



Institute for Fiscal Studies

IFS Green Budget Chapter 1

Christian Schulz

Global economic outlook: from rebound to recovery



1. Global economic outlook: from rebound to recovery

Christian Schulz (Citi)

Key findings

- 1 The pandemic is not over, but economies are now more resilient.** Some vulnerable areas such as international travel will remain well below normal for some time. However, vaccination campaigns have reduced the likelihood of future lockdowns. **As households and companies adjust, the link between mobility and economic activity is weaker.**
- 2 The rebound can become a recovery.** Globally, households and companies have built up reserves, which they could use to spend and invest. But savings could also end up inflating asset prices rather than boosting the real economy. Governments should think carefully about policy levers that might encourage these reserves to be put to productive use.
- 3 For the rest of 2021, supply constraints will continue to impinge on growth.** In an optimistic scenario, shortages merely delay the recovery and trigger additional investment in the meantime. In a pessimistic scenario, lower profits put a further dent in firms' balance sheets and weigh on growth for longer.
- 4 Supply–demand mismatch, rebuilding profit margins, hot real-estate markets, sensitive price expectations and the green transition all point to higher inflation rates for some time.** However, globally there is still a lot of slack visible in labour market data, which suggests that there remains both upside and downside inflation risk.
- 5 The risk of a major fiscal tightening, as happened after the 2008–09 crisis, is low.** Governments will phase out the extraordinary support provided during the pandemic over the coming months. However, deficits will stay higher

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

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

1.1 Introduction

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

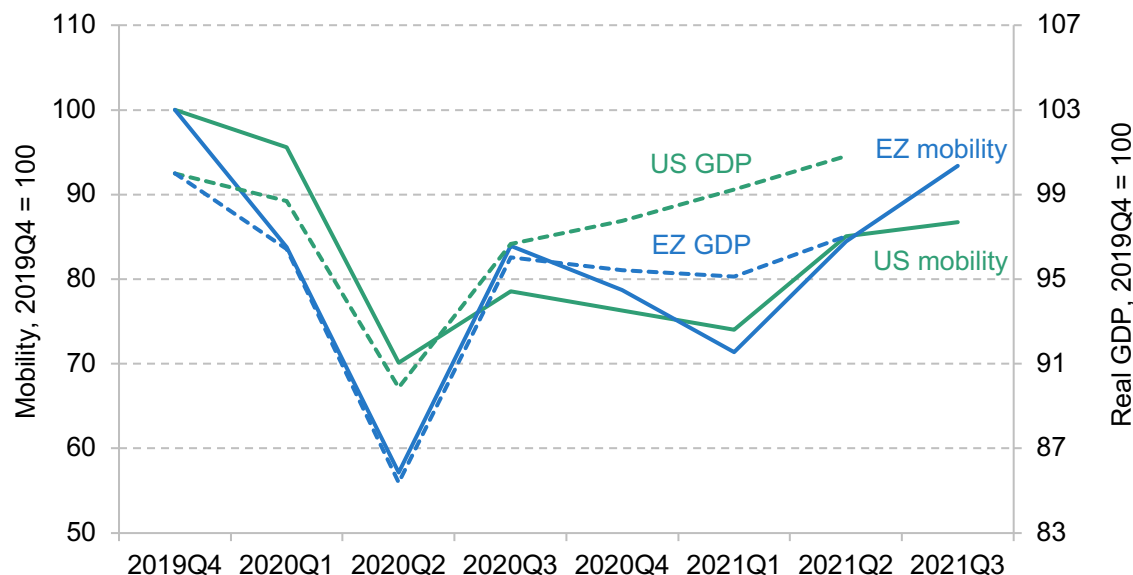
Preparations for this year's Green Budget fell into summer months when, in large parts of Europe, the impact of the pandemic seems to have faded and hopes for a near-complete recovery are high. That was similar last year. However, the epidemiological outlook in the 2020 Green Budget proved to be overly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

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

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

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

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



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

Source: Google, Citi Research.

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

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

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

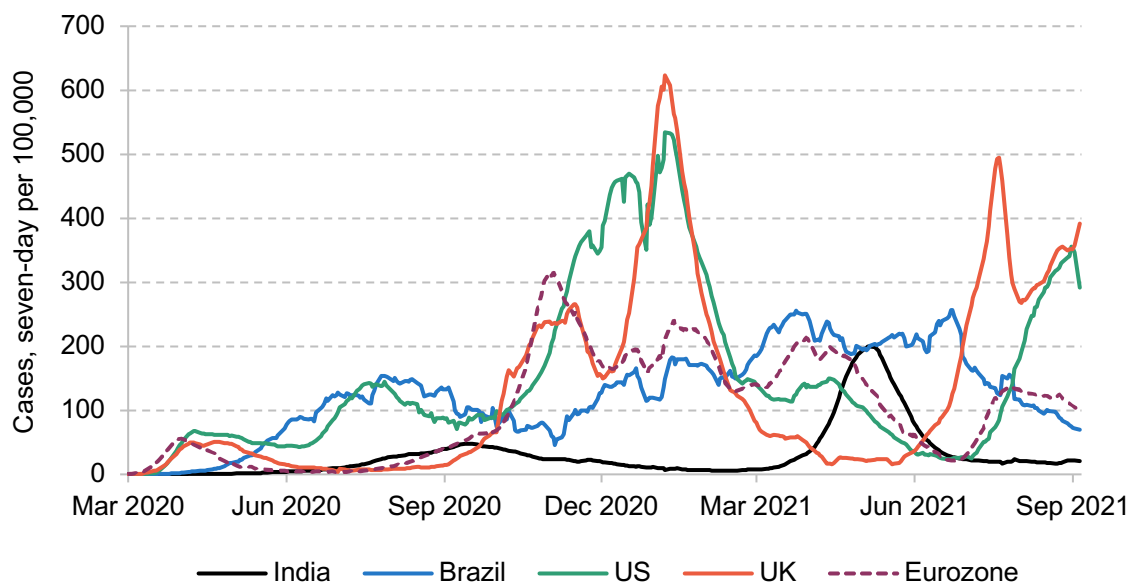
Real GDP growth (YY %)	2020		2021		2022		2023		2024		2025	
	Green Budget 2020	Latest	Green Budget 2020	Latest	Green Budget 2020	Latest	Green Budget 2020	Latest	Green Budget 2020	Latest	Green Budget 2020	Latest
World	-3.9	-3.5	5.4	5.8	3.1	4.4	2.9	3.1	2.9	3.0	-	2.9
Advanced economies	-5.2	-4.8	4.8	5.1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

