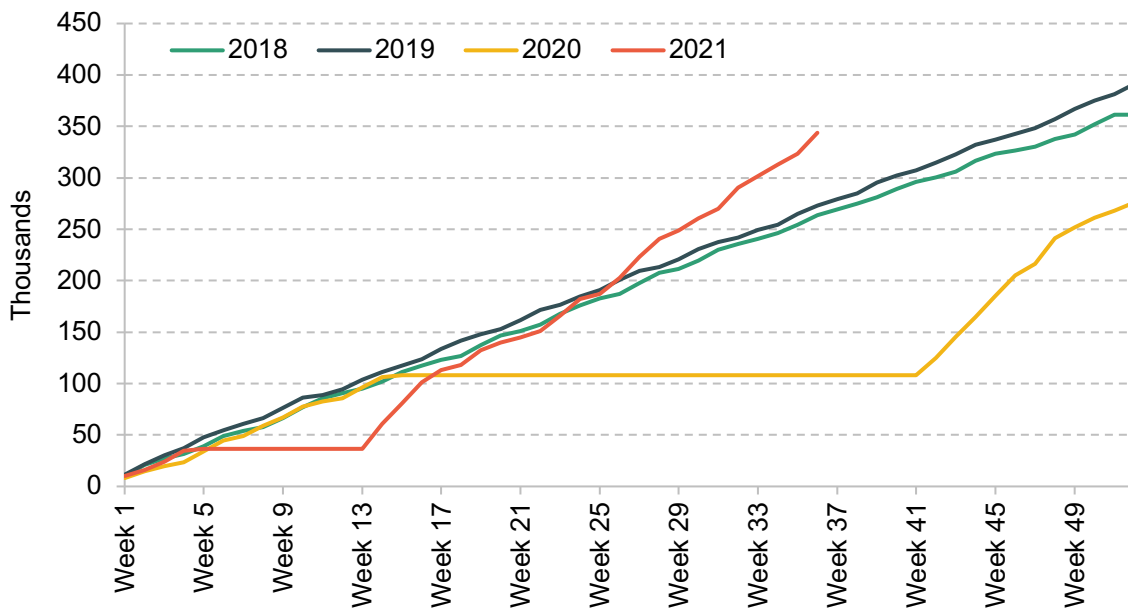
Figure 2.6. Private income shortfall versus discretionary COVID-19 support



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 (Baqae 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 (Baqae 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; Baqae and Farhi, 2020a, 2020b). Applying the same methodology¹¹ 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.

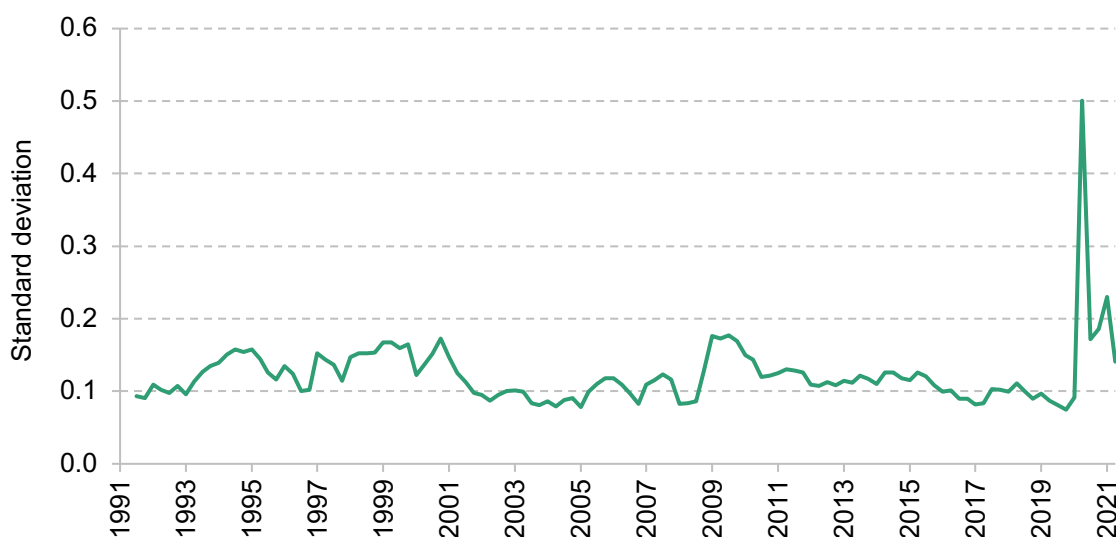
¹¹ Structural shocks are identified using the same statistical approach as in Uhlig (2005). Variables included are real GDP and sectoral deflators. These shocks are then used as regressors within sector-specific models to see whether output and inflation have generally moved in line with aggregate changes,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

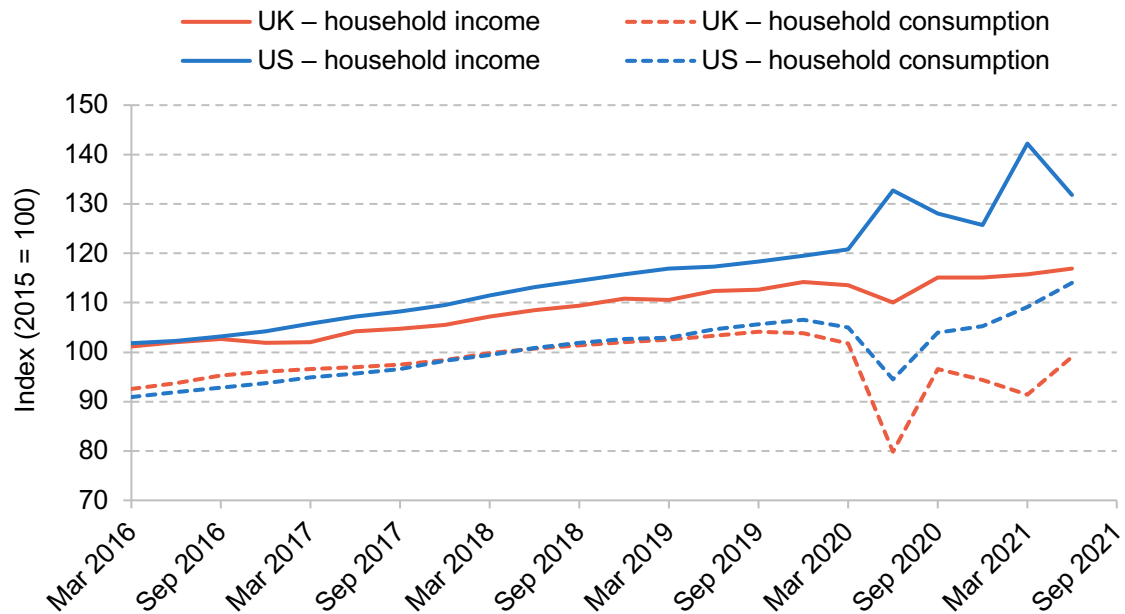
The first is the degree to which elevated saving to date reflects households' anticipation of a better public health environment ahead. Potentially the strongest argument for a large near-term boost is if excess household saving reflected a deferred demand effect – with households holding onto income 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.

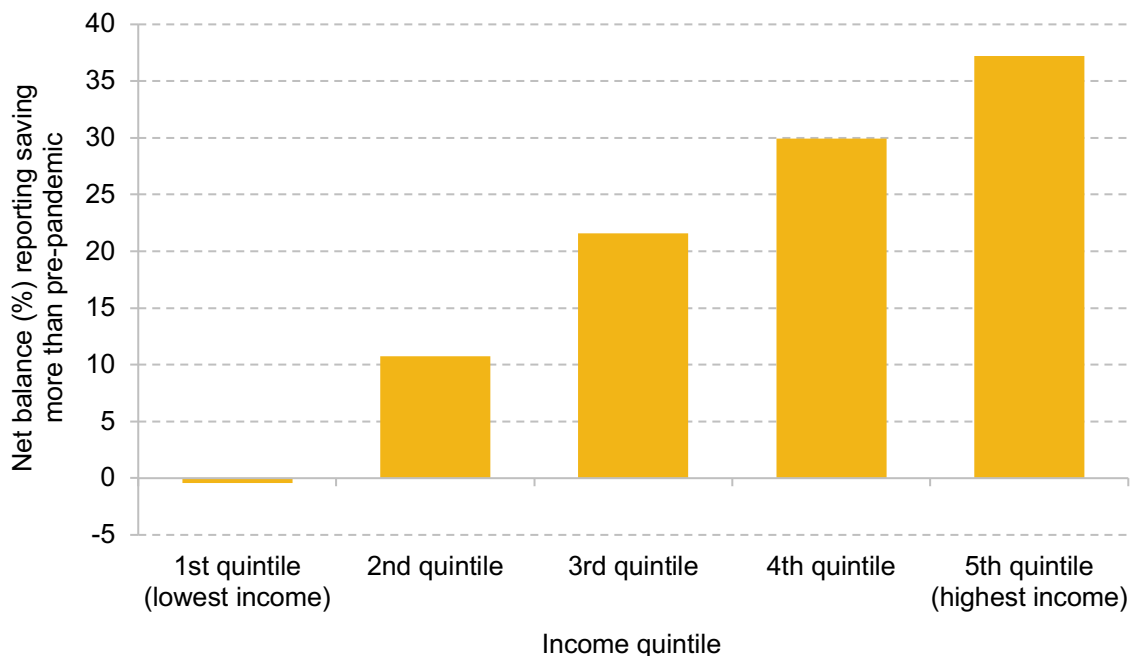
Figure 2.9. Household disposable income and consumption in the UK and US (index, gross disposable income, 2015 = 100)



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.

