

# UK Economic Update

November 2020



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# Summary

This month's edition provides an update on the latest UK economic data, including the third quarter GDP and employment data. We provide an update to our projections and scenarios, reflecting England's second national lockdown in November and other developments, including the outcome of the US election and progress in a vaccine for COVID-19.

## The latest UK economic data

- The pace of the UK's economic recovery continues to slow down. After two consecutive quarters of negative growth, the UK economy grew by 15% in Q3, from the previous quarter. But this hides a slow down in the monthly rate of growth, from 6.3% in July, 2.2% in August, and 1.1% in September. This means more than 80% of the UK's recovery occurred in June and July. As of September, economic output stood at 8.2% below pre-COVID levels.
- The labour market remains under pressure, but some tentative positive signs have emerged. In September, a record increase of 181,000 people were made redundant, bringing the unemployment rate for the three months to September up to 4.8%. This represents a 0.7 percentage points increase from the previous quarter. However, there was also a record flow of 215,000 people from economic inactivity to unemployment, which suggests that the gradual relaxation of social distancing measures and the opening of schools has encouraged workers to seek employment.

## Our revised projections for the UK economy

- **We have revised our projections for the UK economy.** We expect the UK economy to end the year with negative quarterly growth for Q4 of between -2.1% and -3.3%. Under our 'quick rebound' and 'slow rebound' scenarios, the expected contraction in GDP ranges from around -11.2% to -11.4% in 2020, before returning to growth of around 6.0% to 3.4% in 2021. Our revised scenarios reflect the introduction of a second national lockdown in England and slow progress in UK-EU trade negotiations. As a result, our headline projection for GDP growth in 2021 in the 'quick rebound' scenario is weaker than in our previous optimistic scenario, in which we projected growth of 10.1%.
- **We don't expect economic activity to recover to pre-pandemic levels until at least Q3 2022.** Under our 'quick rebound' scenario, we expect the level of GDP to reach pre-pandemic levels in Q3 2022. Under our 'slow rebound' scenario, our assumption of further restrictions and a 'thin-deal' with the EU push back the recovery timeline to the end of 2023.
- **We expect all sectors to return to growth in 2021.** With the prospect of an earlier-than-expected mass roll-out of vaccines in sight, we expect the healthcare, hospitality and transport sectors to lead growth in 2021. They are estimated to grow by between 21% to 48% under the 'quick rebound' scenario, and 4% to 13% under the 'slow rebound' scenario.
- **We will continue to revise our projections.** Government policy continues to rapidly evolve, in response to developments in the pandemic. At the same time, the coming weeks will likely see key information come to light regarding the outcome of the UK-EU trade negotiations. As a result, we will continue to revise and refine our scenarios and projections as more information materialises. We will release a new update in December.

# Summary

This month's edition introduces our "nowcasting model", which has been used to develop our projections. We also discuss the outlook for consumer spending over the Christmas period.

## Introducing our nowcasting model

- **For the first time in our UK Economic Updates, we develop our very own nowcasting model based on a Dynamic Factor Model to predict monthly GDP growth.** The model uses real time and high frequency data to provide more timely estimates of economic output than official data releases. This highly dynamic model has been adopted by a number of central banks but mostly on a quarterly basis. However, in this analysis we utilise the predictive power that a monthly nowcasting model offers to provide a closer view of the UK economic outlook in times of uncertainty.
- **Our monthly nowcasting model projects 0.4% monthly GDP growth for October 2020.** We expect monthly GDP growth to continue to slow down, following month-on-month growth in September of 1.1%. This reflects the introduction of the local tiered lockdown system.
- **After six consecutive months of growth, we then expect the economy to contract in November.** We expect that monthly GDP will decline by around 6% in November, due to England's second national lockdown, followed by marginal month-on-month growth of 0.3% in December 2020.
- Please refer to the Annex for more details into the methodology and data sources used in our nowcasting model

## Our revised projections for the UK economy

- **PwC's Consumer Sentiment Index worsened as England entered a second national lockdown.** After continued recovery since March, the latest consumer sentiment index, conducted at the start of November, recorded a decline, as on balance, consumers expect to be worse off over the next 12 months than a year ago.
- **The risks for Christmas spending are skewed to the downside.** On balance, the downside risks to Christmas spending outweigh the upside factors. While positive factors are at play - namely, high levels of involuntary saving, the extension of the furlough scheme, and positive news regarding a vaccine - the considerable uncertainty surrounding the economic outlook and what this year's Christmas may be like are likely to weigh on spending intentions.
- **But bumper January sales could be on the horizon.** However, the outlook for January sales spending is more positive. Optimism may pick up in the new year, if plans to begin rolling out a vaccine are realised. In addition, if consumers are largely restricted to online shopping, retailers are likely to have unsold stock, which could lead to bumper January sales discounts. This may encourage a release of pent-up demand.

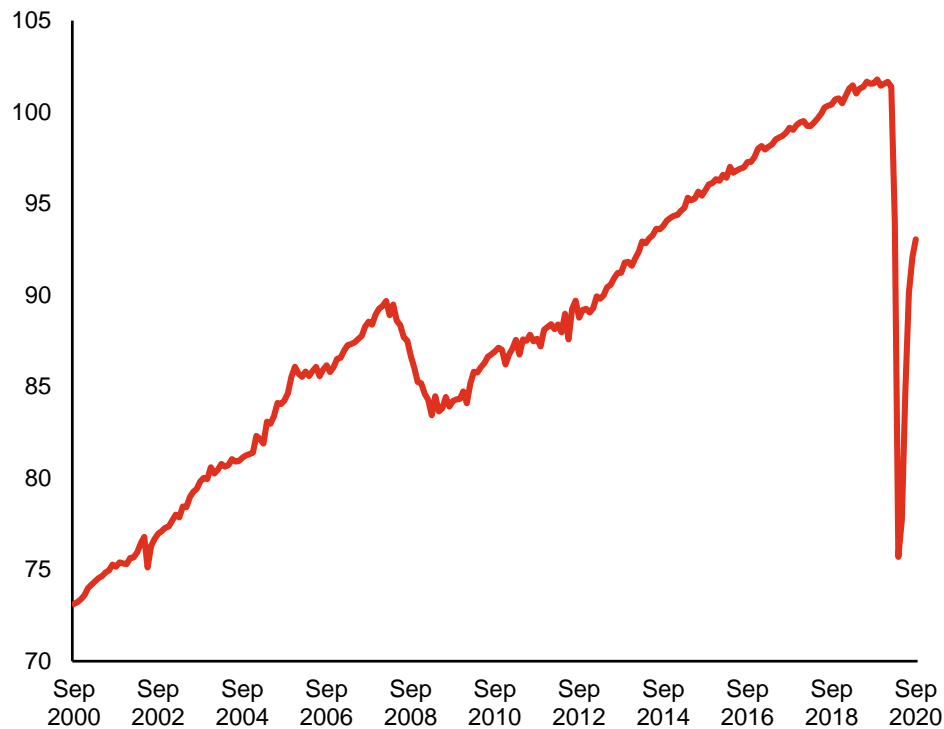
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The UK's economic  
performance in Q3

# The UK economy grew by 15.3% in Q3, but remains 8.2% below pre-pandemic levels

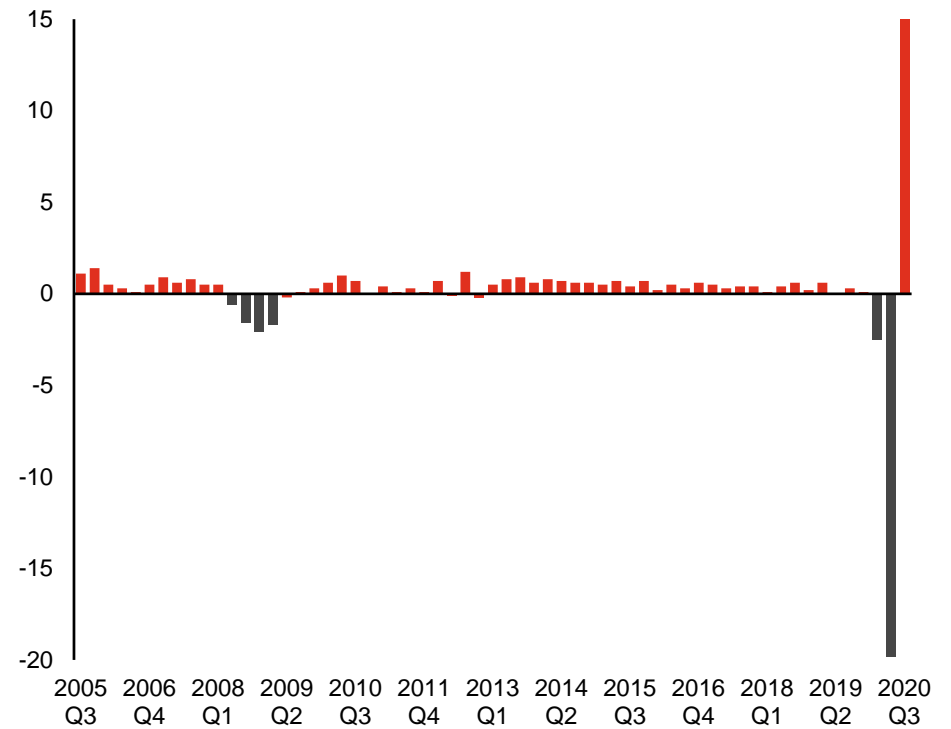
The data for the three months to September showed the UK economy grew by 15.3% on the previous quarter, the highest quarterly rise ever recorded. However, beneath the surface we find a significant slowdown in the monthly pace of the recovery. Over the three months to September, month-on-month growth has gradually slowed from 6.3% in July, 2.2% in August, and 1.1% in September. This means more than 80% of the UK's recovery occurred in June and July. Around two-thirds of the lost output caused by the first national lockdown has been clawed back, but economic output remains 8.2% below pre-COVID levels as of September.

Real GDP monthly index (2018 = 100)



Source: ONS

Real UK GDP growth, Quarter 3 2005 to Quarter 3 2020, quarter on quarter growth, %



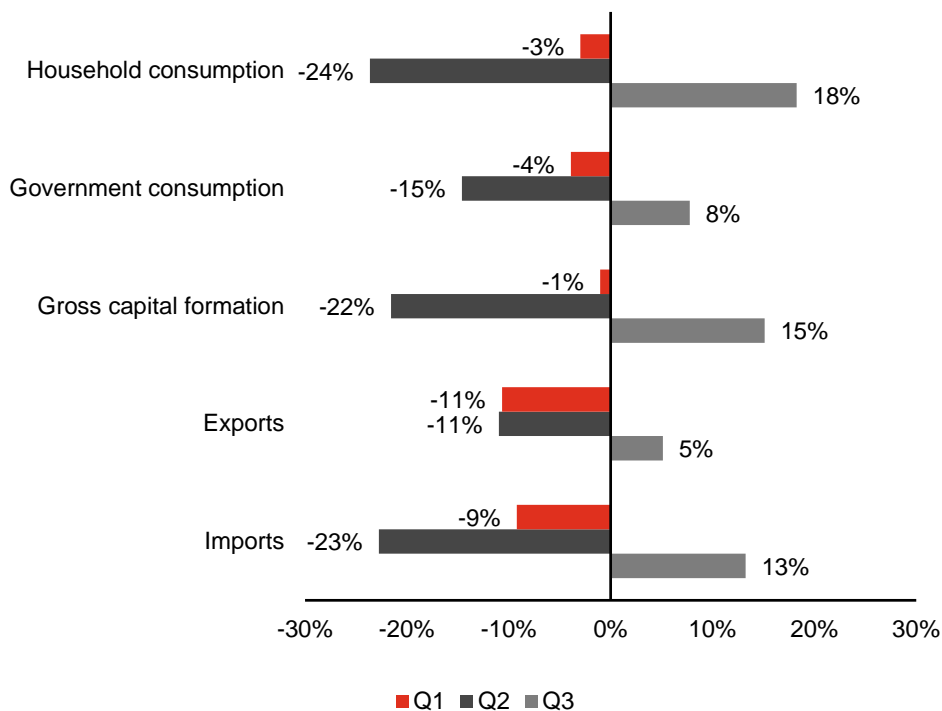
Source: ONS

# Household spending returned to growth in Q3, but levels remain 12% below pre-pandemic levels

Following record contractions in Q2 across the GDP expenditure components, Q3 saw significant growth, most notably in household spending and gross capital formation. The recoveries largely reflect the gradual reopening of the economy over the summer, slowing down in September, to some extent with the gradual reintroduction of some restrictive measures (i.e. the rule of six) from mid September.

However, all levels of expenditure remain below their pre-pandemic levels. Household consumption remains 12% below levels seen in Q4 2019, as the pandemic both restricts and alters spending patterns. Business investment stands at just 80% of its Q4 2019 levels, reflecting higher levels of economic uncertainty restraining the willingness of firms to undertake investment.