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

1.2 The pandemic still poses global risks

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

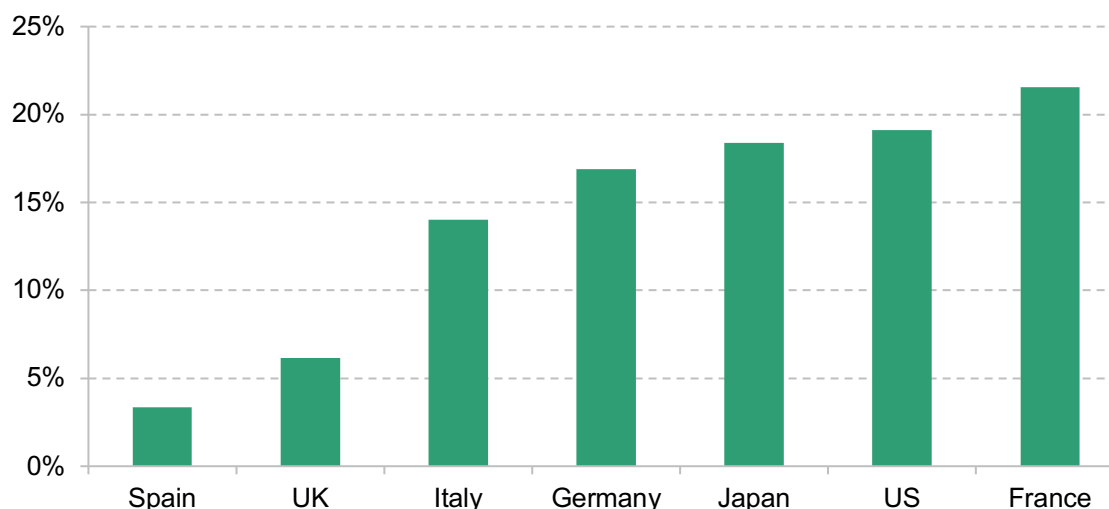
Figure 1.2. Seven-day COVID-19 incidence per 100k persons: US, UK, Eurozone, India and Brazil



Source: Johns Hopkins University and Citi Research.

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

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



Note: As of late August 2021.

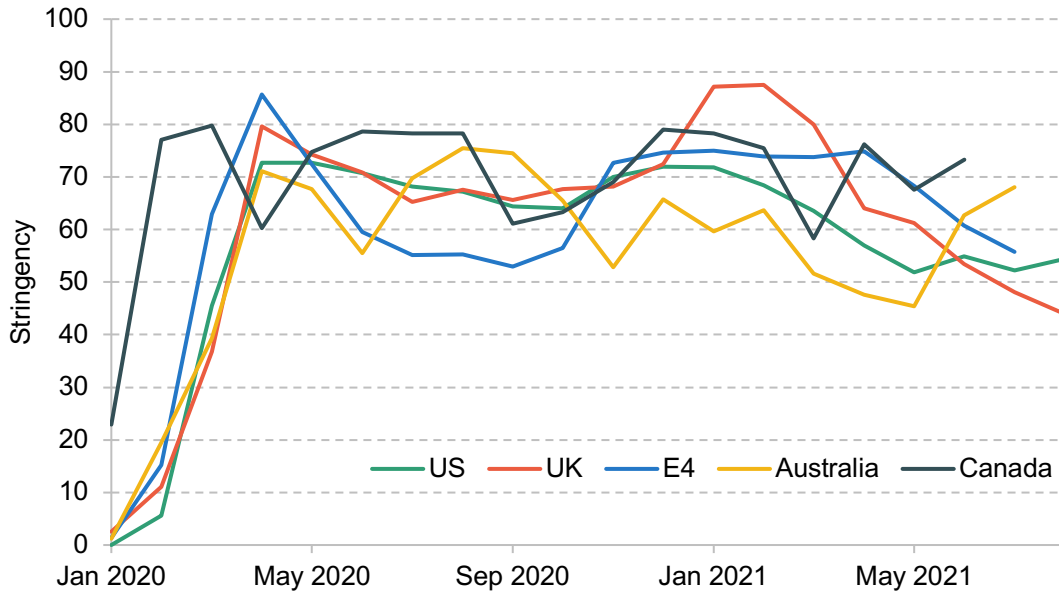
Source: US CDC (>65-year-olds); Spain, Italy, France ECDC (>60-year-olds); Germany RKI (>60-year-olds); UK NHS (>65-year-olds); Japan Cabinet Office (>65-year-olds); Citi Research.

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

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

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

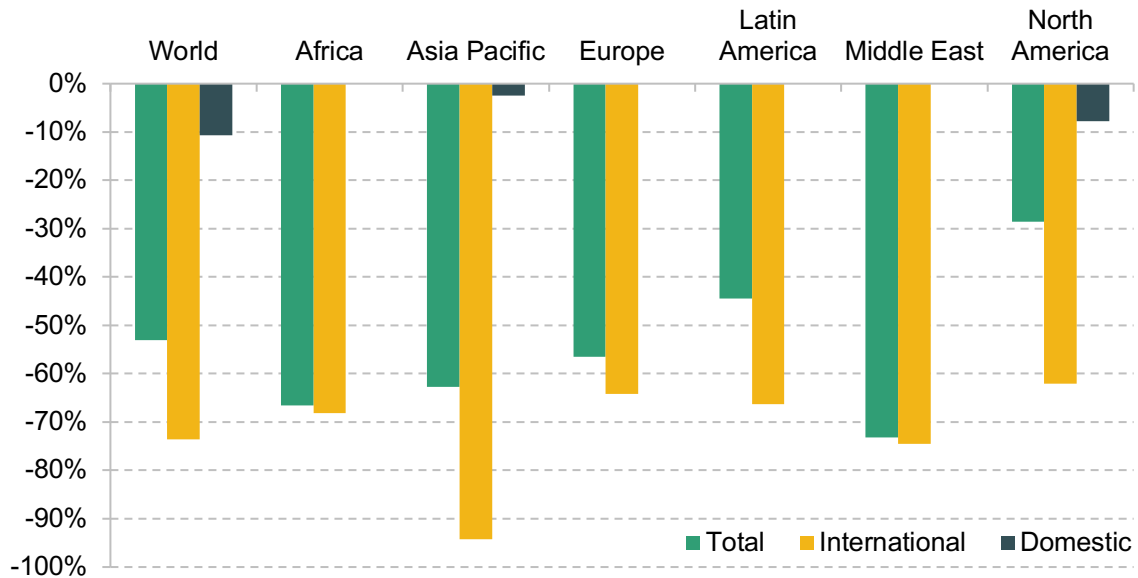
Figure 1.4. Oxford University’s COVID-19 Government Response Tracker stringency index



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

Source: Oxford University and Citi Research.

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



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

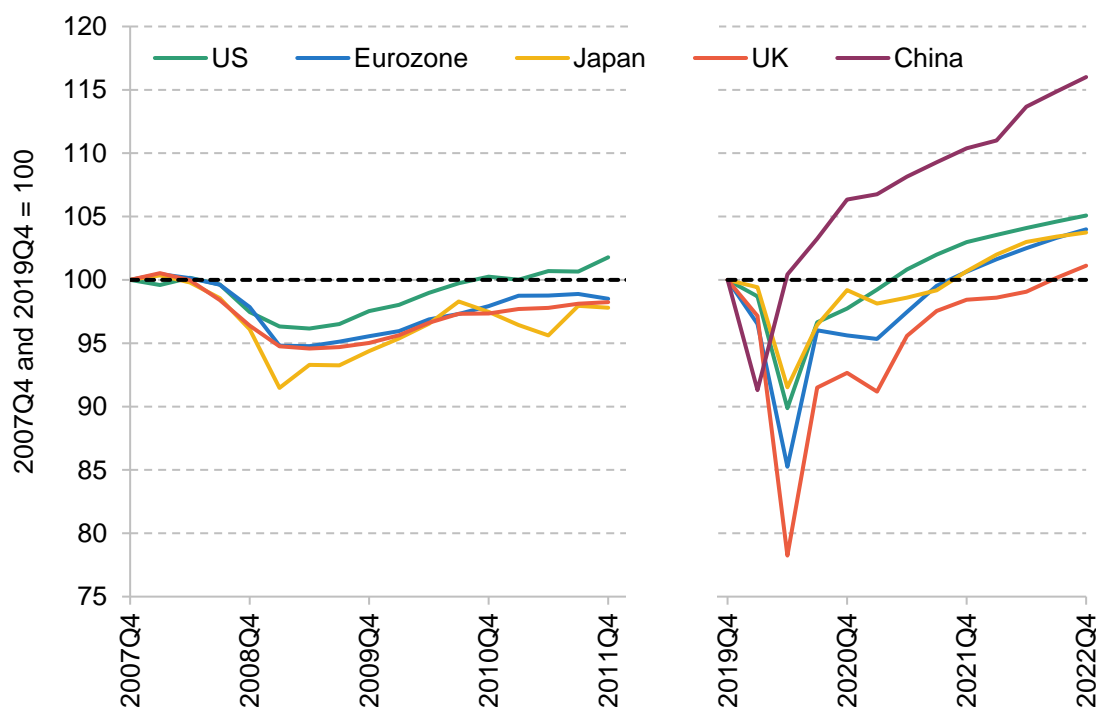
Source: IATA and Citi Research.

