COVID-19

UK Economic Update

For more information on the potential business impact of COVID-19, please visit www.pwc.co.uk/covid19

24 June 2020

Contents

Summary

This month's edition provides an update on the UK's latest economic data, including the results from wave six of the ONS Business Impact of Coronavirus Survey, and highlights April's GDP data, retail sales and the labour market. We also provide a special focus on the impact of COVID-19 on UK trade and its prospects for 2020.

- **The crisis has caused the UK economy to shrink by a quarter compared to pre-lockdown levels.** GDP in April 2020 fell by 20.4%, the biggest monthly fall since the series began in 1997. Combined with the decline in growth during Q1, this suggests the COVID-19 crisis has shrunk the UK economy by around 25% up to April. This was driven by a broad-based decline across all sectors of the economy, not just sectors directly affected by lockdown.
- **The cost of the fiscal stimulus to support the economy is significant by historical standards.** Public sector net debt at the end of May 2020 rose to nearly £2tn (or 100.9% of GDP), exceeding the size of the economy for the first time since 1963. This has been driven by the level of spending on various support schemes for the economy and a 46% fall in VAT collections. The sharp rise in public sector borrowing indicates the scale of the challenge faced by policymakers to keep the economy afloat during the crisis.
- **Labour markets have been hard hit.** As of 21 June, around 9.2 million workers (more than one in four) are signed up to the Coronavirus Job Retention Scheme (CJRS), while the number of payroll employees in May has fallen by more than 600,000 since March. May also saw a record decline in weekly hours worked, close to 9% compared to last year. Vacancies in May also declined to an all-time low – at 476,000, there are 60% fewer vacancies compared to the same period last year.
- **There are some early signs of recovery, with businesses are beginning to emerge from lockdown.** ONS business surveys show that 79% of UK businesses have remained in operation, with a further 9.3% having either resumed trading in the last two weeks or are intending to restart in the next two weeks. Following the government's announcement of non-essential retailers being allowed to reopen from 15 June and further easing coming over the next few weeks, we will see more businesses resume trading in late June and beginning of July.
- **UK retail sales show a marked improvement after a difficult April.** The partial rebound in retail sales in May by 12% compared to April has been driven by positive growth in non-food stores as these began to reopen as well as the growth in non-store retailing (principally online), which now accounts for one-third of all retail spend, the highest proportion on record.
- **We have revised our projections to reflect more recent economic data.** Our projections reflect recent economic data on the severity of the economic disruption in the short-term, as indicated by the 20% decline in monthly output in April, the first full month under lockdown. On the other hand, economic activity is likely to show improvement from May onwards as early signs of business recovery and trading activity might suggest. We have therefore revised our estimates for GDP growth in 2020 so that the decline in output ranges from -8% to -12%. There should be a gradual recovery later this year and in 2021, although a deeper contraction in Q2 could hold back the speed of the recovery in the UK after the initial bounce from leaving lockdown. We estimate the level of GDP may still be around 1.5% to 7% below pre-crisis trends by the end of next year.
- **UK exports are likely to fall by around 6%-8% as a result of the global economic slowdown caused by COVID-19.** Our analysis of trade flows suggests UK exports could fall by around 6.3% (£41bn) in the 'smooth exit' scenario and by 8.0% (£50bn) in the 'bumpy exit' scenario, compared to 2019 levels. However, there is still considerable uncertainty over the prospects of UK trade in the short-term, which will depend on the pace of the economic recovery in the UK and its trade partners. Beyond 2020, the UK's trade performance will depend on the free trade agreement it strikes with the EU following the end of the transition period.

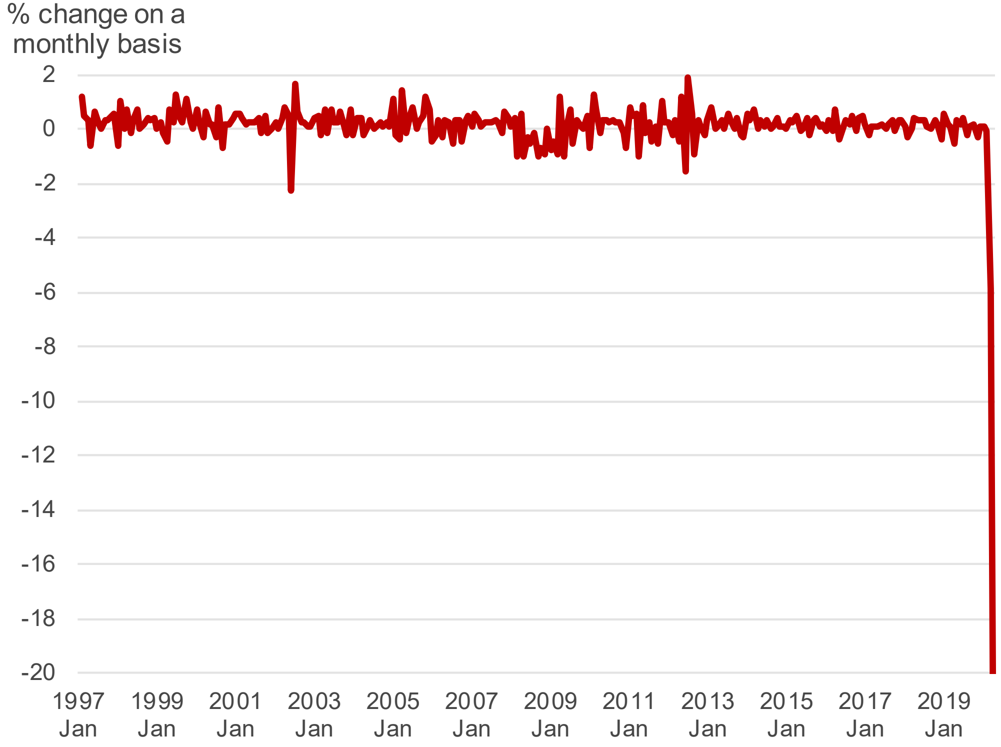
1

This month’s data

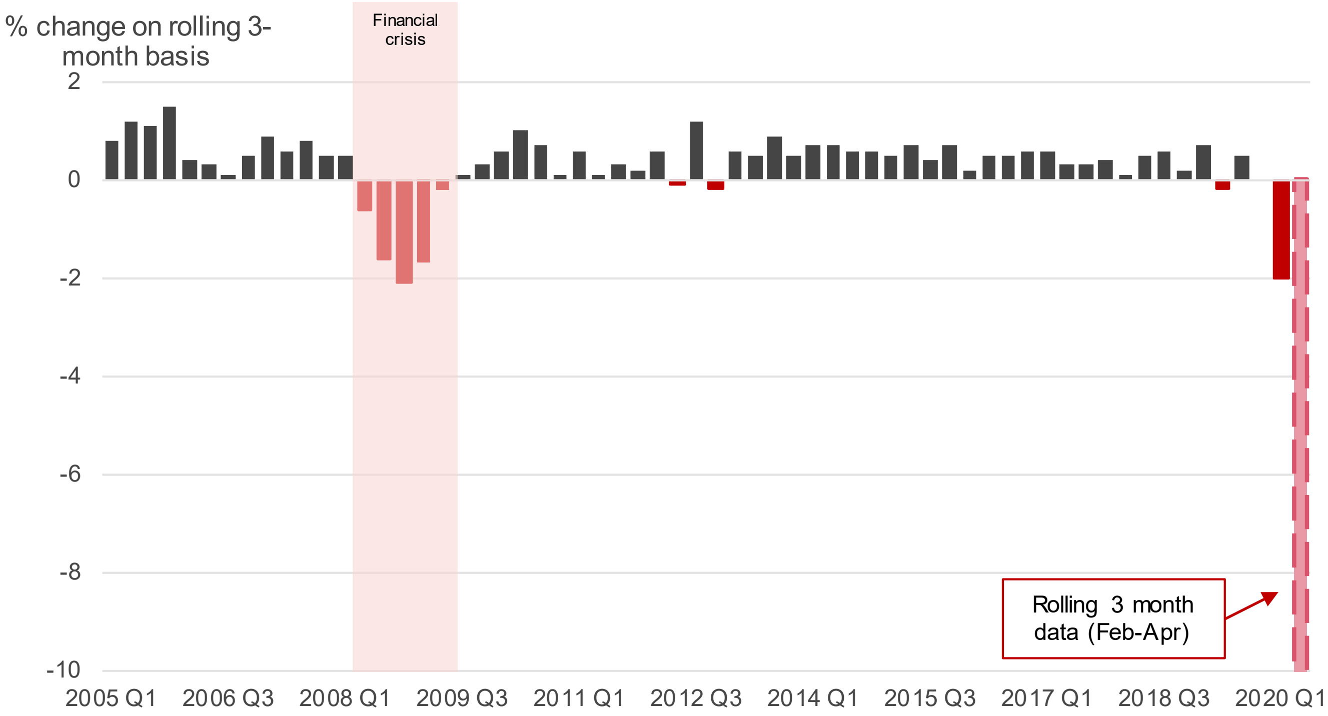
UK economy shrunk by 20.4% in April, 25% down from pre-lockdown level

GDP growth in April 2020 fell by 20.4%, the biggest monthly fall since the series began in 1997. Three-month rolling data also show a much steeper contraction than over the financial crisis. Combined with the decline in growth during Q1, this suggests the COVID-19 crisis has shrunk the UK economy by around 25% up to April.

A 20.4% decline in GDP for the month of April is unprecedented, but not unexpected



In the three months to April 2020 UK GDP fell by 10.4%, five times larger than the steepest rate during the financial crisis (% change)



Source: ONS

The GDP contraction was caused by a broad-based fall in activity

The 20.4% monthly GDP contraction in April was driven by a massive fall in output in construction (40.1% smaller than last month) and manufacturing (-24.3%), which were hit much harder than the services sector as a whole (-19.0%). The decline in services was largely driven by the fall in retail activity, accommodation and restaurants and the education sector. More recent retail trade data show early signs of a rebound in retail sales volume in May, with an increase of 11.8%, but still 13.1% lower than its pre-lockdown level. Recent PMI data suggests that output from May onwards is likely to mark a significant improvement from April businesses begin to resume operations.

The contraction in GDP in April 2020 was caused by a broad-based reduction in economic activity

Percentage change (%)	Compared to March 2020	Compared to pre-lockdown levels (Feb 2020)
GDP growth	-20.4	-25.1
Index of Services	-19.0	-24.0
Index of Production	-20.3	-23.7
Manufacturing	-24.3	-27.8
Construction	-40.1	-43.6

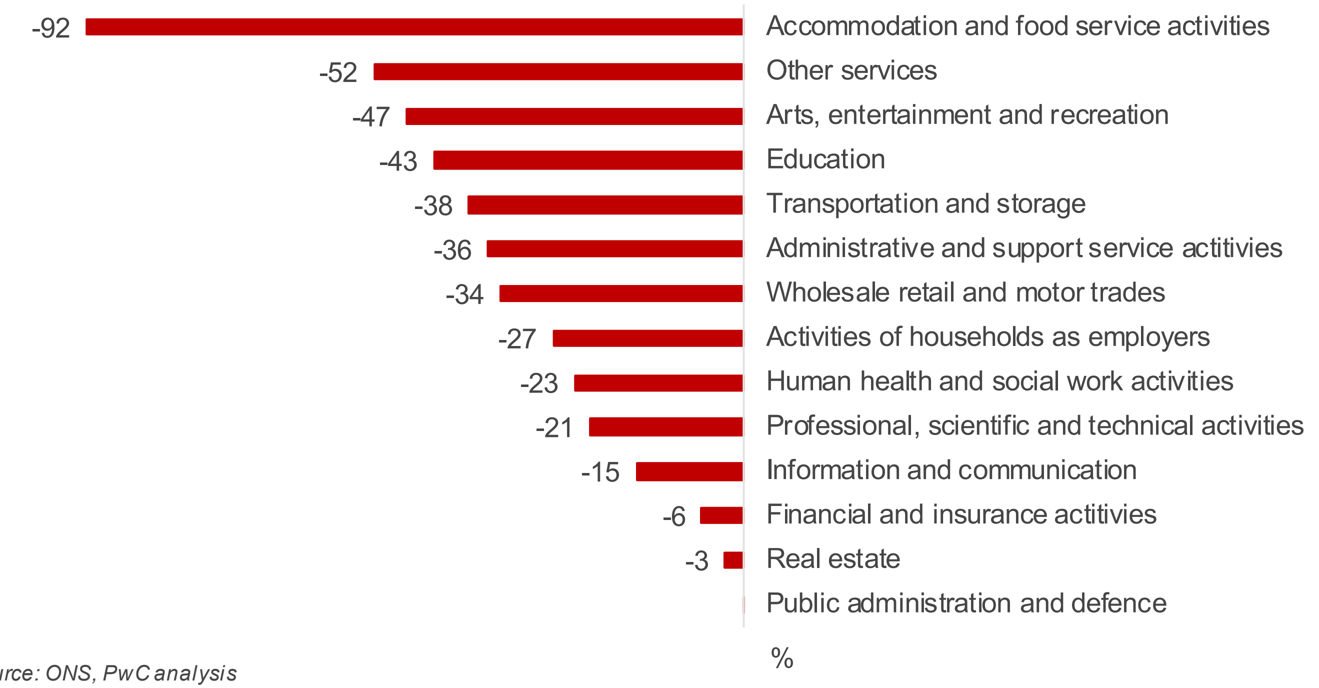
- The **Services sector** fell by 24% compared to pre-lockdown, which was mainly driven by wholesale and retail trade and repair of motor vehicles and motorcycles (-87.3%, accounts for 3.5% of the negative monthly growth). Other services that have also been hit hard, unsurprisingly, were air transport (-92.8%) and travel and tourism (-89.2%)
- The **Index of Production** is 23.7% smaller than its pre-lockdown level. All but one of the 13 sub-sectors saw downward contributions, in particular the fall in the auto and transport equipment manufacturing (car manufacturing activity fell by a record 90.3%). The shutdown in car plants led this industry to nearly halve in size and new engine production is below 1% of what it was pre-lockdown.
- The fall in **construction** output was mainly driven by the contraction in private and commercial new building (-59.2% and -39.7%, respectively), and private housing repair and maintenance (-54.3%).

Source: ONS

Most services sectors have shrunk in lockdown, with hospitality hit the hardest

The services sectors that have been most impacted include those directly impacted by the lockdown, such as hotels and restaurants, the arts, entertainment and cultural sector, and the transport sector. The education sector was also hard hit, as a result of school closures during March and April. The impact on the wholesale and retail sector was less serious, as the increase in essential retail activity may have partially offset the fall in activity in non-essential retail. This picture should also improve gradually as lockdown restrictions ease.