## Growth in GDP expenditure components, Q1 - Q3 2020



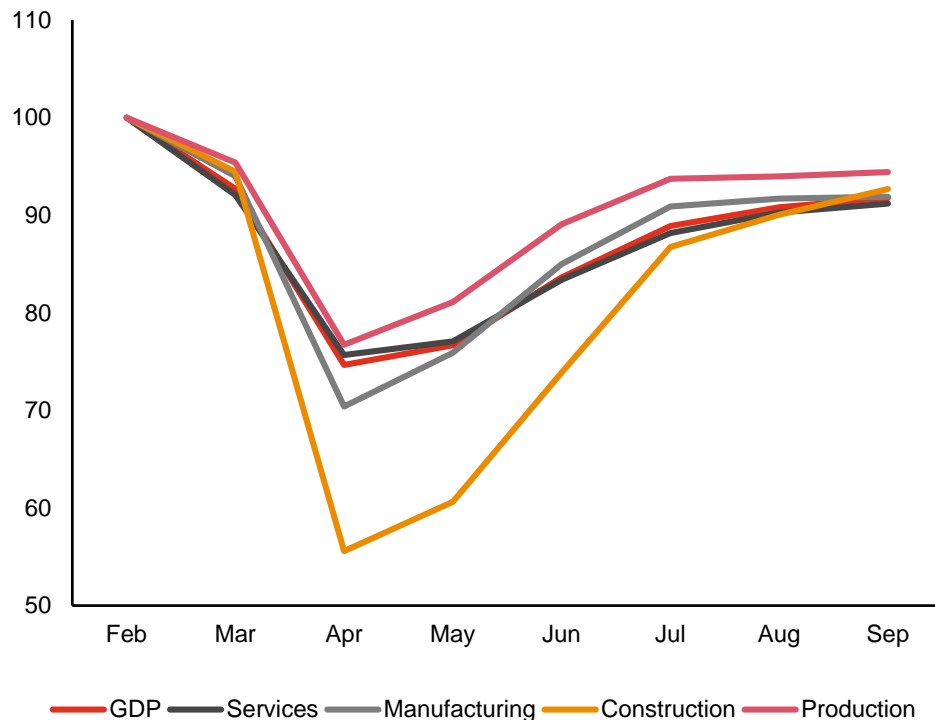
- Household consumption:** The 18% growth in private consumption in Q3 was mainly driven by spending on restaurants and hotels as the economy gradually opened up, buoyed by the government's 'Eat Out To Help Out' scheme in August. Transport also played a part, due to higher spending on motor cars and fuels as normal activity and travel around the country resumed. Positive contributions were also made from clothing and continued growth in furniture and household equipment. This corresponds with records quarterly growth of 17.4% in retail sales.
- Government consumption:** A resumption of activity in healthcare drove growth, most notably with regards to elective surgeries and GP services. The volume of healthcare consumption remains 25% below Q4 2019 levels as coronavirus safety protocols continue to limit activity and patient capacity. With the reopening of schools in September, education consumption also picked up, but with lower attendance than usual.
- Gross capital formation:** Growth in Q3 was driven by housebuilding (which grew by 70% q-on-q), as construction activity resumed, and business investment (which grew by 9% q-on-q), as firms make investments in ICT equipment and buildings.
- Net exports:** A recovery in both imports and exports reflects pent up demand, boosting demand for UK manufacturing exports like cars, while at the same time increasing demand from UK consumers for international goods and services.

Source: ONS

# Recovery momentum has slowed in all main sectors across the third quarter

The third quarter saw record quarterly increases across services, construction and production (which includes manufacturing) output, reflecting some recovery from the steep contractions experienced in Q2. However, record quarterly growth masks a month-on-month slowdown over the three months to September. This reflects a combination of base effects from the steep contractions of Q2 and, to some extent, the reintroduction of distancing requirements from mid September. The primary drivers behind the 1.1% expansion in GDP in September were a pick up in construction output (2.9% higher than in August) and services (1.0% higher), while manufacturing output grew by just 0.2%, relative to August. A further slowdown, and potentially contraction, in growth is expected in October with the introduction of the local lockdown system.

## Monthly output index of UK sectors (Jan 2020 = 100)



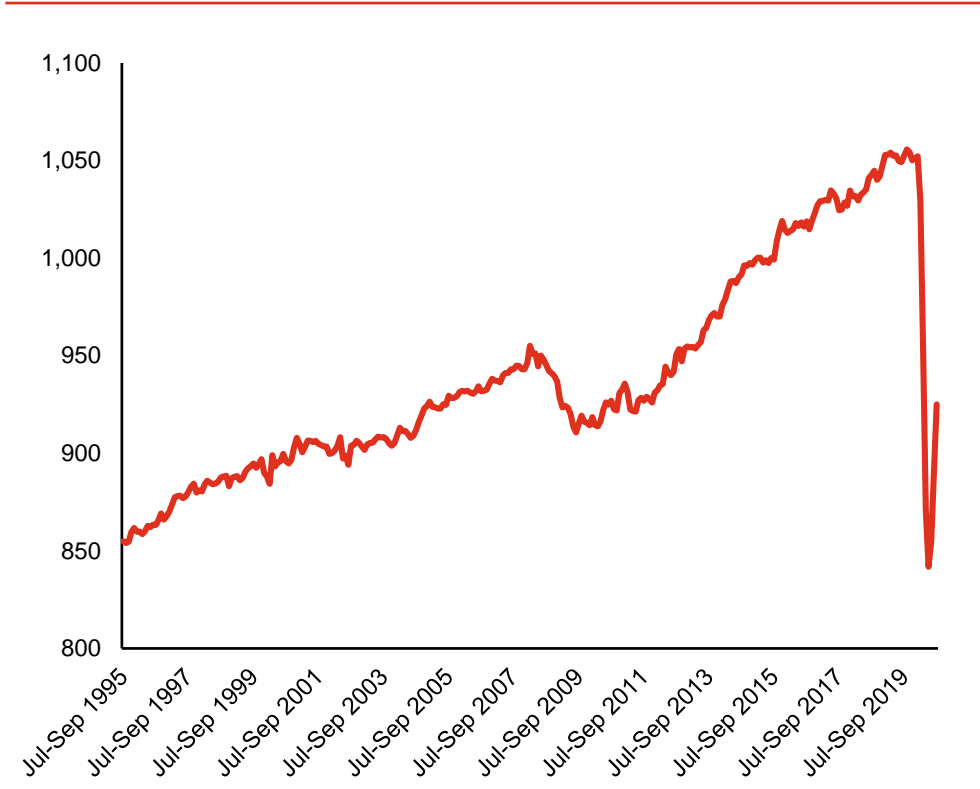
Source: ONS

- **Services output:** Month-on-month growth slowed from 2.4% in August to 1.0% in September. The professional, scientific and technical activities sector was the largest contributor, along with education as schools reopened. From spectacular growth in August (over 65% higher output compared to July), output in the accommodation and food services sector slipped back by 8% as the government's 'Eat Out To Help Out's scheme ended. Output in the sector is at 70% of pre-pandemic levels, as health risks and distancing rules limit activity and tourism.
- **Production output:** The manufacturing sector experienced growth in 10 out of its 13 sub-sectors, while the manufacture of pharmaceuticals served to drag on growth in September, with a contraction of almost 10% compared to the previous month. Manufacturing output stands at 92% of pre-pandemic levels in September. In other production categories, the energy sector has recovered to above February 2020 levels
- **Construction output:** Housebuilding drove growth in construction in September, with output 4.2% higher than in August, as firms adjust to social distancing requirements to maintain work. The infrastructure and private new housing sub-sectors are the only components to have returned to their February peak, while public new housing remains the furthest away from its peak.

# The labour market is still under pressure as redundancies rise by 181,000 in Q3

The labour market continues to feel the impact of the pandemic. In the latest official figures for the three months to September, the unemployment rate rose to 4.8%, up 0.7 percentage points from the previous quarter. This equates to an increase of 243,000 — the largest quarterly increase since the financial crisis in 2009 — bringing the UK’s total unemployed to 1.6 million people. Redundancies also registered a record increase of 181,000 on the quarter to reach a new record high. Total hours worked showed signs of recovery, but remain 12% below pre-pandemic levels.

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



Source: ONS

**UK redundancies (people aged 16 and over), not seasonally adjusted, thousands**

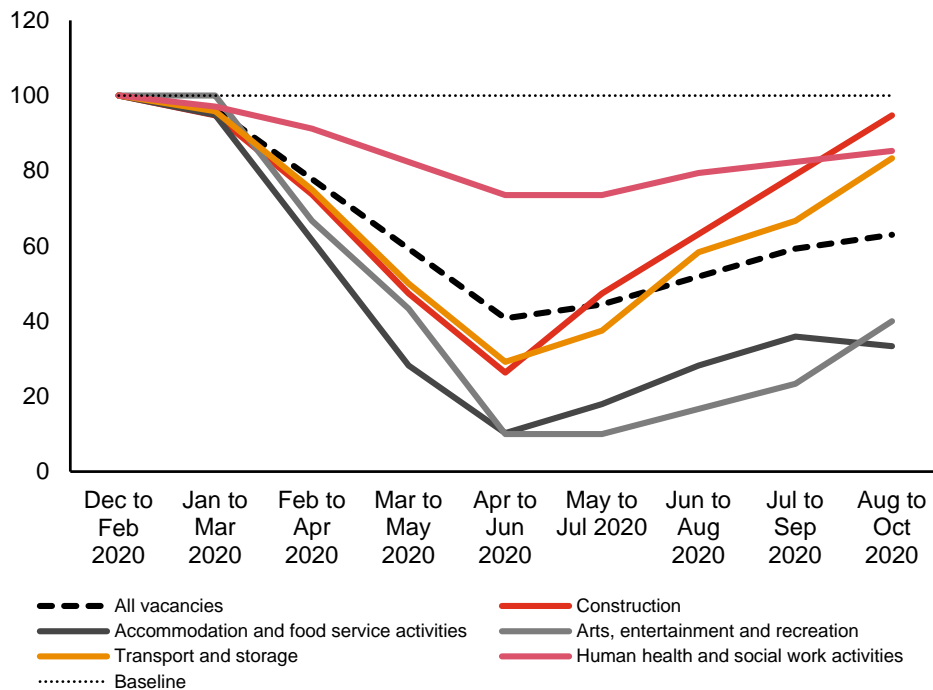


Source: ONS

# There are tentative positive signs emerging, however, as 215,000 people begin searching for work from economic inactivity

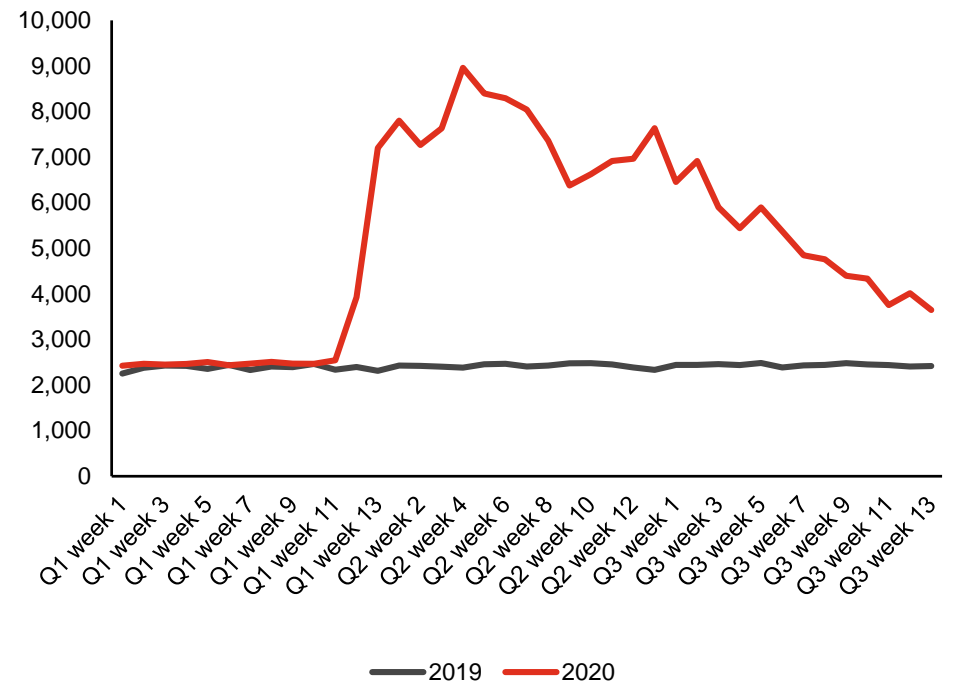
Despite record high redundancies and rising unemployment, the share of people who are economically inactive remains largely unchanged at 20.9% in September. Indeed, there was a record flow of 215,000 people from economic inactivity to unemployment, which suggests that the gradual relaxation of social distancing measures and the opening of schools has encouraged workers to seek employment. It also implies that the rise in the inactivity rate observed in the previous months is likely to be a temporary rather than a permanent phenomenon, and that scarring in the labour market is probably going to be limited as long as demand levels in the economy return to pre-crisis levels. Vacancies have also continued to recover in the three months to October, exhibiting a quarterly increase of 146,000. But the number of vacancies remain low compared to a year ago, at two-thirds of levels in Q3 2019. After three consecutive months of growth, vacancies in accommodation and food services fell, as the outlook for the hospitality sector weakens with the local lockdown system in October.