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

1.3 The economic allure of lockdown savings

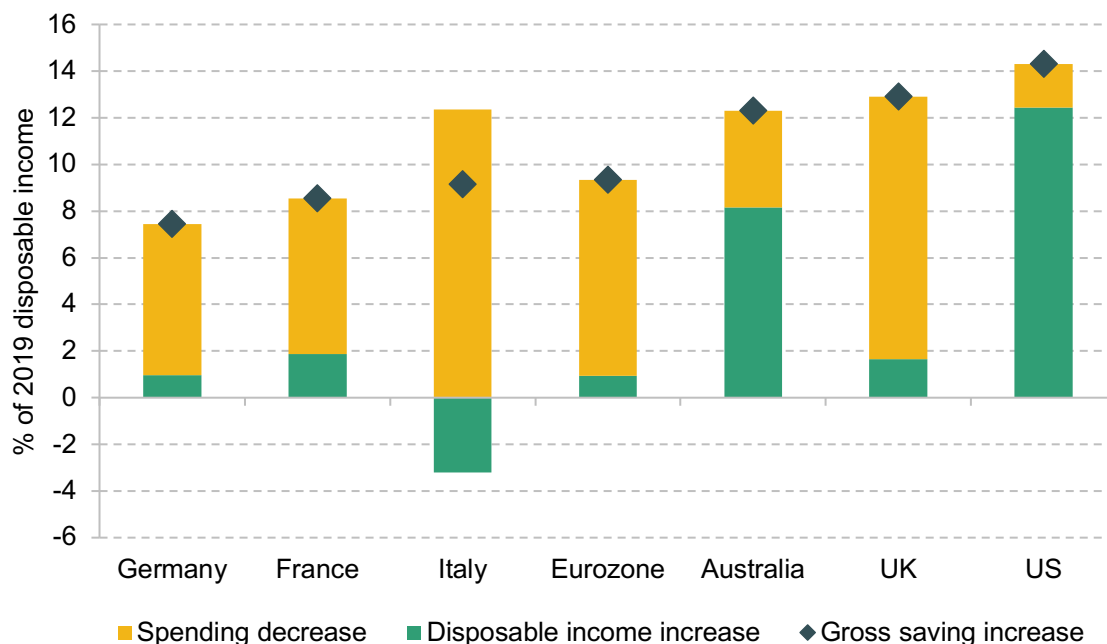
At the time of writing this Green Budget, the global economy is growing at historically strong rates. Most western governments have considerably relaxed health measures in recent months as new infections receded and vaccination campaigns progressed. People in most countries felt more comfortable returning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

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



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

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



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

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

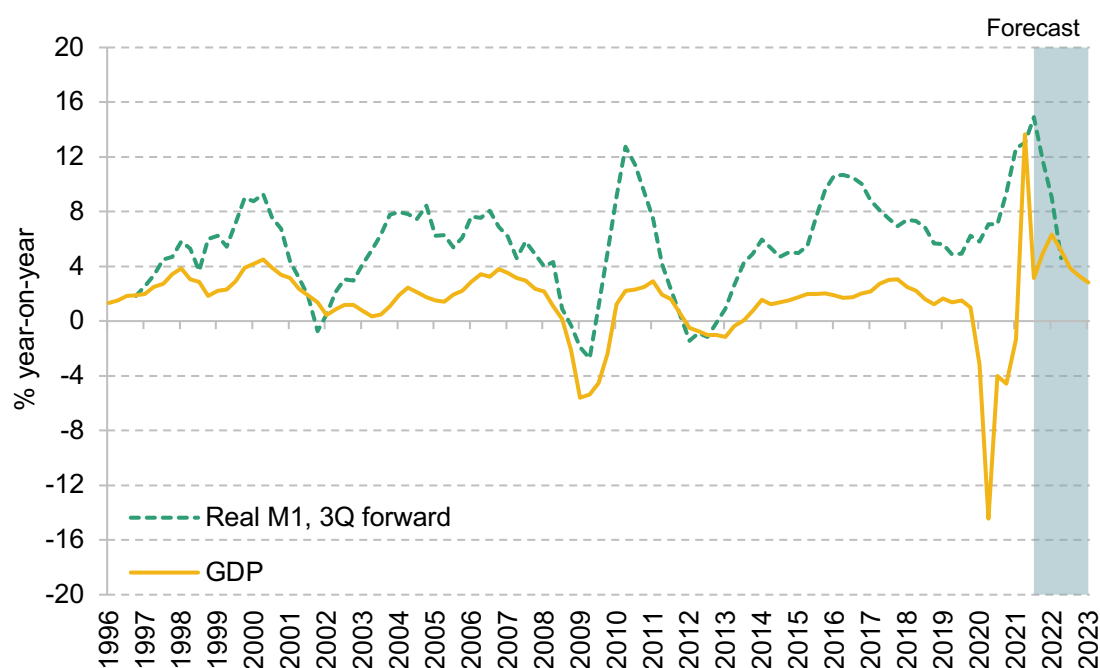
The key driver of both downturn and rebound was and is private consumption. Where shops and restaurants were closed and travel heavily restricted during lockdowns, households' spending opportunities vanished. While some of the spending was diverted to home office equipment, food orders or movie streaming,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

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

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

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

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



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

Source: Eurostat, ECB and Citi Research.

