



Institute for Fiscal Studies

IFS Green Budget 2020: Chapter 1

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# Global economic outlook: lessons from the pandemic



# 1. Global economic outlook: lessons from the pandemic

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## Key findings

- 1 **Attempts to contain the first wave of COVID-19 with hard lockdowns were costly.** Some governments succeeded and are reaping economic and political benefits from it. Others tried less successfully and may end up worse off than those that did not try or abandoned attempts early. In most cases, the bar to returning to the stringent lockdowns seen during the spring seems high.
- 2 The fiscal and monetary response has been even swifter and more comprehensive than after the 2008–09 crisis. Governments initially responded with a ‘first wave’ of measures aimed at protecting household and business incomes. This was followed over the summer by a ‘second-wave’ response targeted at boosting demand as lockdowns eased. Finally, some countries – most notably in the EU – have started to introduce ‘third-wave’ packages to help support the transition to a new normal. **Timely, well-targeted and generous support should significantly improve the chances that scarring will be minimised and a more complete economic recovery achieved.**

- 3 The 'first-wave' fiscal response saw considerable support for the labour market, which helped to keep workers attached to their jobs. In Germany, the UK, France and Italy, traditional measures of unemployment remained in single digits over the summer, but **rates of furloughing pushed total unemployment rates to nearly 25% in the latter three countries.**
- 4 In virtually every economy, the collapse of economic output in the first half of 2020 was historic. GDP fell by 10.2% in the US, 11.5% in Germany and 14.3% in the EU as a whole. Other countries suffered much worse economic shocks; GDP fell by 17.6% in Italy and 18.9% in France. **Of 28 major economies, Spain and the UK had the worst falls in GDP (of 22.7% and 22.1% respectively).** Only China continued to grow in the first half of 2020, but growth of 0.4% is a far cry from its usual growth rates.
- 5 After an economically disastrous first half of the year, most countries experienced a sharp – but generally incomplete – recovery. We expect that, **even avoiding another round of major lockdowns, most economies will not return to pre-pandemic levels of output until 2021 or 2022.**
- 6 Even when the pandemic itself is over (with the development and roll-out of a vaccine or effective medication), there will be lingering economic effects. Supply will feel the impact of depressed investment in 2020, as well as ongoing hygiene measures that remain necessary. Demand will be affected by ongoing caution, shifts in behaviour and unemployment. Even where economies recover, significant losses for creditors could crystallise. **We therefore expect all economies to remain smaller than either our pre-COVID forecast or a simple extrapolation of pre-COVID trends would imply.** The pandemic could also spark wider changes in the political landscape; a first test will be the US elections in November.

**7 Citi forecasts big GDP declines and sharp recoveries almost everywhere, with GDP reaching pre-crisis levels mostly in 2021 or 2022.** On current forecasts, China and the US look set to outperform European economies. Inflation and interest rates should stay low. There is a significant risk of divergence between the best- and worst-performing economies in this crisis; going into the final quarter of 2020, the UK has one of the worst starting points among major economies.

## 1.1 Introduction

The coronavirus outbreak and the policy response to it has not just dominated the economic and fiscal developments so far in 2020; it also sets the starting point for the rest of the year and 2021. As long as the virus remains a significant health threat – with no vaccine and no highly effective treatment – the situation remains too volatile to provide a definitive assessment of the global economic impact. Instead, in this chapter, we reflect on some of the developments of the past year and lessons to draw from them, before presenting Citi’s current global economic forecasts.

We begin in Section 1.2 by discussing how the COVID-19 pandemic and the policy response to it have unfolded in different countries. Section 1.3 discusses the economic response to this public health crisis. We analyse the ‘three waves’ of fiscal responses (from the immediate move to protect households’ and businesses’ balance sheets – and to support public services – during the lockdown, to the need to stimulate demand once the virus was (seen to be) under control, and the ongoing project of supporting economies to transition to the ‘new normal’). Section 1.4 explores the role of monetary policy. Section 1.5 analyses the short-term economic costs of lockdown, while Section 1.6 looks at longer-term impacts on the labour market, investment and private sector debt. Section 1.7 examines the potential political consequences of the pandemic. In Section 1.8, we present our forecasts for growth in the US, China and the Eurozone. Finally, Section 1.9 concludes.

## 1.2 The health response: virus control as an investment

Within little over half a year, the COVID-19 pandemic has triggered unprecedented damage around the world. By the end of September, more than 30 million people are confirmed to have contracted COVID-19, with around a quarter of a million new cases each day according to World Health Organisation (WHO) data. The number of people who have died after contracting COVID-19 has surpassed 1 million and countless others have been hospitalised with severe cases. The long-term health consequences of the illness, even of mild cases, are unknown.

Until comprehensive medical treatment or vaccination is developed and delivered at scale (see below for progress on that), the spread of the virus looks set to continue (if not accelerate in some countries). However, the global hotspot has shifted from East Asia to Europe, and now to the Americas and lately India. Scientific research into the factors driving its spread and deadliness continues to make advances. Those which have been identified include climate, seasons, demographics, urbanisation, social culture, healthcare resources and pandemic management (including voluntary and imposed social distancing as well as testing strategies, for example). But luck or misfortune clearly also plays a role and we are careful not to heap praise or criticism on any particular government for its performance at any particular point in time, as some have gone quickly from relative good performers to weak ones – and vice versa.

Among large western economies, the United States has so far suffered the highest confirmed incidence of COVID-19, with 1.8% of the population having tested positive by the end of September. The actual incidence is probably several times higher, but still likely to be far below the 60–70% needed for ‘herd immunity’ (assuming the virus generates an average of three new cases per infection). Other major industrialised economies report (confirmed, again by the end of September) incidence levels of 0.1% (Japan) to 0.5% (UK), also still far away from herd immunity.

Besides the number of confirmed cases, the share of the population who die after contracting COVID-19 is an important indicator: it describes one of the dangers emanating from the disease and thus influences people’s behaviour. On this measure, Spain has had the worst pandemic so far among large industrialised

Table 1.1. G7 and Spain: pandemic, healthcare, health policy and voter satisfaction indicators, September 2020

Country	COVID-19 outcome			Healthcare resources			Policy			Government record		
	Confirmed cases per million	COVID-19 deaths per million	COVID outcome rank	Healthcare spending (% of GDP)	ICU beds (per 100,000 inhabitants)	Health resource rank	Lockdown stringency per case per 1,000	No. of tests (per confirmed case)	Policy rank	% confident not to catch virus	% trust in gov't handling of virus	Gov't rank
Germany	2,864	114	2	11.7%	29.2	2	15.9	43	2	60%	71%	1
Canada	3,403	252	3	10.8%	13.5	3	13.7	41	3	43%	75%	2
Japan	511	12	1	11.1%	7.3	6	57.6	20	1	25%	42%	8
Italy	4,327	593	5	8.7%	12.5	5	12.7	31	5	39%	67%	3
France	4,268	474	4	11.2%	11.6	4	12.2	21	6	49%	38%	6
UK	4,949	633	6	10.3%	6.6	8	9.8	46	4	52%	40%	5
US	17,609	627	8	17.0%	34.7	1	2.7	13	8	37%	38%	7
Spain	8,789	672	7	9.0%	9.7	7	5.5	21	7	55%	45%	4
Source	<i>JHU</i>	<i>JHU</i>		<i>OECD</i>	<i>Statista/WHO</i>		<i>Oxford University</i>	<i>Statista</i>		<i>YouGov</i>	<i>YouGov</i>	

Note and source: See the next page.

**Note and source to Table 1.1**

Note: Confirmed COVID-19 cases (as of 29 September 2020) and number of deaths from COVID-19 (as of 21 September 2020) are measured per million population. ICU beds per hundred thousand are based on the latest-available WHO data, in 2009 for the US, 2012 for the European countries and 2017 for Japan. The Oxford University lockdown stringency index tracks the daily level of typical measures such as school and shop closures, stay-at-home orders, restrictions on public gatherings or closures of public transport. YouGov data on confidence in not catching the virus and trust in government handling are based on the latest data available, from late August to early September. Healthcare spending as per OECD data. Testing as per Statista data. Countries are ordered based on their average rank across the four domains in the table (COVID-19 outcomes, healthcare resources, policy and government record).

Source: Johns Hopkins University (JHU), WHO, OECD, Statista, Oxford University, YouGov and Citi Research.

economies, with around 675 COVID-related deaths per million residents recorded by Johns Hopkins University and WHO by the end of September. The UK and US, with around 630 COVID deaths per million, are not too far behind, while Canada (~250), Germany (~115) and especially Japan (12) have fared much better so far (see Table 1.1). On current trends, the US – where the daily death rate was much higher in September than in other developed countries – looks set to lose further ground on this measure.

Questions about the quality and comparability of the data, especially on fatalities, make it difficult to rank economies in terms of the severity of the outbreak. With that in mind, we compare the G7 countries and Spain on a ‘COVID-affectedness’ measure that incorporates both their COVID-19 case rates and death rates (each per million population).<sup>1</sup> On the resulting measure, Japan has had the most benign pandemic so far, with Germany just behind. Spain and the US have had the most severe pandemic.

Resources in the healthcare system were a key bottleneck in dealing with the initial wave of the virus, as harrowing pictures and accounts (in particular from Northern Italy) suggested a clear risk of healthcare systems being overwhelmed and unable to

<sup>1</sup> Specifically, we first divide each measure by the average among the eight countries in our sample (which gives a measure of how many times above or below average each country is). We then add these two factors together within each of the four dimensions in Table 1.1, and rank the subsequent sum.

protect and deliver care to all vulnerable people. Ahead of the winter months, when other illnesses (such as seasonal flu) will probably add more strain on the availability of hospital beds and ventilators, health ministers will once again take their resources into account. High-level indicators of healthcare resources suggest that the US had the best starting point, with the highest number of ICU beds (35 per 100,000 people) and the highest expenditure on healthcare relative to the size of the economy (17.0% of GDP), followed by Germany (29 and 11.7%). The UK had the worst starting point among the G7 countries and Spain, with 7 ICU beds per 100,000 people and 10.3% of national income spent on healthcare, followed by Spain (10 and 9.7%) and Japan (7 and 11.1%). Among the major European economies and Canada, the healthcare resources ranking correlates well with the health outcomes from the pandemic. However, the US had the best starting point but has had the worst pandemic, while Japan had one of the worst starting points but the best outcomes so far.