Almost all sectors experienced unprecedented contractions compared to pre-lockdown (Apr vs. Feb, % change)



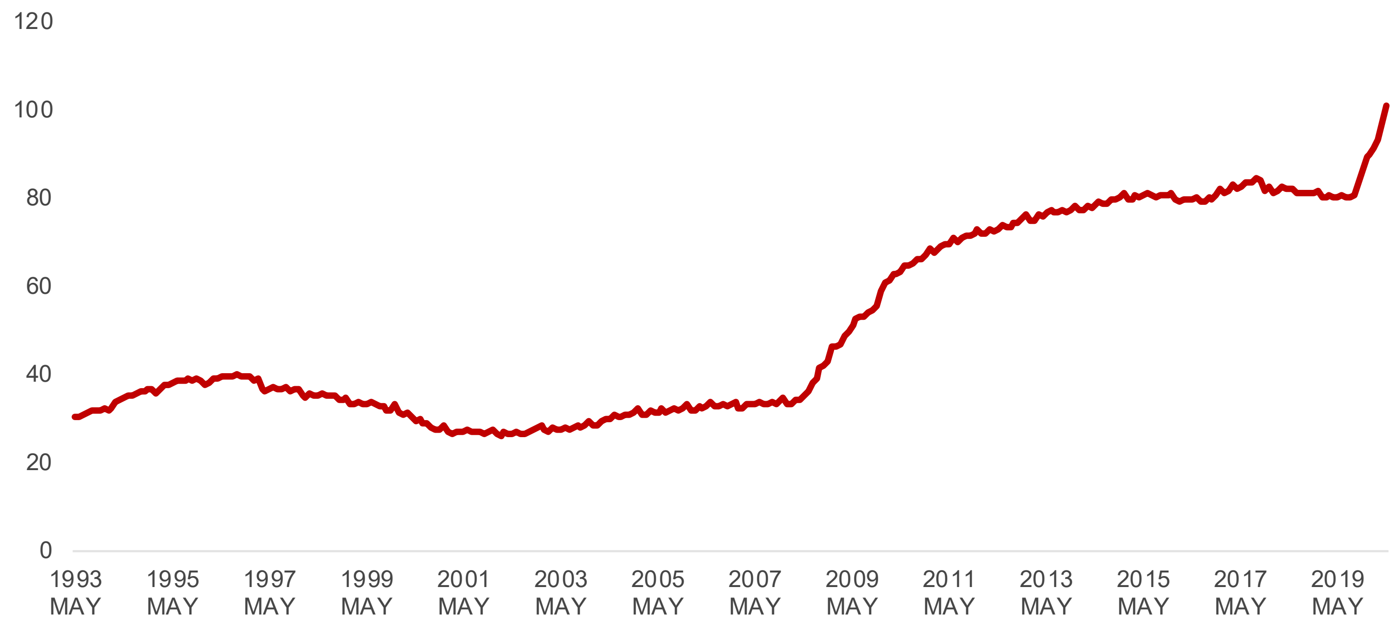
Source: ONS, PwC analysis

- Breaking down the 24% reduction in Index of Services compared to pre-lockdown levels of activity, accommodation and food services was hardest hit (which wiped out the vast majority of activity in that sector, -92%), followed by other services and the arts, entertainment and recreation sector, both experiencing a 50% decline in activity.
- Education and transport were also badly impacted by the pandemic (output fell by -43% and -38%, respectively) but may gradually improve in the coming weeks as schools reopen and as more and more people return to work.
- The fall in wholesale and retail trade activity also captures the plunge in car sales, predominantly driven by a reduction in new car registrations.
- The only sub-sector that did not see a decline was public administration and defence, which remained flat in April.

Public sector debt exceeded 100% of GDP in May

Public sector net debt (excluding public sector banks) at the end of May 2020 stood at nearly £2tn. This is equivalent to 100.9% of GDP, exceeding the size of the economy for the first time since 1963. Contributing to this figure is the £29bn spending on various support schemes for the economy and a 46% fall in VAT collections due to the fall in retail sales. In the month of May alone, the amount of cash borrowed by the government surged to £62.7bn, more than the total for the whole of the 2019-2020 financial year. While these figures are subject to uncertainty, the sharp rise in public sector borrowing indicates the scale of the challenge faced by policymakers to keep the economy afloat during the crisis.

UK public sector net debt as a percentage of GDP, 1993-2020

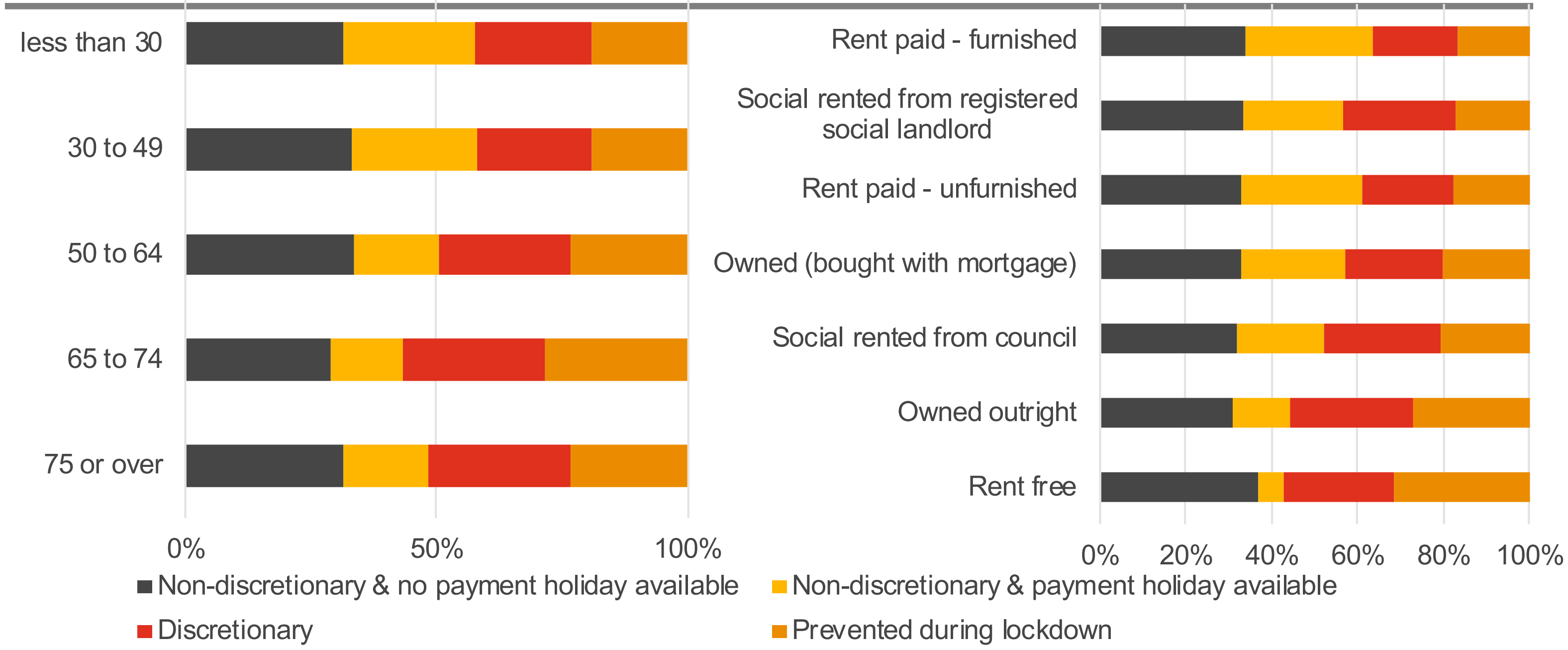


Source: ONS

One-fifth of UK household spending has been held back in lockdown

The lockdown has meant households have fewer outlets to spend their income, as discretionary spend categories such as travel, holidays and meals out have become more restricted. ONS data suggests more than one-fifth of usual household expenditure has been largely held back, which amounts to £182 pent-up cash per week (or 21.9% of an average weekly budget).1 However, younger people, renters and those living in London are the least likely to be able to cut back on spending, because they spend a lower proportion of their budget (between 17% and 20%) on non-essential goods and services.

Younger people, renters and those living in London are the least likely to be able to cut back on spending (% weekly household expenditure)



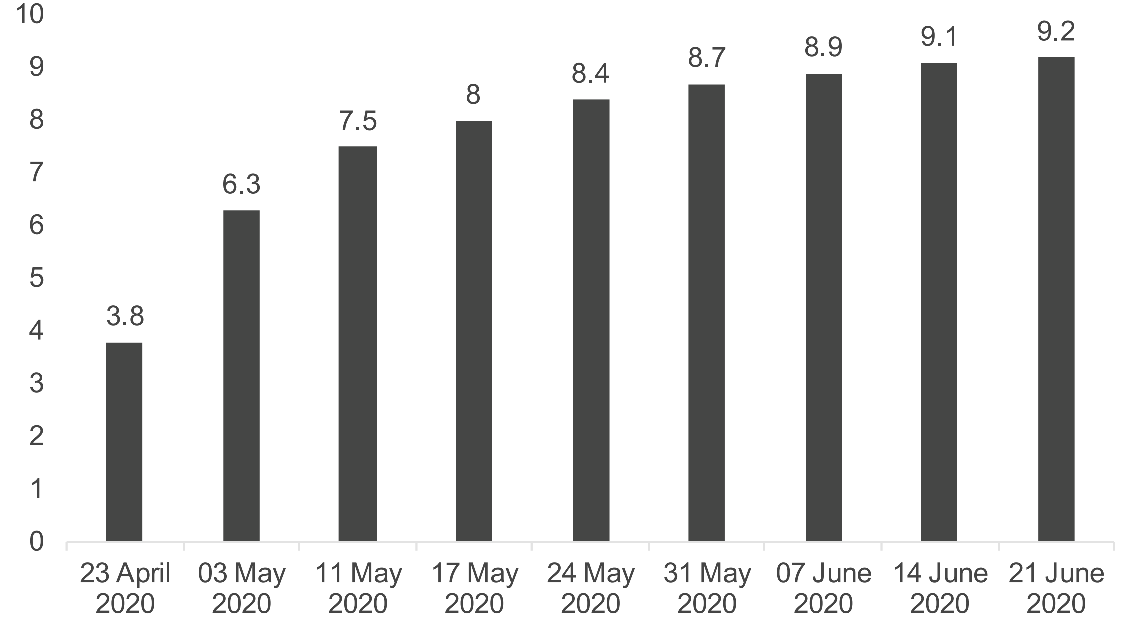
- People under 30 years old spend the highest proportion of their weekly budget on essentials (58%) and only 19% on goods and services that is unavailable during lockdown, compared to 43% and 29% in the group aged 65-74. This suggests young people are less able to cut back on spending.
- Renters spend more on essentials (between 52% and 64%) compared to home owners and rent-free households (between 42% and 57%).2 Renters are also among the groups most vulnerable to falling behind with housing payments during lockdown. This is because they are more likely to be vulnerable to the loss of income from unemployment, and are also less likely to receive rental payment holidays.3
- In London, where property prices and rental rates are highest, households spend the greatest proportion of their weekly budget on essentials, such as food and housing costs, and the lowest proportion on activities such as holidays and meals out. Therefore, compared to the rest of the UK, London households are the least equipped to cut back on spending.

Source: ONS-Family spending
1. As of financial year ending March 2019
2: Note that rent-free households have higher non-discretionary spending & no payment holiday available because while they have the lowest non-discretionary spending, they are the least likely to receive payment holidays
3 Source: Resolution Foundation

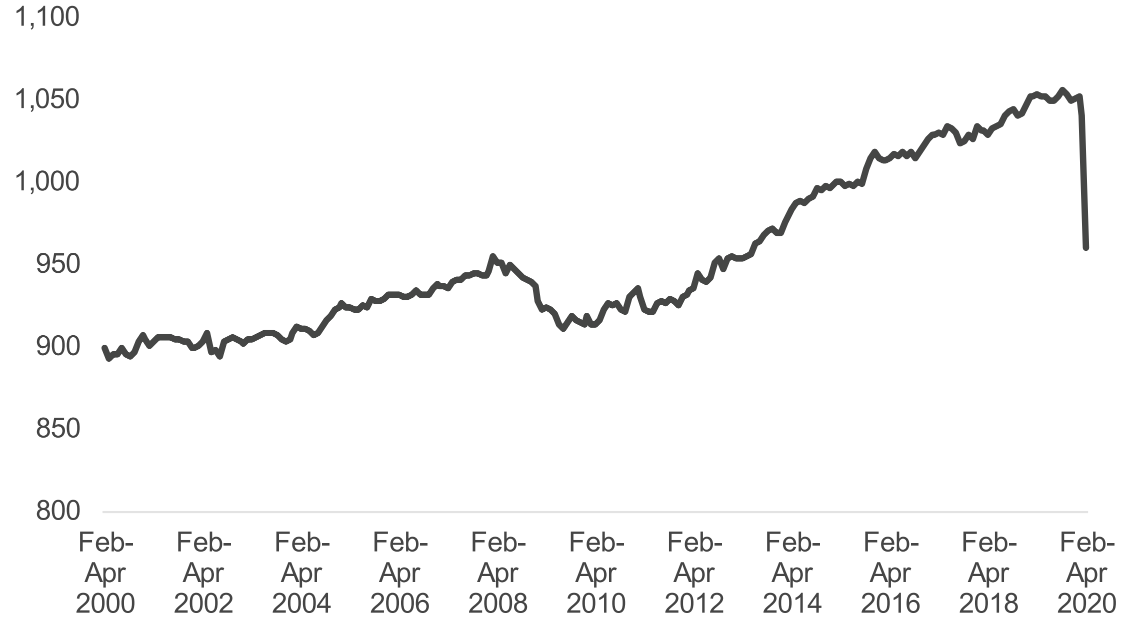
Actual weekly hours worked saw record falls in May

While employment and unemployment rates remained broadly unchanged over the three months to April, other data, such as the rate of worker furloughing indicates the extent to which workers have been hit. Around 9.2 million workers (more than one in four) are now signed up to the scheme. The number of payroll employees in May has declined by more than 600,000 since March. The record fall in weekly hours worked, close to 9% compared to last year, offers a truer picture of the impact of rising unemployment and furloughing. Vacancies in May also declined to an all-time low – at 476,000, there are 60% fewer vacancies compared to the same period last year.

Total number of jobs furloughed under the CJRS, millions of jobs



UK total actual weekly hours worked (16 years and over), seasonally adjusted, millions of hours