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

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

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

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

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

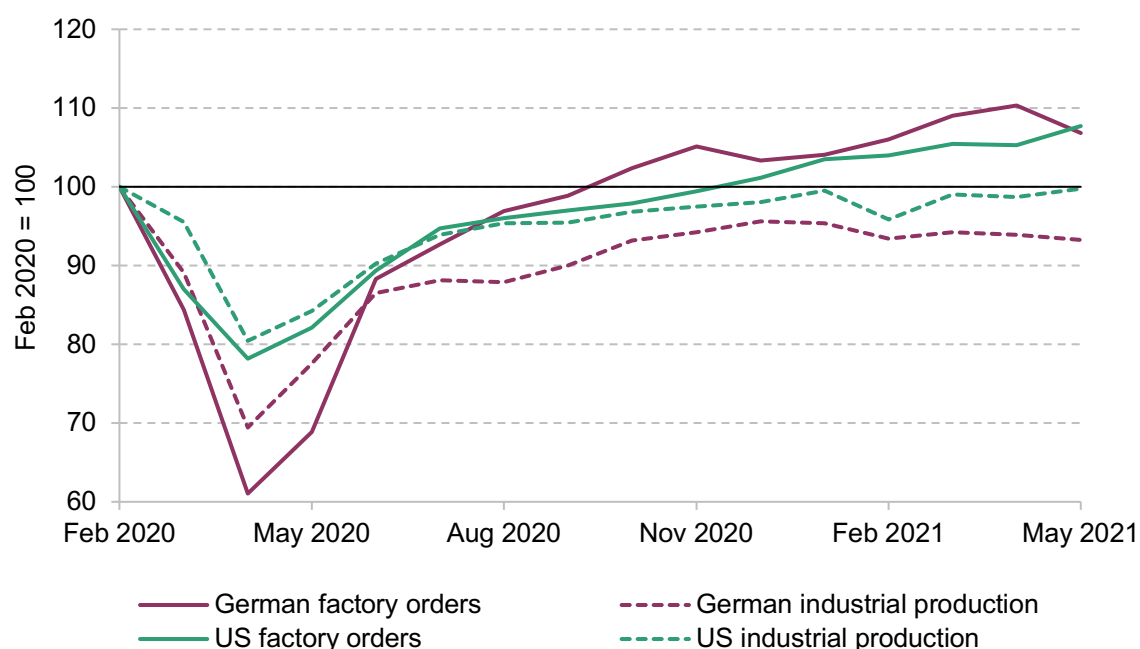
We stress that all of these policies could have unwanted side effects. For example, low interest rates could be ineffective if savers simply respond by saving into riskier products. There is some evidence that negative interest rates even encourage rather than discourage saving if households have certain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

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

1.4 Hitting supply constraints

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

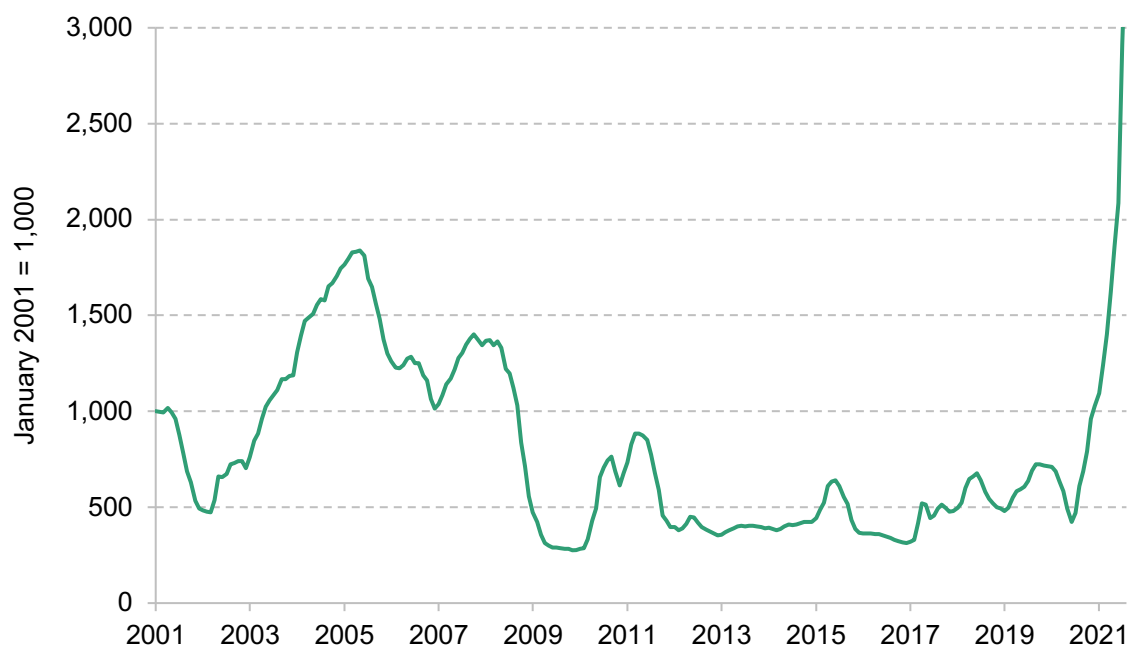
Figure 1.9. Factory orders and manufacturing output: US and Germany (real terms, February 2020 = 100)



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

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

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

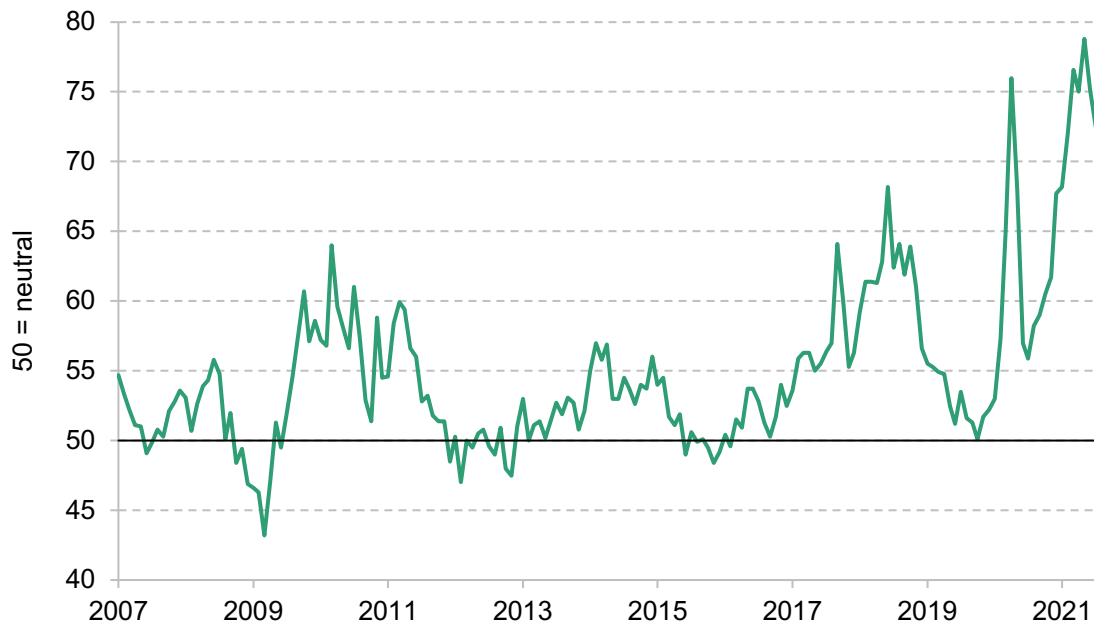


Source: Harper Petersen and Citi Research.