That suggests that other factors were also key drivers of the severity of COVID-19. It seems clear that some of these other factors related to the public policy response, including the timing and extent of social distancing measures and the availability of testing. Oxford University data suggest that Japan imposed very stringent social distancing measures early in the path of its epidemic. After a slow start, by 21 September the UK had been carrying out the highest number of tests relative to the number of cases confirmed. On these measures, Japan, Germany and Canada took stronger policy action when the virus was relatively less prevalent; of the countries considered, they have also had the smallest outbreaks. The US and Spain were the least determined in policy measures and also ended up with the most severe outbreaks so far.

At least for now, containing the outbreak is paying off politically where governments have done relatively well. Germany's government, which has presided over the least severe outbreak in Europe so far (as well as having the greatest health resources in Europe going into the pandemic, and the most stringent measures compared with the size of its outbreak), scored best among all economies we considered in YouGov's polls for trust in the government's handling of the crisis. In France and the US, which have had worse pandemics despite their resources, governments now command less trust. Citizens with more trust in government also seem less worried about their own risk of catching the virus, which in turn should help them return to activities such as work and shopping.



In our view, this highlights that success during the first wave in controlling the virus, and especially in implementing successful policy measures to mitigate its health effects despite the associated economic cost, was an investment into limiting economic damage going forward. However, with second waves now appearing in many European countries, even governments that were relatively more successful during the first wave will need to demonstrate to their citizens that they are able to respond appropriately to any resurgence in the virus.

Indeed, it is clear that the pandemic continues in all regions around the world, albeit with different dynamics. Many parts of the world are still in the first wave, while others are experiencing new surges in cases following a loosening of social distancing measures. So far, these ‘second waves’ seem to be less deadly than those experienced in early spring. Partly this is a matter of time; changes to the hospitalisation and death rates typically lag infections by several weeks. Partly this is the result of better data, which give a more accurate picture of the extent of the outbreak; in most countries, more widespread testing allows public health authorities to pick up milder cases that might previously have gone undetected (or at least unconfirmed). There are also indications that, so far, the second wave has disproportionately hit young people, who seem to cope better with the disease (although the long-term effects of getting ill with the disease are not known). Better management of the pandemic (for example, through tracing known contacts and more localised policy responses) and external factors such as the seasons or demographics might also have helped to contain the size of recent outbreaks. There are also some indications that the fatality rate of the disease has been brought down, with some studies seeming to show that the fatality rate among patients in intensive care is falling as better treatments are discovered. Some governments (Belgium and the US, for example) seem to have successfully ‘flattened the curve’ of the second wave, using social distancing measures.

Determined government responses – factoring in trust in government and all the other factors – look likely to be necessary until effective medication or a vaccine has been found and delivered. It is clear that the earlier governments act, based on accurate information on the spread of the virus from testing, the more likely they can avoid losing control again and having to impose highly restrictive and economically damaging national lockdown measures.

### The prospects for a vaccine

While there are several promising candidate vaccines currently working their way through the approvals process, the timeline for an effective and approved vaccine is inherently uncertain. Citi economists' working assumption is that the trials of a first vaccine from the UK will conclude in late November or early December, likely prompting a quick review by the regulators (Kim et al., 2020). Kim et al. also report that a manufacturing partner in India (Serum Institute of India) is planning to produce 300–400 million doses of the vaccine by the end of 2020. The UK vaccine is not the only plausible candidate; other vaccines – for example, from Germany, the US and China – are also currently in Phase 3 trials and so, if successful, could enter mass production phase by year-end or early next year.

Once approved, it will take some time before enough doses are produced to protect at least the most vulnerable part of the population. The sum of the companies' global COVID-19 vaccine production targets by the end of 2020 would be around 400–500 million doses, which could be enough to vaccinate large parts of critical groups such as doctors, nurses and healthcare workers. For 2021, the global COVID-19 vaccine supply targets of the companies sum to around 10.1–10.7 billion doses.

Governments have placed pre-orders on a number of the vaccines being developed. The sheer number of COVID-19 vaccine pre-orders<sup>2</sup> from the US (800 million doses by mid August), the EU (800 million doses), Japan (490 million doses) and the UK (340 million doses) means that much of the early production of a successful vaccine would likely go to the developed markets region in the first six months after the vaccine is approved. Even under an optimistic scenario of mass vaccine production, starting from the end of this year or early next year, we may have to live with the risk of additional waves of COVID-19 through the first half of 2021.

<sup>2</sup> Note that most vaccines will need two doses to achieve immunity, and not all of the vaccines might be successful, so the numbers given give a better idea of the kind of investment governments are making here and the likely distribution, rather than the number of people or share of population who might soon be immunised.

## 1.3 Three waves of fiscal responses

While health ministers fought to contain the spread of the virus, finance ministers played a key role in funding the response and cushioning its economic and financial impact. Fiscal policy has a crucial role to play in alleviating the impact of the crisis, accelerating the recovery and – going forward – facilitating any structural changes due to longer-run consequences of the pandemic. Around the world, governments have announced fiscal packages of unprecedented sizes and continue to do so. We can distinguish the packages in three ‘waves’ according to their function.

### The first wave of fiscal responses: protecting incomes

In the first wave, governments tried to shoulder businesses’ and households’ losses due to the lockdown, in order to protect their incomes and balance sheets.

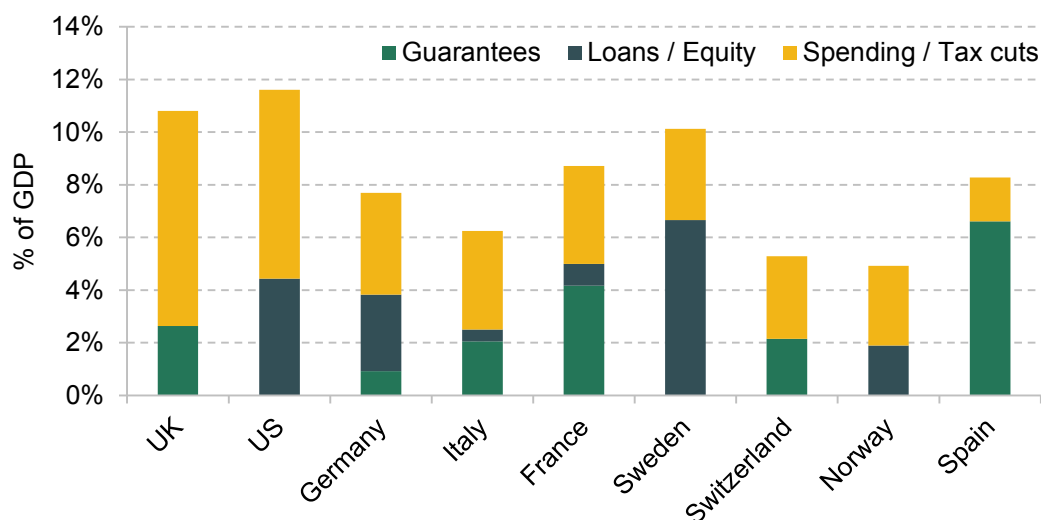
Especially in Europe, many governments activated, expanded or created furloughing schemes as an alternative to traditional unemployment schemes, providing state funding for the bulk of employers’ wage costs. Furloughing had previously proved to be a valuable tool for preventing mass unemployment and preserving employer–employee links – for example, in Germany during the 2008–09 financial crisis.<sup>3</sup>

Many governments also introduced new or more generous welfare benefits, often temporarily. For example, the \$2 trillion CARES Act in the United States substantially beefed up existing unemployment benefits by \$600 per week with federal money until 31 July and provided one-off cheques worth \$1,200 per adult, while the UK government increased the standard allowance of universal credit by £20 per week for 2020–21 (see Chapter 8). Many governments, including the UK, paid out grants to the self-employed.

Businesses have benefited from a whole range of support tools such as tax deferrals, loan guarantees, wage subsidies or even direct grants (or forgivable loans) to cover their fixed costs during the pandemic, such as the \$670 billion US Payroll Protection Program or Germany’s current €25 billion bridge funding scheme for small and medium-sized businesses.

<sup>3</sup> See, for example, Walz et al. (2012).

**Figure 1.1. Overview of ‘first-wave’ fiscal responses to protect incomes (% of GDP)**



Note: ‘Spending / Tax cuts’ includes all fiscal income replacement measures such as furloughing, increased welfare, grants, tax cuts or deferrals, etc. ‘Guarantees’ is loan guarantees with varying guarantee levels (usually 80–100%) and interest rates, where we show the actual take-up only. ‘Loans / Equity’ includes forgivable loans to businesses and households as well as direct equity injections. All measures announced by end of April 2020.

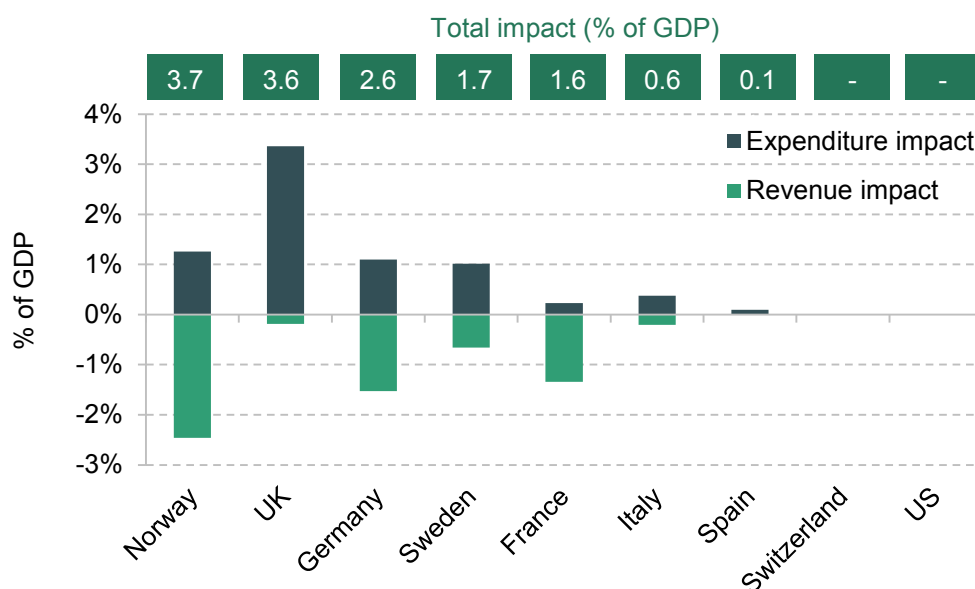
Source: Government announcements and Citi Research.