**Job vacancies per 100 employee jobs, seasonally adjusted, (Index, December to February 2020 = 100)**



Source: ONS

**Total number of persons temporarily away from paid work, seasonally adjusted, UK, January to May, thousands**

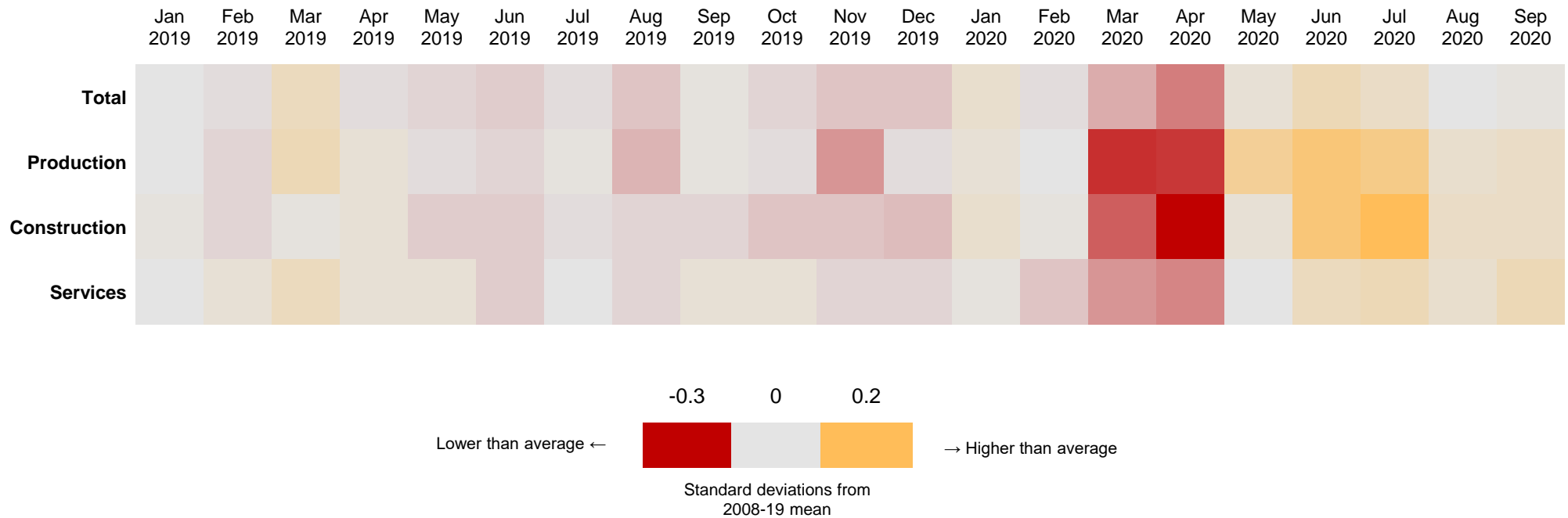


Source: ONS

# Business activity appears to be improving, with more business creations in Q3 than a year earlier

There are positive signs for the recovery in business activity. The number of business created in Q3 was about 5% higher compared to the equivalent statistic 12 months ago. This reflects a rebound from the slowdown of business creation in Q2 (the number of new businesses in Q2 was 13% below 2019 levels), as well as the opportunities in sectors less adversely affected by the pandemic. For example, sectors with greater opportunities for working from home, such as professional and administrative services industries and online retail, made up a large share of business creations than usually observed in this time of year. Most of the business creations in Q3 were smaller than usual, based on both employment and turnover, reflecting the uncertainties surrounding taking on too many workers or expanding in the midst of the pandemic. The latest VAT diffusion index data for September also show tentative positive signs; turnover across all three main sectors remains marginally higher than the historical average, although less so than over the summer months. This again reflects the slowdown of the economic recovery; the coming months are likely to see a dip below averages over the lockdown months.

## VAT diffusion index, turnover, month on month, seasonally adjusted, standard deviations from the mean



Source: ONS

# Headline consumer price inflation increased from 0.5% in September to 0.7% in October

Consumer price inflation remains subdued at 0.7% in October, but saw a slight uptick in growth, up from 0.5% in September. This small rise in the headline 12-month CPI rate was mainly driven by an increase in prices for 'clothing and footwear'. This reflects a return to usual price growth, following the discounting that occurred in March and April in response to the national lockdown. At the other end, 'recreation and culture' made the largest negative contribution to the inflation rate, reflecting reduced demand for foreign holidays and a lack of new cinema releases. 'Restaurants and hotels' is the only category for which prices remain lower than they were a year ago, due to the continued effect of the temporary reduction in VAT. The gradual increases in consumer prices could be temporarily cut short next month, as England's second national lockdown in November restricts activity and demand for things like fuel. In the run up to Christmas, however, we could see a further pick up in household spending, which could put upwards pressure on prices.

## CPIH and CPI, % change from previous year



Source: ONS

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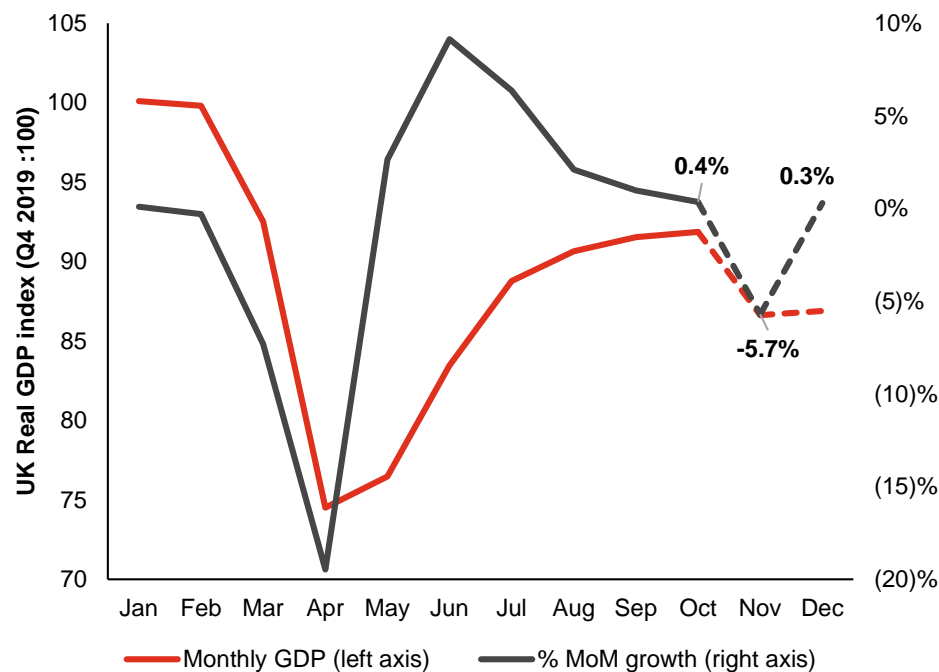
Outlook for the UK  
economy

# After six consecutive months of growth, our analysis predicts that the economy will contract in November by 5.7%

For the first time in our UK Economic Updates, we use our nowcasting model (see Annex for methodological details) to project monthly GDP growth. A nowcasting model uses real time data to provide more timely estimates of economic output than official data releases. Our nowcasting estimates predict a month-on-month GDP growth rate of 0.4% in October, representing a slow down in growth of 0.7 percentage points compared to September due to the introduction of the tiered local lockdown measures in England. Our analysis predicts that the economy will then shrink by 5.7% in November, as a result of the second national lockdown in England, before marginally recover by 0.3% in December.

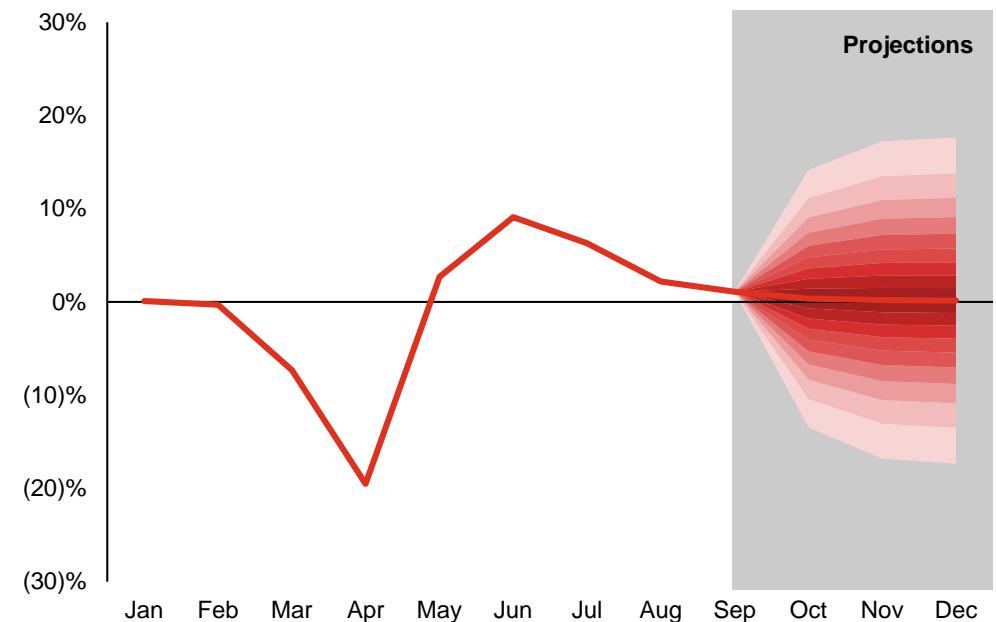
The fan chart on the right shows the predictive interval of our predictions at different probabilistic levels (30%, 60% and 90%). In particular the shaded area shows the range which GDP growth is expected to lie within on 90 out of 100 occasions. The relatively wide predictive interval suggests that our model is sensitive to the level of uncertainty in the economy and the predictions should be used as an indicator rather than the exact prediction of each month's GDP growth. The Annex provides further explanation of the fan chart and how it can be interpreted.

**UK GDP, monthly levels and growth rates, 2020**



Source: PwC analysis

**UK GDP, MoM growth rate predictive interval, %, 2020**



Source: PwC analysis

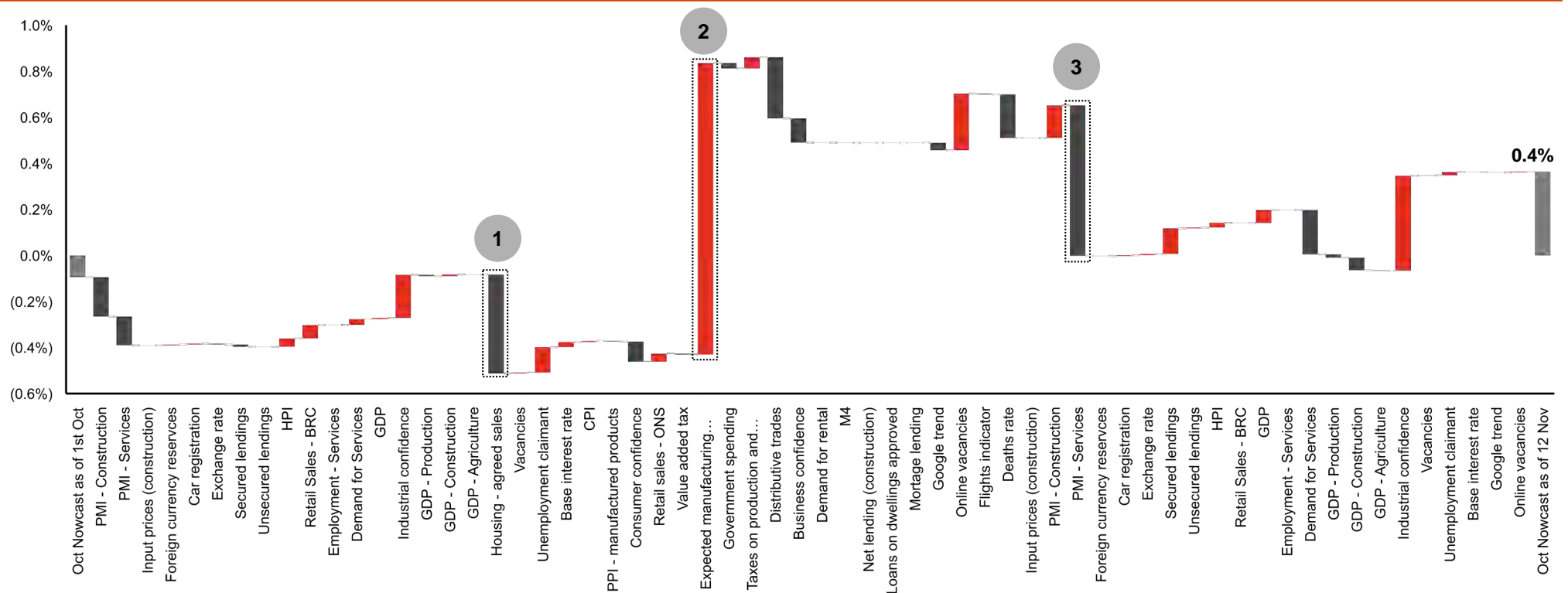
# Nowcasting projections are constantly being revised with real-time data

The chart below shows how our nowcasting prediction for October has been revised over time. Key drivers includes:

1. The decrease in **Housing - agreed sales** was larger than expected in October, contributed to a downward revision.
2. The increase in **Expected manufacturing output** was higher than expected in October, contributed to an upward revision.
3. The fall in **PMI - Services** was larger than expected in October, contributed to a downward revision.