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

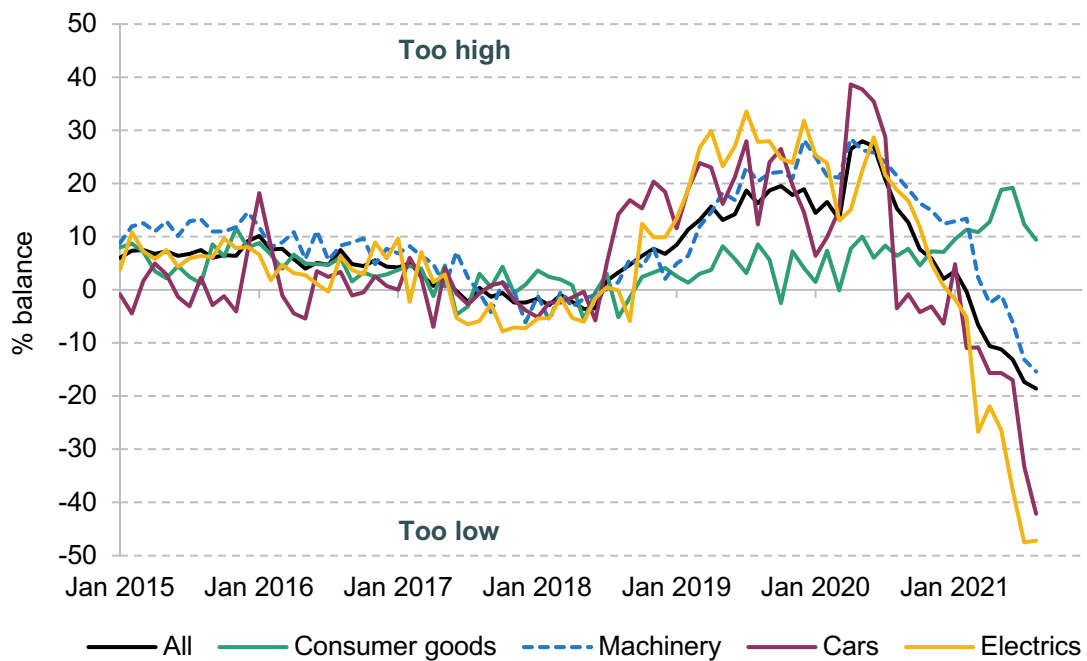
Supply shortages and supply chain disruptions show, for example, in lengthening supplier lead times in global purchasing manager surveys. In the US (Figure 1.11) and elsewhere, delays in delivery are spreading at a record pace. Another sign of supply–demand mismatch is in the depletion of manufacturers'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

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



Source: ISM and Citi Research.

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



Source: Ifo and Citi Research.

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

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

1.5 Inflation is overshooting

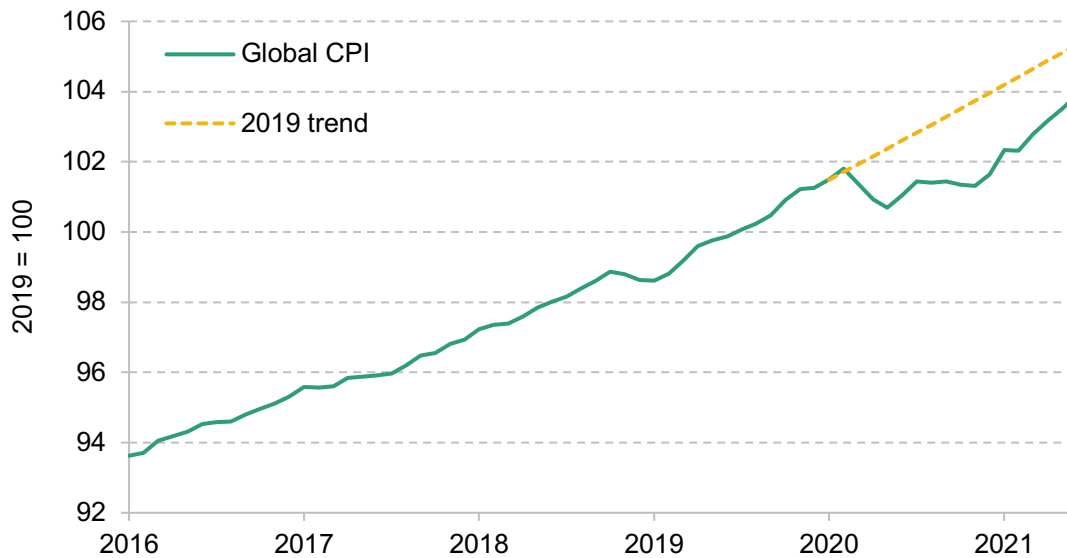
In the meantime, inflation is making headlines, with prices rising at rates that are high by the subdued standards of this millennium (so far). Consumer price inflation is above 5% in the US and above 3% in the Eurozone and the UK. To a large degree, these high rates reflect base effects (that is, the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

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

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

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

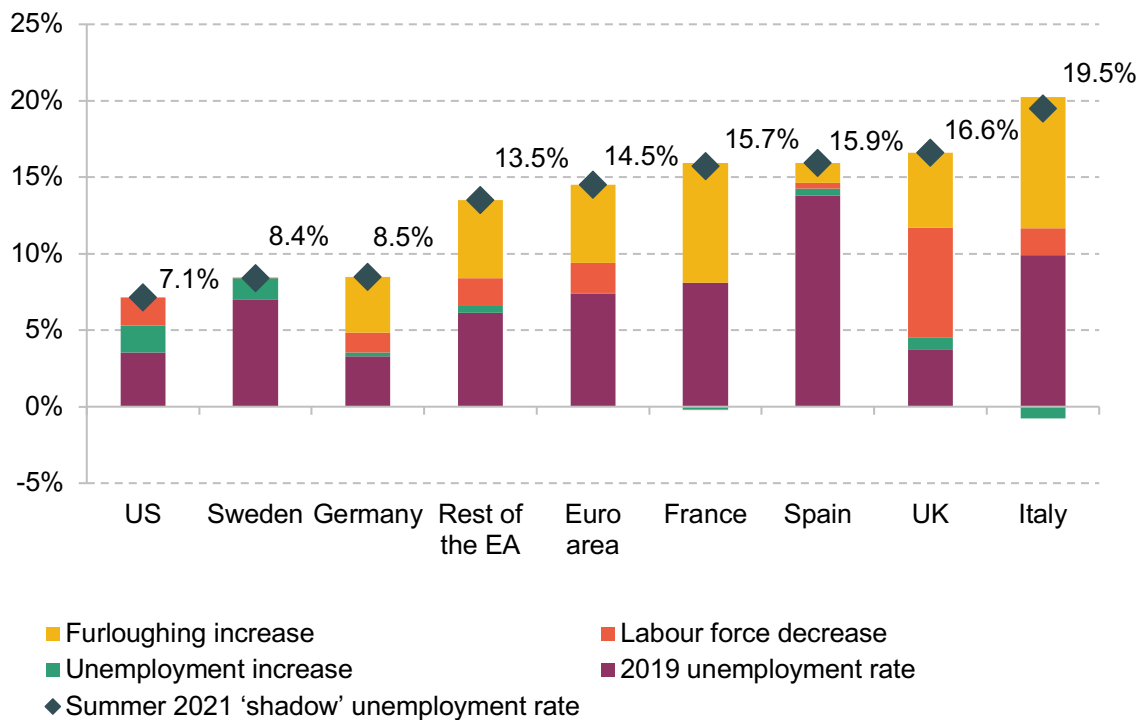
Figure 1.13. Consumer price index: US, Eurozone and China (seasonally adjusted, 2019 = 100)