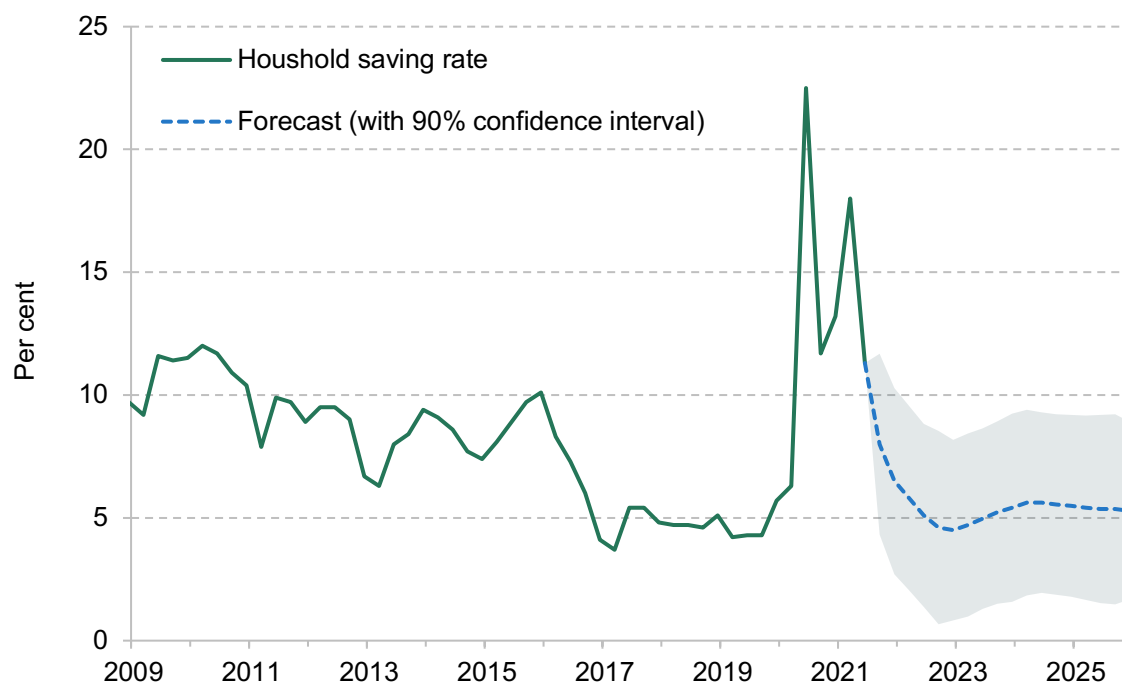
Given all this, in our central forecast we expect 8% of accumulated saving during the pandemic to be spent over the coming three years (the Bank of England (2021g) estimates 10%). The rest will likely find its way into the UK housing market. The rebound here has been large, but thus far unaccompanied 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



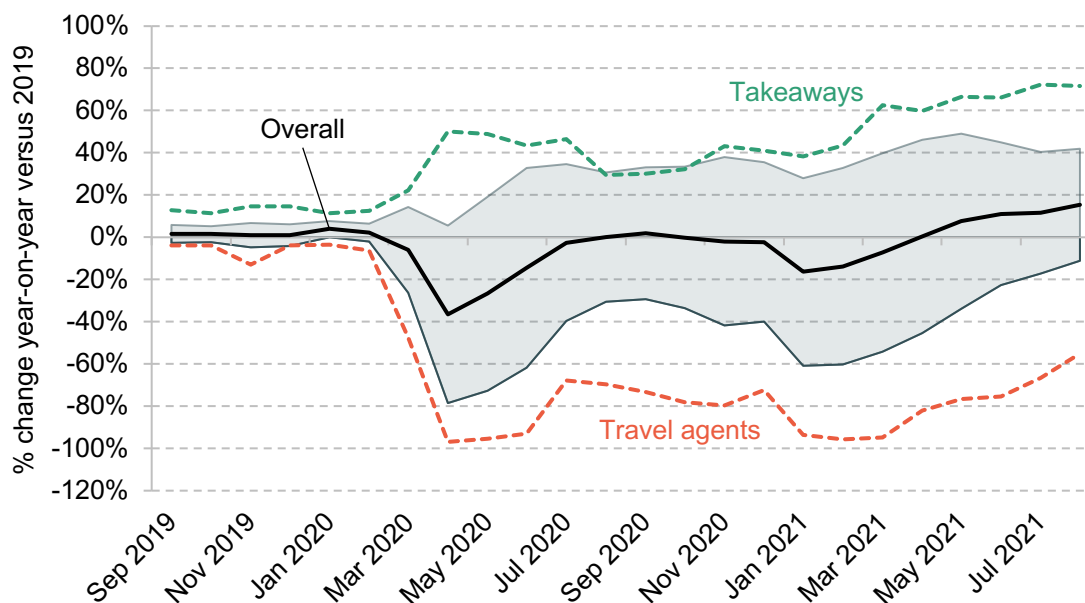
Source: ONS.

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 pandemic¹⁷ – 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.

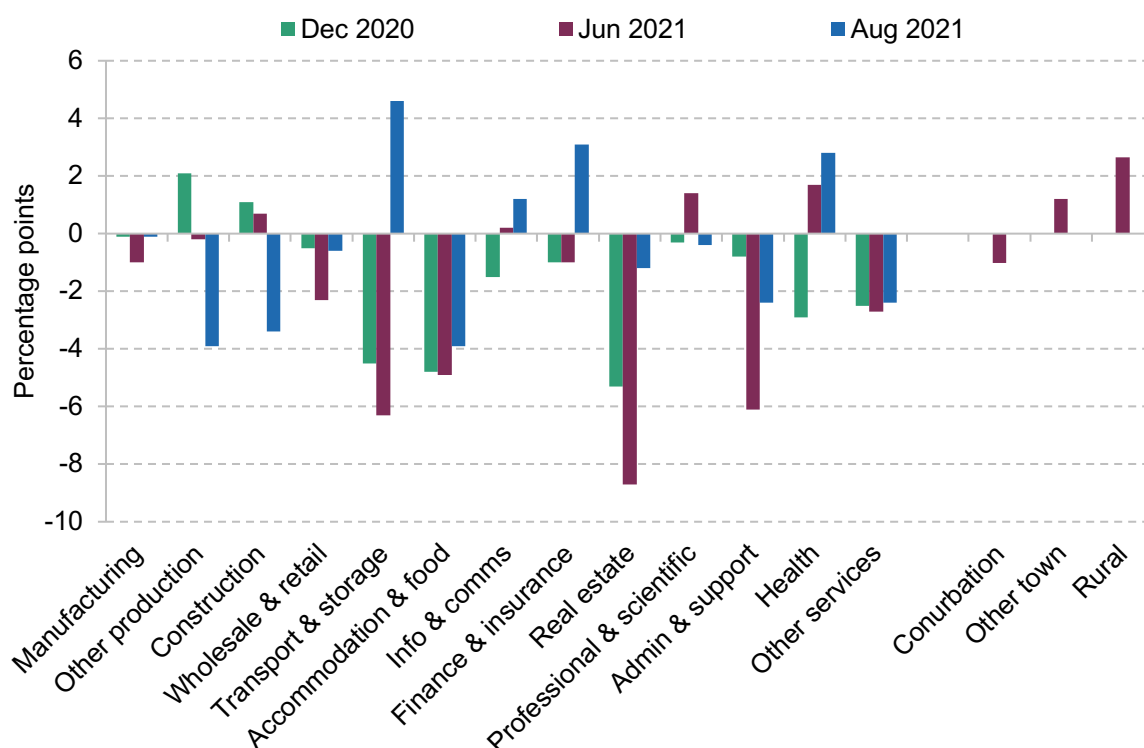
Looking from a firm perspective, the Bank of England Decision Maker Panel survey also showed considerable dispersion in firms' expectations for long-term sales. Some sectors (e.g. finance, transport and storage) expect to emerge larger in the longer term because of the pandemic. Others, such as hospitality 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