Figure 1.1 shows how much funding countries have committed to these ‘first-wave’ responses as a share of the size of their economies. Different countries made very different decisions: these first-wave packages range in value between 4% and 12% of the size of the economy. However, we would not overstate the differences, for two reasons. First, the numbers in Figure 1.1 only cover measures directly related to the pandemic; going into the crisis, some countries already had generous automatic stabilisers, while others – most obviously the United States – had to catch up. Second, these ‘first-wave’ measures could in practice drag on for many months: many governments will probably absorb loans into equity later on, or will retroactively compensate households, firms and banks for losses incurred during the lockdown.

## The second wave of fiscal responses: demand stimulus

In a second wave of fiscal responses, governments are trying to boost demand and stimulate economic activity to help the economy recover as lockdowns ease. These ‘second-wave’ packages only start when the economy reopens and are designed to boost demand. Figure 1.2 shows the size of these packages for a selection of

**Figure 1.2. Overview of ‘second-wave’ fiscal responses to stimulate demand (% of GDP)**



Note: Measures announced by end of August 2020.

Source: Government announcements and Citi Research.

economies, distinguishing between stimulus from higher public spending and stimulus from lower tax receipts. The packages announced so far typically range between 1% and 4% of GDP, with a bias towards tax cuts. One of the most common measures has been a temporary cut in VAT (sometimes across the board, sometimes targeted at specific sectors judged to be most in need of support). Temporary tax cuts may encourage households to spend in the next few months.

### The third wave of fiscal responses: transition to the ‘new normal’

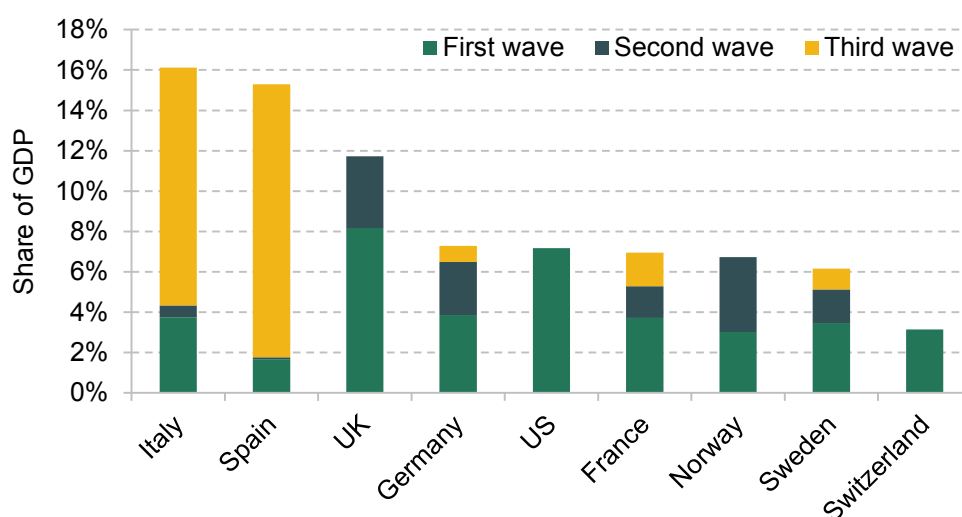
A third wave of fiscal responses will help economies to transition to the ‘new normal’ after the pandemic. This means both carefully facilitating structural changes and reconstruction in the economy and compensating vulnerable regions and the parts of society that suffer most from the long-term consequences. These packages may be fiscally neutral (though for most it is too early to tell); they are also often accompanied by structural reforms to improve the flexibility of the economy and focused on public investment to boost growth structurally rather than just temporarily. For example, this ‘third-wave’ response includes the EU’s

€750 billion ‘Next Generation EU’ package, which includes the €672.5 billion Recovery and Resilience Facility (RRF).

So far, relatively few countries have announced substantial ‘third-wave’ packages; the EU’s RRF is, by a long way, the largest such policy. This tool will channel €312.5 billion of grants and €360 billion of cheap loans to EU member states to fund investment in digitalisation and green technologies, with the largest share targeted at the Southern European countries which entered the crisis in worse financial positions and have suffered heavily during the pandemic.

Figure 1.3 shows the total fiscal response across all three of these ‘waves’, as of end of August 2020. Thanks largely to the EU RRF, Southern Europe may enjoy the greatest fiscal tailwind in the coming years. However, most of their support will not come until next year, leaving these countries’ economies relatively exposed to the crisis in 2020. By contrast, the US with its CARES Act and the UK are spending most relative to their GDP on protecting private sector balance sheets (‘first wave’),

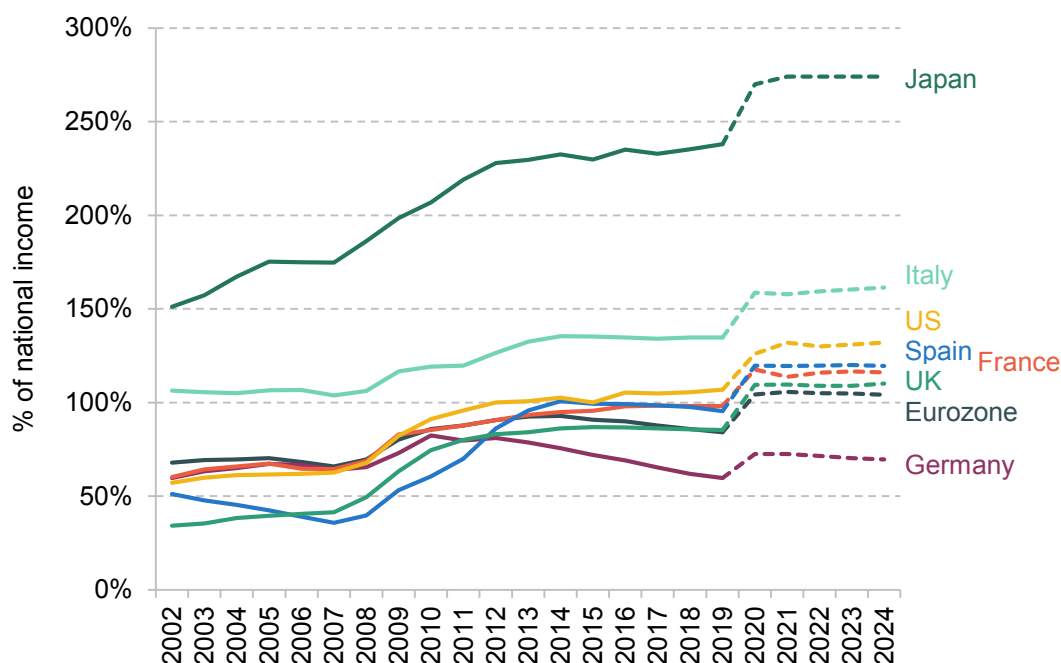
**Figure 1.3. Combined fiscal responses to the COVID-19 pandemic (total size of policies announced as a share of 2020 GDP)**



Note: ‘First wave’ only includes actual spending / tax cuts (and excludes the guarantees, loans and equity measures shown in Figure 1.1). ‘Third wave’ currently largely includes the EU’s recovery fund. The figure represents total packages announced by August 2020 as a share of 2020 GDP, not annual numbers.

Source: Government announcements and Citi Research.

**Figure 1.4. Debt as a share of national income in selected developed economies**



Note: Debt-to-GDP ratios from 2020 onwards are based on Citi forecasts.

Source: OECD and Citi Research.

while the UK, Germany and the Nordics have so far announced the most in conventional demand stimulus (‘second wave’).

Such large fiscal measures, in combination with existing automatic stabilisers such as unemployment benefits or progressive income tax systems, are leading to very large deficits and rising public debt as a share of national income (see Figure 1.4). In many economies when the pandemic struck, these had hardly declined from the highs reached after the 2008–09 financial crisis.

One of the key drivers of the shallow recovery and low inflation after the 2008–09 crisis was – at least in retrospect – premature attempts by governments to bring down their debt levels, which had spiked during the crisis due to the recession and policy responses such as bail-outs. Over the next few years, we can expect a debate about how to adapt fiscal rules and frameworks to underpin trust in government finances (despite debt ratios that are high by recent historical standards) while maintaining enough flexibility to respond to future economic shocks. Credible yet flexible fiscal frameworks are always important, but will be particularly essential in

the coming years because fiscal policy is now the only remaining macro-stabilisation tool (see Section 1.4).

We cannot rule out that some governments will push for a relatively swift fiscal tightening in order to restore traditional fiscal anchors (such as the EU's Maastricht Treaty commitments to ceilings of 3% of GDP on the deficit and 60% of GDP on public debt). But these traditional fiscal anchors will, by and large, look unachievable given the enormous rise in debt countries have incurred during the current crisis. We expect that most economies will need to find new reference points and hopefully ones that are better designed.

However, it is also possible that some governments will try to cut corners with attempts to use artificially low interest rates (potentially involving some form of capital controls or financial repression) and higher inflation to reduce their debt burden. This will be more difficult in larger industrialised economies with independent central banks, especially in countries that depend on a steady influx of foreign capital (since controls on capital outflows would likely lead to a sharp reduction of inflows as well).

## 1.4 Monetary policy: support act

Traditionally, central banks are the first line of defence in any recession or crisis, and COVID-19 is no different. Across the world, central banks swiftly cut interest rates where they still could (among major central banks, only the Fed and the Bank of England still had interest rates that were sufficiently positive before the crisis to allow them space to cut). Many also expanded their balance sheets by around 10–15% of GDP with large-scale asset purchase programmes for government and private sector bonds as well as new cheap loans to banks in order to boost lending to the real economy (see Table 1.2).

Following this first wave, central banks are currently reviewing how to boost their support further. One mechanism is to allow for more inflation: provided that bond yields are set in nominal (cash) terms, higher inflation would lower real-terms yields (which are the true constraint for business investment). The Fed announced in August that it will not just tolerate but seek for inflation to overshoot its 2% target in order to make up for past undershoots. The European Central Bank (ECB) is also conducting a strategy review which could end up with tweaks to the inflation target. The Bank of England is showing signs that it will no longer rule out a



negative policy interest rate (in fact, Citi expects a slightly negative Bank rate by mid 2021). In addition, the Bank of England has introduced new forward guidance stating that tighter monetary policy is not in sight before there is ‘clear evidence that significant progress is being made in eliminating spare capacity and achieving the 2% inflation target sustainably’. Other central banks may also use guidance to anchor market expectations for the next interest rate hike to such a degree that inflation expectations can rise and push lower real yields.