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

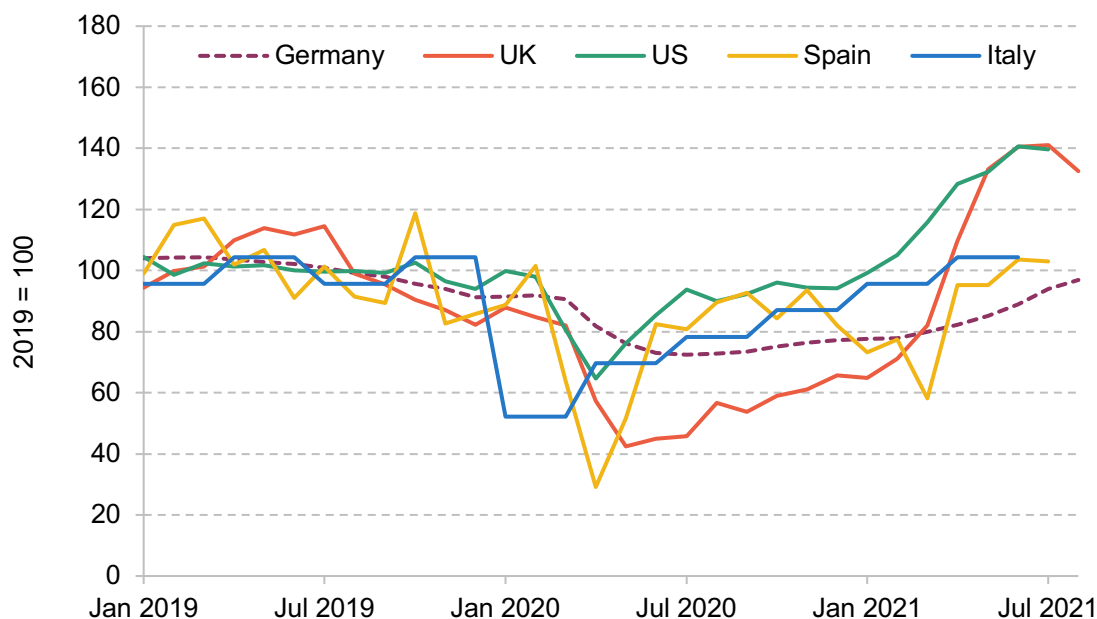
Source: ECB, BLS, CNBS/H and Citi Research.

Figure 1.14. 'Shadow' unemployment rates, Summer 2021



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

Figure 1.15. Job vacancy indices (2019 = 100)



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

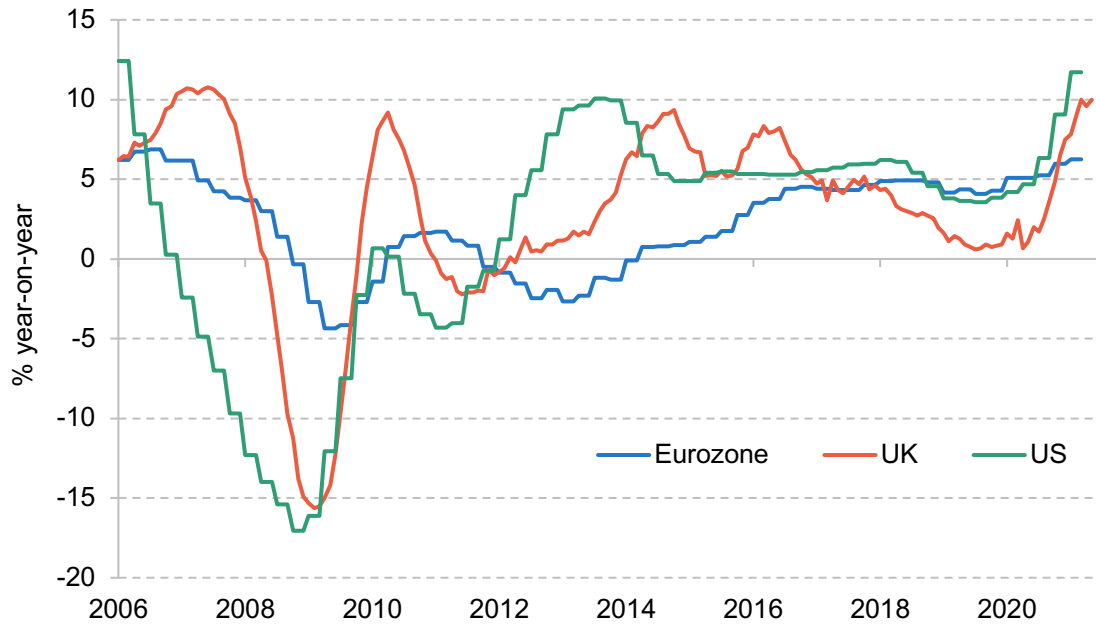
A full absorption of all the ‘unemployed’ workers is likely to take time as long as economies operate below pre-crisis levels overall and due to economic reconfiguration, especially in economies with less flexible labour markets, such as in continental Europe. In the US and the UK, there are signs of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

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

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

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

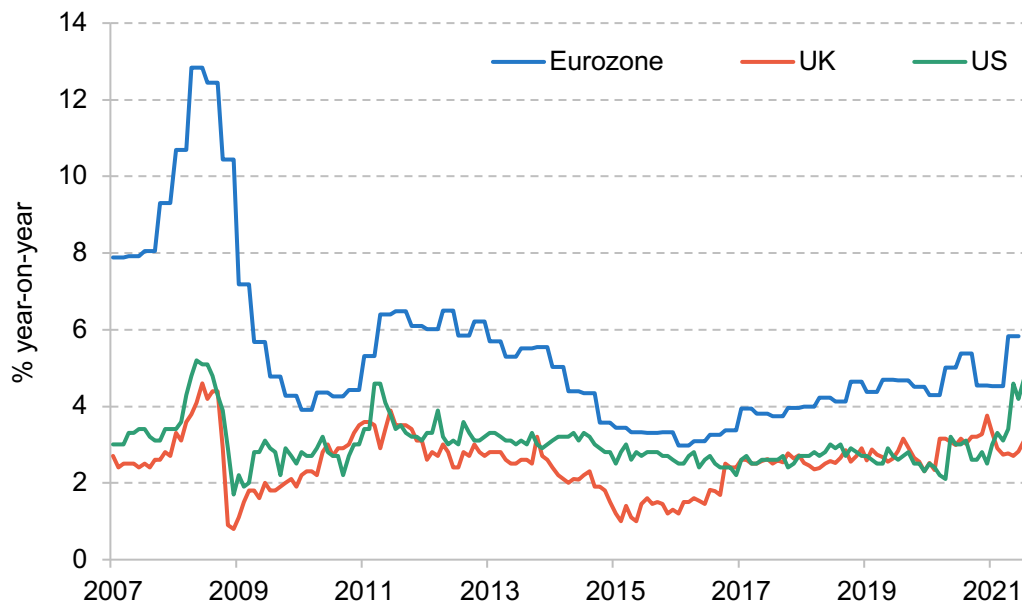
Figure 1.16. House prices: US, UK and Eurozone (YY %)



Note: All dwellings.

Source: BIS and Citi Research.