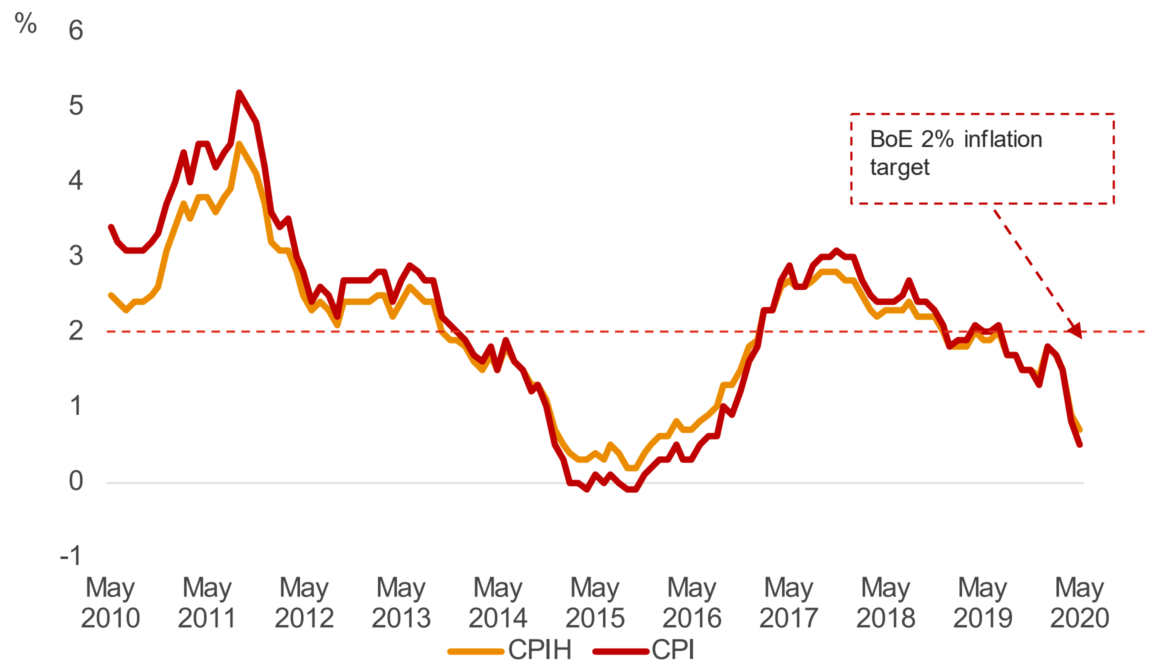


Source: ONS

Headline consumer price inflation fell to 0.7% in May, from 0.9% in April

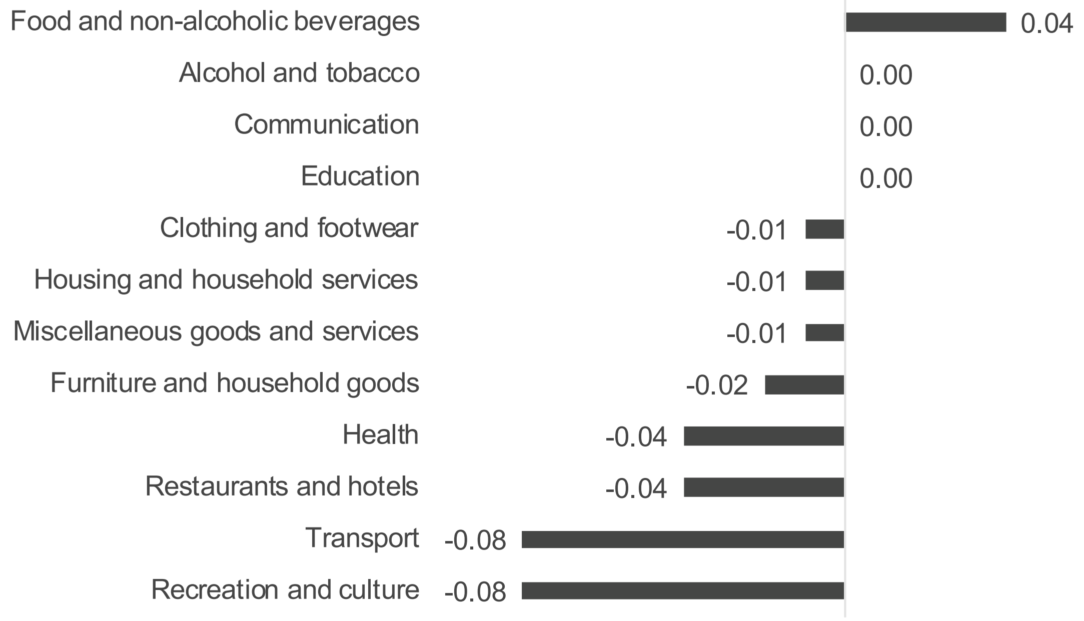
Headline inflation, as measured by Consumer Prices Index including owner occupiers' housing costs (CPIH), continues on its downward path since January 2020, declining from 0.9% to 0.7%, driven by the falling prices in motor fuel and some recreational and cultural goods, partially offset by an increase in prices for food and drink. Falling consumer prices is yet another sign of the slowdown in economic activity as a result of the lockdown. The gradual pick up in demand as social distancing measures are lifted, might indicate a potential bounce back in consumer spending, which could push up inflation.

Inflation 12-month rates fell for the fourth consecutive month (%)



Source: ONS

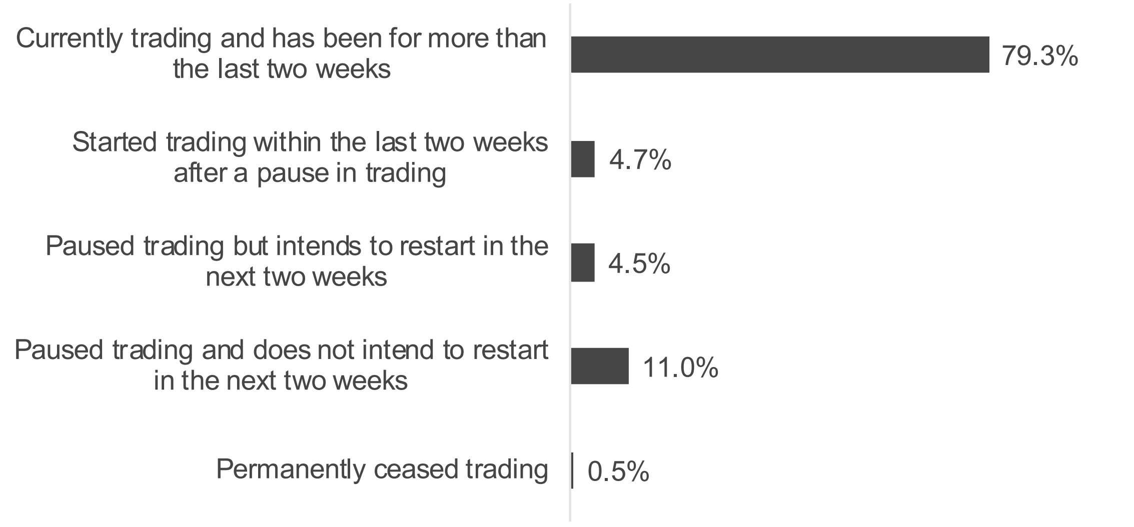
Contributions to change in inflation rate measured by CPIH (percentage points)



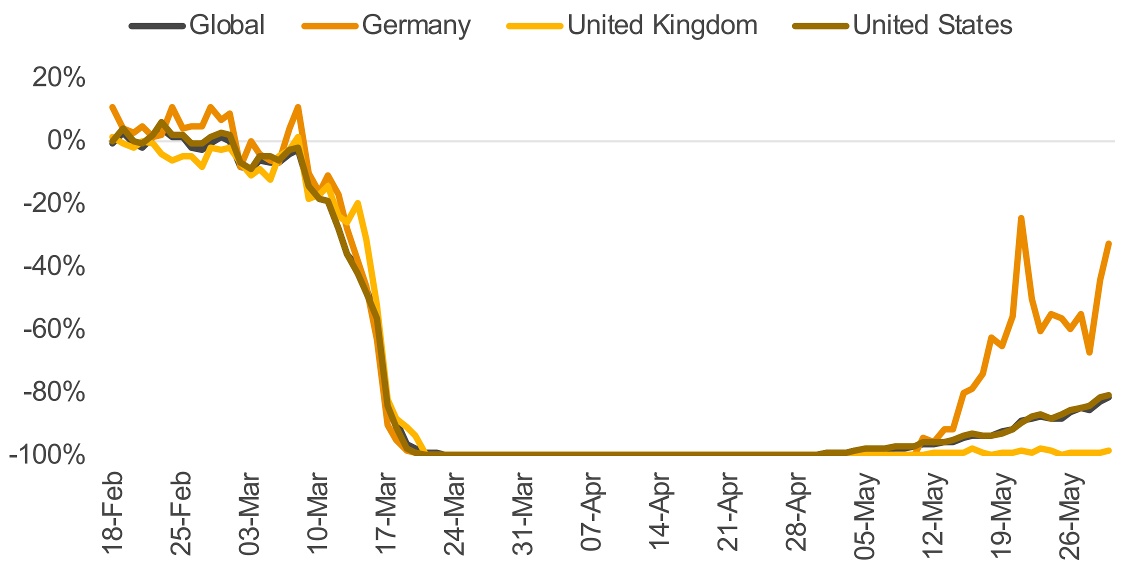
79% of businesses are currently trading, with more to resume

Business intentions to resume trading in the near future could indicate early signs of recovery. A business survey by the ONS conducted between towards the end of May indicated that around 79% of UK businesses have remained in operation, with a further 9.3% having either resumed trading in the last two weeks or are intending to restart in the next two weeks. Following further easing of lockdown measures from 15th June, we expect more non-essential retail businesses to resume operations. Restaurant booking data from OpenTable show signs of recovery in Germany and the US as lockdown restrictions are lifted.

Businesses' trading status, UK, 18 May to 31 May 2020[1]



OpenTable restaurant bookings, compared to previous year (18 February to 30 May)

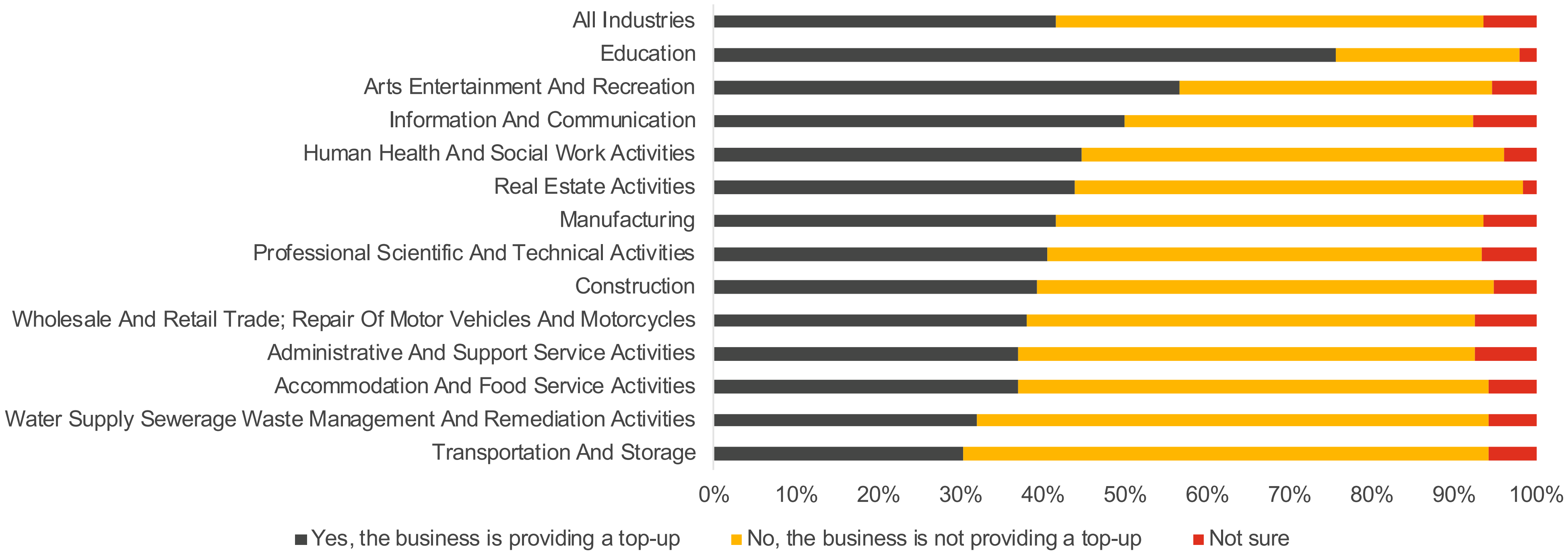


[1]*Businesses were asked for their experiences for the reference period 18 May to 31 May 2020.*
Source: ONS Business Impacts of Coronavirus Survey (BICS) Wave 6, OpenTable bookings

Businesses have been willing to support furloughed workers

A large proportion of businesses have been trying to support employees as far as possible through income top-ups in addition to Coronavirus Job Retention Scheme (CJRS) payments. 42% of businesses with furloughed workers are providing top-ups to employees, with the most generous sector being the education, and the arts and cultural sector. On average, less than 1% of businesses' workforce have been made permanently redundant, except in the transportation and storage sector where 1.8% of workers have been made redundant.

Proportion of businesses are providing top-ups on top of the CJRS, by industry, UK, 18 May to 31 May 2020

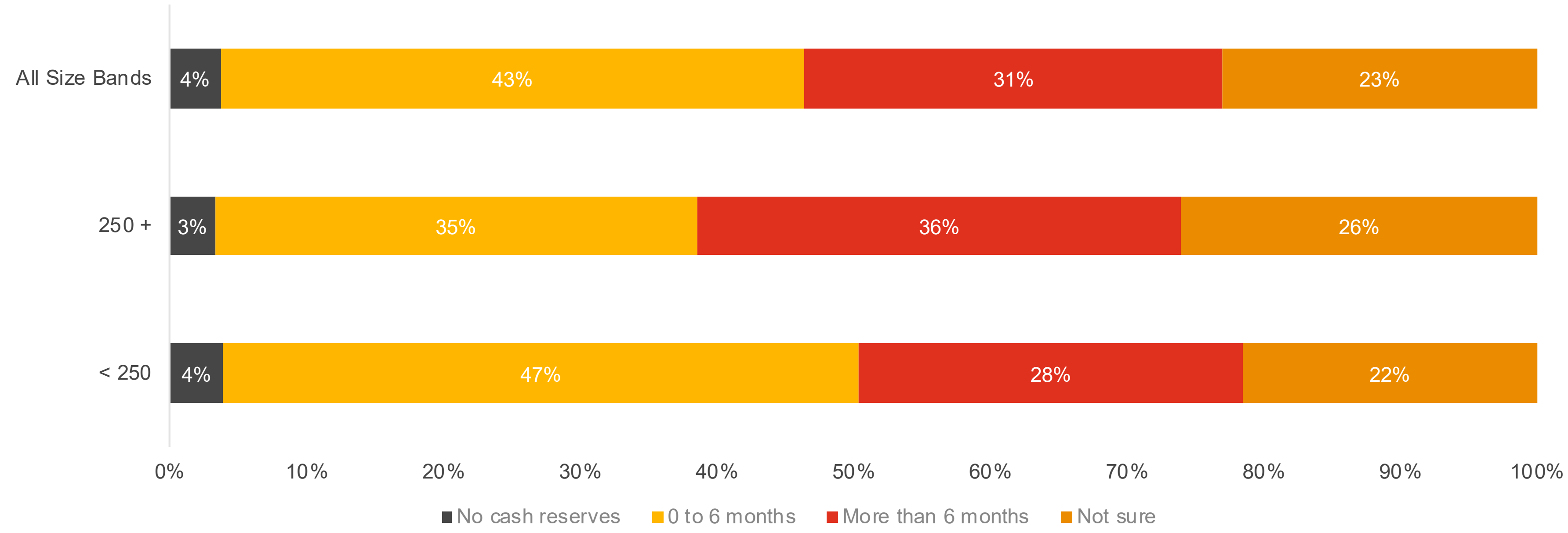


Source: ONS Business Impacts of Coronavirus Survey (BICS) Wave 6

Cash reserves for businesses remain largely unchanged

A business survey by the ONS, conducted between 18 May and 31 May, showed business cash reserves remain relatively unchanged from the previous ONS survey, with around 43% of businesses having cash reserves of up to six months. The cash position for larger businesses tends to be better, with 36% of businesses with 250 employees or more having cash reserves of more than six months, while around 28% of smaller businesses are in the same position. Roughly a quarter of all businesses were unsure what their cash reserves were. This reflects the high uncertainty businesses are facing in terms of the pace of the recovery and for some, when they might be able to restart trading.