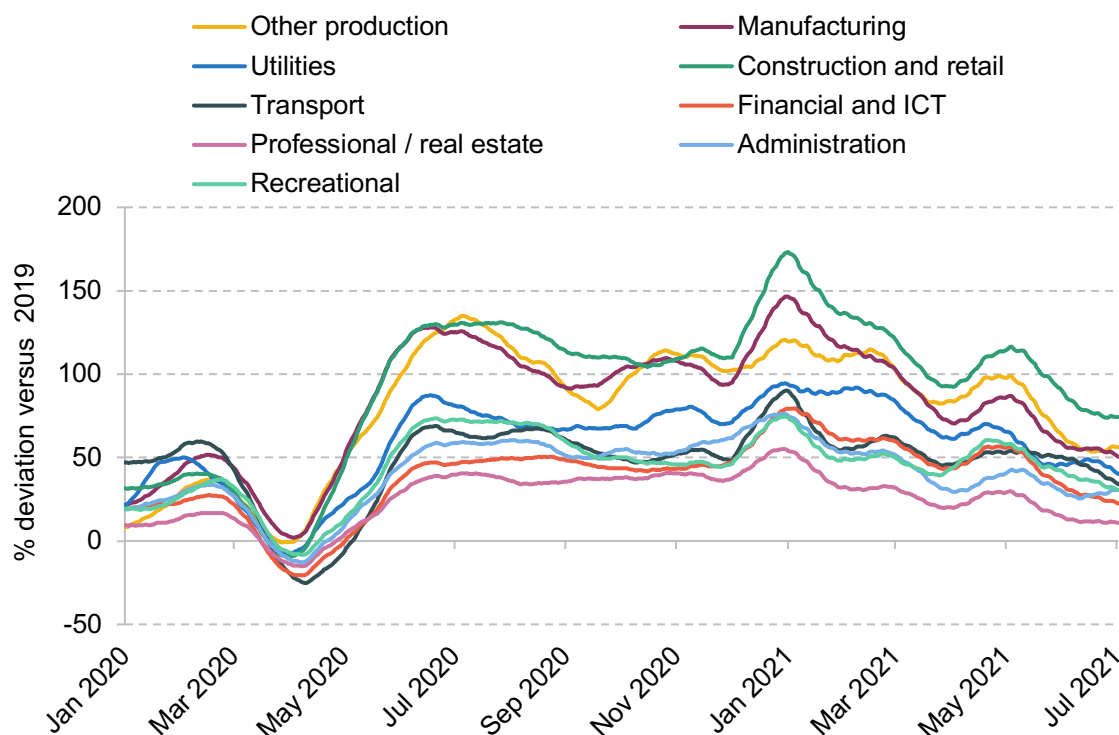


Source: Bank of England Decision Maker Panel Survey, Broadbent (2021).

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

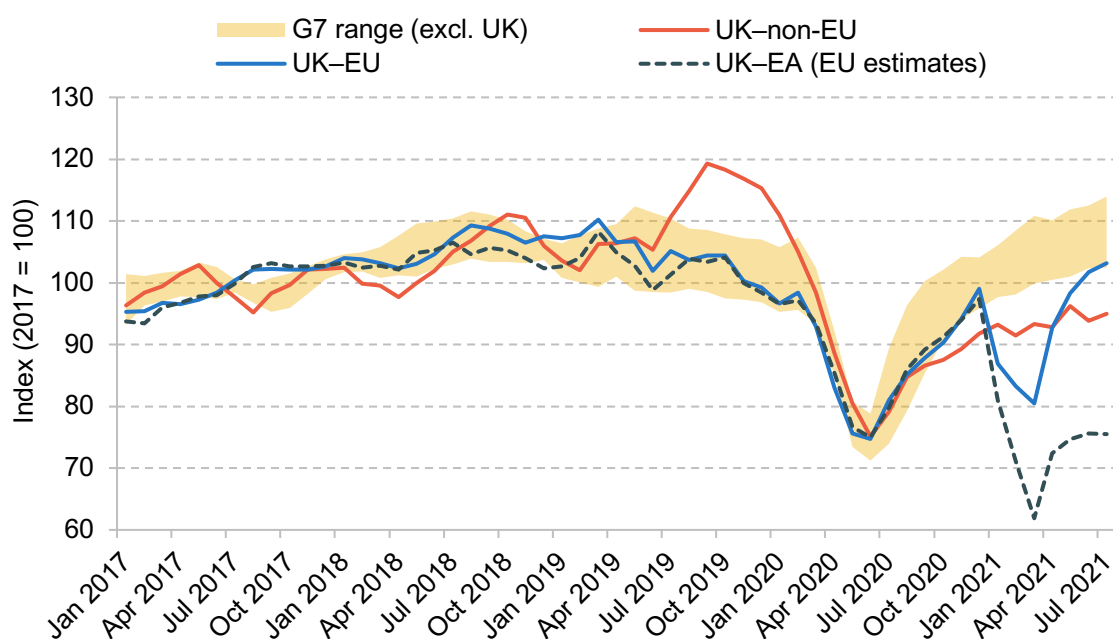
Brexit and COVID have resulted in record trade disruption over the past 18 months.²¹ Both imports and exports fell by around 25% between December 2019 and April 2020 as COVID first spread globally. In the months that followed, total UK trade also lagged the recovery in aggregate activity. Services remain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

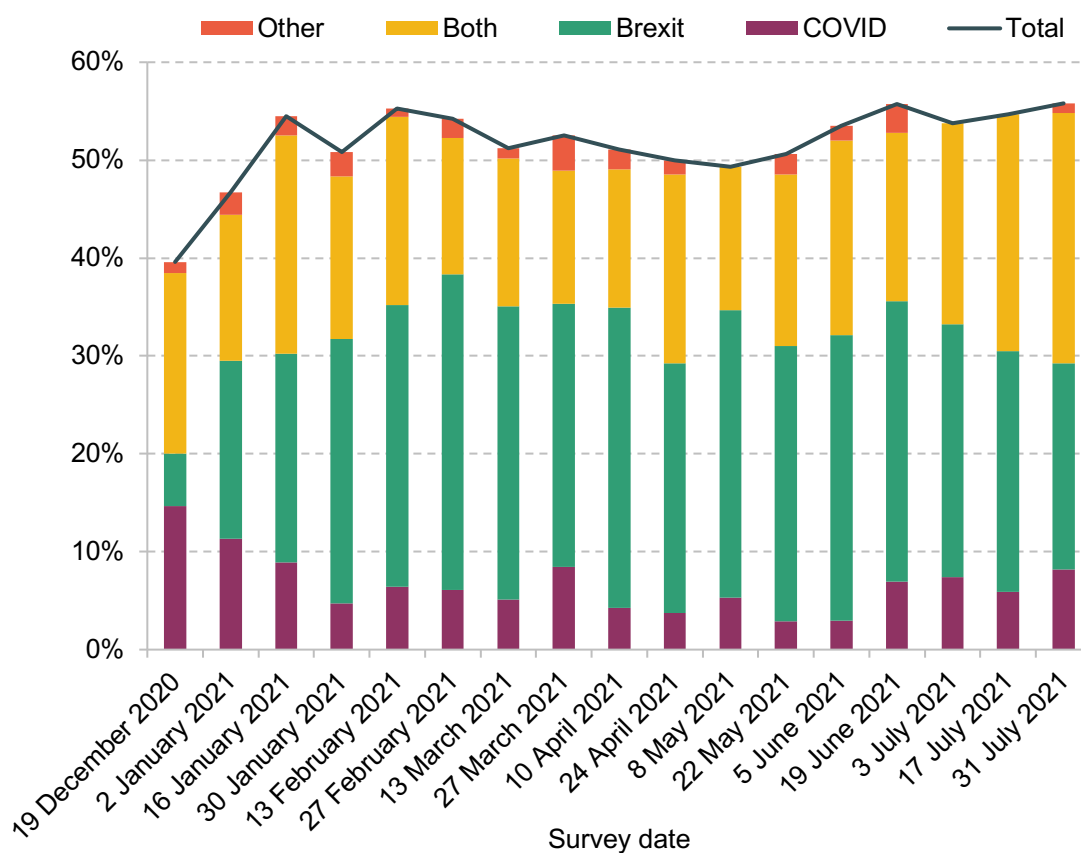
Figure 2.15. G7 goods exports (indexed, 2017 = 100)



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.