Overall, including movements in all other macroeconomic indicator, we expected the range of Oct growth rate to be centred at **0.4%** (See Annex for chart explanation)

## UK real GDP October growth rate nowcast revisions (From 1 October to 12 November)



Source: PwC analysis

■ Increase ■ Decrease ■ Total

# Looking further ahead, the economic outlook will depend on the nature and duration of further restriction measures and the outcomes of the UK-EU trade negotiation

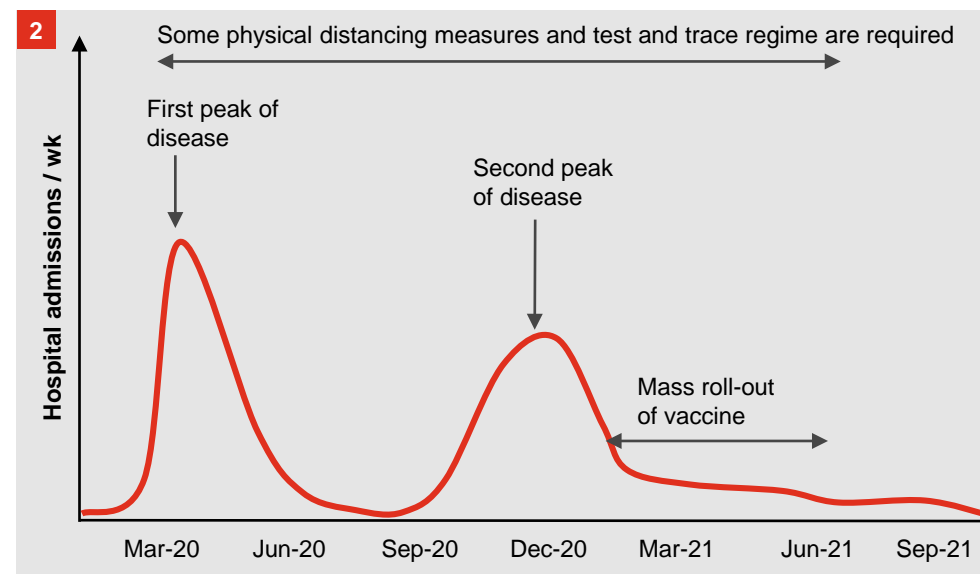
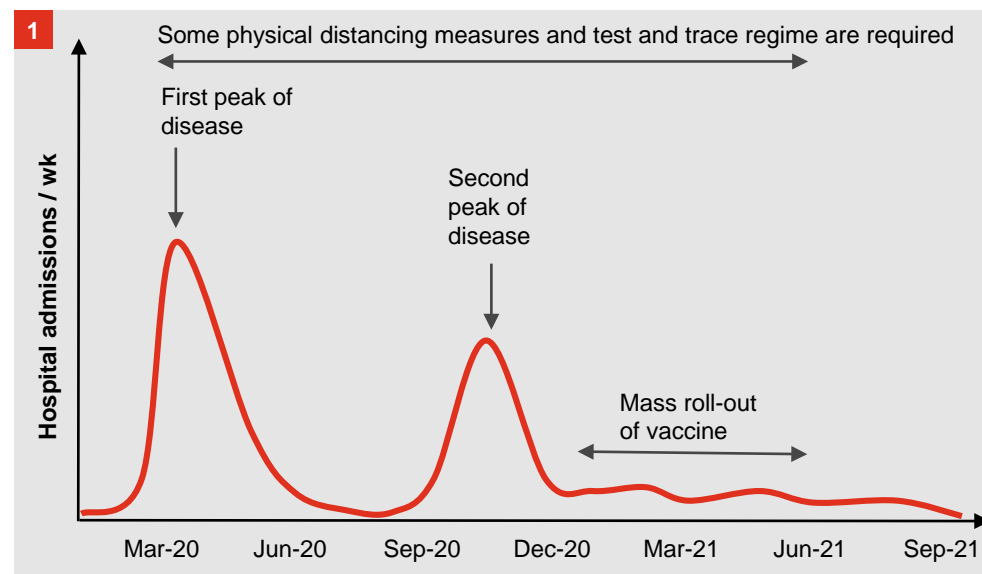
Our illustrative scenarios reflect a range of possible developments in the pandemic and in UK-EU and UK-US trade negotiations. Under the 'quick rebound' scenario, we assume that the November national restrictions will be sufficient in bringing R below one, but under the 'slow rebound' scenario, an extension of the lockdown may be necessary to manage the hospital admission rate over the winter. Together with possible economic scarring of the pandemic, the possible outcomes of trade agreements with the UK's main trading partners, such as the EU and the US, could weigh on long-term recovery prospects of the economy in 2021 and beyond. In our scenarios, we assume a mass roll out over the first half of 2021. We emphasise that this does not assume vaccination of the entire population next year; therefore, the possibility of a vaccine should be viewed as offering light at the end of the tunnel, rather than a 'silver bullet' solution.

## Quick Rebound – Key assumptions

- The November lockdown in England is effective at reducing R rate below one and lowering hospital admissions. As a result, the UK returns to its local alert system on 2nd December, along with social distancing requirements which remain in place into 2021
- An immediate move to a free trade agreement with the EU is achieved by the end of the year
- Negotiations for a UK-US trade deal go smoothly

## Slow Rebound – Key assumptions

- The November lockdown in England is extended in order to reduce hospital admissions significantly and sufficiently. The UK then returns to its local alert system, until at least the summer next year
- A 'thin-deal' with the EU is negotiated
- The UK-US trade negotiations are slow but smooth

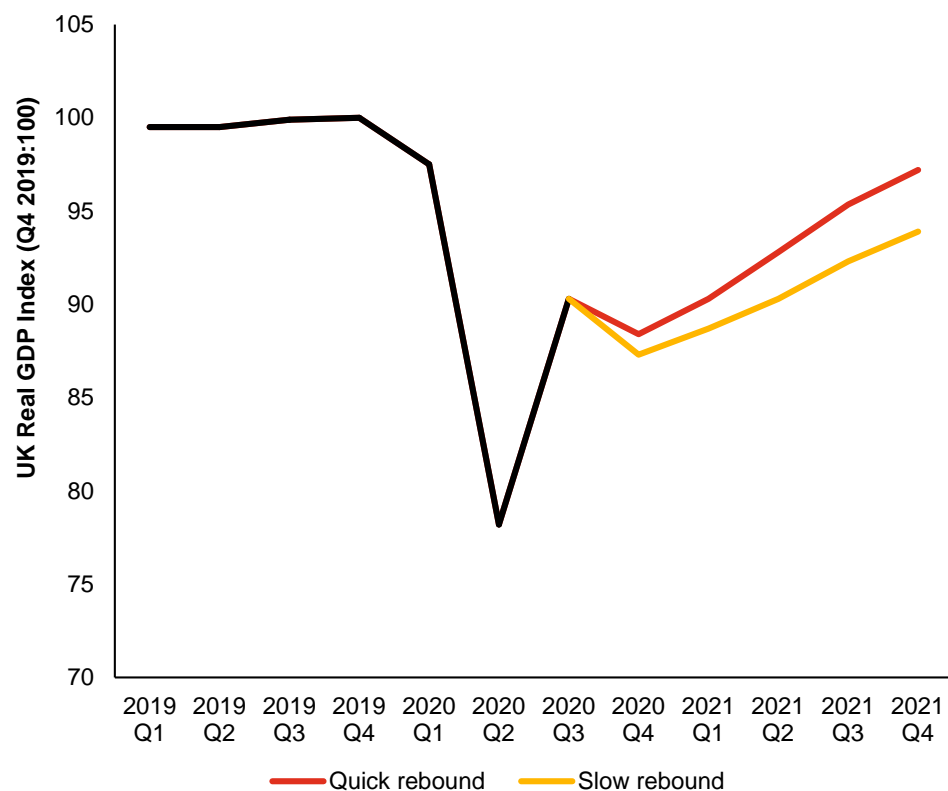


Note: Our scenarios assume a mass roll out of vaccine in the first half of 2021, The OECD predicts that an early vaccine would add 2 percentage points to the global GDP in 2021 ([link](#)). However, there are still uncertainties surrounding this assumption.

# After a double dip, the economy is expected to bounce back as early as Q1 2021 but at a much slower pace

Our revised projections show the UK following a W-shaped recovery. The UK economy is expected to end the year with negative quarterly growth for Q4 of between -2.1% and -3.3%. We expect annual GDP growth to be between -11.2% and -11.4% in 2020 in our 'quick rebound' and 'slow rebound' scenarios. Economic activity is then likely to improve, responding to a potential mass roll-out of vaccines over the first half of 2021. However, the possibility of mild economic disruption following the outcome of the UK-EU trade negotiations could weigh on potential growth.

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



Going into 2021, while a mass roll-out of vaccines would boost economic activities in general, uncertainties over the UK-EU and UK-US trade negotiations and possible lockdown extension are likely to drag down the pace of economic recovery in the 'slow rebound' scenario. In our two scenarios, we project GDP growth in 2021 to range between 6.0% and 3.4%.

Given the potential setback caused by further lockdown restrictions and possibility of an extension, we estimate that the level of GDP may still be around 2.8% to 6.1% below the pre-crisis mark by the end of next year.

Our expectation is that the economy won't recover to the pre-crisis levels until Q3 2022 under the 'quick rebound' scenario, and by the end of 2023 under the 'slow rebound' scenario.

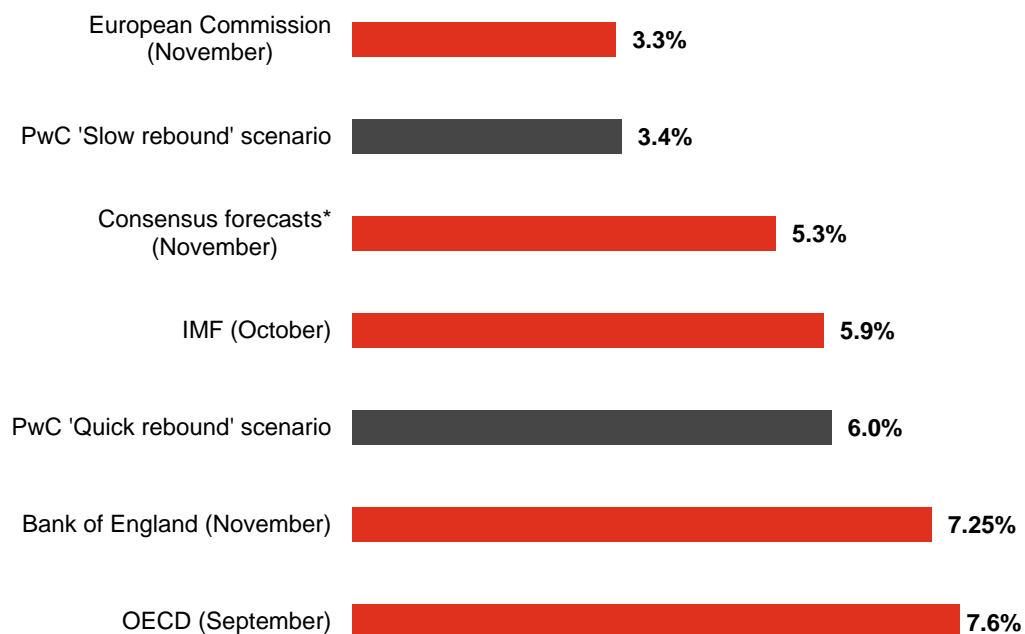
Real GDP growth	2020	2021
Quick rebound scenario	(11.2%)	6.0%
Slow rebound scenario	(11.4%)	3.4%

Source: PwC analysis

# Our GDP growth projections are broadly in line with other third-party projections

Going into 2021, uncertainties remain around the future trade relationships between the UK and its main trading partners, and the trajectory of the pandemic. Factoring in recent economic and political developments, our projections are broadly in line with other external projections.

## Comparison of 2021 GDP projections and scenarios



While most external forecasters assume an immediate move to an UK-EU free trade agreement in 2021<sup>(#)</sup>, under the 'slow rebound' scenario we assume absence of a free trade deal after the end of the transition period, weighing down the UK economic recovery in 2021.

In addition, this month's lockdown, its less intense restrictions, the possibility of extension and vaccine efficacy news have yet been covered by earlier forecasts. We have, therefore, updated our scenario assumptions to reflect their potential impact on the economic outlook in both short term and medium term.