Proportion of businesses with set amounts of cash reserves, by size, UK, 18 May to 31 May 2020



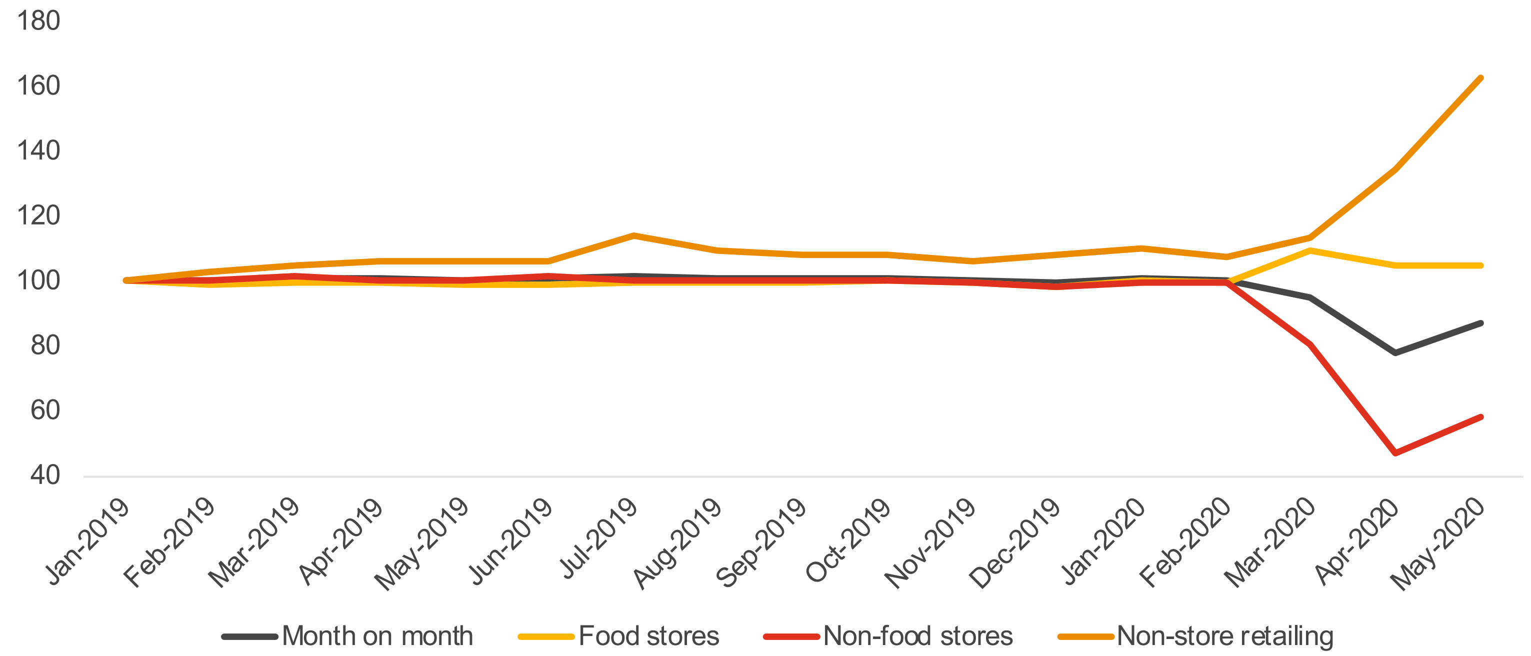
**Businesses were asked for their experiences for the reference period 18 May to 31 May 2020, but for questions regarding cash flow businesses may respond from the point of completion of the questionnaire (1 June to 14 June 2020).*

Source: ONS Business Impacts of Coronavirus Survey (BICS) Wave 6

UK retail sales showing signs of recovery after falling to record lows in April

Retail sales declined by nearly one-fifth in April following the closure of all non-essential retailers since 23 March, wiping out more than a decade of gains in retail sales volumes. May data suggests a partial rebound in retail sales by 12% on the previous month, driven by positive growth in non-food stores as these began to reopen in May. Sales were also partly driven by non-store retailing (principally online spending), which now accounts for one-third of all retail spend, the highest proportion on record. However, sales were still 13% lower than in February before the lockdown was implemented.

UK Retail Sales Index (2019 Jan = 100)



Source: ONS

2

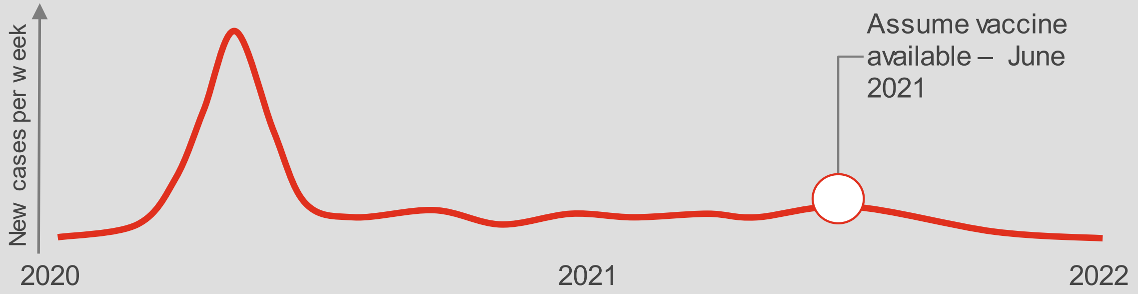
Our projections of the UK economy

Potential COVID-19 scenarios to inform crisis planning

Our illustrative COVID-19 scenarios reflect a range of likely outcomes following the UK government's phased approach to lifting lockdown restrictions and re-opening of retail activity. Both scenarios assume a continuation of some elements of lockdown over the coming months, but for varied periods and at varying levels of intensity. The subsequent trajectory of the disease is dependent on the success of these non-pharmaceutical interventions (NPIs), whether they need to be re-imposed, and the introduction of other NPIs or pharmaceutical interventions at a later date (i.e. treatment or vaccines).

1 SMOOTH EXIT

Gradual lifting of NPIs does not result in a significant further rise of cases. Cases continue to occur at a lower level.



Assumptions:

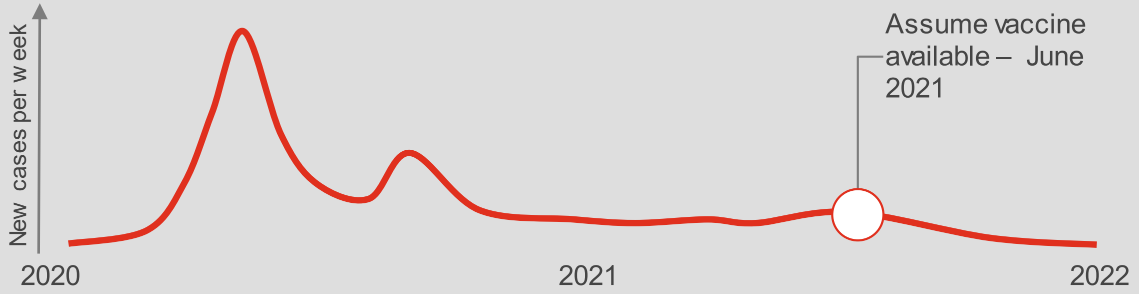
- Following an initial peak in April 2020, successful implementation of NPIs including testing, contact tracing, quarantine and physical distancing results in the effective reproduction rate remaining at or below one, and therefore the number of cases reducing to a lower level.
- NPIs are lifted in a gradual, phased way from late May 2020 onwards.
- Significant testing and contact tracing will be necessary to track and control outbreaks as pre-symptomatic and mild cases prevent complete containment of the virus until a vaccine becomes available.

Timeframe:

- **Peak:** April 2020
- **Total duration:** 12 to 18 months (until a vaccine is available).

2 BUMPY EXIT

Lifting of NPIs results in a subsequent rise in cases, requiring NPIs to be reintroduced to bring cases back to a lower level.



Assumptions:

- Following an initial peak in April 2020, successful implementation of NPIs including testing, contact tracing, quarantine and physical distancing results in the effective reproduction rate remaining at or below one, and therefore the number of cases reducing to a lower level.
- NPIs are lifted in a gradual, phased way from late May 2020 onwards. However, this has the effect of increasing the reproduction number to above one, causing a subsequent rise in cases. NPIs may be introduced and reversed in a cyclical way to control subsequent outbreaks.
- Significant testing and contact tracing will be necessary to track and control outbreaks as pre-symptomatic and mild cases prevent complete containment of the virus until a vaccine becomes available.

Timeframe:

- **Peak:** April 2020, but with prolonged lockdown or re-imposed if there is a later rise in cases
- **Total duration:** 12 to 18 months (until a vaccine is available).

Note: Our scenarios assume the UK moves to a comprehensive free trade agreement with the EU on 1 January 2021, but there are still uncertainties surrounding this assumption.

COVID-19 economic impact transmission channels

There are five main transmission channels through which COVID-19 could impact the UK economy (the first four negative, with an offsetting positive effect from monetary and fiscal policy reactions). Other reinforcing and mitigating impacts are possible, so this is not an exhaustive list.

1. Sector partial or full lockdowns

- The prolonged closure of businesses has had an impact on economic output, particularly in the retail, travel, hospitality and leisure sectors.
- While most people are encouraged to stay or work at home where possible, the UK is seeing a gradual reopening of the economy. Non-essential retailers are now allowed to re-open in England and Wales, with Scotland to follow, however hotels and restaurants remain closed.

2. Uncertainty impacts and demand disruption

- Continued uncertainty about the economy and job prospects are likely to dampen consumer spending as consumers defer major purchase decisions and discretionary spend.
- Businesses face weak demand due to slow growth in the UK and globally.
- Significantly reduced levels of business and consumer confidence results in a sharp and sustained downturn in business investment.
- This channel is likely to have the biggest negative impact on the economy.

3. Supply chain disruption

- Some businesses may face supply chain disruption as suppliers temporarily pause trading in response to lockdown restrictions or weak demand.
- The impact from this channel is likely to diminish over time as more and more businesses in the UK come back online and as suppliers in other countries gradually come out of lockdown.

4. Labour supply reduction

- Social distancing measures see non-essential workers working from home for an extended period, or workers staying at home to care for children or other dependents.
- The impact from this channel is likely to diminish over time as schools reopen and businesses adapt workplaces to accommodate social distancing requirements, allowing employees to return to work.

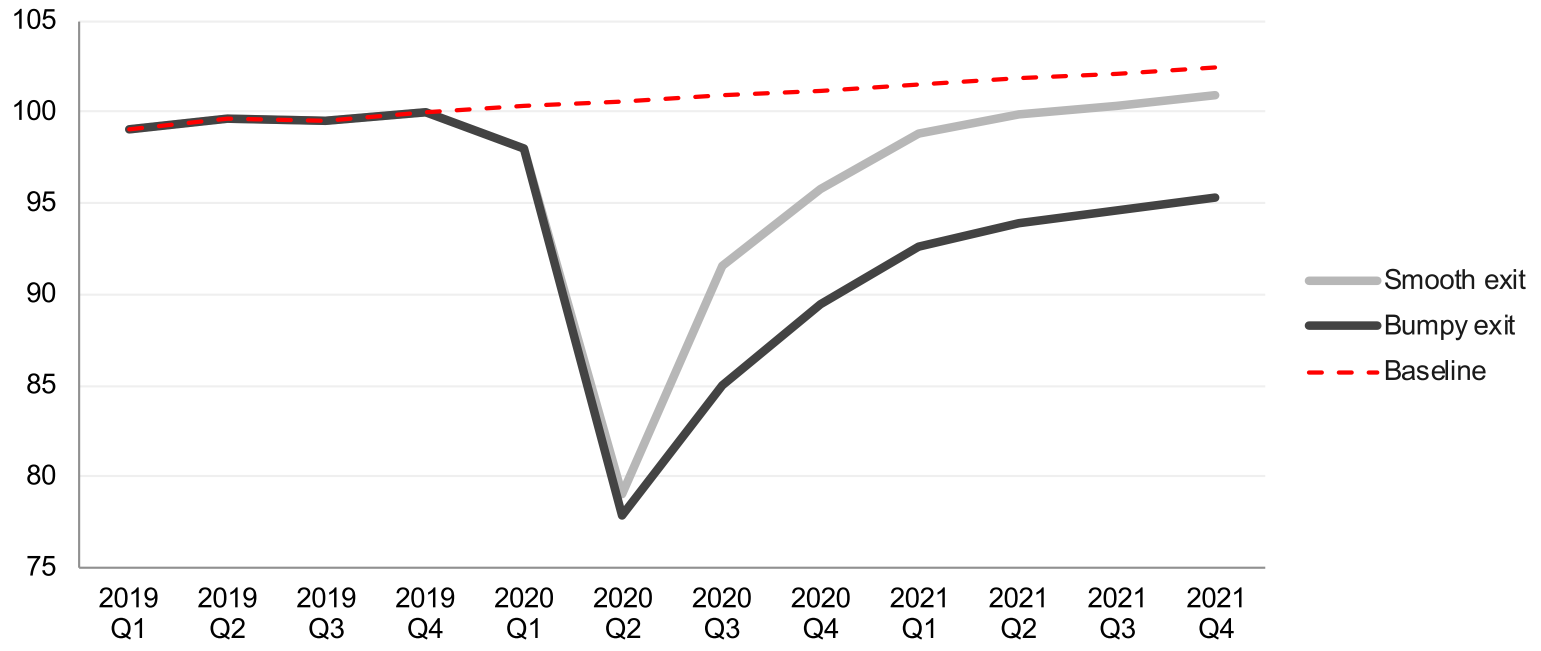
5. Policy reactions

- The UK government has put in place a £133bn stimulus package to provide support to businesses and workers, in the form of the extensive working capital / cashflow support to businesses through tax / payment holidays, grants and loan guarantees.
- The Bank of England also announced a £100bn expansion in its QE programme in June, while keeping the policy rate at 0.1%.

UK GDP will drop sharply in Q2 2020, but should recover gradually

Our projections reflect recent economic data on the severity of the economic disruption in the short-term, as indicated by the 20% decline in monthly output in April, the first full month under lockdown. On the other hand, economic activity is likely to show improvement from May onwards as early signs of business recovery and trading activity might suggest. We have therefore revised our estimates for GDP growth in 2020 so that the decline in output ranges from -8% to -12%. The projections for the 'Bumpy exit' scenario not only reflects the potential disruption from the re-imposition of lockdown measures, but also acknowledges the potential "scarring" effects from a deeper contraction in Q2, perhaps by around 20-30%, much larger than any quarter during the 2008-09 financial crisis. A deeper contraction could hold back the speed of the recovery in the UK after the initial bounce from leaving lockdown. We estimate that output could be back to around 1.5% to 7% below its pre-crisis trend by the end of 2021.

UK GDP index (Q4 2019 = 100), quarterly levels in each scenario

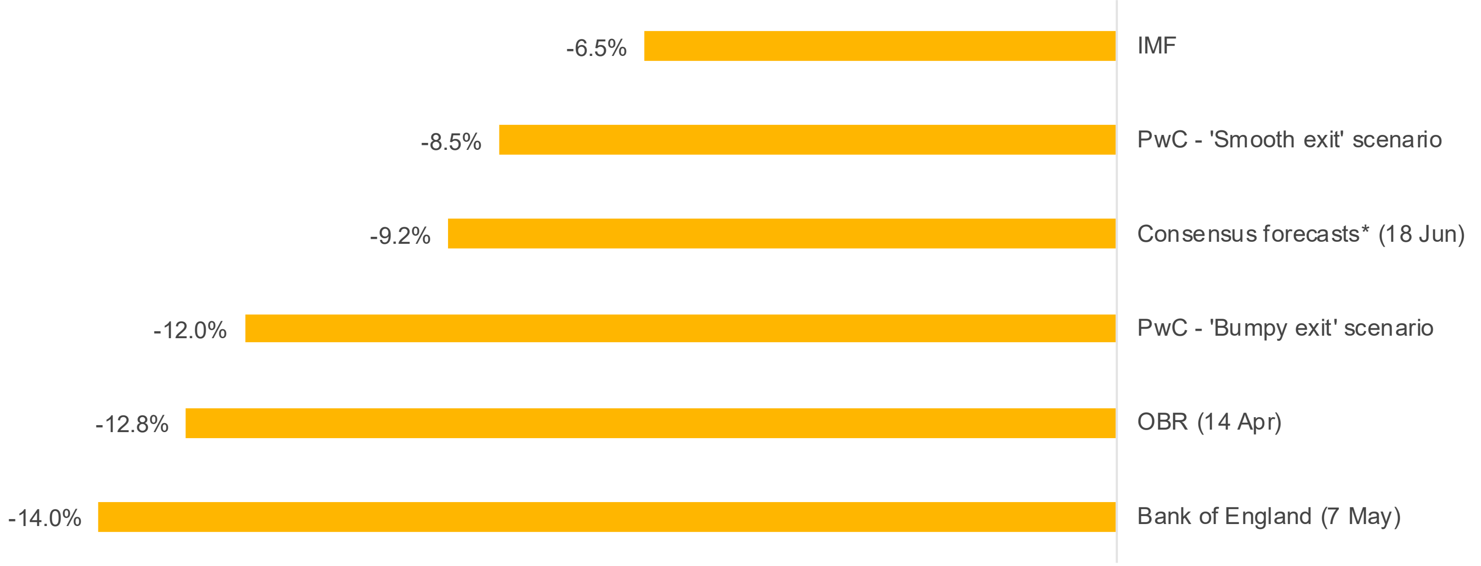


- Our expectations for Q2 2020 growth shows a significant weakening in business investment and consumer expenditure, leading to a deep contraction in Q2, perhaps by around 20-30% - much larger than any quarter during the 2008-09 financial crisis. This compares to a contraction of around 2.1% in Q4 2008 at the height of the global financial crisis, or a 2.7% quarterly decline at the peak of the 1974 recession.
- The scale of the impact is driven by the unprecedented nature of the lockdown, as well as lower consumer spending and business investment due to more standard confidence and income effects.
- We assume output would then recover relatively quickly at first as lockdowns are eased, followed by a more gradual pace of recovery as economic life slowly returns to normal. The recovery is longer under the 'Bumpy exit' scenario due to larger scarring effects and the temporary re-imposition of social distancing measures in this case.
- The pace of the recovery remains highly uncertain, but we assume this involves the level of GDP returning to only around 1.5% to 7% below pre-crisis trend levels by the end of 2021. But other outcomes are clearly possible if the crisis lasts for longer.