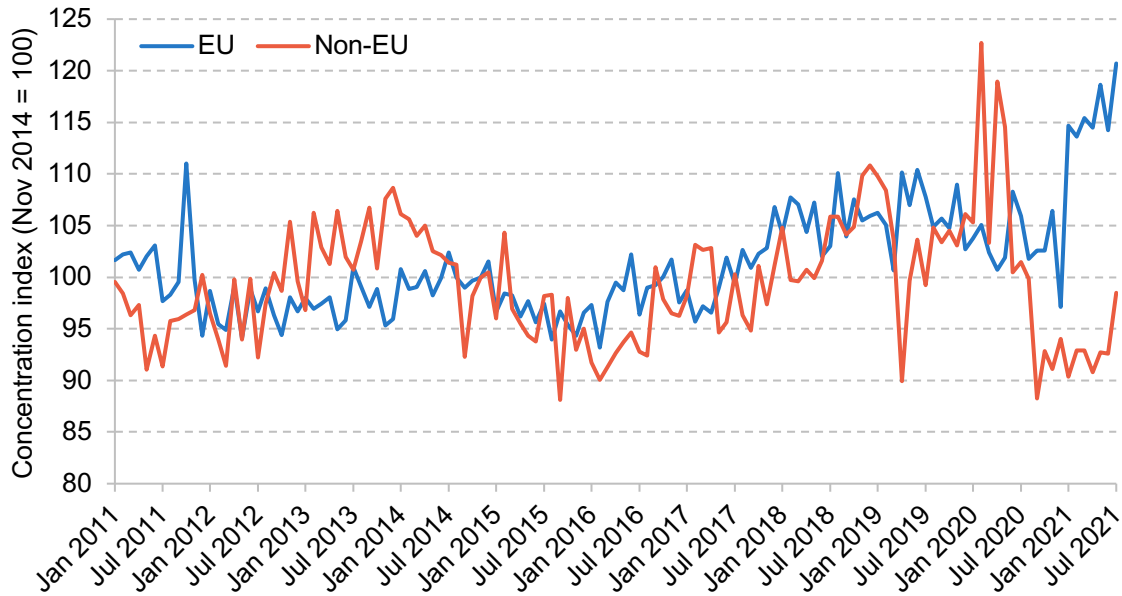
Adjustments here are likely on the economic recovery in the years ahead. As we noted in last year’s Green Budget, economic adjustment to Brexit was likely still largely to come at the beginning of 2021 (Nabarro, 2020b). The 20% sterling depreciation in 2016 – without any of the actual frictions this 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-WWI 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).

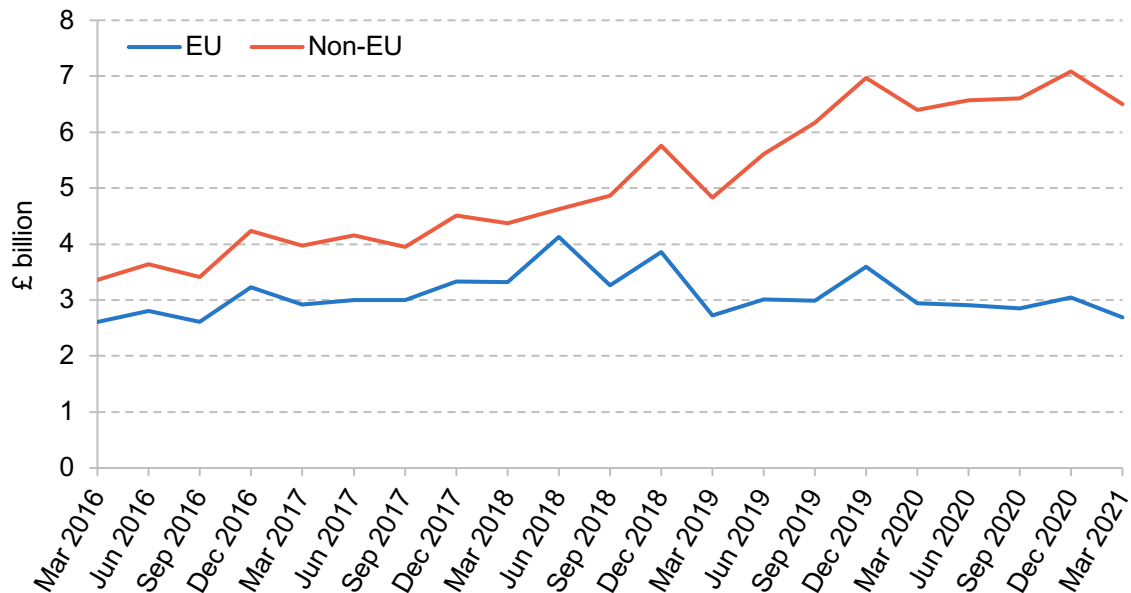
Figure 2.17. UK goods export concentration, EU and non-EU (index, November 2014 = 100)



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 Mariathan, 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.

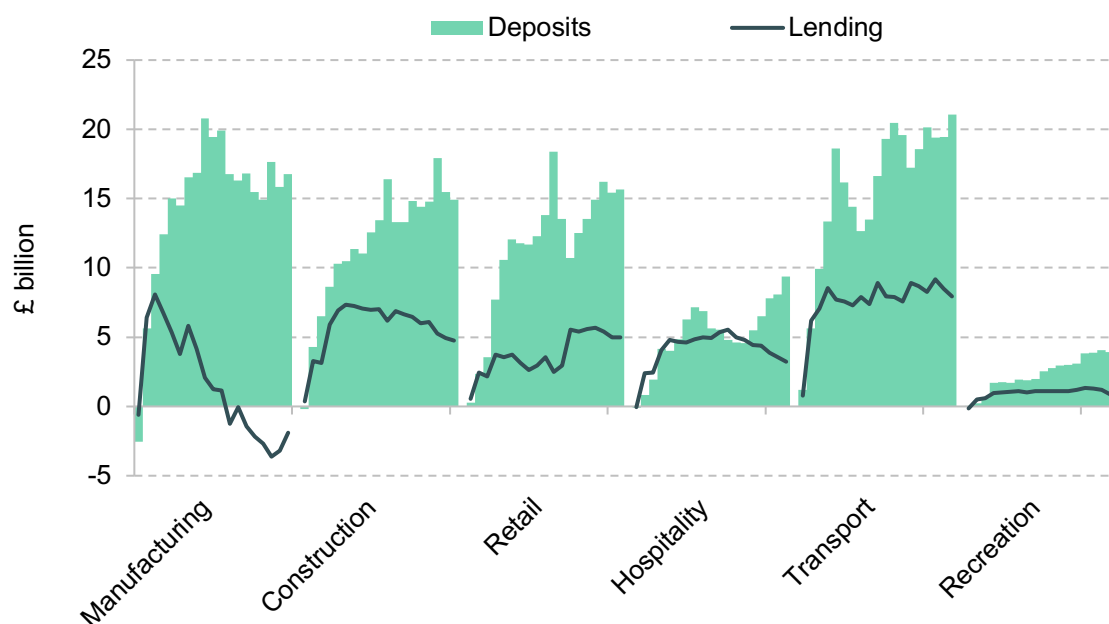
The key concern now is the distribution, rather scale, of corporate debt, in our view. While benign in aggregate, balance sheet developments vary sharply across sectors and firms. For example, bank lending has now actually fallen to below its level at the start of the pandemic in manufacturing (Figure 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/businessinsightsandimpactonthueconomy>). These data suggest only a moderate fall between late July and early September.

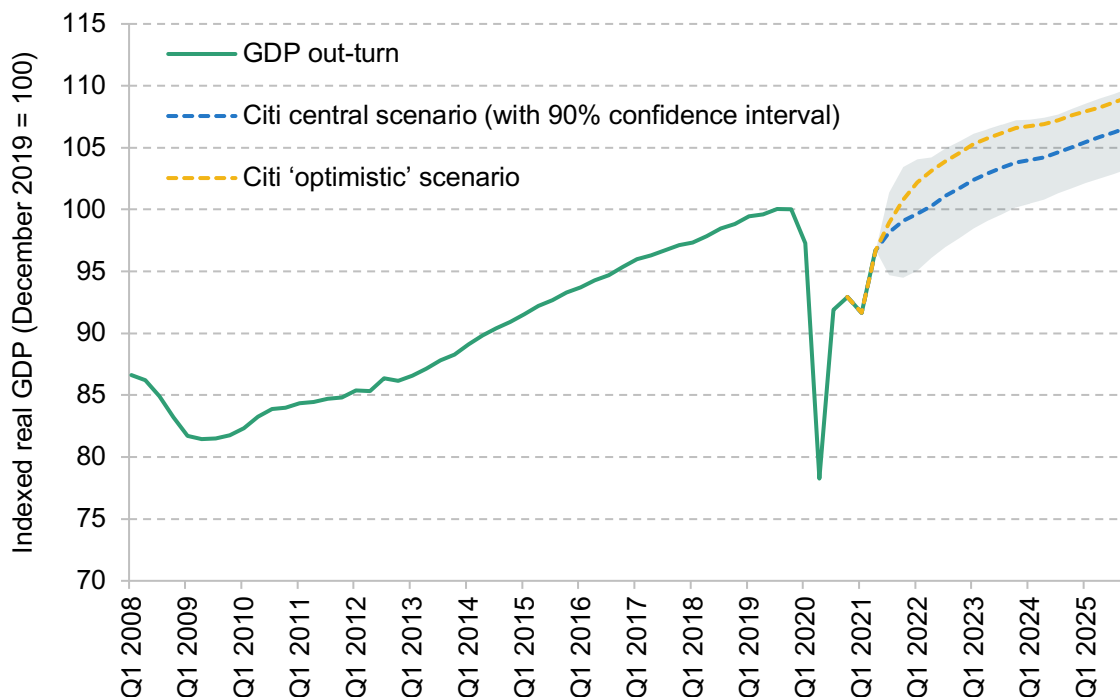
Financial Crisis, we think the recovery from COVID-19 is also likely to prove relatively capital intensive, with the labour market lagging rather than leading the recovery. This would suggest subdued wage pressures over the coming years as labour demand softens and supply gradually recovers. Some matching 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