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



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

- **Inflation expectations could perpetuate the current surge.** Periods of high inflation, even if driven by temporary factors, can perpetuate themselves if households and companies revise up their inflation expectations. In the US and to a lesser degree in Europe, households' short-term inflation expectations have been rising sharply, driven by higher observed inflation (Figure 1.17). While short-term inflation expectations tend to lag actual inflation, they do lead to wage growth, so the rise could have an effect on wage demands as well as firms' perceived pricing power. Both could lead to permanently stronger price dynamics. However, so far there is less evidence of rising long-term inflation expectations. We also note that purchasing intentions remain subdued in the UK and German GfK consumer confidence surveys, which we would not expect if households expected the current price hikes to persist.
- **The green transition could drive up many prices.** A major event, with potentially important economic and inflationary consequences, will be the COP26 meeting in Glasgow in November. A summer of extreme weather events globally has once again made clear the challenge the world is facing in slowing climate change and the potential costs if it fails to achieve this. In our view, the pandemic has helped bring the vulnerability of the world to environmental challenges up the agenda, which will now benefit the fight against climate change. However, to ensure that it can continue to prosper in the long run, the global economy will have to internalise the damage current activity is doing to future prospects. The EU Commission has warned, for example, that its 27 member states will have to invest an extra 2% of GDP every year until 2030 to cut greenhouse gas emissions by 40% compared with 1990. This extra spending will need to be offset by higher taxes and cuts elsewhere. We expect higher carbon prices and other indirect taxes to play a major role in reducing emissions. Already, Europe's traded carbon price, which only applies to manufacturing, power companies and airlines, has doubled during the pandemic (Figure 1.18), reflecting high demand but also anticipation of future cuts in supply. Germany this year extended carbon pricing to the energy sector, introducing a €25 per tonne price in January which increased overall CPI inflation by 0.3–0.5 percentage points and is scheduled to rise to €55 by 2025 (and probably earlier if the Greens take office following the recent election). The EU is currently considering a carbon border adjustment tax, which would increase the price of imported goods from non-compliant countries (for a discussion in a UK context, see Chapter 8). We can expect carbon pricing to play a major role in the global response to the climate crisis and directly drive up consumer prices. (Carbon pricing and other issues around green taxes in a UK context are discussed in Chapter 8.)

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



Note: Shows European Climate Exchange over-the-counter (OTC) spot price for 1 metric tonne of CO₂ emissions.

Source: Bloomberg and Citi Research.

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

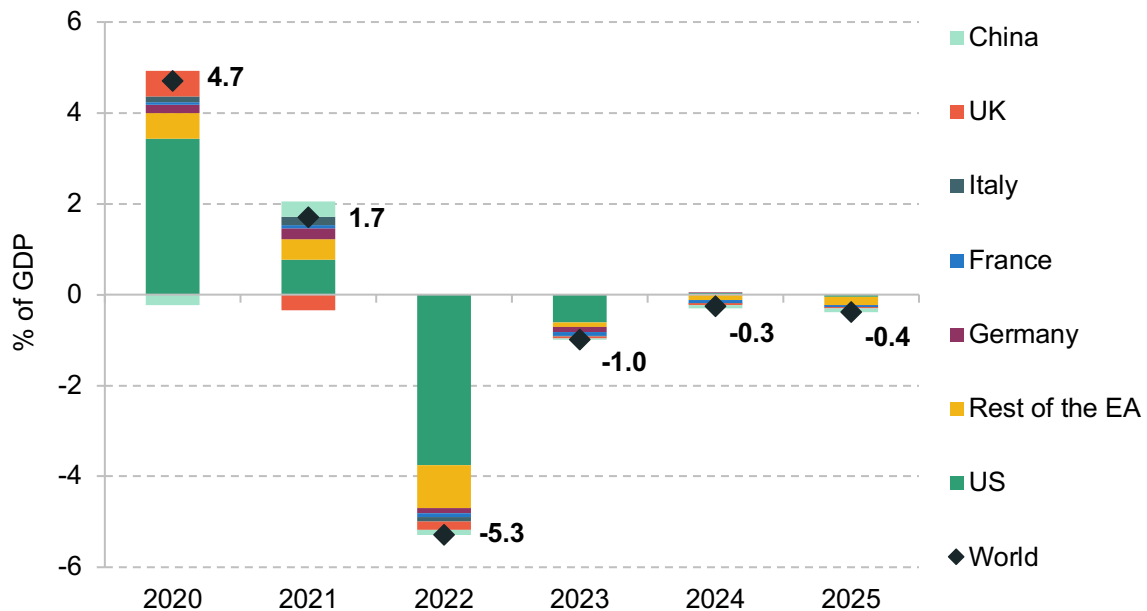
In sum, supply–demand mismatch, rebuilding profit margins, hot real-estate markets, sensitive price expectations and the green transition all point to higher inflation rates for some time. However, as long as economies have not returned to pre-crisis trend levels of output, and labour supply rebounds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

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

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

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

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



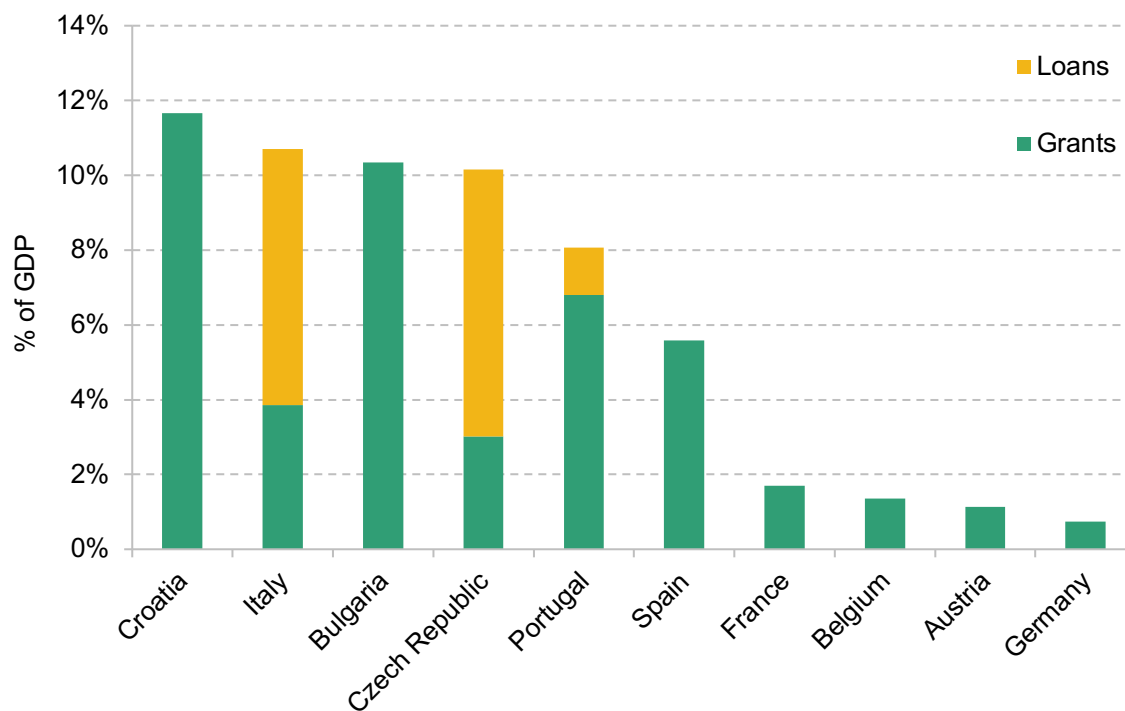
Note: Change in the general government budget deficit, adjusted for the change in the output gap (with a factor of 0.5).

Source: IMF and Citi Research.