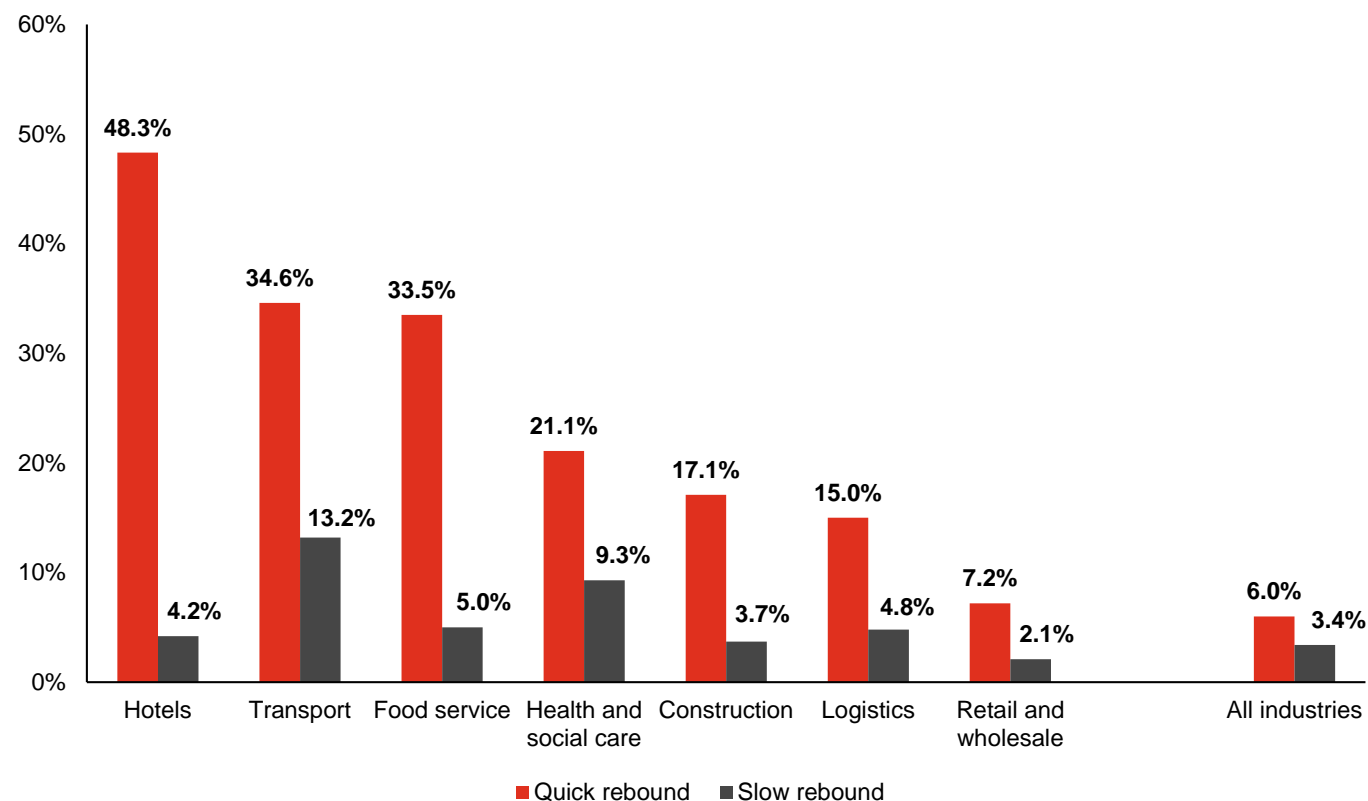
(\*): HMT comparison of independent forecasts (November 2020) – average of new forecasts made in last month  
Source: PwC, EC, OECD, IMF, HMT, BoE

(#): For example, BoE and OBR. Among a few, the EC assumes the UK-EU trading relations to be based on WTO Most Favoured Nation (MFN) rules from 2021 in their European Economic Forecast (November 2020).

# Hospitality, healthcare and transport sectors will lead growth in 2021 as a vaccine is rolled out and fewer restrictions are in sight

We anticipate that most sectors will return to growth in 2021, with hotels, food service, transport and healthcare leading the way. They are expected to grow by between 21% and 48% on average under the 'quick rebound' scenario, and between 4% and 13% under the 'slow rebound' scenario. The potential mass roll-out of a vaccine over the first half of 2021 following this month's vaccine efficacy announcements would boost growth across the sectors. However, this is subject to considerable uncertainty, such as regulatory approval, and possible challenges, such as production and distribution.

## Projected GVA average annual growth rates of leading industries, %, 2021



Source: PwC analysis

We expect the **hotels, transport and food service** sectors to grow as they recover from a low base in 2020.

Being allowed to stay open during the second lockdown, construction will continue to grow in 2021, partly driven by fiscal measures to boost infrastructure investment.

**Logistics** is likely to recover more strongly, driven by the acceleration of e-commerce and unprecedented demand for vaccine distribution, although under the 'slow rebound' scenario, 'thin-deal' impact on trade may have mild downside effects on the sector.

**Retail and wholesale** is expected to experience a setback as a result of the 2nd lockdown, stockpiling aftermath and cautious consumer spending (as explained further in Section 3) but release of pent-up demand and vaccine news would help maintain growth in the short run.

Going into 2021, adaptations made by businesses should enable continuance of operation to support the recovery\*.

(\*): Google mobility data shows less disruptive activity in early November lockdown compared to the first national lockdown ([link](#))

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The outlook for  
consumer spending  
over Christmas

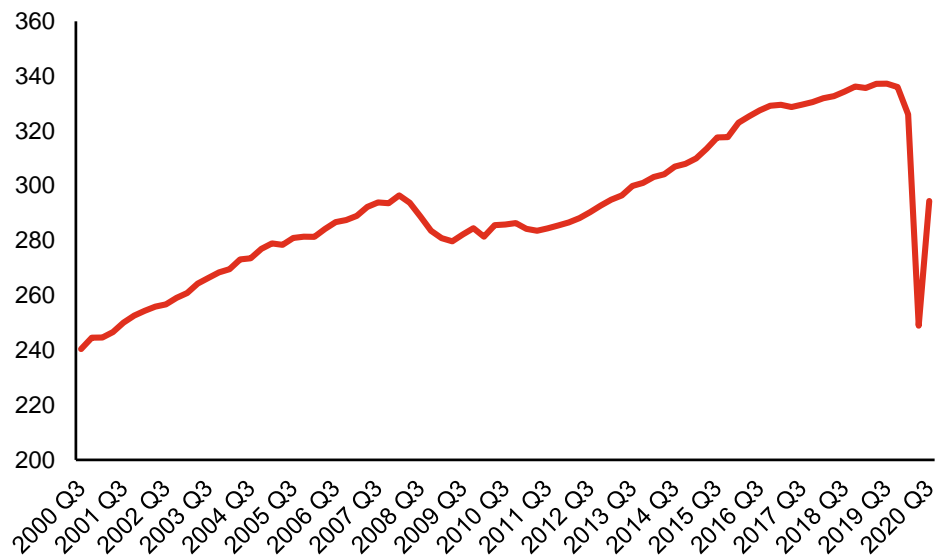
# Despite household spending remaining 12% below pre-pandemic levels, retail sales have made a strong recovery

At least a quarter of household spending goes towards retail goods,<sup>1</sup> according to the ONS. Household spending picked up significantly in Q3, but remains 12% below the pre-COVID baseline. Retail sales, however, have exhibited a clear V-shaped recovery. Since April, retail sales (excluding fuel) have since recorded five consecutive months of growth. In September, year-on-year growth in retail sales was over 6%. Against a backdrop of a cumulative total of 9.6 million furloughed workers, considerable economic uncertainty, and a new world of work and social life, consumer spending has shown considerable resilience.

Consumer spending has been buoyed by the furlough scheme propping up incomes, significant pent-up demand, and considerable agility. This agility has led consumers to adapt to how they shop and what they buy. The significant move to online retail has provided consumers continued access to goods, despite lockdown and distancing restrictions. There have also been clear shifts in expenditure patterns as consumers adapt to new ways of working and socialising, for example shifting from purchasing clothes to working from home equipment. The boost to consumer spending over Q3 may also have been influenced by perceptions of reduced health risks.

But with a second national lockdown, the key question remains - will this recovery continue to deliver a bumper Christmas?

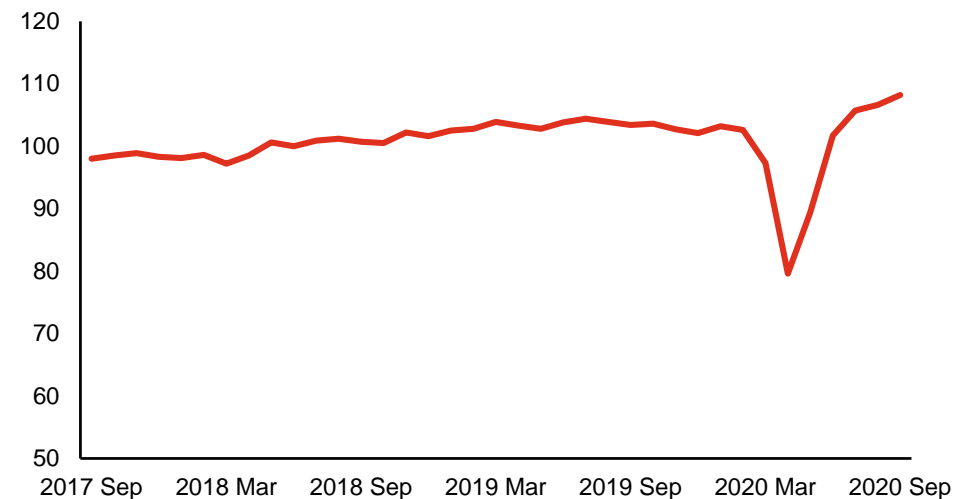
**Real household final consumption expenditure (£ billion)**



Source: ONS

<sup>1</sup> Includes food and alcoholic drinks, clothing and footwear and household goods and services

**Average weekly real retail sales index excl fuel (Jan 2018 = 100)**

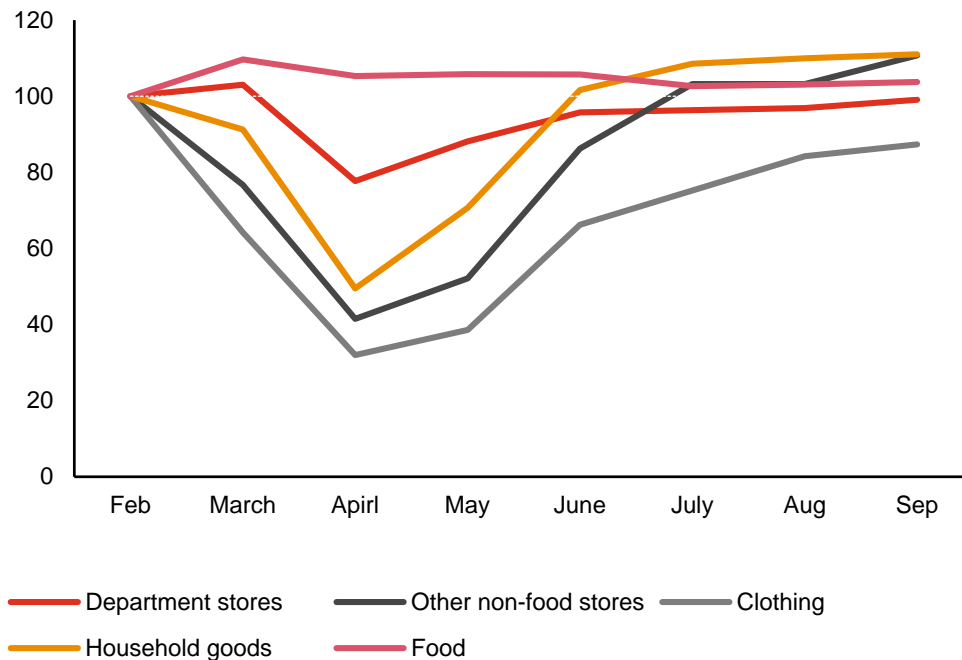


Source: ONS

# A robust recovery in the retail sector as a whole masks a varied picture across different retail groups

Strong headline retail sales, however, hide significant disparities within the sector. While sales in groceries and household goods have benefitted from strong demand, sales in clothing and footwear remain subdued. These disparities are reflected in new **PwC analysis** of retail store openings and closures. On the one hand, store openings in Q3 were the highest since 2017, with over 5,100 new stores. The key success stories have been value retailers, supermarkets and coffee shops. Yet, at the other end of the spectrum, the retail sector has registered over 11,000 store closures - resulting in a record net decline of 6,000 stores. In addition, more than one in eight shops have yet to reopen after temporarily closing. The pandemic has accelerated a number of trends already in play: a shift to online, changing priorities in shopping categories and a rapid shift away from outdated and poorly delivered store formats. These closures therefore also represent the consolidation and exit of marginal stores following rapid retail expansion over the past two decades.