PwC’s economic growth scenarios compared to other analyses

Our ‘Bumpy exit’ scenario growth projections are broadly in line with illustrative projections by the OBR predicting a 13% fall in 2020. The OBR assumes a very sharp 35% drop in Q2 2020. Similarly, the Bank of England’s most recent forecasts for the UK assume a quarterly decline of over 20%, with growth in 2020 averaging at -14%. The latest IMF and consensus forecasts as surveyed by the Treasury in May more optimistic and broadly in line with PwC’s ‘Smooth exit’ scenario.

Comparison of 2020 GDP projections and scenarios



**HMT comparison of independent forecasts (June 2020) – average of new forecasts made in last month*
Source: PwC, OBR, IMF, HMT, BoE

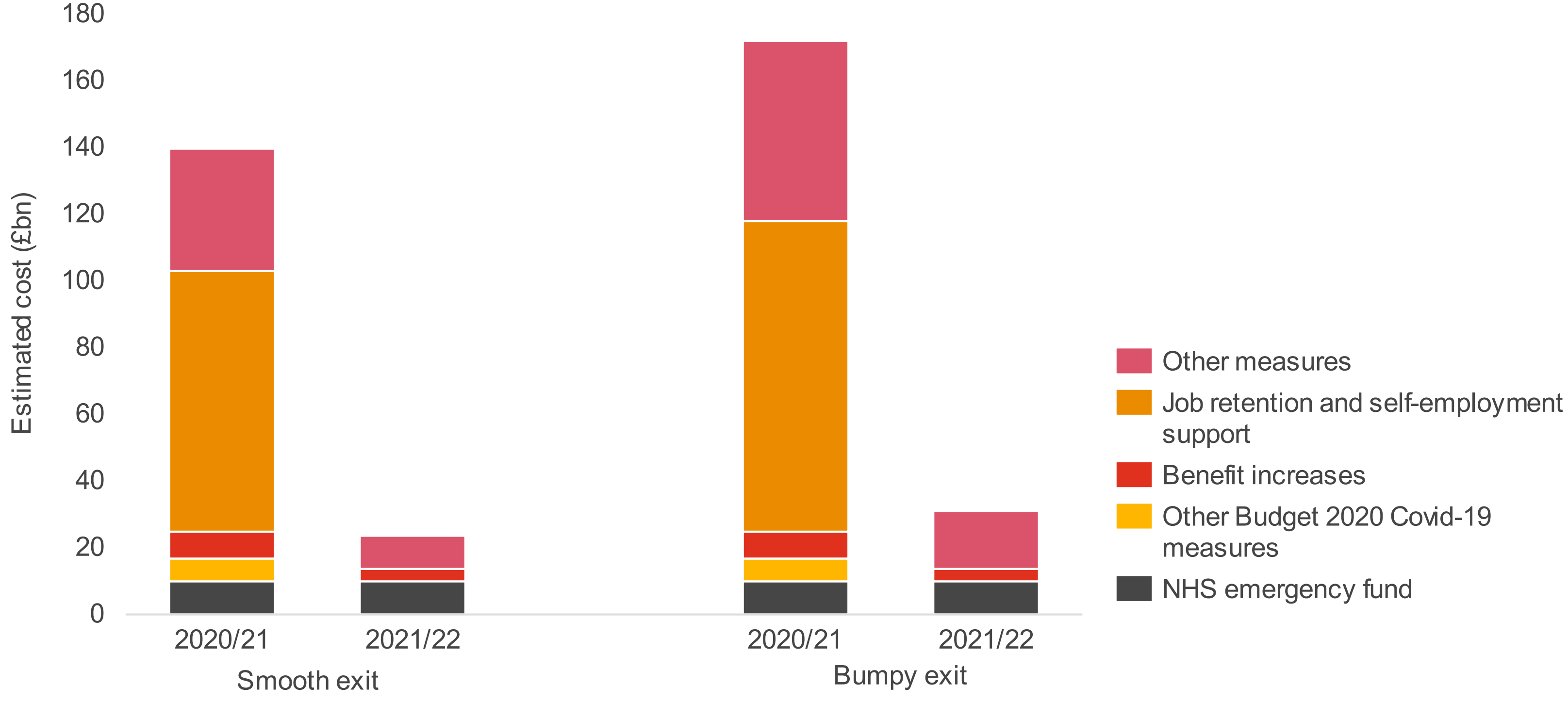
- The Office for Budget Responsibility (OBR) published illustrative projections on the impacts of COVID-19 on UK economic output on 14 April. They estimate that 2020 Q2 GDP could fall by as much as 35% compared to the previous quarter and by around 13% in 2020 as a whole despite a strong recovery later in the year.
- Similarly, the Bank of England anticipates a significant decline in Q2, followed by a material pick up in activity later in 2020 that continues into 2021, when the economy recovers to its pre-COVID level in the second half of 2021. However, in its June Monetary Policy Committee (MPC) announcement, the Bank noted that emerging evidence suggests that the fall in global and UK GDP in 2020 Q2 will be less severe than set out in the Bank’s May Monetary Policy Report.
- IMF and consensus forecasts project more moderate falls in GDP in 2020, but also some longer term scarring effects as we do. But all such projections are subject to large uncertainties and can only be illustrative at present.

3 UK public finance scenarios

Direct cost of fiscal measures to combat COVID-19

We have maintained our estimates of the impact of fiscal measures on public finances in line with our revised scenario projections for UK growth. The Treasury, working closely with the Bank of England, has responded to the COVID-19 crisis with direct fiscal support measures totalling around £140bn to £170bn in 2020/21 in our two scenarios. But many measures are temporary so costs should be much lower at only around £20bn to £30bn in 2021/22, assuming the crisis ends next year as assumed in both scenarios. The assumptions behind this and other fiscal analyses in this section are described further in the annex at the end of this report.

Estimated cost of direct fiscal support measures in alternative scenarios (£bn)

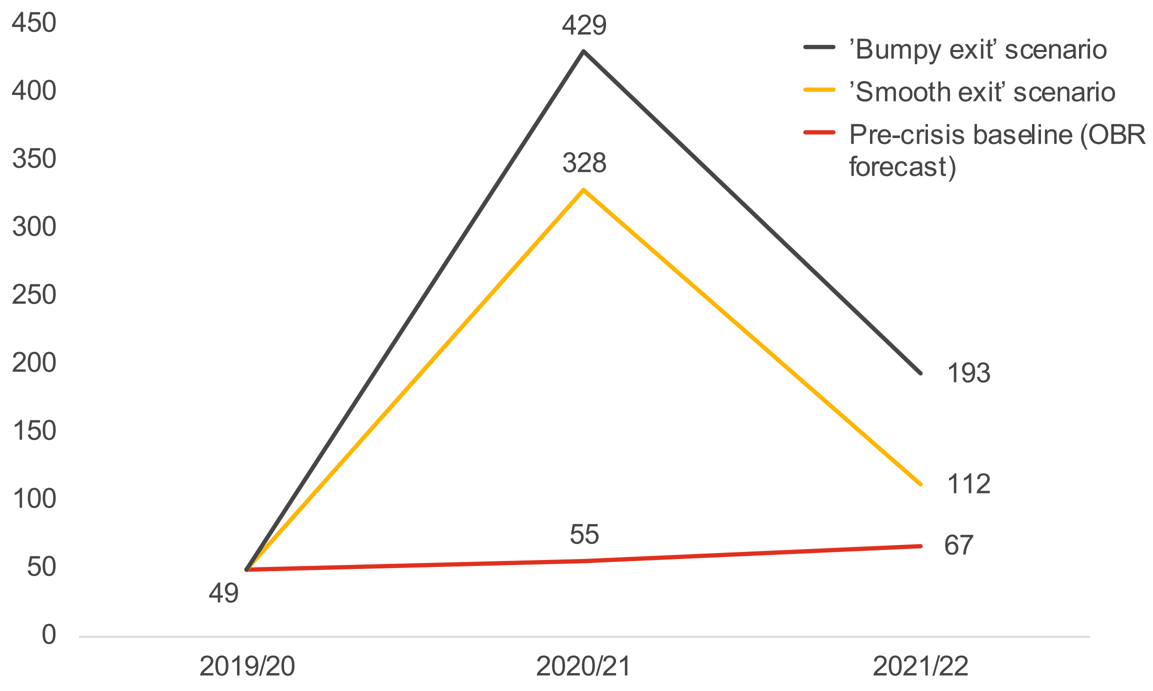


- Our previous fiscal analysis (published on 29 April) assumed a direct fiscal support of around £140bn to £170bn in our two scenarios in 2020/21, and £20bn to £30bn in 2021/22.
- We have revised the estimated cost of the fiscal stimulus package upwards. This is mainly driven by the higher cost associated with the Coronavirus Job Retention Scheme in light of more recent data on business take-up (the scheme is estimated to cost £14bn per month), as well as the extension of the scheme until October 2020.
- Our estimates of the fiscal package also does not include the cost of additional fiscal stimulus that could be implemented, such as a reduction in VAT rates or other new schemes.

The budget deficit will rise sharply in 2020/21, but should then fall back

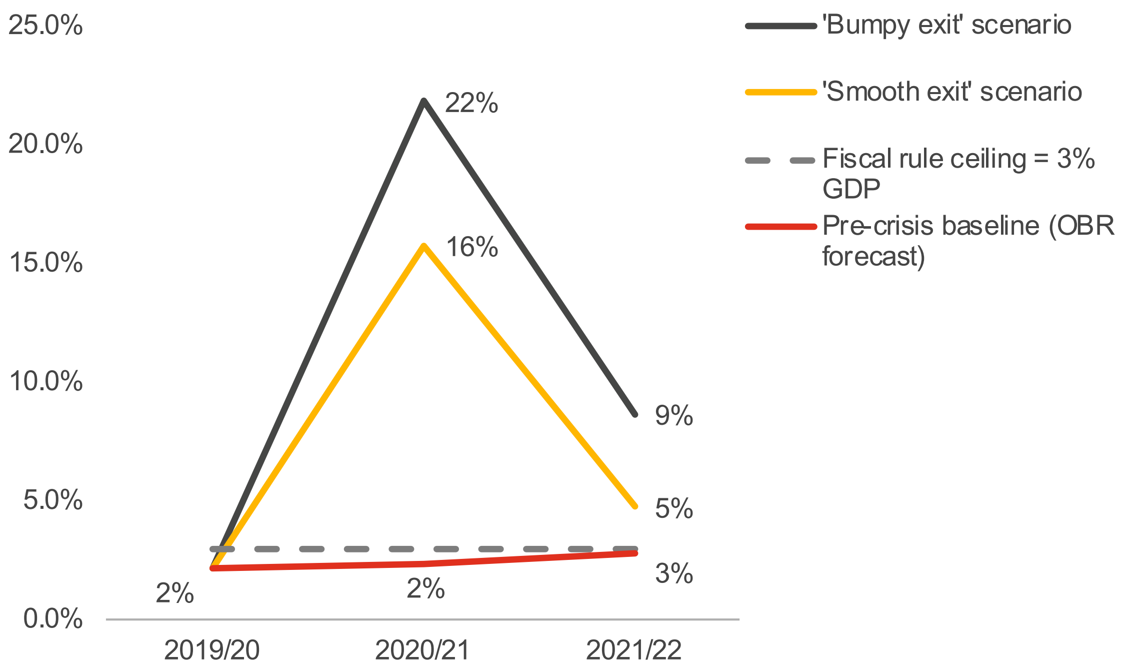
Our revisions to the cost of the fiscal support package as well as our new lower economic growth scenarios imply a sharp rise in the budget deficit in 2020/21 to around £330-430bn, or around 15% to 22% of GDP, as compared to 10% in 2009/10 after the financial crisis. But we expect much of this rise will reverse in 2021/22, with the deficit coming down to around 5% to 10% of GDP. This will depend on whether any further fiscal stimulus measures are introduced to provide a boost to the economy. Nevertheless, this would still be above the 3% of GDP ceiling implied by current fiscal rules, so some longer term fiscal tightening may be needed after full recovery has been achieved. But that is a matter to decide after the crisis.

Annual budget deficit (£bn)



Source: OBR for pre-crisis baseline, PwC for alternative scenarios

Annual budget deficit (as % of GDP)

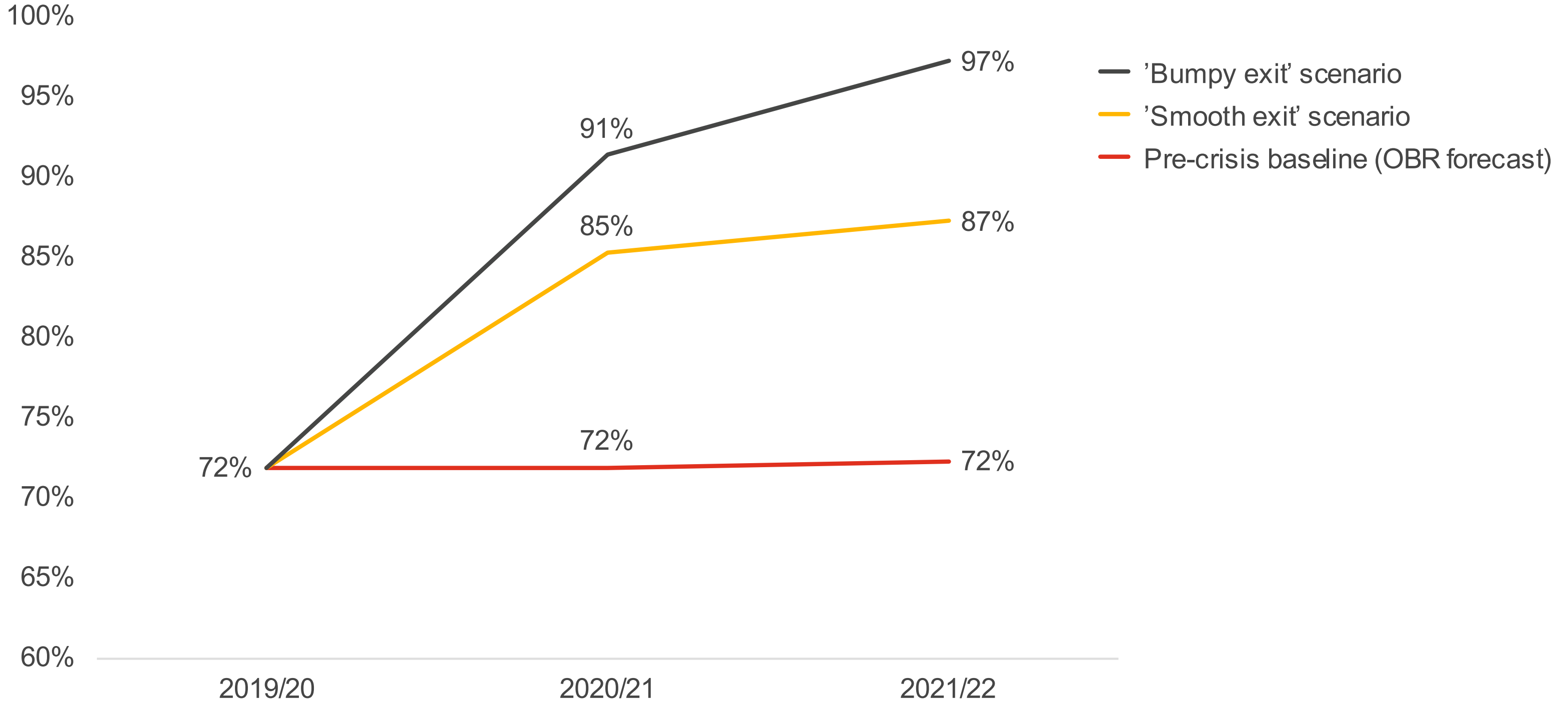


Source: OBR for pre-crisis baseline, PwC for alternative scenarios

Impact on public debt to GDP ratios in alternative scenarios

In our 'Smooth exit' scenario, public debt might stabilise at around 90-100% of GDP in 2021/22, so in this case there should be no major threat to longer term fiscal sustainability. But the debt profile looks less sustainable in a 'Bumpy exit' scenario as that may be associated with a larger permanent loss of GDP and, hence, of tax revenues. In that less favourable case, there may be a need for future tax rises or renewed spending restraint in the longer term, but only once we are well passed the end of the current crisis. Bank of England action means there is no problem with the government borrowing more for now.