**Table 1.2. Central bank rate cuts (bps) and announced asset purchases (% of GDP) in selected economies**

	Fed	ECB	BoE	BoJ	SNB
<b>Interest rate cuts</b>					
Policy rate (%), end of Dec. 2019	1.5–1.75%	–0.5%	0.75%	–0.1%	–0.75%
Policy rate (%), end of Jul. 2020	0–0.25%	–0.5%	0.1%	–0.1%	–0.75%
Rate cut (bps), Jan.–Jul.	150	0	65	0	0
<b>Balance sheet expansion (% of GDP)</b>					
Central bank balance sheet, end of Dec. 2019	19%	39%	22%	104%	123%
Central bank balance sheet, end of Jul. 2020	32%	53%	33%	121%	136%
Balance sheet expansion, Jan.–Jul.	13%	14%	12%	17%	13%

Note: ‘Fed’ is the Federal Reserve Bank (US), ECB the European Central Bank (EU), BoE the Bank of England, BoJ the Bank of Japan and SNB the Swiss National Bank. Basis points (bps) are equal to 0.01%.

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

Despite this, central banks have arguably not had the prominent role during this crisis that they had in 2008–11, for two reasons. Unlike the 2008–09 crisis, the current crisis did not originate in the financial system. Central banks have also seen their scope for additional support limited by the fact that most central banks were at or close to their effective lower bound and so were not able to lower interest rates substantially further.

Still, central banks played an important support role for fiscal policy. Especially in the early stages of the crisis, they had to make sure that the enormous extra debt issued by governments did not crowd out private sector borrowing and thus lead to a credit crunch. Central banks' own purchases of government bonds played an important role in averting this. (See Chapter 5 for a discussion of this in the UK.)

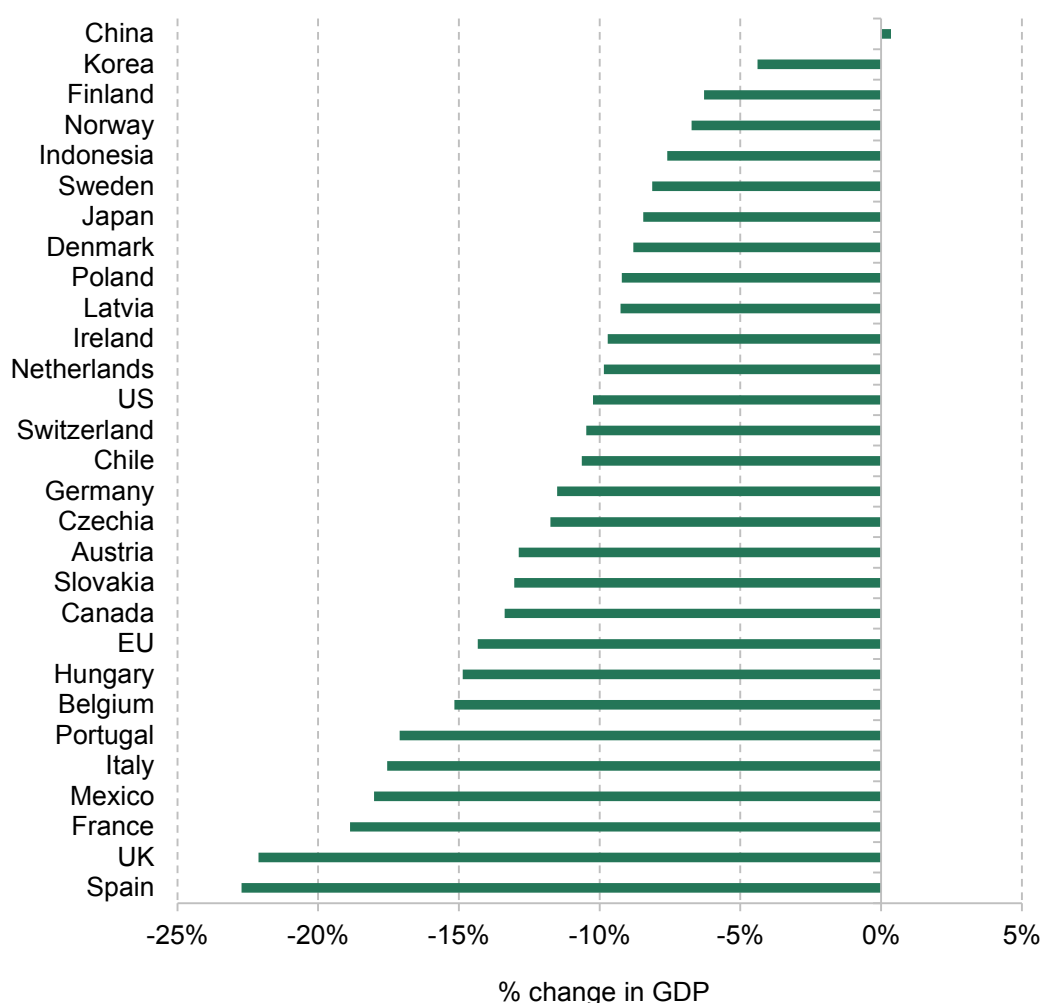
In their quest to return inflation to their targets – and in some cases, such as the US, at least temporarily beyond that – central banks will probably keep interest rates extremely low and balance sheets very large for years to come. While there are some inflationary risks from lingering supply issues (see Section 1.6) and perhaps fiscal stimulus packages (see Section 1.3), overall we expect that these inflation targets will remain out of reach because of the downward pressure on prices from the shock to labour markets and capacity utilisation in most parts of the world. To some extent, this is already becoming evident – for example, with a dramatic fall in oil prices during the lockdown and only partial recovery since.

## 1.5 Economic impact: the cost of lockdowns

Beyond the tragic human toll, the impact of the pandemic is aggravated by the extraordinary economic damage it has caused. Around the world, the pandemic and the measures to contain it have caused falls in economic activity which dwarf those experienced during the last big crisis in 2008–09.

Figure 1.5 shows that, of the larger economies that have so far reported official numbers, Spain and the UK have experienced the biggest slumps in the first half of 2020, with GDP declining by nearly a quarter. France (–19%) and Italy (–18%) are not far behind. Canada (–13%) was in line with the G7 average of –13%; the US (–10%) and Germany (–12%) were slightly less bad. The best performers were in the North and East of Europe as well as in East Asia. But even China, the only

Figure 1.5. Percentage change in GDP between 2019 Q4 and 2020 Q2

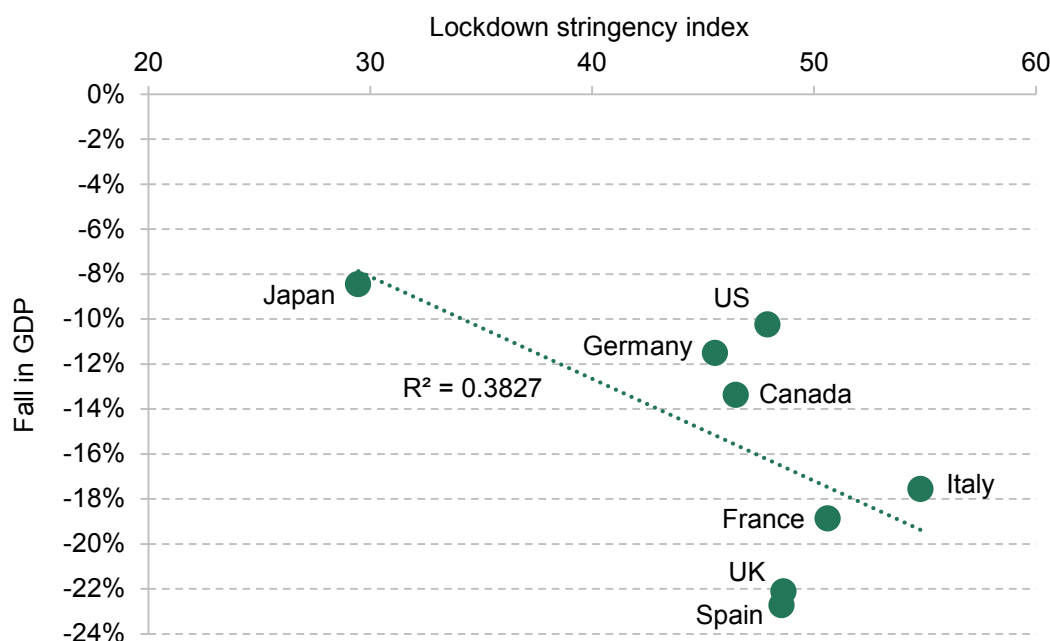


Source: OECD and Citi Research.

major economy that eked out a positive number in the first half of the year (+0.4%), performed historically badly relative to its usual growth rates.

These international comparisons provide clear patterns of where the economic impacts have been greatest, but some caution is needed in interpreting these international comparisons: differences in GDP accounting between countries may only trigger small differences in measured growth rates in normal times, but can be blown out of proportion in these extraordinary circumstances. One example is the accounting of consumption of public services, which has led to measured increases in quarter 2 (Q2) in some countries (Germany, Italy) but sharp declines in others

**Figure 1.6. Correlation between average lockdown stringency and GDP decline in the first half of 2020**



Note: The  $R^2$  is a measure of the share of the variation in the fall in GDP that is explained by variation in lockdown stringency. Lockdown stringency is measured on a scale from 0 to 100 (least to most stringent measures); we take the average from January to June 2020.

Source: OECD, Oxford University and Citi Research.

(France, UK). In any case, the hit in the first half of 2020 reveals little about the further path of these economies.

As Figure 1.6 shows, the severity of lockdowns was a key contributor to the fall in GDP, but not the only one. People's voluntary social distancing, the monetary and fiscal response to the pandemic, and the exposure of each economy to sectors particularly hard hit by the virus all played a role as well.