Real average weekly retail sales index by category (Jan 2020 = 100)



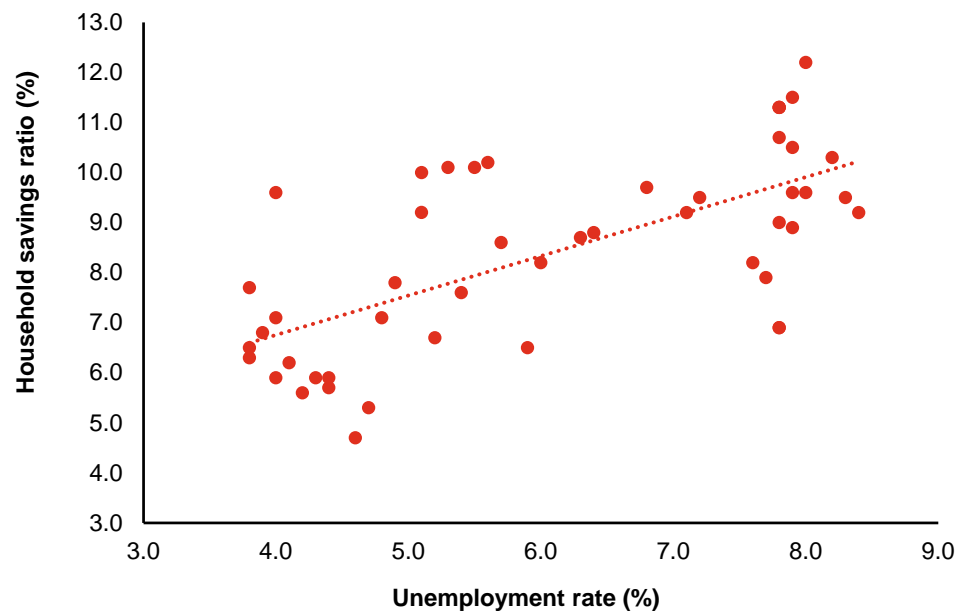
- Grocery stores:** After stabilising from the initial demand shock when the first national lockdown restrictions were introduced in March, grocery sales remain around 3% higher than pre-pandemic levels. This is notwithstanding the government's 'Eat Out to Help Out' scheme in August, which saw the UK consume over 100 million meals out.
- Household goods:** After an initial shock to demand, household goods sales skyrocketed and have since stabilised at 10% greater than pre-pandemic levels. The uplift has been greatest for homeware and electrical appliances, as the cut to stamp duty spurs on house moves and pent up demand, combined with unspent holiday savings, sees consumer spending redirected to home improvements. Demand for household goods also comes as workers expect the shift towards working from home to be more permanent, meaning they are prepared to invest in items to make this transition more comfortable. Indeed, the Bank of England estimates that annual growth in spending on furniture was almost 40% higher in Q3 and home improvements spending stood 35% higher than a year ago.
- Clothing and footwear:** The hardest hit by the COVID-19 pandemic, sales in this category remain 15% below January levels. The slow recovery reflects the marked change in people's work and home lives this year; with fewer office meetings, weddings and nights out, demand for formal and occasion wear has plummeted. Demand for sports and casual wear has helped to achieve some recovery for this category.

Source: ONS

# The outlook for unemployment and the economy could weigh on consumers spending and saving habits

In the remainder of this section, we analyse the outlook for consumer spending over the 'Golden Quarter' - the three months in the run up to Christmas in which retailers typically experience their peak trading. The 'Golden Quarter' includes events such as Halloween, retail specials such as Black Friday and Cyber Monday, and Christmas shopping and sales. But people are potentially facing a very different Christmas this year. And this is likely to have implications for consumer spending and the retail sector. There are a number of factors at play - including government lockdown policies, economic uncertainty, household savings, and changing consumer demands - which we now explore.

**Historically, there is a positive relationship between the unemployment rate and the household savings ratio (quarterly, 2008- 2019)**



When deciding whether to spend or save, consumers' perceptions of the future economic outlook play a role. In particular, household saving tends to be influenced by the outlook for unemployment. During downturns, as the figure to the left illustrates, households tend to increase their saving as a share of disposable income - referred to as precautionary saving.

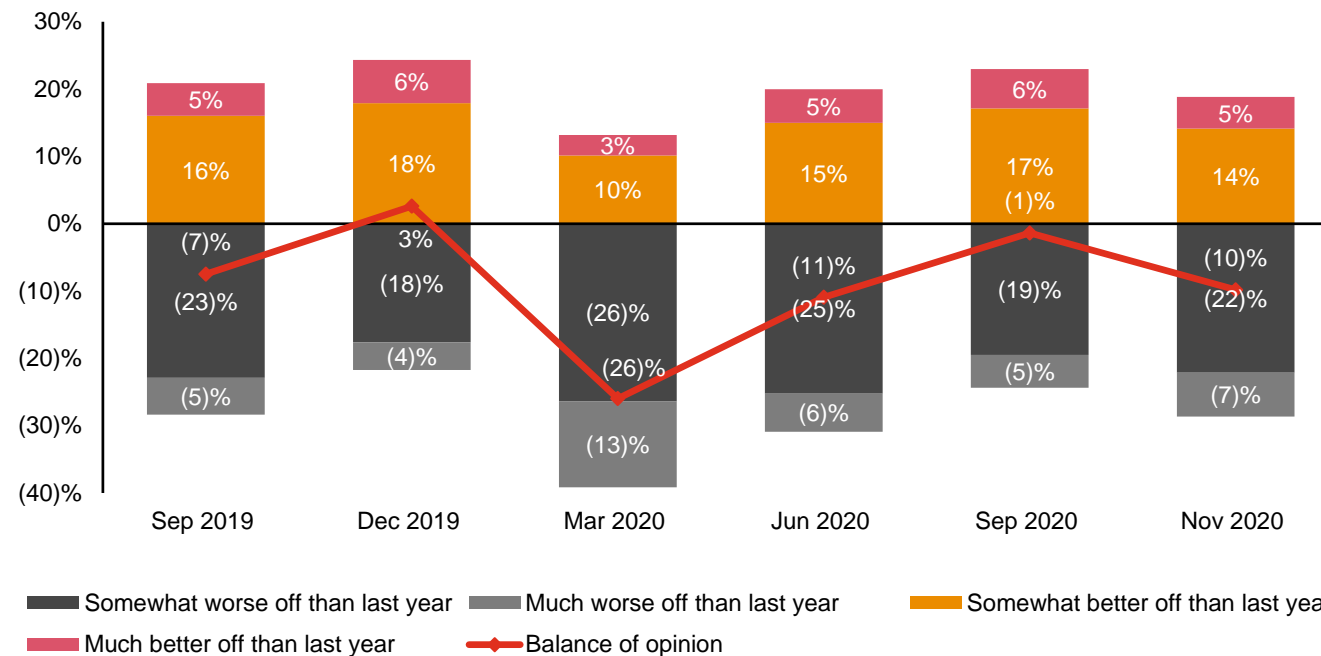
To date during this economic downturn, the labour market has fared relatively well, propped up by the government's furlough scheme and other business support measures. But unemployment is likely to gradually rise over the rest of the year and into next year, as firms continue to adjust to lower levels of demand. Workers will have to balance their expectations of job security with the further extension of the Chancellor's furlough scheme until the end of March 2021, against the risks of redundancy - which, as we discuss in Section 1, have been on the rise.

Source: ONS, PwC analysis

# Consumer sentiment fell as England entered a second national lockdown

Recent measures to combat the spread of the COVID-19 pandemic in November appear to have significantly impacted consumer sentiment. Conducted between 6-8 November 2020, and surveying 2,087 people, PwC's **latest index** shows a significant drop in consumer sentiment since September, falling from -1% to -10%. This means that consumers, on balance, expect to be worse off compared to last year over the next 12 months. This is the sharpest fall we've seen since March 2020, when it fell to -26% from +3% in December 2019. These results provide an early indication that consumer sentiment has been weakened by the lockdown measures and increased economic and health uncertainty.

## Consumer sentiment index, September 2019 - November 2020 (% of respondents)



The fall was not as great as during the first national lockdown, in which the index fell to -26% in March. This likely reflects the fact that consumers and businesses are adjusting to the measures, enabling some activity, jobs and spending to resume.

With lockdown measures due to end in December, consumer sentiment may pick back up again just in time for Christmas. Indeed, consumer sentiment made a strong recovery from the lows seen in March during the first national lockdown. By September, we had seen sentiment recover to near-pre-pandemic levels across all demographics and regions. Despite just emerging from a national lockdown, many UK consumers had disposable money and were willing to spend. Confidence was actually higher than it had been in September 2019.

As we explore in the following slides, high levels of saving and postponed spending over periods of lockdown can have significant implications for subsequent spending.

Source: PwC analysis

Note: We asked a nationally representative sample of 2,000 adults the question "Thinking about your disposable income (money remaining after household bills, credit cards, etc.), in the next 12 months do you expect that your household will be better off or worse off?" We then calculated the balance of opinion by subtracting the percentage of people who thought they would be worse off from those who thought they would be better off.

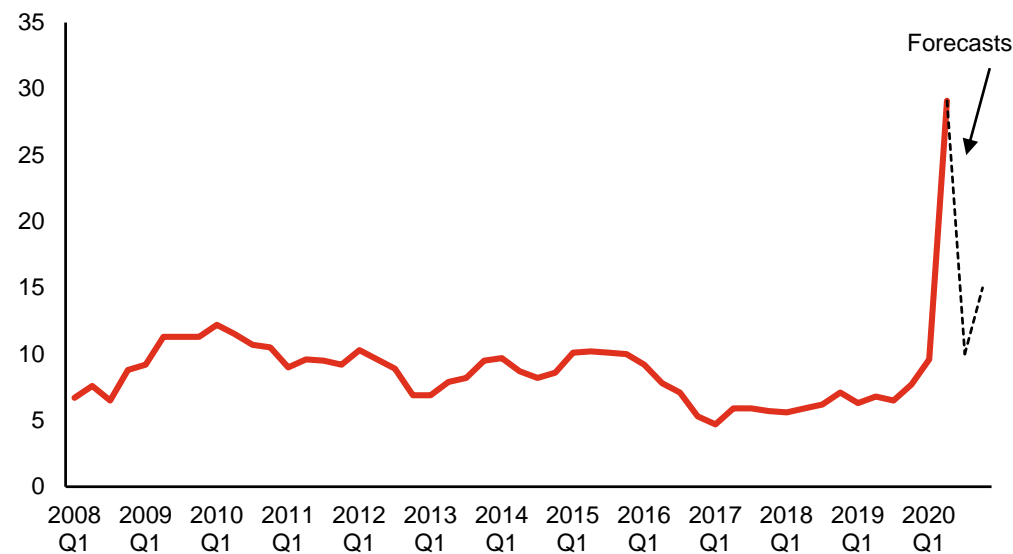
# With involuntary savings expected to rise again over lockdown, pent up demand may drive Christmas spending

In Q2 of this year, the household savings ratio reached a historic high of almost 30%, breaking down the conventional relationship between unemployment and savings. While precautionary savings undoubtedly played a role given the unprecedented uncertainty surrounding the pandemic, another factor was also at play. With lockdown measures prohibiting spending, households were in effect 'forced' to save. In the absence of UK data, analysis by the [ECB](#) of household saving over the pandemic in Europe reveals that involuntary savings were indeed the dominant driver of the increase in household savings in the second quarter of 2020. It is important to also note that while the contribution of precautionary saving is small relative to involuntary savings, it is large relative to periods in history; uncertainty has also played a role.

High levels of involuntary savings have significant implications for consumer spending, as this effectively represents stocks of postponed spending that can be run down rapidly when normal household spending patterns can resume. Indeed, we saw household spending pick back up significantly in Q3 of this year, as restaurants, bars and all retail shops reopened. As a result, the savings rate is expected to have fallen back down to around 10 to 15% over Q3.

Over England's second national lockdown in which bars, restaurants and leisure facilities are all closed, involuntary savings are likely to increase again - but to a lesser extent given the shorter duration of restrictions. A spike in involuntary savings a month before Christmas could have significant implications for Christmas spending - especially as household spending remains below pre-pandemic levels, suggesting pent-up demand remains. The combination of pent-up demand and the festive period could be great news for big ticket spending.

## UK household savings ratio (% of disposable income)



Source: ONS, Bank of England

# The rise in savings has not occurred evenly across the income distribution

A record high aggregate household savings ratio hides huge disparities in savings by households of different incomes. [Survey research](#) suggests that households in the lowest income bracket (i.e. annual income of less than £20,000) experienced a net fall of almost 15% in their savings, while those in the highest income bracket (i.e. over £55,000) saw an increase of 15% in their savings. There are two possible explanations for these disparities: changes in income and / or changes in spending due to COVID-19 may be different across the income distribution. Our analysis suggests that the driver has been differences in spending patterns across income groups.

- **Changes in income:** Survey research (for example, see the [Resolution Foundation](#)) suggests that around 30 to 40% of households have experienced a drop in their incomes due to COVID-19. But these declines have been felt relatively evenly across the income distribution. The Resolution Foundation finds that 37% of adults in the bottom 40% of the income distribution reported a fall in income, compared to 35% of adults in the top 40%. Similar conclusions have also been made by the [Bank of England](#). While the same is not true for earnings - the [IFS](#) finds that earnings of those in the bottom quintile experienced a 15% fall in their median household earnings, compared to around 5% for other quintiles - the government's furlough scheme has propped up the income of low earners. These findings suggest changes in income across the income distribution cannot account for the disparities in saving.
- **Changes in spending:** Lockdown measures have had the greatest impact on social spending. Households in the top three income deciles spend four times more, on average, on social activities (i.e. restaurants, hotels, recreation) than those in the bottom three deciles. With this spending prevented, higher income households therefore have a greater share of their disposable income that they are 'forced' to save. In comparison, low income households typically spend a greater proportion of their disposable income on essentials. Food and housing account for 40% of spending for households in the bottom three income deciles, compared to less than 25% for the top three deciles, according to ONS data. Spending on these essentials has not been altered by lockdown measures - leaving a smaller share of income leftover for saving.

## Reported change in savings due to COVID-19 by income group



Source: Bank of England

## What are the implications for consumer spending in the 'Golden Quarter'?

- **High income households are the biggest spenders:** According to ONS data, households in the top three income deciles spend 3.5 times more on average than those in the bottom three deciles on consumer goods (i.e. clothing, household goods). As higher income households are the ones with greater savings, this is positive news for retailers.
- **Government support will continue to prop up incomes into the New Year:** With the furlough scheme extended until the end of March next year guaranteeing 80% of pay, government support should help to prop up incomes, and to some extent spending. In addition, for low income people who were unemployed before the pandemic, increases to Universal Credit have led to an increase in their incomes, propping up spending at the bottom of the income distribution.