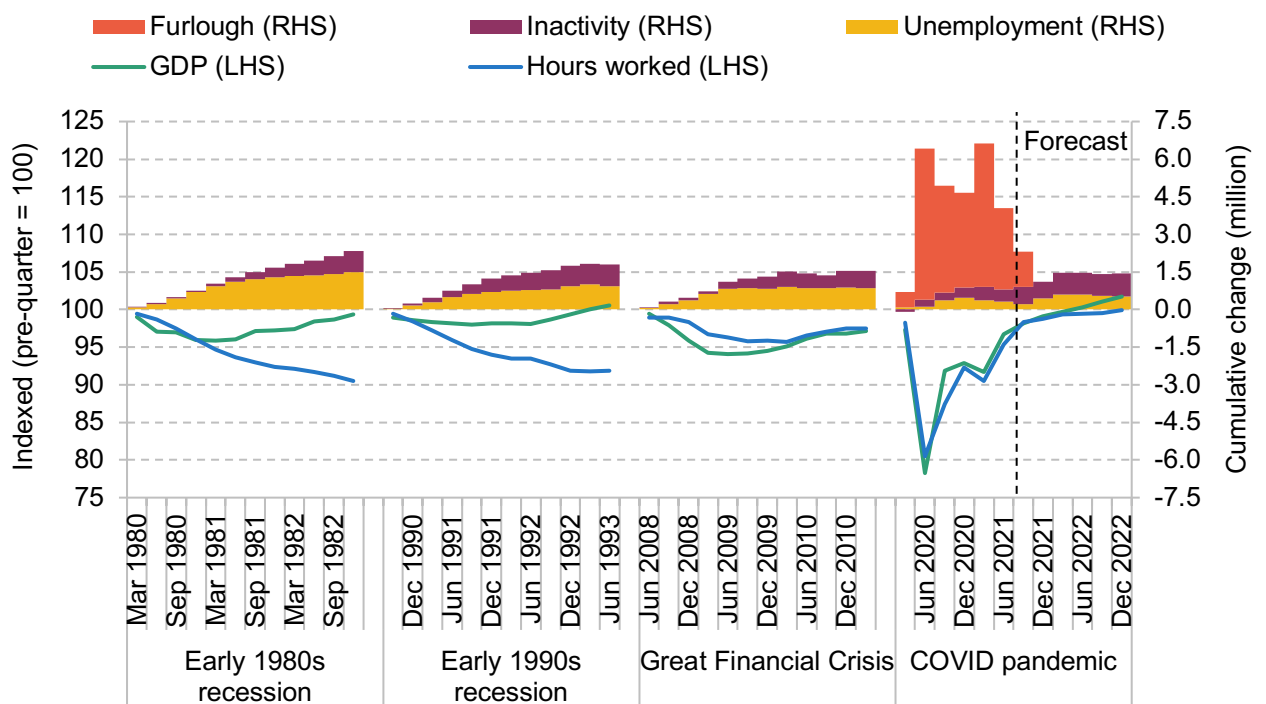


Source: ONS and Citi Research.

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 0.4³⁰ 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 slack³¹ 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.

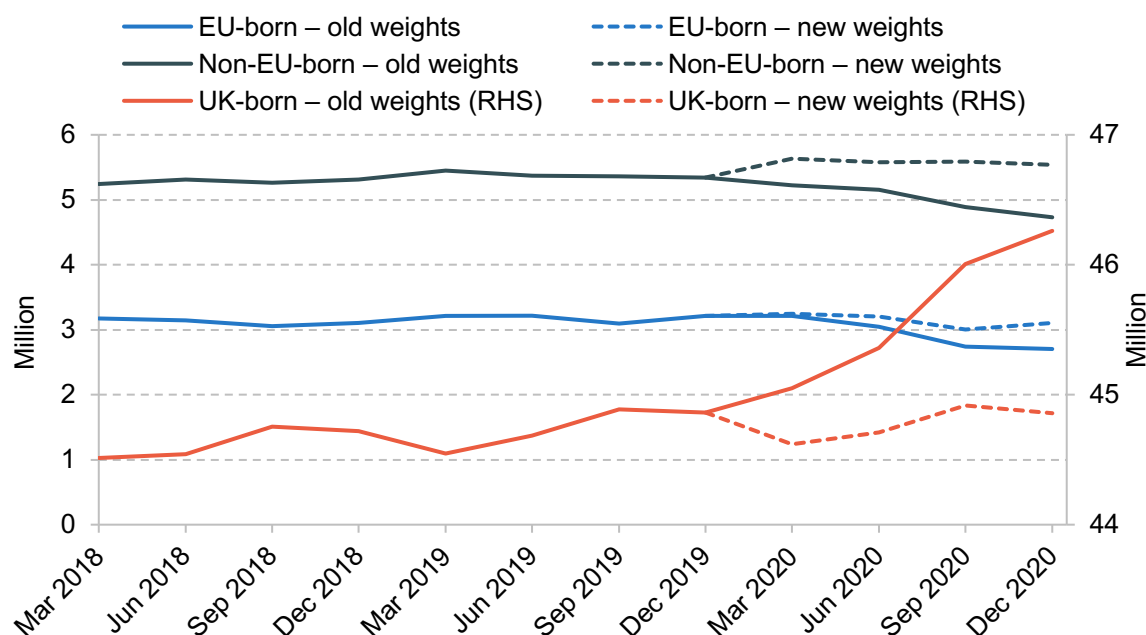
Reductions in the working population are also likely less than initially feared. The suspension of the International Passenger Survey during the pandemic created substantial uncertainty here. O'Connor and Portes (2021) initially estimated as many as 1.3 million immigrants may have left the country as 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.

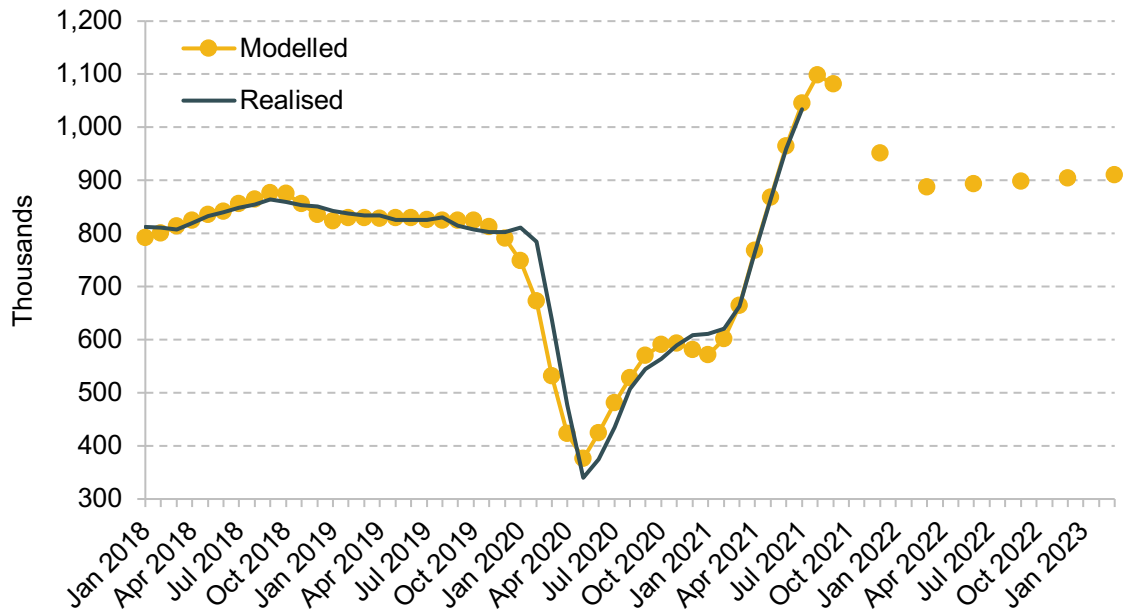
Source: ONS.

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/economicactivityandsocialchangetheukrealttimeindicators/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.