The good news is that, unlike in 2008–09, the COVID-19 crisis has a single external proximate cause, rather than being the result of a build-up of imbalances within the economic system. If the pandemic does not last long (for example, because a vaccine is found, produced and delivered quickly), and if it is handled well, in theory the crisis does not have to leave major permanent marks on economic activity; for example, previous pandemics in East Asia have left few if any lasting marks on economies there. Of course, for many economies, the health consequences of and the economic disruption engendered by the COVID-19 pandemic have far exceeded what has been seen in some of these other cases; the

longer the pandemic period lasts, and the more severe the disruptions to daily life, the more likely that economies will suffer long-term consequences.

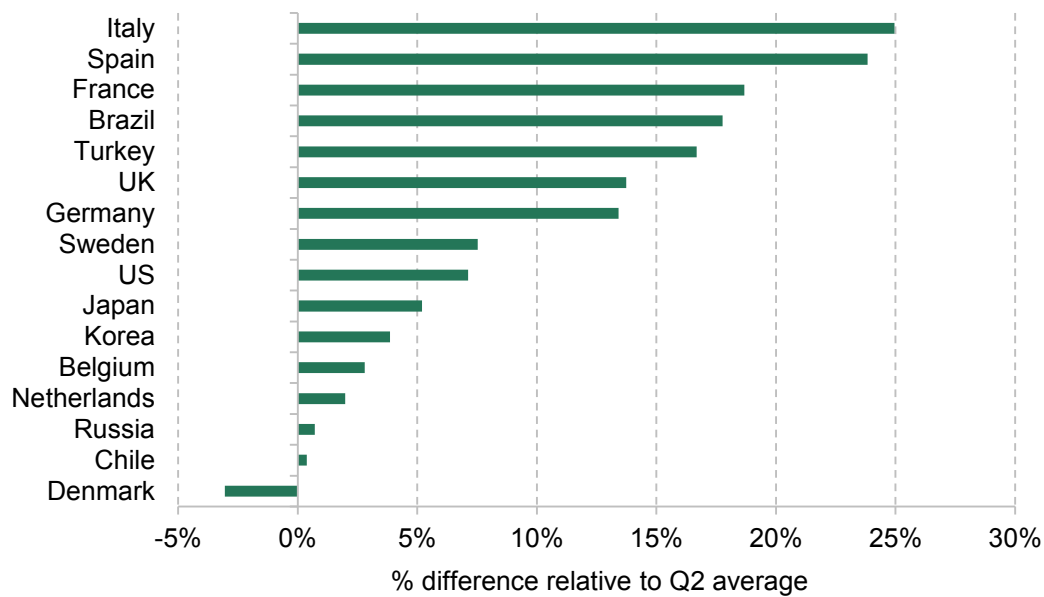
As governments got the first wave under control (or accepted the health risks of the virus), economies started to recover. Figure 1.7 shows that most major European economies saw July industrial production data (the latest available) at least 10% above its Q2 average. Without any further changes in Q3, the July rise would see production rebound by between 8% in Sweden and 25% in Italy, following falls of 16–19% quarter on quarter (QQ) in Q2.<sup>4</sup>

Likely in part due to temporary shifts in preferences (such as households replacing restaurant visits with home cooking or public transport with bikes or cars), but also expressing some pent-up demand, retail sales and car registrations exceeded pre-crisis levels by the end of Q2 or in early Q3 almost everywhere. Other high-frequency data such as Google mobility data, restaurant bookings or truck toll kilometres also point to a sharp recovery in activity (see Figure 1.9 in the next section), albeit at different paces. In many countries, monetary and fiscal support (see Sections 1.3 and 1.4) may only really boost activity in the second half of the year, further boosting chances of a continuing recovery, provided the pandemic remains under control and no new disruptive lockdowns are necessary.

Global trade is also making a return, with data from CPB (the Netherlands Bureau for Economic Policy Analysis) suggesting global trade volume in June was only down 10% year on year (YY), compared with –18% YY at the trough in May. The decline in global trade actually was a little less severe than in 2008–09 and the recovery appears to be quicker (see Figure 1.8), perhaps because of the switch from services consumption to relatively more trade-intensive goods consumption during the pandemic. We can thus safely say that the historically bad second quarters in most of the world will be followed by historically good third quarters. But, as pent-up demand peters out and a number of governments tighten social distancing measures to combat the resurgence of the virus over the winter, the question will be how much of this strength persists through the fourth quarter of 2020 and beyond.

<sup>4</sup> This does not necessarily mean that countries are back to where they started before the pandemic. Since these percentage changes are calculated quarter on quarter, a 20% fall would need to be followed by a 25% rise to return production to its original level.

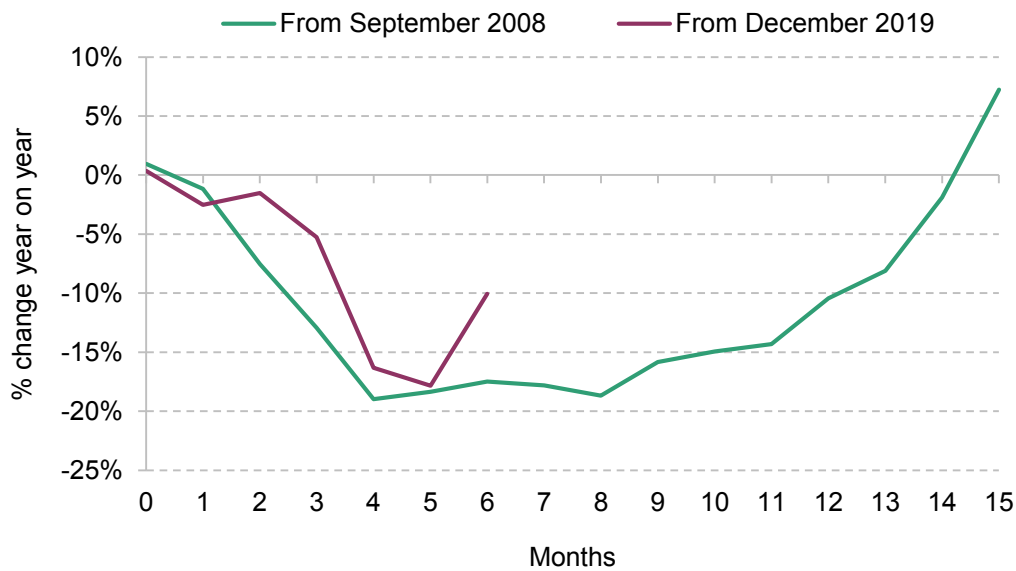
Figure 1.7. Industrial production in July compared with Q2 average (%)



Note: Industrial production excluding construction.

Source: OECD and Citi Research.

Figure 1.8. Global goods trade volume (% change year on year), after the financial and current crises



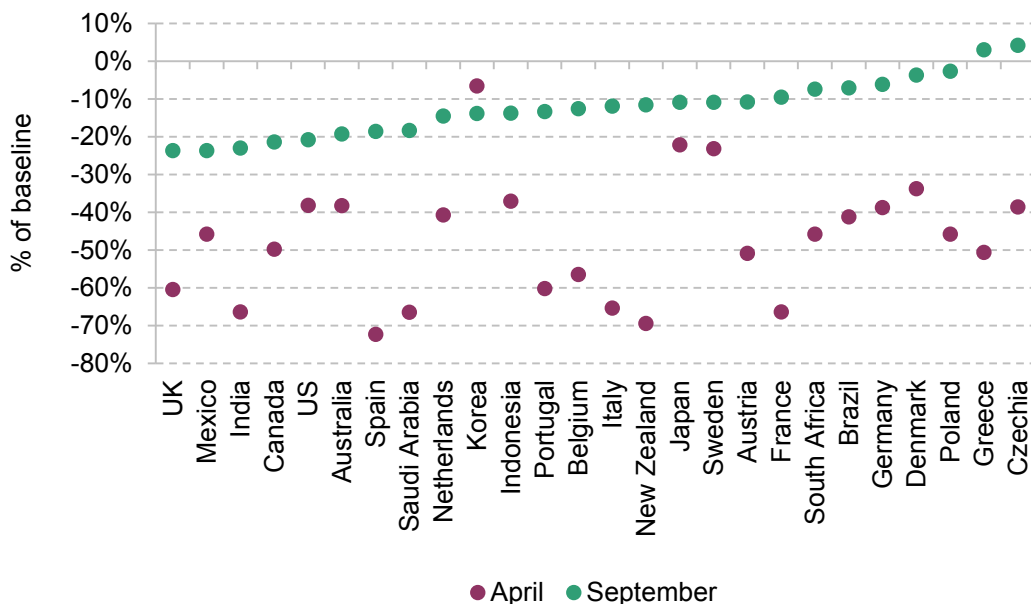
Source: CPB and Citi Research.

## 1.6 Lingering effects

Although a vigorous recovery was under way over the summer across industrialised economies and many emerging markets, we expect most economies to operate significantly below pre-crisis levels of output for a considerable period of time. Citi forecasts most economies to return to their pre-crisis levels of output only in the second half of next year, or perhaps even in 2022 or beyond.

Even after the end of (the first wave of) mandatory lockdowns in most western economies, people's behaviour as shoppers and workers remained significantly different from normal. Figure 1.9 shows the combined daily footfall in grocery stores, non-food retail, entertainment venues, workplaces and public transport stations, relative to its pre-pandemic baseline, in April and the first half of September 2020. In September, Greece and the Czech Republic were the only countries in the sample where mobility was above the baseline. A few others were less than 5% away from normal. The vast majority, however, including all G7

**Figure 1.9. Google mobility data for retail, entertainment, workplaces and public transport (% of baseline)**



Note: Google mobility data track the number and length of visits to certain places by mobile phone users. Up until 11 September 2020. Baseline: Median activity 3 January to 6 February 2020.

Source: Google and Citi Research.

nations, still operate at 5–25% below normal, with Germany at –6% and France at –9% leading the way ahead of Japan (–11%) and Italy (–12%). The US and Canada at –21% each and the UK at –24% were even further away from pre-crisis levels of mobility. And, of course, the tightening of social distancing measures this autumn will in all likelihood see many of these measures trend even further downward.

The overall patterns in Figure 1.9 hide variations in where people are going. In September, footfall in grocery stores in the countries in our sample had returned to pre-pandemic levels on average. But for other types of retail, as well as recreation, it remained down 4%. Footfall in public transport stations was still down by 21% in September, and for workplaces it was down by 27% on average. These figures suggest that, while customers had started returning to shops, many workers and travellers were still staying home over the summer. There is likely to be even more regional variation – for example, with people staying away from usually busy city centres, which means a lot of their shopping and entertainment infrastructure is underutilised.