Public sector net debt, excluding contribution from Bank of England schemes (% GDP)



Source: OBR for pre-crisis baseline, PwC for alternative scenarios

- Our estimates of the debt-to-GDP ratio have been revised from our previous 29 April update to match our new budget deficit and GDP scenarios. We also exclude the impact on debt of the Bank of England's schemes (such as the Term Funding Scheme), which provides a better indication of underlying trends in the debt to GDP ratio.
- The government clearly needs to borrow much more in the short term to help soften the economic blow from the crisis. So the debt-to-GDP ratios will rise, particularly in a 'Bumpy exit' scenario. Recent successful gilt auctions show the markets are happy to buy significant additional amounts of UK government debt at current record low yields.
- This reflects the fact the Bank of England has pledged to buy at least an extra £190bn (c.8% GDP) of gilts, and more if needed, which offers considerable support to the market. In the short term, the government can also call on temporary cash flow financing through expanding its 'overdraft' at the Bank of England.

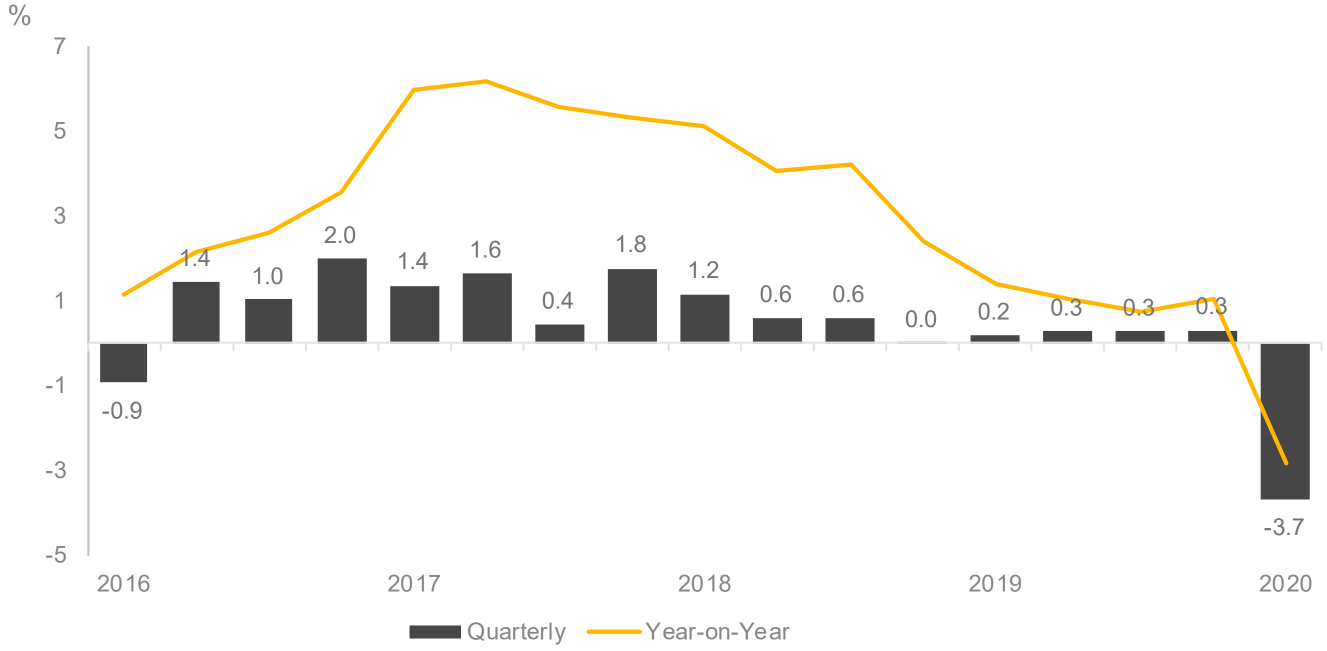
3

Focus on: Impact of COVID-19 on trade and future prospects

COVID-19 has caused a collapse in global trade

In this section we turn our attention to the impact of COVID-19 on trade globally and in the UK. The pandemic has triggered a sharp, sudden fall in global trade, affecting both the supply and demand of goods and services. The initial shutdown in China disrupted global supply chains and caused its exports abroad to plummet. As infections spread globally and as the shutdowns began to be implemented across many countries, this led to depressed demand for imports goods and services, thus reducing overall goods imports into countries such as the UK. This has also had an impact on the pattern of commodities traded in the short-term, and may also have longer-term consequences for trade flows in the future.

World trade volume growth rate, quarterly and year-on-year, 2016-2020



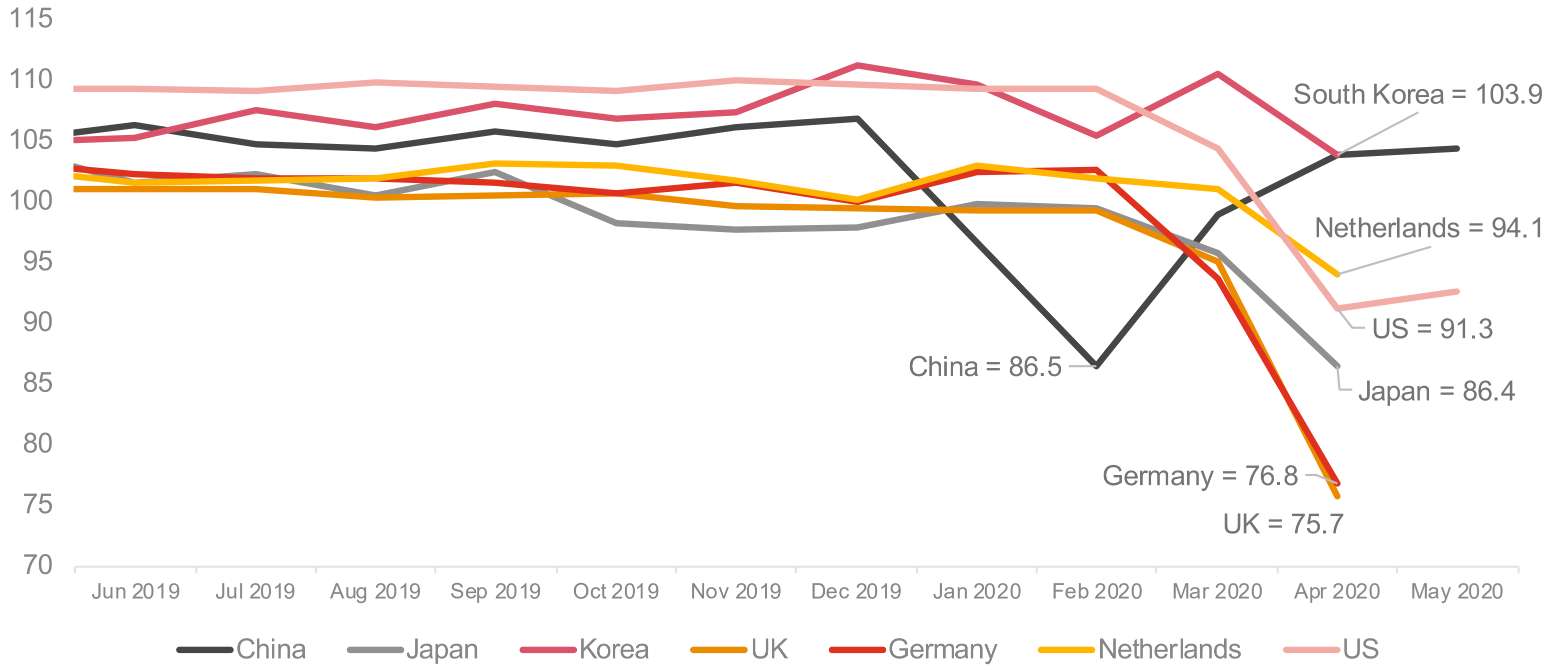
- The OECD estimates the volume of goods and services decreased by 3.7% in the first quarter of 2020. This is equivalent to a 2.8% year-on-year fall in global trade volumes.
- The initial shock to global trade first occurred as lockdowns were implemented in China, starting in Hubei province where the outbreak was first identified. This had a particularly severe impact given China's position as the world's largest exporter of goods by value – accounting for 13% ($2.5tr) of overall global goods exports in 2018. It is also the world's second largest goods importer by value, contributing to 11% ($2.1tr) of overall global imports in 2018.
- As China's industrial output fell by almost 10% in Q1 2020, this had an immediate effect on other Asian economies, such as Hong Kong, Japan, South Korea and Vietnam, where there are strong supply chain links and tourist flows. These countries accounted for one quarter of China's export value in 2018. The disruption to industrial production then also started hitting the supply chains of businesses in countries further afield, such as the US, UK and Europe.
- As lockdowns began to be imposed in the UK and Europe from the end of March, these then subsequently reduced demand for intermediate inputs from abroad and other imports, further dampening global trade.

Source: OECD Economic Outlook (June 2020)

Industrial production activity has been severely impacted, reducing export capacity

COVID-19 has caused supply-side shocks and disrupted global supply chains. Due to social distancing measures, manufacturers have temporarily shut operations or are operating at reduced capacity, partly as a result of sector lockdowns and social distancing requirements. This has led to a significant reduction in industrial production and export capacity globally. Between December 2019 and February 2020, China's industrial production fell by 19%. While industrial production activity in other countries remain at record lows, these are likely to recover gradually as the lockdown is lifted, allowing export capacity to increase.

Industrial production index by country, monthly, 2018-2020



Source: Datastream from Refinitiv
Notes: January 2020 value unavailable for China so we have interpolated between December 2019 and February 2020. Japan's industrial production index is only for mining and manufacturing, the Netherlands exclude construction, all other countries represent total industrial production.

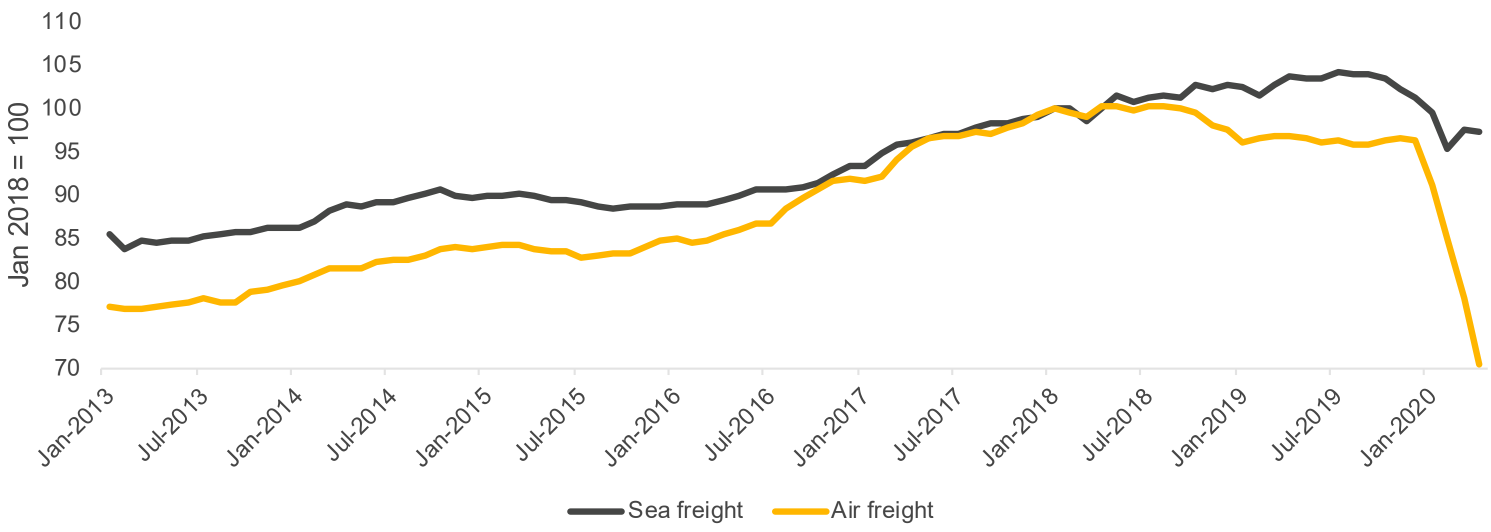
- While China has almost recovered to pre-COVID-19 production levels over the past few months, countries such as Germany, the UK and Japan, have only just passed the peak impact and it will take time for supply chains to recover.
- Data on industrial production are not yet available for May in these countries but evidence from Purchasing Managers' Indices (PMI) suggest that production activity in these countries is recovering. The latest data point (May 2020) for the US shows signs of a gradual recovery, however, it may be several months before production reaches pre-COVID-19 levels.
- Other countries such as South Korea appear to have maintained a stable level of industrial production. This could be due to effective testing and contacting tracing measures introduced early on which has prevented a lengthy nationwide lockdown and has thus enabled production to be minimally disrupted.

Global demand has weakened from multiple channels and underlying factors

Trading activity has also been hit significantly from the demand side. Firstly, demand for consumer goods and services has fallen due to the shutdown of the retail and hospitality sector. This has reduced demand for imported goods as retailers are unable to operate and sell their products, as well as lower demand further up the supply chain for intermediate inputs and imported components of production. The pandemic has also affected people's spending capacity which has affected household consumption as uncertainty over the economy and job prospects remain high, as well as the rise in precautionary savings.