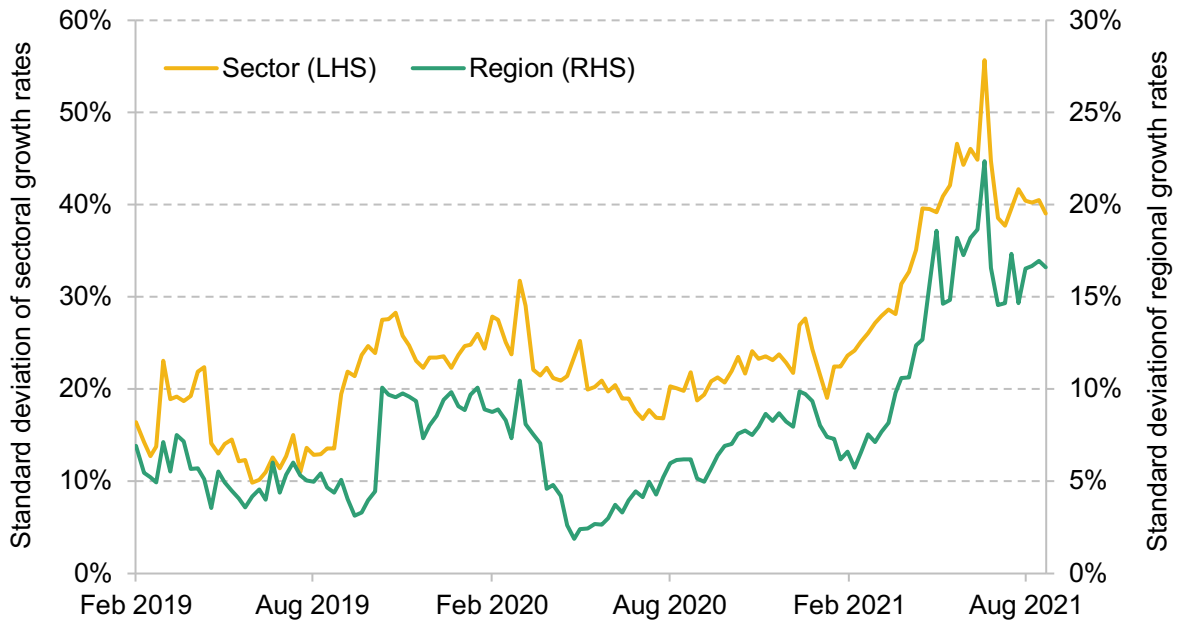
Instead, looking first in aggregate, the recent surge in labour demand does not yet seem sufficient alone to exhaust labour market slack. Based on the gap between current output and its pre-pandemic trajectory, we think ‘underlying’ vacancy levels are likely a little closer to 600,000. This is the level 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).

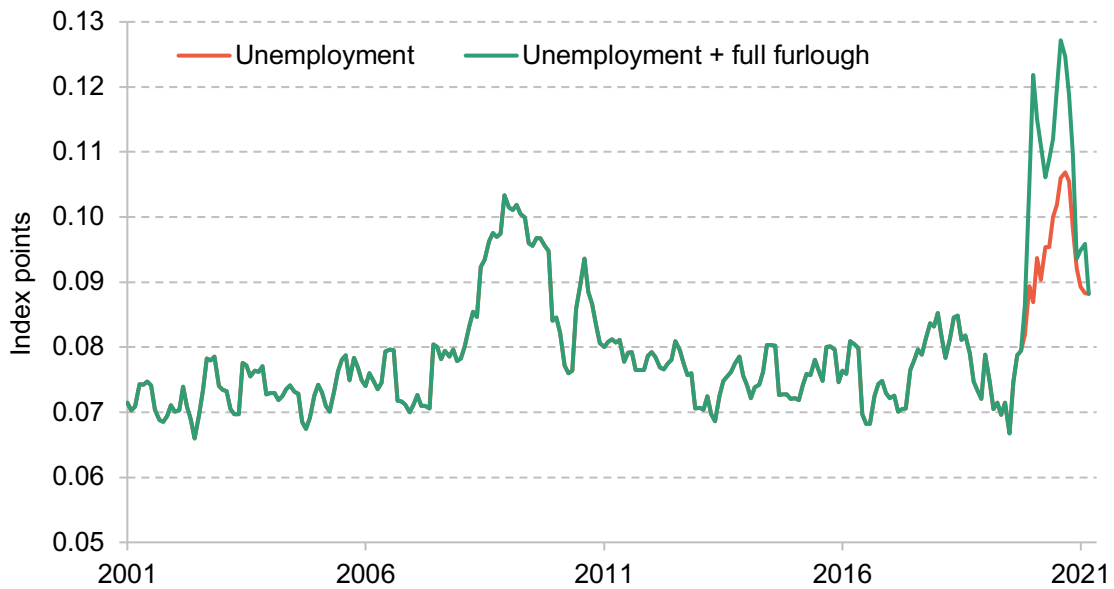
Figure 2.24. Firm and sectoral dispersion in annual vacancy growth, 2019–21



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

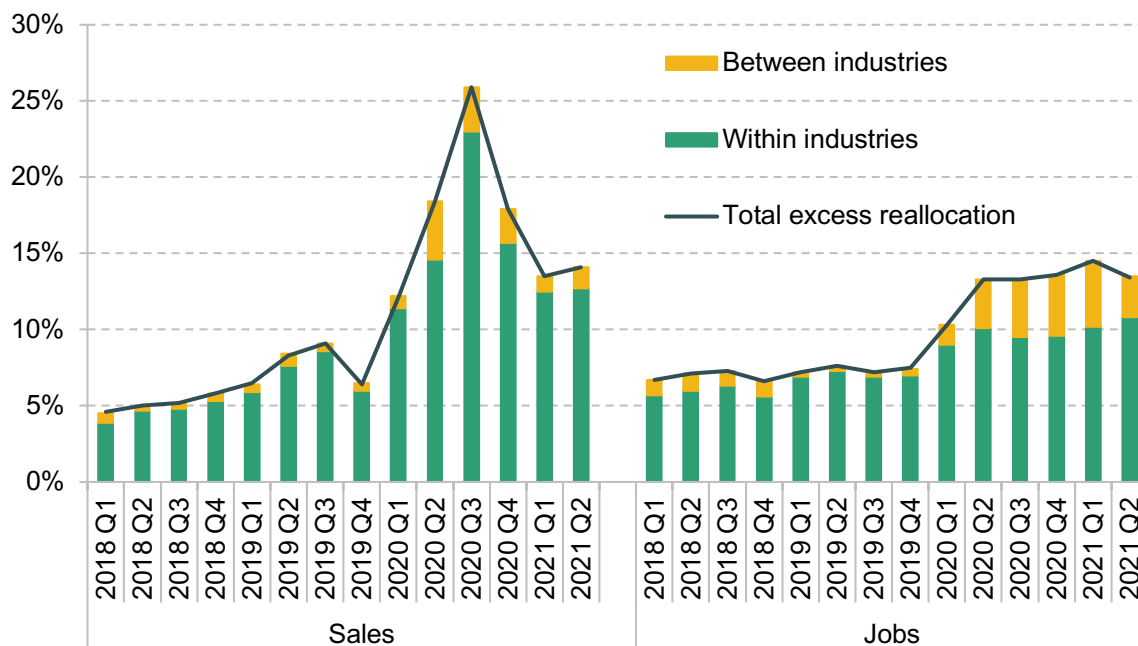
The unwind of furlough support may also play an important role here. Furlough numbers have proven persistently stubborn in recent months, with the latest data suggesting as many as 1.3 million workers remained on either full or partial furlough at the start of September – significantly above Bank of 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).

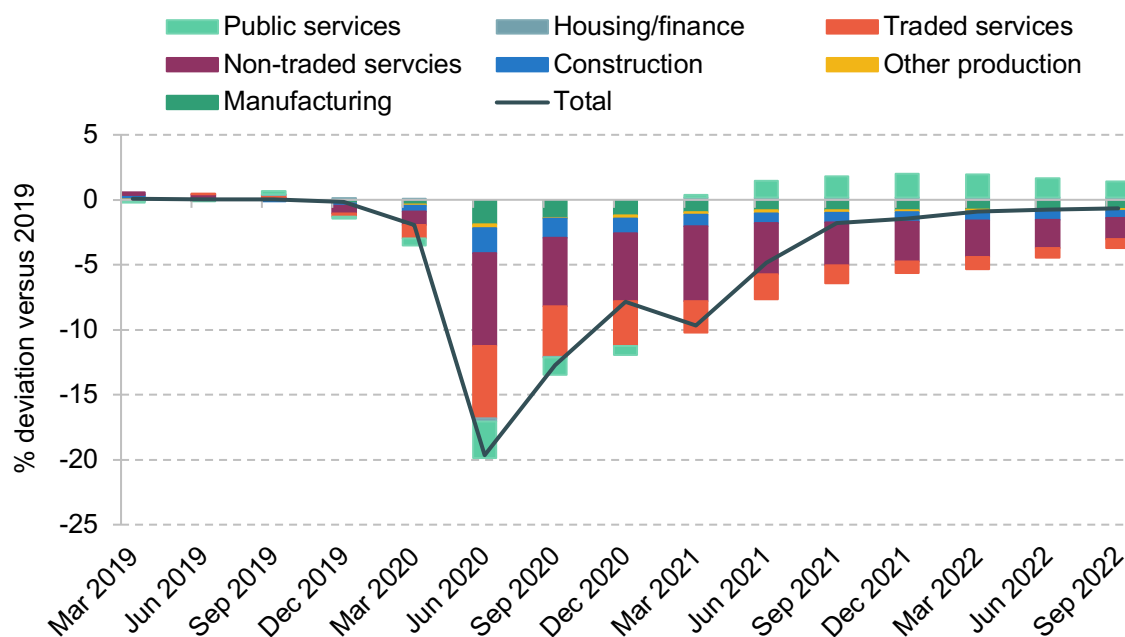
Source: Bank of England.