Besides the immediate fear of catching the virus and ongoing (and intensifying) social distancing measures, there are a number of lingering effects which will delay a full economic recovery (not just to where output was before the pandemic, but to where it would have been had the pandemic not happened). These include impacts on the labour market, lower investment, newly accumulated household and business debt, and a general move away from globalisation and trade.

### Labour market scarring

The labour market is a lagging indicator of the state of the economy, so it is no surprise that in most countries, it is nowhere near normal. However, in many cases, the effects of the pandemic are not yet evident in traditional indicators such as the unemployment rate or employment, which in some cases have hardly moved. We can instead look at an expanded definition of unemployment, which takes into account both furloughed workers and those who have temporarily left the labour market altogether (for example, to homeschool their children or look after relatives during the lockdown). On this measure – which still does not reflect reduced working hours – unemployment in large economies ranges between 10% in the US in the August data to around a quarter of the workforce in the UK, France, Italy and Spain (see Table 1.3).



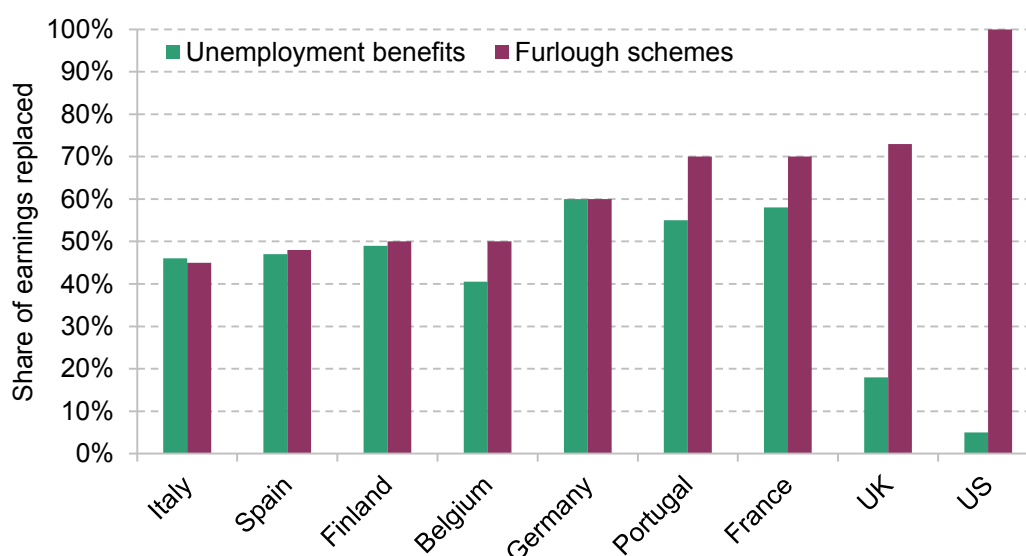
Table 1.3. Measures of unemployment as a share of the workforce

% of workforce	US	UK	Germany	France	Italy	Spain
Unemployment rate	8.4%	4.1%	4.4%	6.9%	9.7%	15.8%
Furloughing rate (latest)	0.0%	19.0%	9.0%	18.0%	13.4%	4.0%
Change in participation rate since February	1.7%	0.2%	N/A	N/A	N/A	3.4%
<b>Total</b>	<b>10.1%</b>	<b>23.3%</b>	<b>13.4%</b>	<b>24.9%</b>	<b>23.1%</b>	<b>23.2%</b>

Note: Latest available data – June for the UK and France, July for Italy and August for the US, Germany and Spain. Spain and UK participation – change between 2020 Q1 and Q2.

Source: Bureau of Labor Statistics, Office for National Statistics, Eurostat, national labour agencies/ministries and Citi Research.

Figure 1.10. Share of net earnings replaced by furlough payments and standard unemployment benefits 2019–20



Note: Unemployment benefits for six months for average-wage worker excluding housing benefits. For the US, we present replacement rates for the 'furlough scheme' inclusive of the \$600 per week federal top-up to unemployment benefits, which acts as a de facto furlough scheme.

Source: OECD; Ganong, Noel and Vavra, 2020; Citi Research.

Experience suggests a long period of elevated slack in the labour market ahead, with higher labour supply than labour demand leading to unemployment. In the last big crisis in 2008–09, it took the US and the Eurozone seven years to return from the peak unemployment rate to the pre-crisis trough; in the UK, where employment fell by less, a return to full employment was quicker, but still took four years. The depth of this crisis has led to higher unemployment (sometimes disguised as furloughing or inactivity) than in 2008–09 in most economies. Of course, if the overall economic recovery from this crisis is swifter and more complete than after the financial crisis, it should support a quicker recovery in employment as well.

In addition, as temporary furlough schemes (or, in the US, the generous extra unemployment benefits that acted as a de facto furlough programme) are wound down, some of these employees will return to their original jobs. However, even most of these relatively more fortunate workers will still have faced a considerable time with lower-than-usual incomes, given that the wage replacement rates of unemployment benefits as well as furloughing payments are at best 80% of previous net earnings for the average worker (see Figure 1.10, which shows replacement rates in terms of net earnings). The exception is the US, where the CARES Act created a 100% replacement rate for the mean worker, which translated into an estimated 134% replacement rate for the median worker (Ganong, Noel and Vavra, 2020) until it expired on 31 July.

Should these high levels of cyclical unemployment persist in the medium term, there is a risk that the would-be workers start to lose their skills or see them become obsolete. Once this hysteresis – human capital depreciation – sets in, it can leave a lasting mark on the workforce’s capacity and so on the potential size of the economy.

## Low investment

Data from the first half of 2020 suggest that, while the forced drop in private consumption due to shop closures and travel restrictions was in aggregate terms the largest driver of the recession, machinery and equipment investment often dropped significantly more sharply.

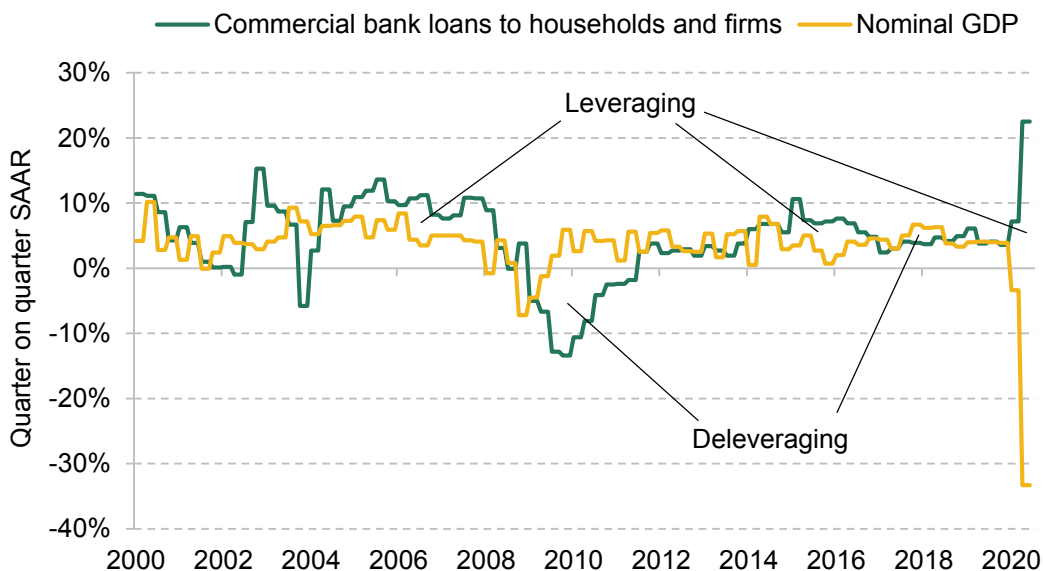
This fall in investment has immediate effects on the economy, since it reduces demand. But it also has longer-term impacts, since investment today creates supply

capacity in the future. Lower investment is likely to leave at least a temporary mark on potential growth, in conjunction with lower labour input.

### Rise in gross private sector debt

Although governments waded in and helped businesses and households with substantial grants during the lockdown, businesses in particular also reverted to credit (some of it underwritten by governments) to fund the expenditure they were unable to roll off to the state. In the US, Figure 1.11 shows that bank loans to households and firms jumped by 23% in Q2 (annualised quarterly growth) while nominal GDP plunged by an annualised 33% quarter on quarter. In the Eurozone, on the same measure, bank loans to households and non-financial corporations jumped by 20% QQ seasonally adjusted at an annualised rate, while GDP might be down by more than 40% QQ in Q2 on an annualised basis (these data are not yet available). Both in the US and in the Eurozone, this jump in credit growth is entirely due to non-financial corporations, while mortgage credit growth was stable and consumer credit growth plunged.

**Figure 1.11. US bank loans to households and firms and nominal GDP growth (% change QQ, seasonally adjusted and annualised rate (SAAR))**



Source: Federal Reserve and Citi Research.

Even when GDP recovers, these moves will leave private sector debt ratios – particularly among firms – significantly higher. And while interest rates are very low, they have not fallen as much as they did after the 2008–09 crisis simply because they were already at or very close to the lower bound. In other words, central banks are less able to help firms and households with their much more indebted balance sheets, which could prove to be a drag on investment and economic growth going forward.

Impaired balance sheets, especially in sectors such as airlines and international tourism which will be affected by social distancing for longer (see Giani et al. (2020)), could lead to rising levels of non-performing loans and even to bankruptcies. Banking systems have become more resilient due to tightened regulation since the last crisis. But even if they survive unharmed, banks may scale back lending if it is perceived as too risky. Already, the euro area bank lending survey reveals tightening credit standards as banks become choosier about who they lend to.

## De-globalisation

As in any global recession, the pandemic crisis has led to a sharp slowdown in global trade volumes. But beyond that, the pandemic experience may incentivise governments and companies to reduce their reliance on the cross-border supply chains which facilitated globalisation. For example, many governments in the developed world are trying to increase domestic output of medical supplies (not least vaccines) after the experience of shortages in personal protective equipment at the start of the crisis.

More broadly, the disruption to international trade and travel could stoke a trend towards re-onshoring, which has become more important in recent years due to developments such as the US–China trade wars and Brexit.