Furthermore, travel restrictions and quarantine requirements have temporarily paused tourism activities. Signs of the dramatic effect on the tourism sector were first seen in February in China around the time of the Lunar New Year. China experienced the largest recorded year-on-year decrease in number of flights on 17 February, with a 71% fall in flights compared to the same date in 2019. This trend was then followed by other countries as they imposed lockdown, for example in Italy the number of flights in and out of the country fell by 74% in March.[1]

Sea and air freight, Jan 2013 to April 2020



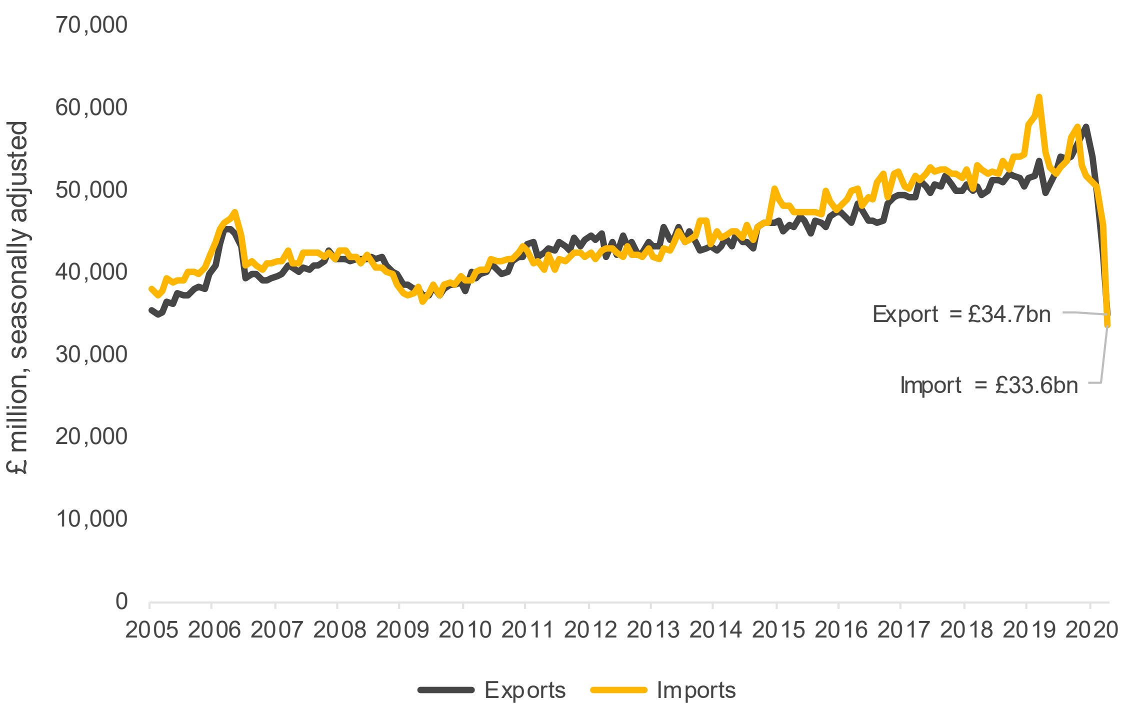
Source: IATA, RWI/ISL Container Throughput Index

[1] World Economic Forum

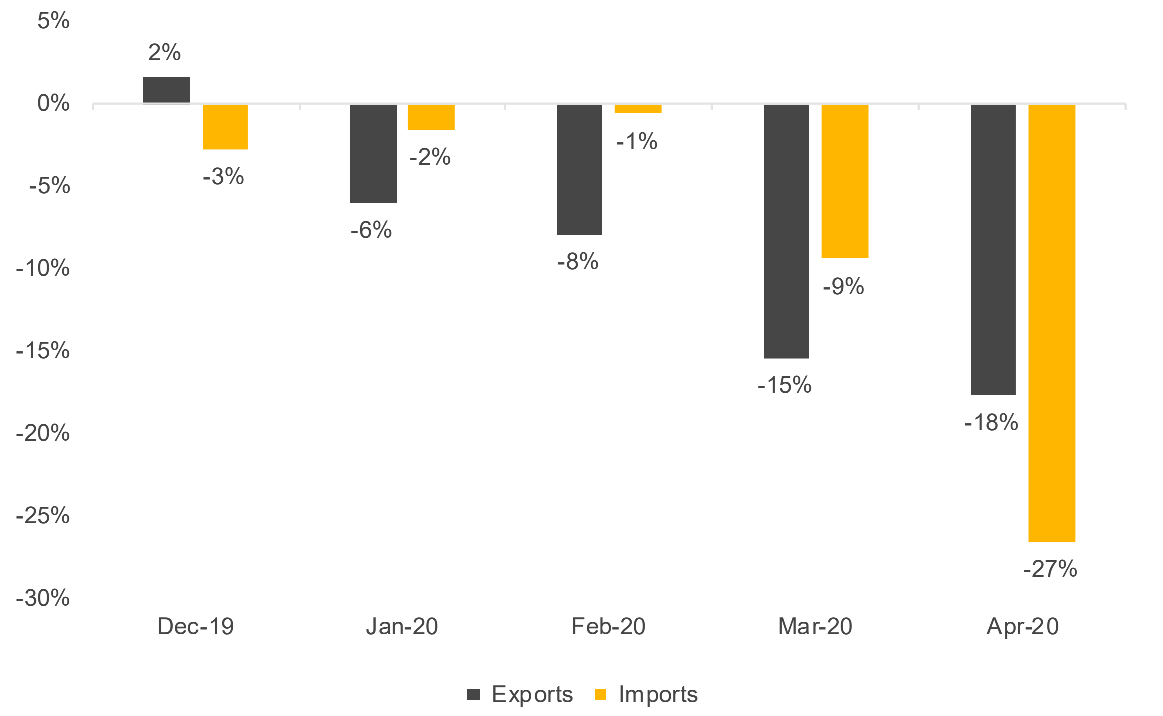
The value of UK exports and imports fell by a third between December and April

UK trade has broadly followed an upward trend since 2009 in the aftermath of the financial crisis. However, this since the start of the crisis, trade data shows that both UK imports and exports have declined by about 40%. The fall in UK exports coincided with the start of the pandemic in China, which accounts for 6% of total UK exports, and fell further as lockdown measures became more widespread, particularly in the US and the EU, hitting countries like Germany, the Netherlands and France which represent nearly a quarter of UK exports. The decline peaked in April when exports fell by 18% on a monthly basis in April as the lockdown continued. Imports on the other hand declined much more sharply and recently, particularly in March and April as social distancing measures took effect in the UK which reduced overall household consumption as well as resulting in falling demand further up the supply chain (e.g. manufacturing).

UK export and import volumes, £ million, seasonally adjusted, chained volume measure, January 2005- April 2020



UK export and import volume growth rate, month-on-month %, seasonally adjusted, chained volume measure, December 2019- April 2020

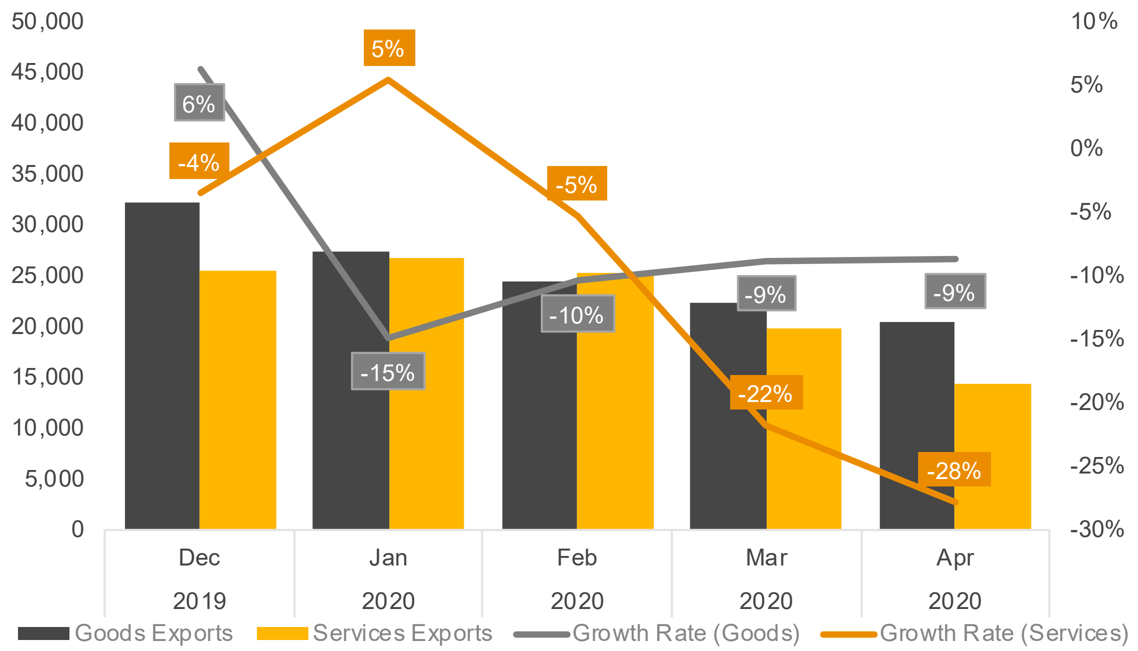


Source: ONS (June 2020)

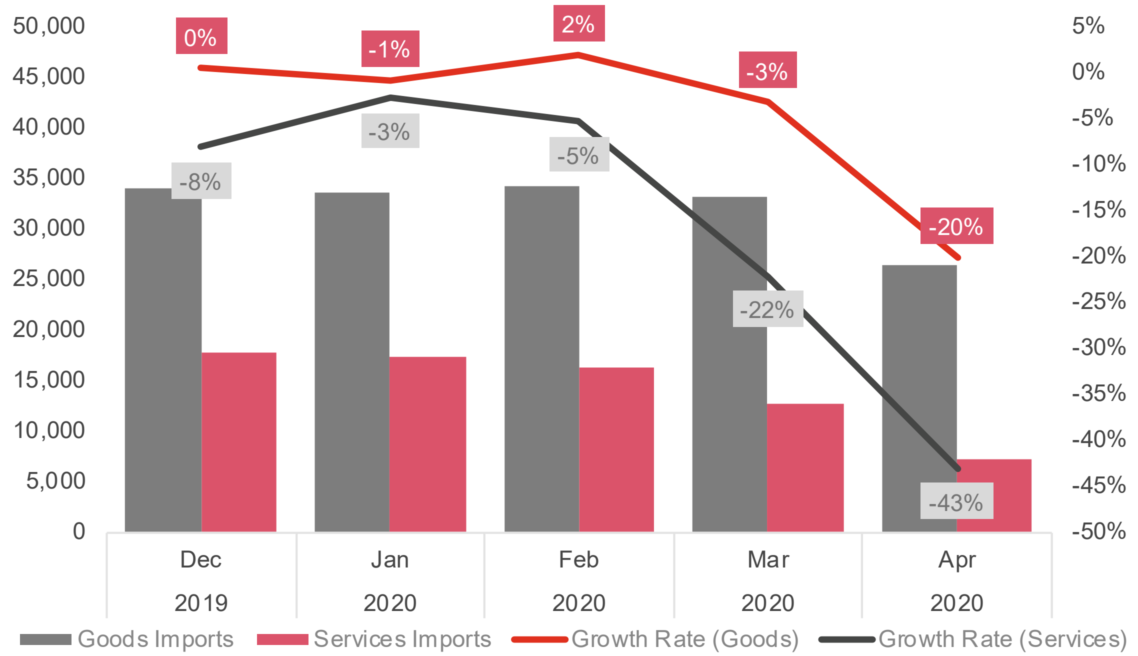
The sharp decline in UK trade since lockdown began has been mainly driven by services

The decline in trade activity as a result of the lockdown has been mainly driven by the fall in services trade. UK export of services declined by £12.4bn, while import of services declined by £10bn in the three months to April 2020 (chained volume measure). Services exports and services imports fell by 28% and 43% respectively between March and April, which is significantly faster than goods export and imports (9% and 20% respectively). While there is no data on the exact mix of services which have experienced this decline, the travel and tourism sector (air transport, accommodation, travel agency and reservation services) which accounted for 18% of total services trade in 2018 (and accounts for around 10% of UK GDP), is likely to have been hit hard by global sector lockdowns.

UK goods and services export volumes (£m) and month-on-month growth rate, seasonally adjusted, December 2019 - April 2020



UK goods and services import volumes (£m) and month-on-month growth rate, seasonally adjusted, December 2019 - April 2020

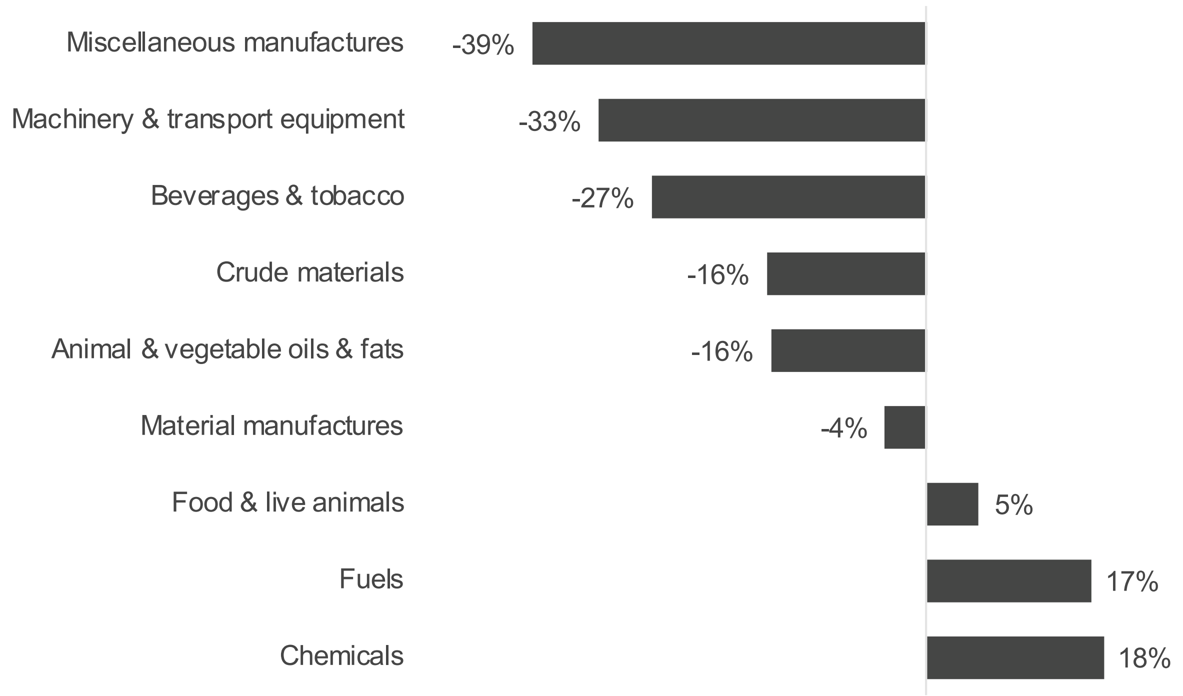


Source: ONS (March and June 2020)

Exports of manufactures and machinery most severely impacted

Commodity trade data show that in April, the biggest percentage fall in export volumes were observed in manufactures, machinery and transport equipment, and beverages and tobaccos compared to the previous year. This was driven by the decline in global demand, particularly in car exports as consumer discretionary spending was hit by economic uncertainty. The ability to supply goods for exports has also been impacted, albeit to a smaller extent, as a result of social distancing measures. On the other hand, chemical exports, such as medicinal and pharmaceutical products are 18% higher than April last year suggesting COVID-19 has boosted the UK's trade in healthcare commodities.