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).

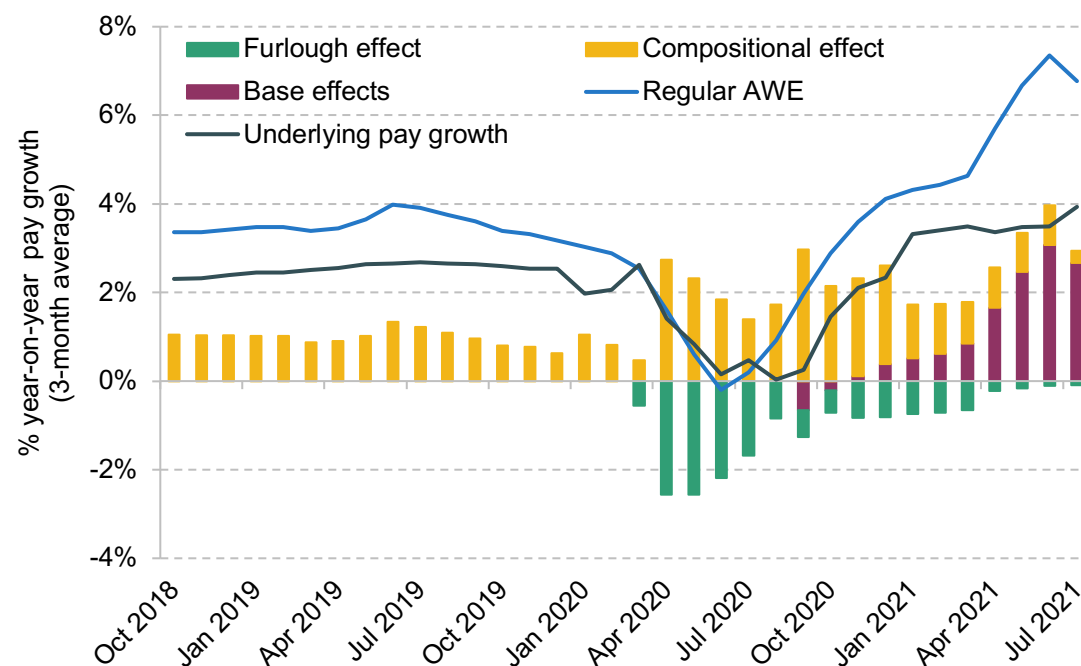
We expect matching challenges to weigh on aggregate supply by roughly 0.3ppt in 2022. We expect these effects to ease back through 2023 and 2024. Policy support to help workers retrain and move could yet alleviate some of these effects.

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.)

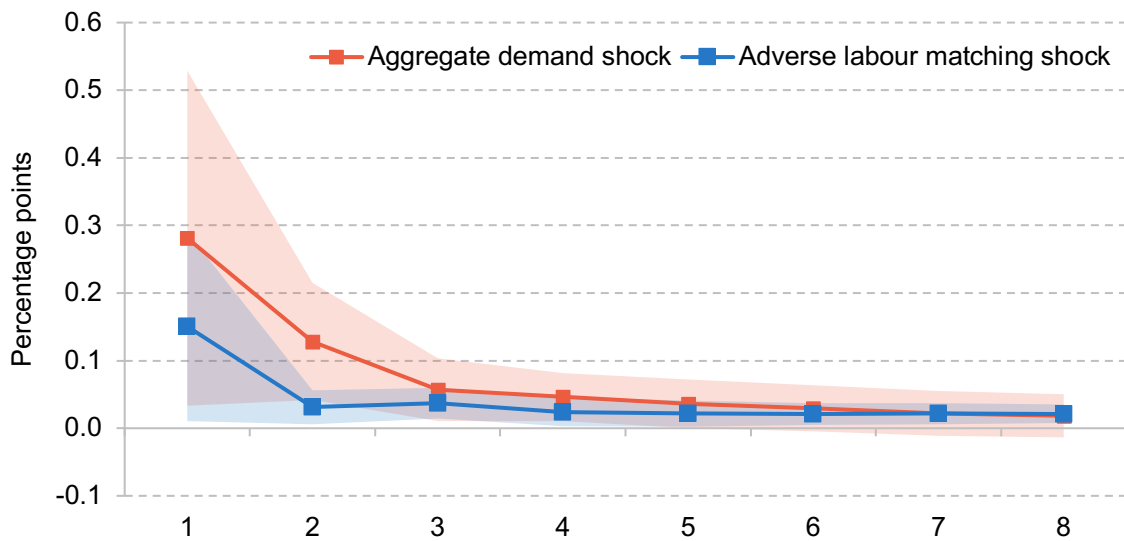
We expect wage growth in many of these areas to remain high over the coming years. Bank of England Agents currently show wage settlements increasing by between 10% and 40% in some of these sectors (Bank of England, 2021a). However, we expect these effects to be offset by growing wage reductions elsewhere 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

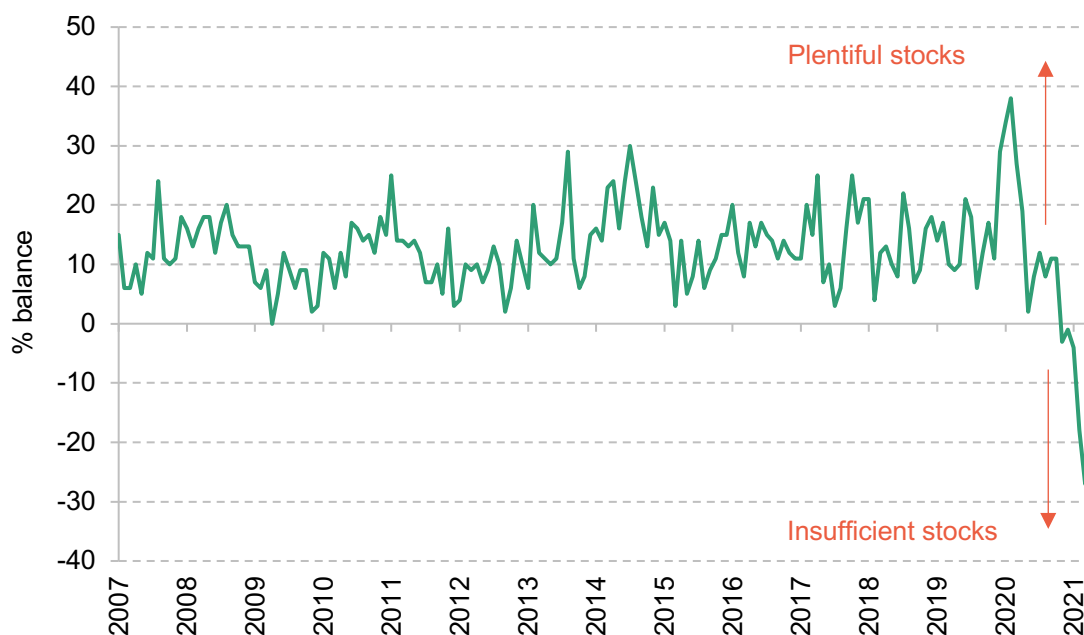
in 2021 than in 2020, and at a faster rate than many other G7 countries despite a larger drop in output – with only US inflation trending higher.

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

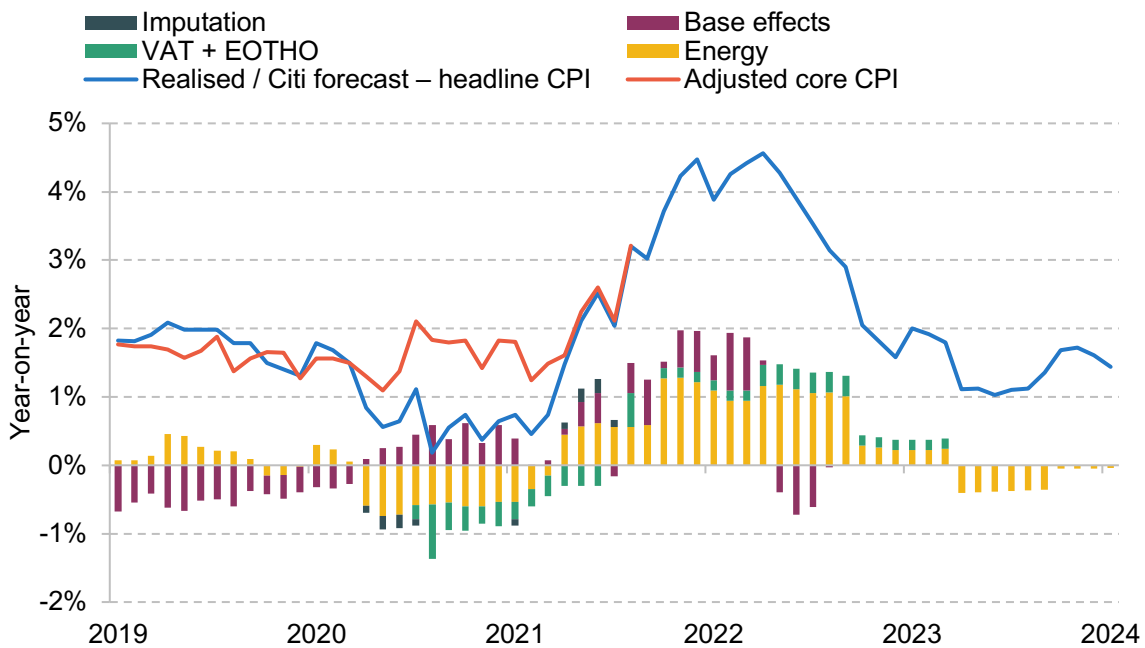
⁴² A rough rule of thumb usually suggests a 5% increase in import prices adds 0.8ppt to CPI inflation after four quarters (and 1.6ppt after three years). During the recent crisis, the two seem to have moved with a lag of just a month or two. See Forbes (2015) and Saunders (2021).