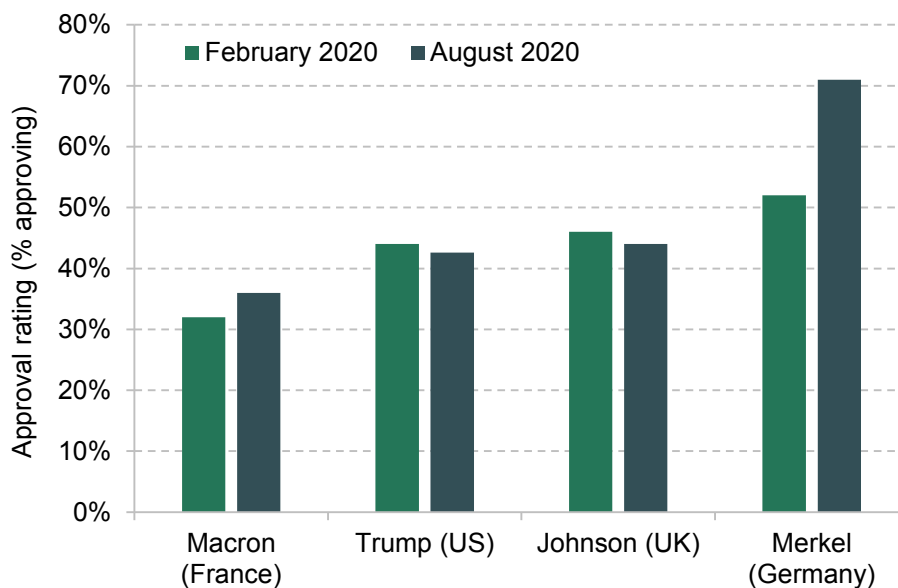
None of these factors necessarily has to stop the recovery in its tracks or will inevitably reduce economies' potential dramatically. Furloughing should soften labour market scarring, while ample fiscal and monetary support should ease the burden on private balance sheets. Once vaccines are widely available, social distancing could fade quickly (though some changes, such as more home working or less reliance on air travel, might be more permanent if they are found to improve productivity). It is even possible that the pandemic could act as a catalyst for more

investment into productivity-enhancing technologies such as digitalisation and robotics. The next 12 months will decide, and politics will play a big role in how these long-term consequences shape up.

## 1.7 Political consequences of the virus<sup>5</sup>

The COVID-19 outbreak, the lockdowns and the economic consequences of both will be a trauma for societies, and could change the social and political order as profoundly as two world wars did during the 20<sup>th</sup> century. The vast majority of citizens understand the reasons for the lockdown and continuing social distancing measures (in fact, in some countries, such as the UK, workers were slow to return to their offices despite government chivvying over the summer). But social distancing rules and lockdowns were and still are an unprecedented state intervention into the

**Figure 1.12. Approval ratings of selected world leaders**



Source: YouGov (Donald Trump, Boris Johnson), Infratest Dimap (Angela Merkel) and Ifop (Emmanuel Macron).

<sup>5</sup> See Mares et al. (2020).

freedom of circulation and association. Many people feared and still fear for their health far beyond usual levels and the recession is already having a deep impact on people's livelihoods.

The crisis has already had an impact on leaders' popularity (see Figure 1.12), which may soon translate into political change, most imminently at the US presidential election in November if the polls are correct. But current polls should not be overstated anywhere; when the crisis abates, new social and societal priorities will emerge. It is not certain that those who presided over the management of the crisis, even where they were successful, will be entrusted with clearing up its consequences.

Some of the possible political changes resulting from the pandemic include:

- **The return of big government.** The COVID-19 crisis is arguably the first systemic global ecological crisis in modern times with visible and profound economic costs. Democratically elected governments have taken measures that would have been considered far too radical for almost any purpose before this pandemic. Their actions could set a precedent for future emergencies – for example, in the wake of climate change. People may take an even dimmer view on economic flexibility than before and demand more protection instead. The ability of governments to intervene in the economy to protect strategic production (for example, of medicines) could lead to a reversal of state aid rules. Key workers in the healthcare system, in care or in distribution, who are often not well paid, will probably demand and may receive higher compensation. In general, citizens will want more protection and thus receive a 'bigger state'.
- **The positive side of the bank–state nexus.** After the 2008–09 crisis, much was done to untangle the link between the state and banks to break the doom-loop between bank and sovereign debt or the 'too-big-to-fail' problem. In 2020, banks took on the role of liquidity providers to firms during the initial phase of financial market upheaval in February and March, which may lead to a return towards deeper cooperation between the state and its banking system.
- **Centralisation.** In some more federally organised countries and regions, there may also be a rethink of subsidiarity principles, given tensions between the central government and local authorities which led to confusing, badly coordinated and ultimately suboptimal outcomes (although we see little

evidence that centrally organised governments systematically performed better during the first wave of COVID-19 than others).

- **Rethinking of monetary financing.** Central banks have bought up large parts of the government debt issued to support households' and firms' balance sheets. This was necessary to avoid enormous amounts of new government debt crowding out private borrowing, which could have led to an unwanted tightening of financial conditions elsewhere. Traditionally, many central bankers have been wary of such financing of government debt; they fear that, if central banks become the buyer of choice for government debt, their future decisions about the interest rate will come under pressure from governments concerned about the impact of a rate hike on the public finances (see Chapter 5). In the current circumstances, however, government bond purchases preserve the ability of central banks to act upon their mandate and thus support 'monetary dominance', rather than coming at an elevated risk of 'fiscal dominance' (where monetary policy is set with an eye to financing government borrowing cheaply rather than in order to pursue an inflation target).

## 1.8 Economic outlook by region

After a disastrous first half of the year, followed by plenty of evidence of a swift but incomplete recovery, Citi economists currently expect world GDP to shrink by 3.9% in 2020, followed by 5.4% growth in 2021.<sup>6</sup> Despite this apparent V shape, the majority of the 50 economies in Citi's coverage will not complete their recovery (i.e. reach their pre-crisis levels of output) before the second half of 2021,<sup>7</sup> and all would be smaller than either our pre-COVID forecast or a simple extrapolation of pre-COVID trends would imply.

We acknowledge major uncertainty around the base cases we present below. They are based on some key assumptions which may prove too optimistic: these include the avoidance of new severe lockdowns, no new trade disruptions, continued fiscal and monetary support through at least 2021, accommodative financial conditions (in particular, a continuation of the current very low interest rates) and a vaccine

<sup>6</sup> For more on Citi's global forecasts, please consult Mann et al. (2020b).

<sup>7</sup> See figure 5 in Mann et al. (2020a).

which is widely available by the middle of 2021. Clearly, a substantial new wave of infections – for example, in Europe during the winter – could once again lead to economically damaging lockdowns beyond what is assumed here. Conversely, an early adoption of one or more of the vaccines could return activity to normal faster than we currently anticipate.

In this section, we present summaries of our latest thinking on the outlook for key global economies.

## United States

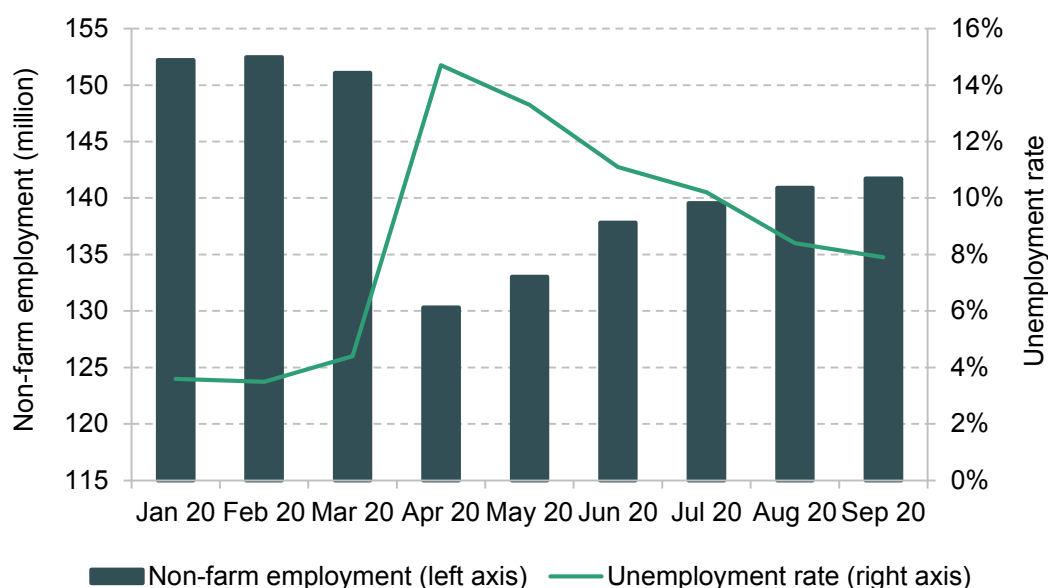
As we noted above, the US has suffered far more COVID-19 infections and deaths than the similarly sized Eurozone. However, only a few states had severe and lengthy lockdowns, which allowed economic activity in the country as a whole to continue at higher levels than in Western Europe in the first half of the year. As a result, the US economy shrank by ‘only’ 9% in Q2, compared with 13% in the Euro area and 20% in the UK. And even though the US as a whole did not manage to get the first wave of COVID under control, data so far in the third quarter suggest the economy is enjoying a rebound in output, with 30% growth on an annualised basis (7% QQ). For 2020 as a whole, we currently expect GDP to drop by ‘just’ 3.6%, far less than in most of Western Europe. However, even the US will take until mid 2021 for real GDP to re-attain its 2019 Q4 level.

Consumption has been the strongest contributor to the rebound. Goods spending is running above pre-COVID levels and services spending, while still below, continues to recover. Concerns that rising COVID-19 cases over the summer would lead to a stall in the recovery did not materialise as spending continued to advance. Housing investment has been extraordinarily strong, well above pre-COVID levels, thanks to low interest rates and generous government income support. Business equipment investment has lagged the rebound in consumer demand, but recent data on durable goods orders bode positively.

The US unemployment rate surged to 14.7% in April 2020 and would have been closer to 20% if not for the substantial number of individuals who reported they were not looking for work. However, from May to September, 11.4 million jobs were added back, leading the unemployment rate to drop to 7.9%. Despite the fastest-ever pace of (re-)hiring, elevated unemployment looks set to continue through the end of the year and into 2021.



Figure 1.13. Non-farm employment and the unemployment rate in the US



Source: Bureau of Labor Statistics and Citi Research.