UK export volumes growth rate by commodity, chained volume measure, year-on-year for April 2020



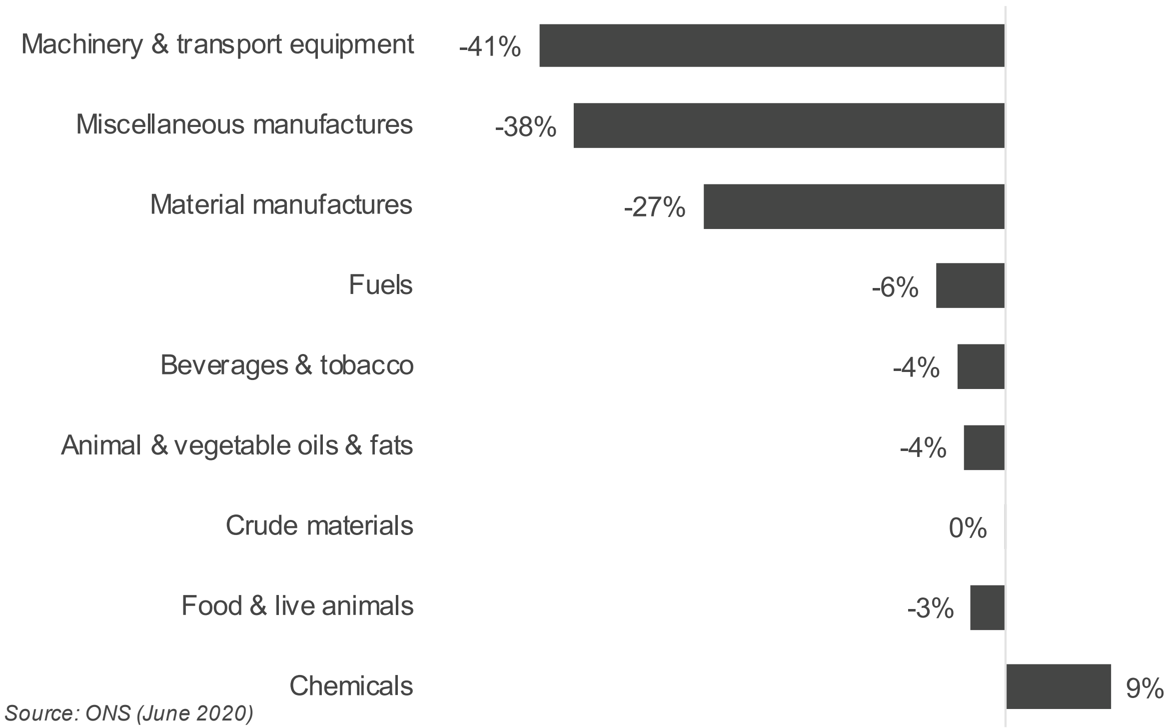
Source: ONS (June 2020)

- **Machinery and transport equipment:** This group of products include electrical goods and equipment, power generators, office machinery, road vehicles, aircraft and other modes of transport. In April, we saw an overall 33% drop in exports for this group of products, with road vehicles taking the biggest hit. Road vehicles exports in April was 72% lower than the same time last year (around £5.5bn lower measured in current prices). Consumer telecoms and sound equipment exports also fell by 53% (£27m measured in current prices) compared to last April. The reduction is driven by the reduced usage of transport globally as restrictions on travel have been imposed over the past few months.
- **Manufactures:** 'Miscellaneous manufactures' include consumer goods such as clothing, household goods, and furniture. Compared to April last year, exports of these goods are 39% lower, the largest fall out of all goods commodities exported from the UK. Exports of these luxury items have also fallen by around 90% (measured in current prices). With the closure of physical retail shops and reduction in social activities (such as going out to restaurants or theatres) consumers have less opportunity and incentive to purchase these consumer goods internationally.
- **Beverages and tobacco:** The export of these commodities has declined by 27% as sector lockdowns on hotels, restaurants and bars have impacted on demand, as well as the fall in consumer disposable incomes.
- **Fuels:** The increase in the exports of fuel is partly driven by the lack of domestic demand, which as a result has been diverted to meet foreign demand instead.

Imports of manufactured goods and cars have fallen by around two-fifths

Commodity trade data show that in April, the largest declines in imports were in miscellaneous manufactures, material manufactures, and machinery and transport equipment. Similar to the trend in exports of chemical imports (which include medicinal and pharmaceutical products and toiletries), this group of commodities is one of the few that have seen a growth in demand. It is 9% higher than April last year suggesting COVID-19 has increased import demand of healthcare commodities.

UK import volumes growth rate by commodity, chained volume measure, year-on-year for April 2020



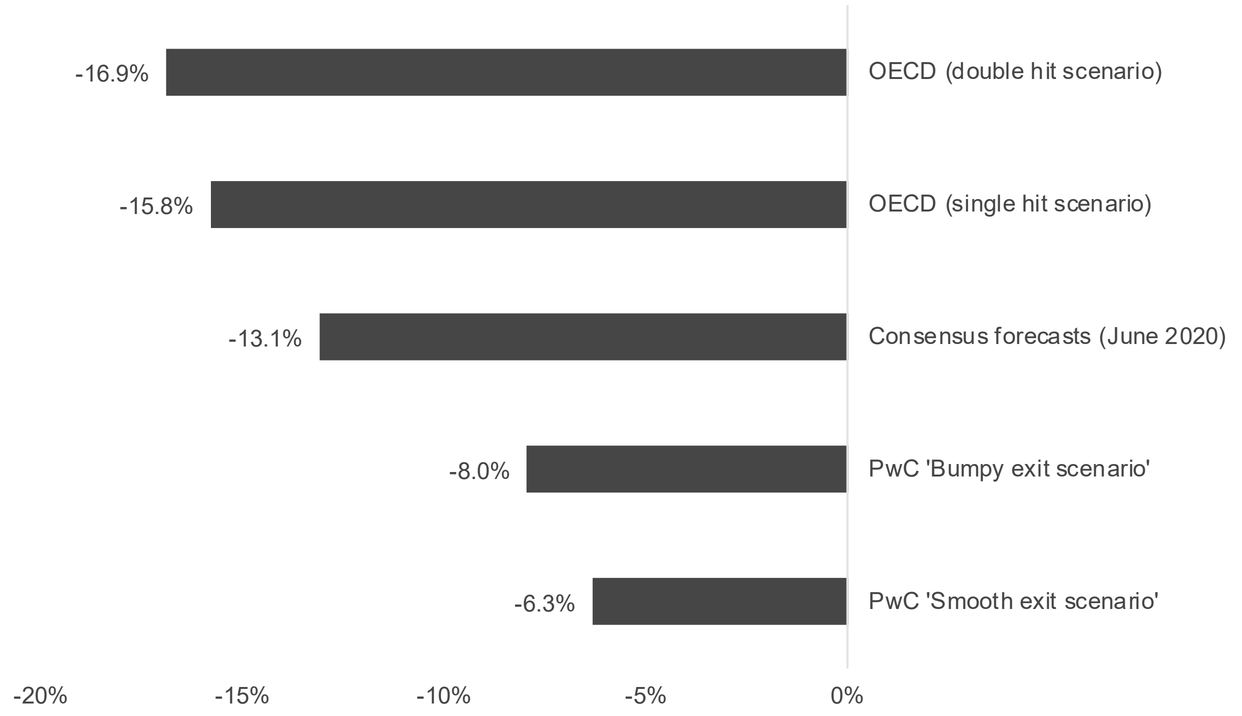
Source: ONS (June 2020)

- **Machinery and transport equipment:** This group of commodities have experienced the largest fall in imports. This is partly driven by the fall in consumer demand for new cars, which has led to knock-on impacts on demand for intermediate inputs into the auto sector. This is also likely to reflect the pause in business investment such as buying new industrial machinery.
- **Manufactures:** 'Miscellaneous manufactures' include consumer goods such as clothing, household goods, and furniture. The import value of clothing and footwear imports is £2.2bn lower than last April (around 40% lower as measured in current prices). Imports of luxury items such as jewellery and art have also fallen by more than 80%, compared to the same month in the previous year. With the high levels of uncertainty in the economy right now and fall in consumer confidence, consumers are holding off spending and increasing levels of precautionary saving.
- **Fuel** imports have declined by 6% as a reduction in economic activity from reduced transport activity and industrial production has reduced energy demand.
- **Food and live animals imports** are also slightly lower than April last year. While commercial demand for these products may have declined as a result of the closure of hospitality and leisure outlets, food products are being funnelled through retail channels as consumers shift grocery spend to supermarkets instead.

The COVID-19 crisis could cause UK exports to fall by 6-8%

There is still a high level of uncertainty on what course the pandemic will take over the coming months and years. Utilising our projections for UK GDP, and OECD and IMF forecasts for global GDP we estimate UK exports in 2020 will fall by around 6.3% (£41bn) in the 'smooth exit' scenario and by 8% (£50bn) in the 'bumpy exit' scenario, compared to 2019. Our projections are relatively more optimistic than the range forecasted by the OECD and Consensus forecasts. However, there is still considerable uncertainty over the prospects of UK trade in the short-term, which will depend on the pace of the economic recovery in the UK and its trade partners. Beyond 2020, the UK's trade performance will depend on the type of free trade agreement that it strikes with the EU following the end of the transition period.

UK export volume projections for 2020



Source: PwC analysis, OECD Economic Outlook (June 2020), IMF World Economic Outlook (April 2020), HMT comparison of independent forecasts (June 2020) – average of new forecasts made in last month

- Our forecasts are based on PwC's long-term global growth model. We use this model to project how the geographical pattern of UK exports will be impacted in the 'smooth' and 'bumpy' exit scenarios.
- We use annual data from the ONS covering UK goods and services exports from 1999-2018 to estimate a log-linear form of the gravity model. We use this panel data model as it allows us to observe the impact on UK exports as the GDP of our trade partners are impacted from COVID-19. It also factors in the effect of distance, where the more distant a country the more negative the impact on trade. We have also included variables to control for the use of a common language, whether the trade partner is a member of the EU and whether the UK has a regional trade agreement with the trade partner.
- We use global growth projections from the OECD's 'double hit' scenario in our 'bumpy exit' model and the 'single hit' scenario projections in our 'smooth exit' model. Where OECD projections are not available, we draw on the latest IMF forecasts from April 2020 in both of our scenarios.
- Our projections are for 2020, during which the UK remains part of the EU's Single Market and Customs Union. Beyond 2020, prospects for UK trade will depend on the type of a free trade agreement struck between the UK and the EU. If the UK moves to a basic free trade agreement with the EU at the end of 2020, this is likely to have a significant negative impact on export volumes in 2021 and beyond.

COVID-19 will have a range of longer term economic impacts on trade

COVID-19 is likely to have long-lasting impacts on global trade and supply chains. Although this crisis has shown how trade has been essential to saving lives and livelihoods, from the supply of PPE and other medical equipment to food, the international trading system is likely to come under more pressure, from tariff increases and other restrictions on trade, to government support in key sectors. Below we set out how the following forces may contribute to a loosening of trade ties globally and accelerate deglobalisation.

Supply chain resilience and automation

- Supply chain efficiency, which has ridden the wave of globalisation, has been the main aim of industrialisation in the past decades.
- The crisis has exposed the risk of being overly dependent on single countries or regions as a source of production inputs, as many global businesses found to their cost when Hubei was first struck down in December 2019.
- The crisis is likely to shift the emphasis away from efficiency and just-in-time production to resilience by diversifying their supply chains rather than being over-dependent on single source suppliers or single territories. Two-thirds of the global CFOs we surveyed cite better resilience and agility as a critical investment area for their business.
- The crisis has also exposed the vulnerability of global supply chains to human fallibility, which could accelerate the take-up of automation to increase supply chain resilience

Deglobalisation

- Globalisation, as reflected in trade flows, the integration of value chains, and the international migration, has been the dominating characteristic of the post-war economy.
- The re-emergence of nationalism and protectionism, as reflected by the recent escalation of trade tensions between the US and China, could result in a further decline in global trade activity. This, combined with Brexit, is likely to result in an increase in the reshoring of manufacturing activity and business services, thus accelerating the regionalisation and reshoring of supply chains. This might be driven by Industry 4.0 technologies such as 3D printing which could reduce the need to source specialist parts from abroad.
- The sourcing of goods and services that are considered of economic and strategic importance, such as medical devices, pharmaceuticals, defence and telecommunications products and services are more likely to be reshored, provided domestically or enjoy additional government support, which may distort trade incentives.

Longer-term changes in consumption and work patterns

- The impact of the lockdown in the short-term is forcing many consumers to re-evaluate their priorities.
- At least until a vaccine is found, there is likely to be a continuation of restrictions on the movement of people and travellers to discourage non-essential travel. These restrictions may have long-lasting impacts on the transport and tourism sector. These sectors' fortunes are also inextricably linked to the health of the wider economy and the willingness and ability of businesses and consumers to start spending on travel again.
- Trade in business services, particularly via "mode 4" (or the physical presence of workers to deliver services in a foreign territory, such as conducting meetings or providing consulting services abroad), may come under strain as a result of movement restrictions. However, the ability of businesses to adjust quickly to remote working may diminish the importance of physical interactions in the future. Similar adjustments may be made to the higher education sector through the broader enablement of distance learning.

Annex – methodological details

UK trade scenarios – technical notes and key assumptions

- To project the change in UK exports in 2020, we use annual data from the ONS covering UK goods and services exports from 1999-2018 to estimate a log-linear form of the gravity model, with the following specification:

$$\ln(Exports_{jt}) = \beta_0 + \beta_1 \ln(GDP_{jt}) + \beta_2 Distance_j + \beta_2 ComLang_j + \beta_3 EU_{jt} + \beta_4 RTA_{jt} + \lambda_t + \varepsilon_{jt}$$

- We find that GDP positively increases trade with the UK, while distance has a negative effect on trade. Having a common language, having an EU membership and regional trade agreement with the UK also have positive effects (see Table A.2).

Table A.1: Variables included in our modelling specification

	Variable	Definition	Data Source
Dependent variable	$\ln(\mathrm{Exports}_{jt})$	Log of UK exports to country *j* at time *t*	OMS
Explanatory variables	$\ln(\mathrm{DP}\ _{jt})$	Long of the GDP of country *j* at time *t*	OECD IMF
	$\mathrm{Distance}_j$	Distance between the UK and country *j*	CEPII
	$\mathrm{ComLang}_j$	Dummy variable equal to one if the UK shares a common official or primary language with country *j*	CEPII
	EU_{jt}	Dummy variable equal to one if both the UK and country *j* are members of the EU at time *t*	CEPII PwC Analysis
	RTA_{jt}	Dummy variable equal to one if the UK has a regional trade agreement with country *j* at time *t*	CEPII WTO PwC Analysis

Table A.2: Estimated gravity model for UK exports

Dependent Variable	Log of UK exports
Log of partner country's GDP	0.92***
Log of the distance between UK and partner country	-0.57***
Common language	1.08***
EU Membership (dummy)	0.61***
Regional Trade Agreement (dummy)	0.11***

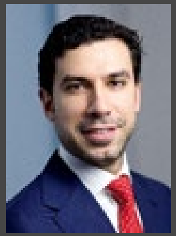
*** Statistically significant at the 1% level, ** statistically significant at the 5% level, * statistically significant at the 10% level

Nick Forrest
Economics leader

T: +44 (0) 7803 617744
E: nick.forrest@pwc.com

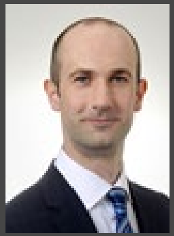
Jonathan Gillham
Chief economist

T: +44 (0) 771 456 7297
jonathan.gillham@pwc.com



Barret Kupelian
Senior economist

T: +44 (0) 771 156 2331
E: barret.g.kupelian@pwc.com



Alex Tuckett
Senior economist

T: +44 (0) 7483 373 911
E: alexander.tuckett@pwc.com

Edmond Lee
Senior economist

T: +44 (0) 7802 660 423
E: edmond.sp.lee@pwc.com

Jing Teow
Senior economist

T: +44 (0) 7525 281 974
E: yong.jing.teow@pwc.com

For more information on our Economics services and reports, please contact one of our team above or visit our website at:

pwc.co.uk/economics

For more information on the wider business impact of COVID-19, please see our website at:

pwc.co.uk/covid19