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.

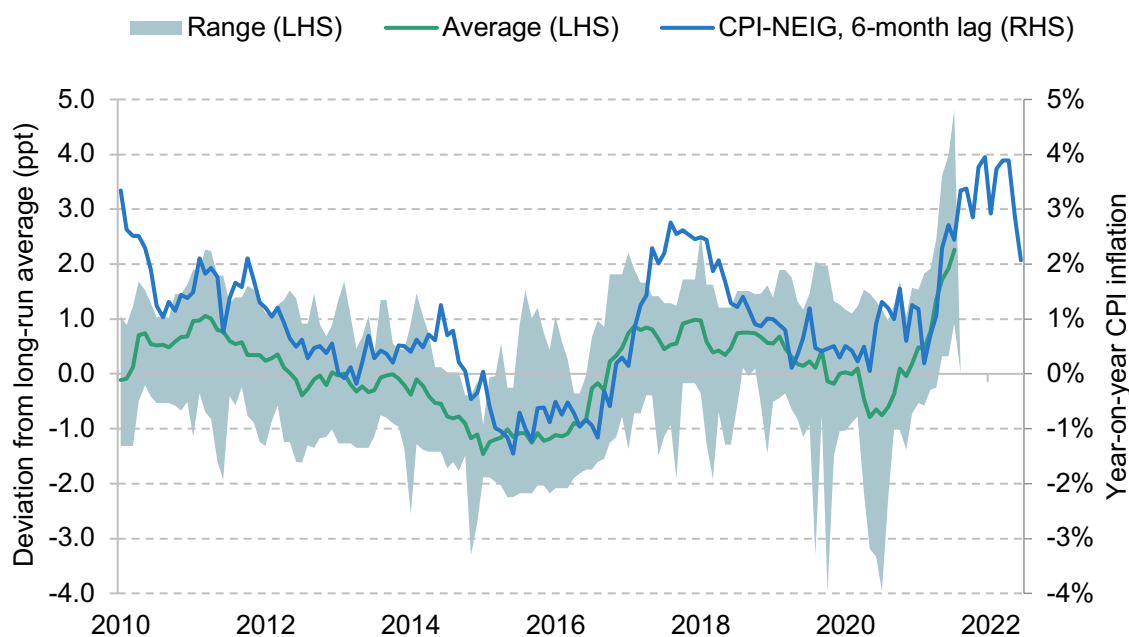
Figure 2.31. CPI inflation (%YY), 2019–24



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 CPIX⁴³ 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.

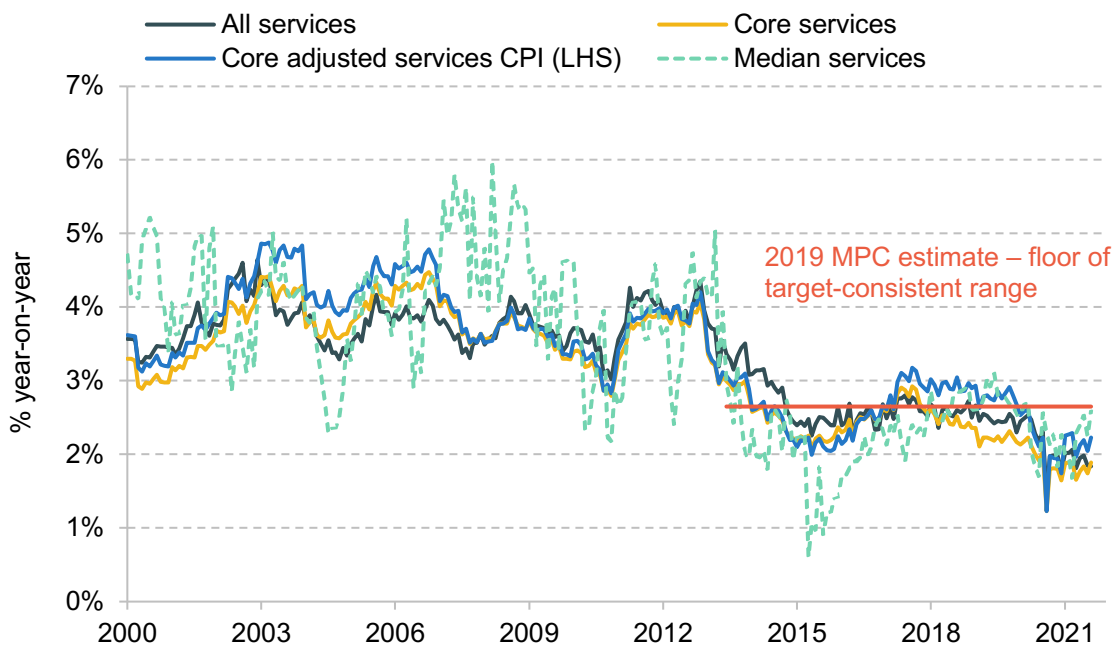
In a context of economic reconfiguration, the balance of risks here will remain difficult to judge through the recovery. Two factors matter. The first is the relative speed at which demand and supply are changing. When demand is changing more rapidly, this tends to weigh on supply and add to unit costs. 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.

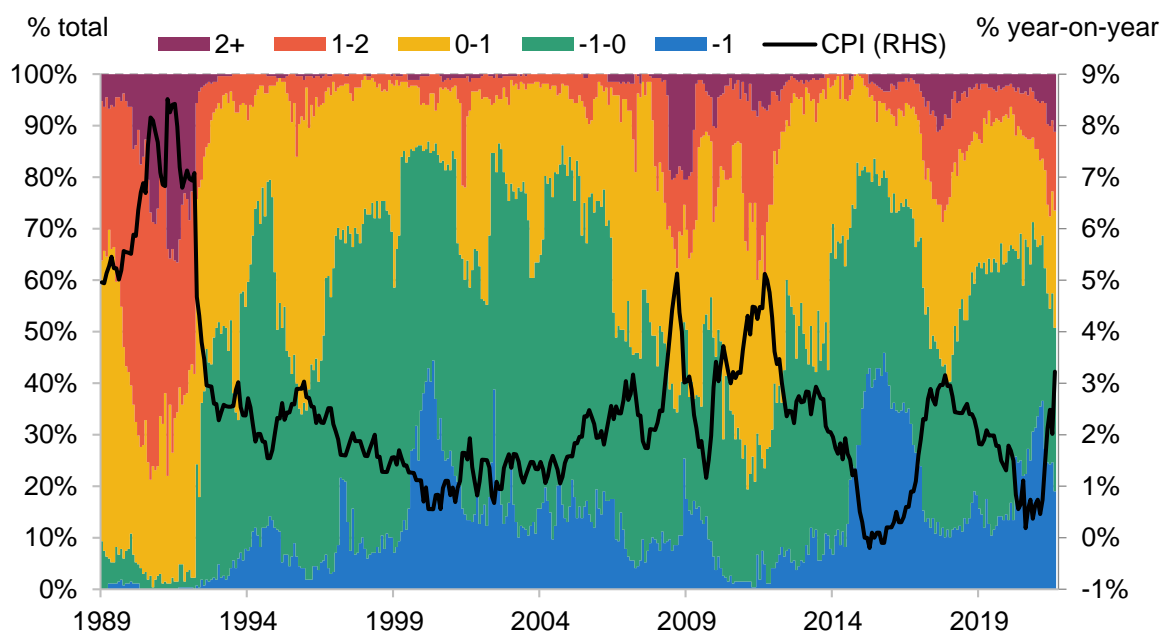
However, if inflation expectations begin to shift up, higher inflation could become more entrenched. This is now the key risk in the UK, especially given the large post-pandemic overhang of household deposits. If inflation expectations began to shift up and policy failed to react, these could now prove 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 Teneyro 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’ (Teneyro, 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
<i>of which:</i>			
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 literature⁴⁶ 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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