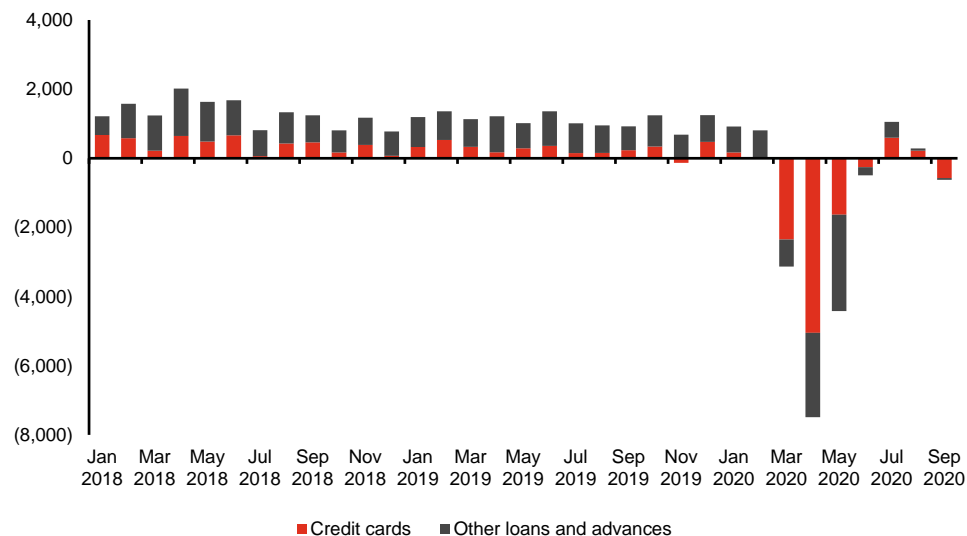
# The growth of consumers taking on credit has reached historic lows in the run up to Christmas

Saving is one way for households to increase their ability to spend. Taking on credit is another. Data from the Bank of England shows that from March, households repaid unprecedented amounts of credit (i.e. from credit cards and other loans, such as car finance). In April, consumers paid off £7.4 billion of credit, a sum six times larger than any other month of net repayments since the beginning of the century. The monthly pattern clearly follows the level of lockdown restrictions over the year, with positive flows of credit (i.e. taking on more credit) resuming in July, the first month in which restrictions were fully lifted. This adds further colour to the story of involuntary savings - never before have households been able to pay off such vast sums of credit.

Consumer credit growth fell to historic lows, with annual growth in September of -4.6%. This comes as households adopt a cautious approach to taking on debt, while at the same time, banks are less willing to lend to consumers in the current economic climate. Banks are not only facing increasing write-offs from struggling businesses, but have also seen a growth in business lending (including government-backed loans) to support companies during the pandemic, reducing their lending appetite to households.

This has implications for Christmas spending. Since 2010, the amount of total credit taken on by households in December has, on average, been almost 20% higher than the overall monthly average. This is in line with [estimates](#) that show households spend around 30%, or £800, more in December than a typical month for Christmas. For lower income households, who have saved less money over the pandemic, this might lead to an increase in credit demand to fund the Christmas period; indeed data from the ONS' Wealth and Assets Survey show that less wealthy households are more likely to have financial debt (i.e. credit cards). But uncertainty over job security and what this Christmas period will be like, may weigh on people's willingness to take on debt to fund spending.

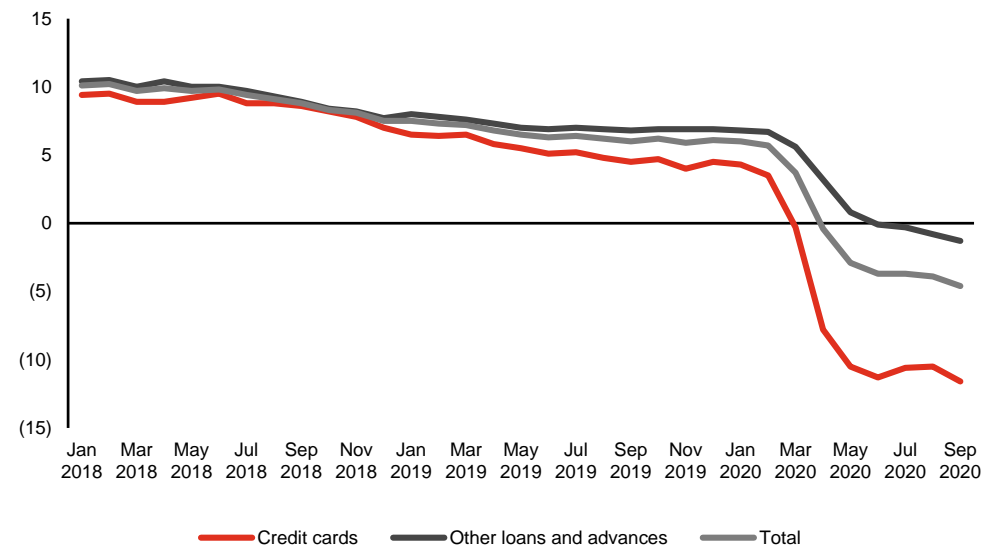
Household credit flows, £ millions



Source: Bank of England

Note: a positive flow means households are taking on more credit; a negative flow means they are paying off credit

Consumer credit growth, % change on a year earlier



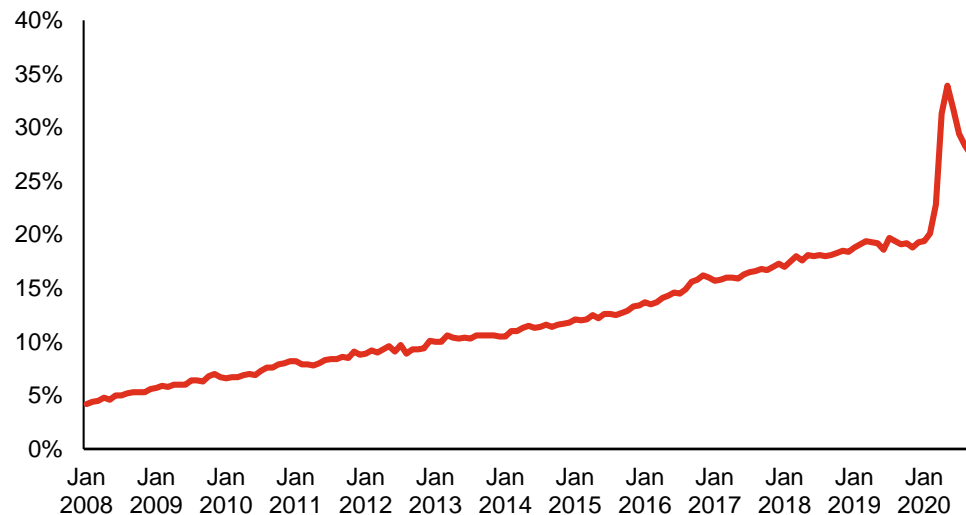
Source: Bank of England

# A structural shift towards online retail will help prop up retail if restrictions remain in place over December

Online shopping offered a lifeline to the retail sector over the first national lockdown. While it took seven years for online shopping to increase from 10% of retail sales to 20% by February 2020, it took just two months to get from 20% to 30% in April. In May, 34% of retail sales were conducted online. This share has since fallen back down, as consumers regained access to high streets from June. But online activity remains eight percentage points higher than pre-lockdown levels and shows little sign of reverting entirely, as online shopping attracts new users and the products that people shop for online broadens. In June, online sales were roughly double pre-pandemic levels in every category except fashion. Indeed, even for clothing, there has been a step change in online shopping as consumers adapt to new ways of shopping and health risks restrict preferences for in store shopping.

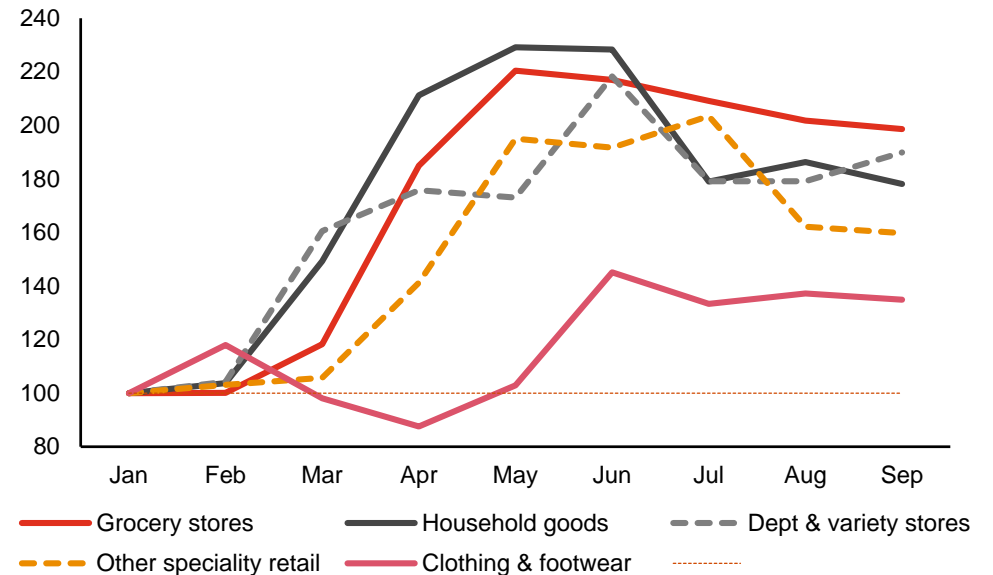
This structural shift to online has positive implications for Christmas shopping even if lockdown or other restrictions remain in place. In addition, analysis by the IFS shows the impact of local COVID-19 cases on consumer spending. Their conclusion is that at the beginning of the pandemic, regions with higher prevalence were associated with lower spending. But since May, there has been no relationship between COVID-19 prevalence and spending patterns by region. This suggests that the potential return to local tiered lockdown system in December will not lead to any significant impact on spending across the country.

Online sales as a share of total retail sales



Source: ONS

Online retail sales index, by product category (Jan 2020 = 100)



Source: ONS, PwC analysis

# The risks for Christmas spending are skewed to the downside, but bumper January sales could be on the horizon

The risks for Christmas spending are skewed to the downside. Important upside factors are at play - namely, high levels of involuntary saving, the extension of the furlough scheme, and positive news regarding a vaccine - the considerable uncertainty surrounding the economic outlook and what this year's Christmas may be like are likely to weigh on spending intentions. But bumper January sales could be on the horizon and spending could be more positive. Optimism may pick up in the new year, if plans to begin rolling out a vaccine are realised. In addition, if consumers are largely restricted to online shopping, retailers are likely to have unsold stock, which could lead to bumper January sales discounts. This may encourage a release of pent-up demand.

## Upside risk to Christmas spending



- The extension of the furlough scheme until the end of March will alleviate income uncertainty for many and help to prop up spending
- Positive news regarding a vaccine will also help to allay fears
- Consumer sentiment has not fallen to the same extent as during the first national lockdown
- Record levels of saving, as people are 'forced' to save, has created significant pent-up demand
- A second national lockdown will create another build-up of involuntary saving and pent-up demand ahead of Christmas
- Significant repayments of consumer credit may improve some consumers' credit scores, increasing their ability to take on additional credit over the Christmas period
- A structural acceleration of the move to online retail will help prop up spending if restrictions continue into December
- Studies have found no relationship between local prevalence of COVID-19 and consumer spending



### Economic and employment uncertainty



### Consumer sentiment



### Saving



### Consumer credit



### Lockdown measures

## Downside risk to Christmas spending



- Unemployment is expected to gradually rise, as firms adjust to lower levels of demand and make redundancies
- Uncertainty over employment may lead to an increase in precautionary saving, thereby reducing spending
- Consumer sentiment has fallen back down in the run up to Christmas, due to the reintroduction of lockdown restrictions in England
- High levels of saving have not been experienced evenly across the UK population, with low income households actually seeing a decrease in their savings
- Both the stock of consumers taking on credit and the growth rate remain at historic lows, as involuntary saving enables repayments and economic uncertainties reduce willingness to take on more debt
- Restricted access to shops may subdue spending, and will have significant implications if in place in high spending regions (i.e. London and the South East), while health risks are likely to reduce footfall at key Christmas shopping high streets, like Oxford Street
- A different Christmas this year may alter spending intentions, i.e. if social distancing measures prevent household mixing and present buying

# 4

Annex –  
methodological  
details

# Nowcasting models use econometrics to produce high-frequency forecasts in the near term

**Nowcasting** is an advanced statistical model that is known for its ability to produce short-term predictions of economic indicators with a relatively **high level of accuracy** and **frequency**.