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

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

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



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

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

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

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

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

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

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

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

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

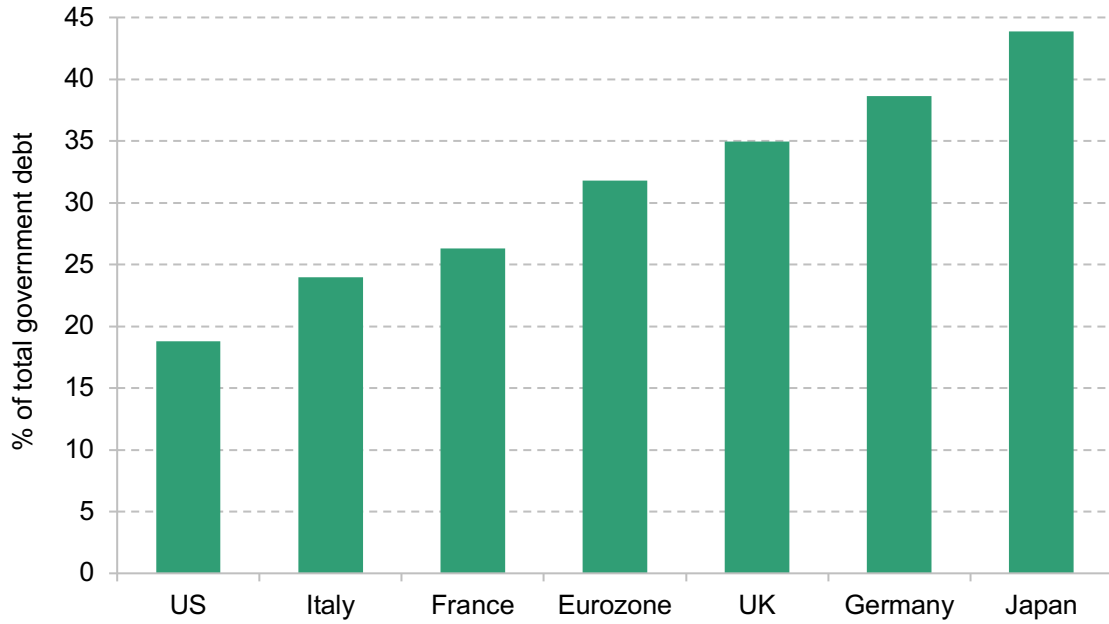
In sum, the risk of a fiscal backlash as after the 2008–09 crisis is low. The extraordinary support during the pandemic will be largely phased out over the coming months. However, deficits will stay higher than pre-pandemic as governments step up public investment. Longer-term though, the debate about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

1.7 Can central banks tighten policy?

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

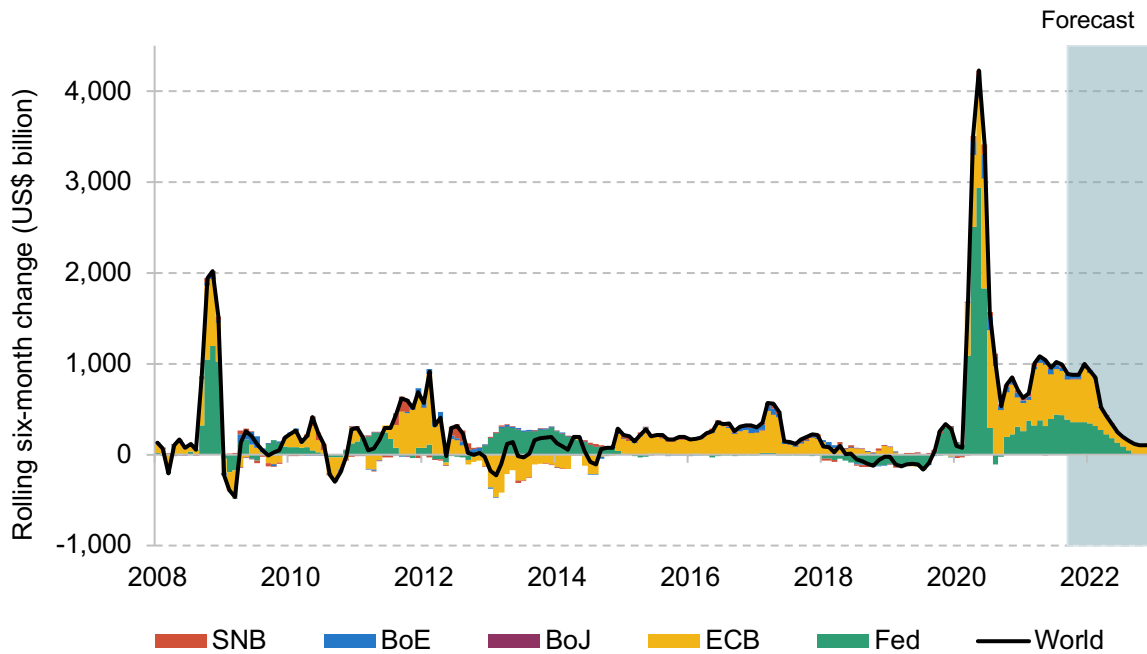
Some central bankers are worried they will come under political pressure in some circumstances not to hike interest rates in order to keep government borrowing costs low, i.e. ‘fiscal dominance’. That may influence their thinking about when and how to withdraw monetary stimulus, to avoid getting into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

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



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

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



Note: Quantitative easing.

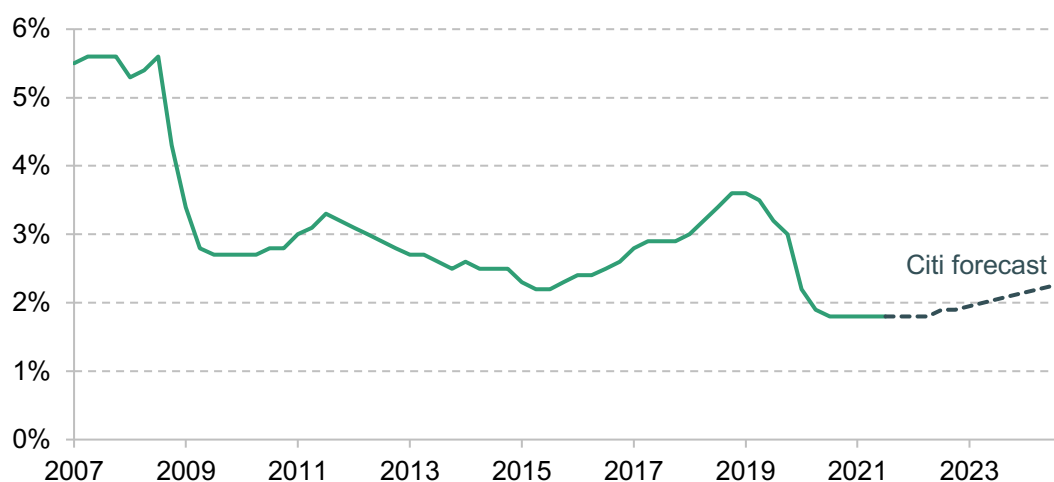
Source: Fed, ECB, BoJ, BoE, SNB and Citi Research.

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

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

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

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



Source: Haver Analytics, IMF and Citi Research.

1.8 Conclusion

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

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

References

Citi Research (2021), ‘[Europe’s post-Covid savings glut](#)’, 25 June.

Flach, L., Gröschl, J., Steininger, M., Teti, F. and Baur, A. (2021), ‘International value-added chains – reform needs and opportunities’, in German, for Konrad Adenauer Foundation.

International Monetary Fund (2021), ‘IMF World Economic Outlook April 2021’.