As elsewhere, falling airfares and hotel lodging prices make COVID-19 a deflationary shock. While some of these prices are now rising from low levels (and so can see large growth rates), slowing growth in rents will help keep inflation in households' costs, as measured by the core Personal Consumption Expenditures Price Index, below 2% for the remainder of 2020. The decline in oil prices means lower headline inflation as well. Recently, prices for certain categories (for example, food) have been boosted by shortages of supply relative to demand, but for now we see the deflationary shock as predominating.

Fiscal measures directly due to COVID-19 surpass \$2 trillion in total size (the \$2.2 trillion headline CARES Act 'price tag' includes lending authority and other indirect measures). Much of the support that went directly to households has run its course; \$600 a week in additional unemployment benefits ran through July, while the bulk of stimulus cheques for \$1,200 per person have been distributed. The government also made available \$670 billion in forgivable small business loans. At the time of writing, Congress looked too divided to pass new support measures before the election. The end of extra unemployment benefits reduces incomes by \$70 billion per month, although this is partially compensated by Federal Emergency Management Agency payments from September. Still, the fiscal tightening creates significant headwinds in the run-up to the election in Q4. These would only be fully

offset if the \$1–1.5 trillion direct income support package we still expect to be agreed before or after the elections (more in the case of a Democratic Congress, less in the case of a Republican one) comes to pass.

At their last meeting in September 2020, Fed officials dramatically revised up their forecasts for 2020 growth, bringing them very close to our own. However, these stronger forecasts do not seem to have translated into an appetite for more hawkish monetary policy; if anything, officials continue to look for ways to add more accommodation and signal a strong commitment to the new goal of targeting 2% inflation on average (and consequently aiming to overshoot 2% following below-target inflation recently). With no overshoot of inflation in Fed forecasts, it is not surprising to see most officials wishing to leave policy rates at zero through 2023. Importantly, even if the recovery continues to proceed faster than policymakers' expectations, Fed officials seem to have committed to dovish policy for the foreseeable future.

### China

China is the only major economy that, at least on official data, had already returned to pre-crisis levels of activity by the second quarter of 2020. Citi economists expect GDP growth to climb gradually from 3.2% YY in Q2 to 5.5% YY in Q3 and 6.3% YY in Q4. Despite the recovery, 2020 is likely to end up as the worst year for China's economy in the modern era. However, we forecast that it will be followed by solid 8.2% YY GDP growth in 2021.

The economic recovery may continue at an uneven pace. Investment growth should quicken further given the strong infrastructure push and a continuation of property investment resilience. We are optimistic on the trade outlook if the world is not going back to the broad-based lockdowns seen in March–April. On the other hand, a slowdown in household income growth and precautionary saving in the face of an uncertain future may still hold back consumer spending. Capital spending by the corporate sector is unlikely to pick up strongly from its deep contraction in the first half of 2020, given the cloudy business outlook and the continuing risks surrounding US–China tensions.

A key driver of the growth acceleration in the second half of 2020 is likely to be the delayed implementation of fiscal initiatives already announced in the first half of the year. However, the 'soft' nature of the fiscal stimulus package due to come on

line (subsidies and tax relief to small and medium-sized businesses and micro-firms so that they can stay afloat without massive layoffs) might mean relatively low multipliers, based on the 2018–19 tax cut experience.

On monetary policy, we believe both Marginal Lending Facility rate cuts and Required Reserve Ratio cuts are still needed in the second half of the year. As the fiscal policy weighs in to take driving role, we think the policy easing will also become less intensified, and the People's Bank of China will continue to use innovative policies to compress credit spreads.

## Eurozone

The Eurozone hosts several of the economies hit hardest by COVID-19, at least during the early stage of the pandemic. It saw harsh lockdowns even where severe pandemics were avoided. As a result, GDP dropped by 15% between 2019 Q4 and 2020 Q2, more than in the US or Japan, let alone China. The upside was that European economies brought the pandemic under control before the summer and were able to lift restrictions earlier and more comprehensively than the US, the UK and some emerging markets still in the middle of the crisis, experiencing a swifter rebound in activity levels over the summer. By July, industrial production had recovered to –8% YY from a trough of –29% YY in April. Retail sales returned to positive year-on-year growth from June (+2% YY) from a trough of –20% YY in April. Despite evidence of a second wave of infections, Q3 looks set to witness the biggest quarterly increase in output in history, +10% QQ on Citi's current estimates.

However, we do not expect a full recovery to pre-crisis levels before late 2021, not least due to a wide dispersion of economic outcomes across the currency zone:

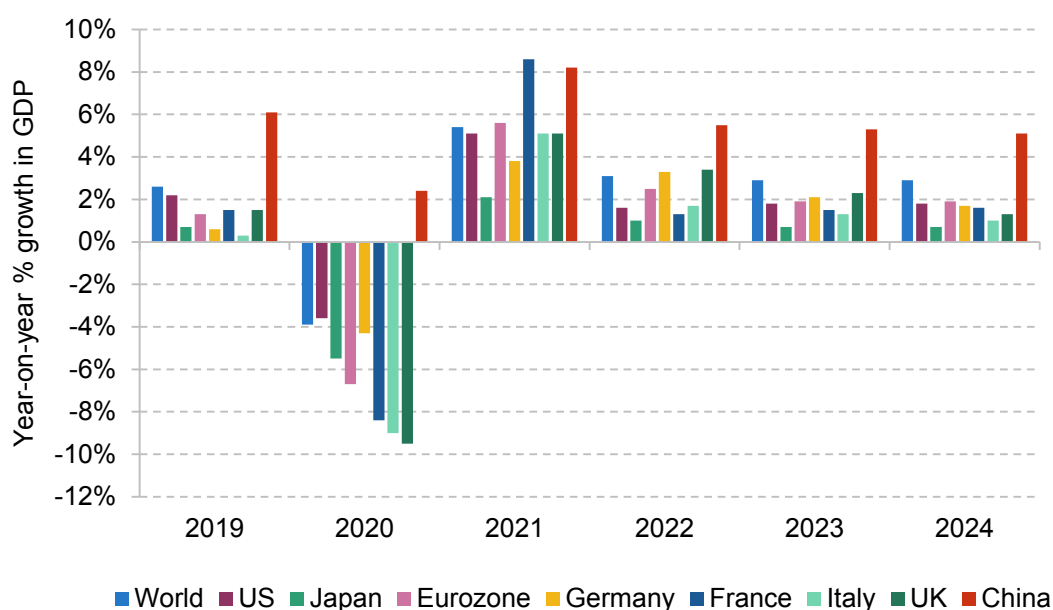
- Among the larger European economies, **Germany** has so far experienced the most benign pandemic, requiring the least severe lockdown and social distancing measures. Domestic demand is bolstered by a generous first-wave fiscal package as well as relatively high levels of trust in government. Germany's Achilles heel is its manufacturing backbone, which may experience supply disruptions for a while and, due to its trade exposure, imports problems from markets where the pandemic has bigger effects. Still, Citi expects a full recovery by 2021 Q3.

- **France** had a very severe pandemic and corresponding lockdown (GDP down by 19% in the first half of 2020), but once lockdown measures ended, it benefited from its greater economic self-reliance and the greater weight of private consumption in its economy. If the French authorities avoid new economically painful lockdowns (a big if, given the latest surge in new infections), we expect France's recovery to be steeper and less subject to external risks than Germany's, which in this scenario would make a full recovery possible by the second half of 2021.
- **Italy** had the deadliest outbreak early on and one of the harshest lockdowns, but also brought the virus under control earlier than others and surprised with a slightly less bad economic performance in the first half of 2020 than France (with a 17.7% cumulative drop in GDP). While the manufacturing sector is recovering nicely and consumer demand is recovering, the greater exposure to tourism is likely to delay a full return to normal to 2022. Italy's woes apply to an even greater degree to **Spain**.

Across the Eurozone, governments are moving towards traditional fiscal stimulus packages, announcing large tax cuts and spending increases. The EU Commission has sensibly suspended its fiscal rules and the ECB effectively deployed government bond purchases to contain spreads in borrowing costs between member states, affording all ample fiscal space. National measures will be meaningfully complemented over the coming years by the €672.5 billion EU Recovery and Resilience Facility, which channels money from the wealthiest and least COVID-affected economies to the struggling South and East of the EU and Eurozone in the form of grants and loans to fund the reconstruction after the crisis in 2021–24 (see Section 1.3).

The EU and the Eurozone remain at particular risk of political tensions, since their central institutions are not as well established as those of historical nation states. The precedent set by the recovery fund towards more fiscal solidarity expresses the willingness of all 27 member states to stick together, but tensions could resume once further economic and financial divergence between member states materialises in the coming years. This uncertainty about EU and Eurozone cohesion will continue to impose a cost on European economies and beyond.

Figure 1.14. Year-on-year % growth in GDP, actual and Citi forecast



Note: 2019 actuals, Citi forecasts from 2020.

Source: National statistical offices and Citi Research.

## 1.9 Conclusion

The global economic backdrop for the UK has changed dramatically due to the pandemic in the first half of the year, with most economies shrinking by 10–25% cumulatively. The summer months saw partial recoveries in most countries, helped by better control of the virus as well as monetary and fiscal support around the world. If a vaccine or medication ends the pandemic soon, outbreaks are handled well in the meantime, and fiscal and monetary support continues to cushion the hit to households and businesses, a swift completion of the recovery and return to pre-COVID levels of output in mid-to-late 2021 is possible (and effectively our global base case).

However, there are risks to this outlook both in the short term and in the coming years. The recent resurgence of new COVID cases has led governments to tighten social distancing measures in a bid to keep the virus under control and stave off the need for harsher, more widespread lockdowns in the future. Still, these moderate restrictions could hamper the green shoots of economic recovery that we have started to see; a failure to get the virus under control at this stage could have even worse consequences for public health and economic output.

Even if the global economy avoids the worst impacts of the virus over the winter, some effects look set to linger at least for a while and nobody knows for sure how and when the pandemic will end. The longer the recovery takes, the greater the risk of a lasting impact on potential growth via reduced capital accumulation and the depreciation of human capital. This could not just delay recoveries, but hamper economies for years or even decades to come. We expect all economies to remain smaller than either our pre-COVID forecast or a simple extrapolation of pre-COVID trends would imply. A longer recovery also brings higher risks to financial stability via rising debts. There is a significant risk of divergence between the best- and worst-performing economies in this crisis; going into the final quarter of 2020, the UK has one of the worst starting points among major economies.

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