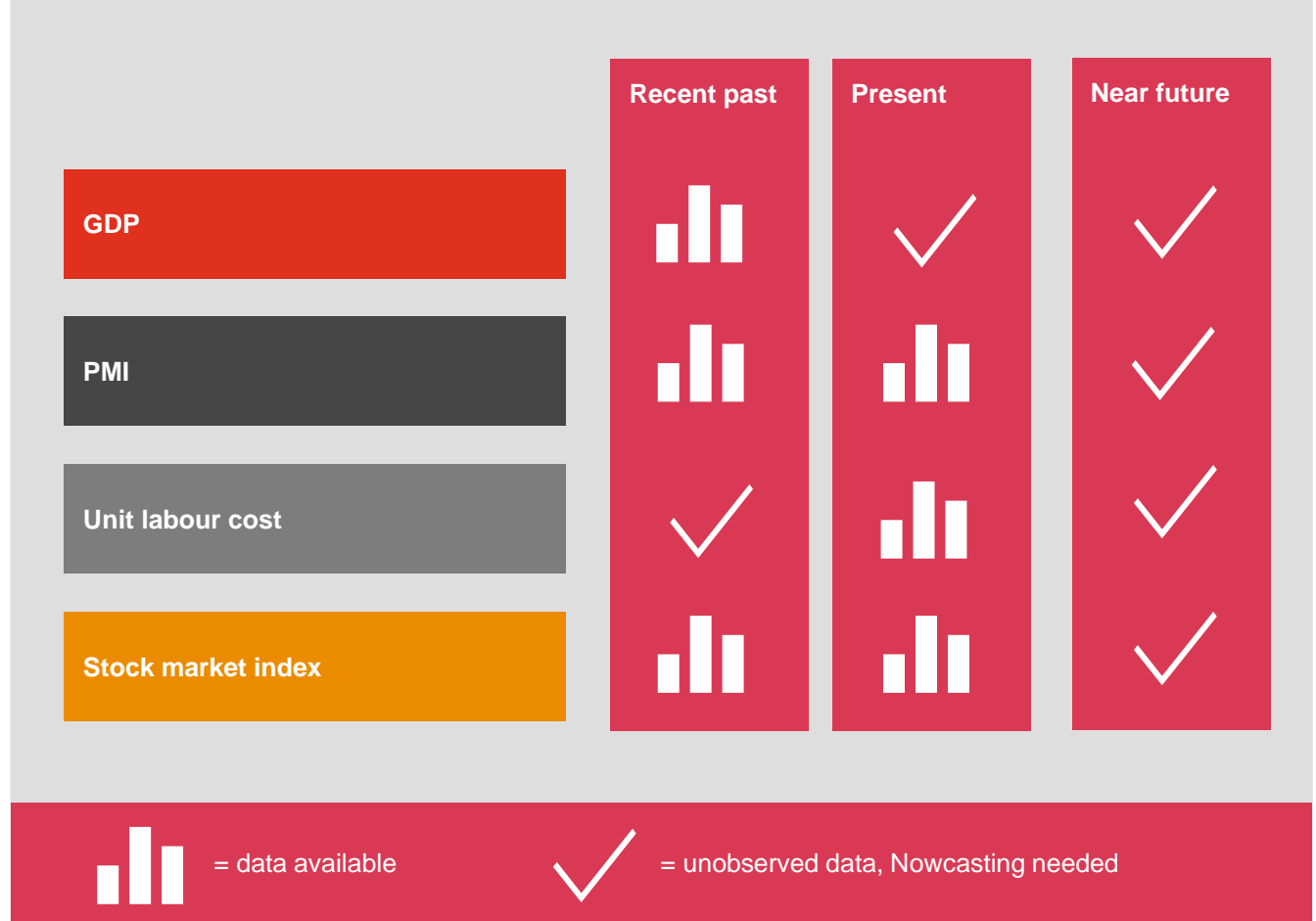
## Why do we need to Nowcast:

In an ideal world, a wide range of macro indicators (e.g. GDP, inflation) at a high frequency (e.g. daily or monthly) would be used to monitor and evaluate real-time economic activities. However, often these indicators are **available at a different frequency** (e.g. quarterly) or are **reported with a lag** (usually 1-3 months). Therefore, most forecasters provide low frequency forecasts but we are one of a few organisations to bridge this gap and develop **high frequency forecasts**.

Advantages of this approach:

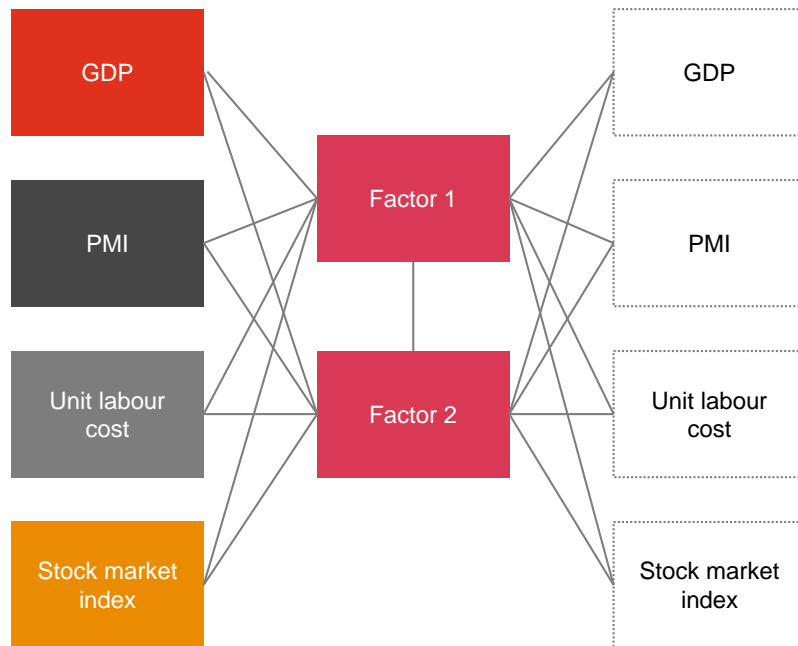
- Nowcasting provides a timely view on the current state of the economy;
- Nowcasting provides relatively accurate forecast for the near future;
- Nowcasting provides a view of an unobserved indicator (e.g. due to low frequency reporting) and predicts the missing values of the recent past;
- A full nowcasting model has the ability to nowcast not only the targeted variable (e.g. GDP) but also some other key economic indicators (e.g. inflation).

## Illustration: Using Nowcasting to predict missing data



# Nowcast utilises a Dynamic Factor Model to ‘distill’ information from a wide range of economic, political and pandemic-related variables

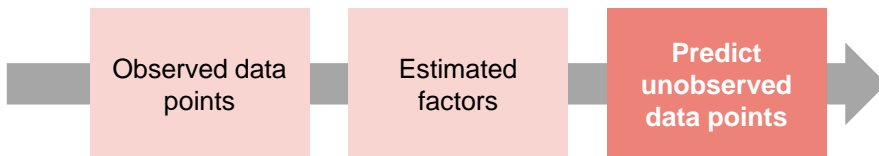
The widely used Dynamic Factor Model (DFM) has the ability to tackle data challenges and utilise all the available information to accurately predict the current state of the economy.



**The state space feature allows us to estimate factor in periods even when data points of some (or all) variables are unobserved.** As mentioned in the previous slide, the key challenges in nowcasting is that data could be arriving at different times, with different frequency. This problem could be generalised into a missing data problem and easily solved by the DFM while preserving the useful information from available data. In other words, the nowcasting model tells us the latest view on macroeconomics indicators, taking into account the most up-to-date release.

**DFM estimates the underlying factors of the model.** A factor of the model could be understood as the variation that is commonly observed in all/some indicators. In other words, the model ‘distills available data into a concise summary of economic conditions. The aim of the model is to separate out the idiosyncratic part from the factor component and model these separately. The time dynamics of the factors are also being estimated, i.e. how factors in the past affect current factors. These dynamics would allow us to project forward, including both factors and observatory variables.

**In short, DFM uses observed data points to estimate underlying key macroeconomics factors, and use these estimated factors (and its prediction) to infer missing (not yet observed) economic indicator values.**



# An overview of the Nowcasting model in mathematical terms

A typical dynamic factor model for nowcasting has the 3 equations shown below. These equations together form a system that defines the dynamic factor model. Coefficients within this system are being estimated using an Expected Maximisation algorithm.

## Equation 1: Observatory equation

$$x_t = \mu + \Lambda f_t + \varepsilon_t,$$

$x_t$  = a vector of all the observed variables,  $f_t$  = a vector of unobserved factors

This equation links observed variables to factors that are estimated by the dynamic factor model. Effectively this is assuming each observed variable could be partly explained by a combination of factors.

## Equation 2: Factor equation

$$f_t = A_1 f_{t-1} + \dots + A_p f_{t-p} + u_t,$$

$f_t$  = a vector of unobserved factors,  $f_{t-p}$  = factor  $p$  period before current

This equation links current factors to past factors. Effectively this is assuming that movement in factors in the past could have an impact on its current/future values.

## Equation 3: Shock equation

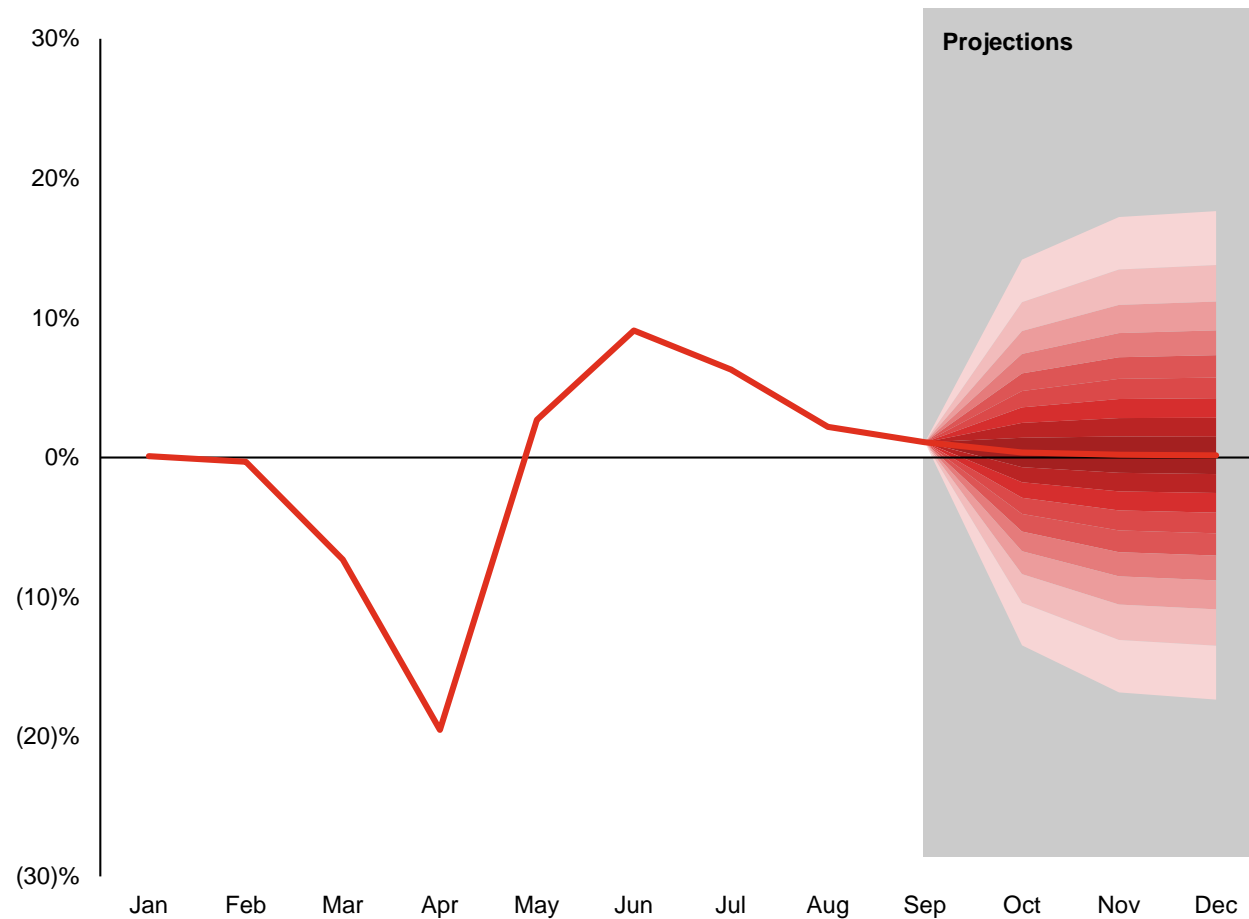
$$\varepsilon_{i,t} = \alpha_i \varepsilon_{i,t-1} + e_{i,t},$$

$\varepsilon_{i,t}$  = idiosyncratic shock, one for each observed variables,  $\varepsilon_{i,t-1}$  = idiosyncratic shock one period before

This equation links current shocks to past shocks. Effectively this is assuming that unexpected movement in observed variables in the past could have an impact on its current/future values.

# Nowcasting: Understanding the output

UK GDP, MoM growth rate predictive interval, %, 2020



Source: PwC analysis

The fan chart shows the predictive interval at different probabilistic levels (from 10% to 90%). In particular the lightest shaded area outlines the range which GDP growth is expected to lie within on 90 out of 100 occasions. Further to this, growth is expected to lie within the darkest shaded band on 10 of those 100 occasions.

This interval has been derived by calculating the Root Mean Squared Error (RMSE) from out-of-sample forecasts. These are computed by comparing a series of out-of-sample predictions (i.e. what we would have forecasted in the past) to the actual level of GDP growth in each month from Dec 2017 to Sep 2020. For one-month ahead forecast (wrt the publication date), the magnitude of error in our nowcasting model are:

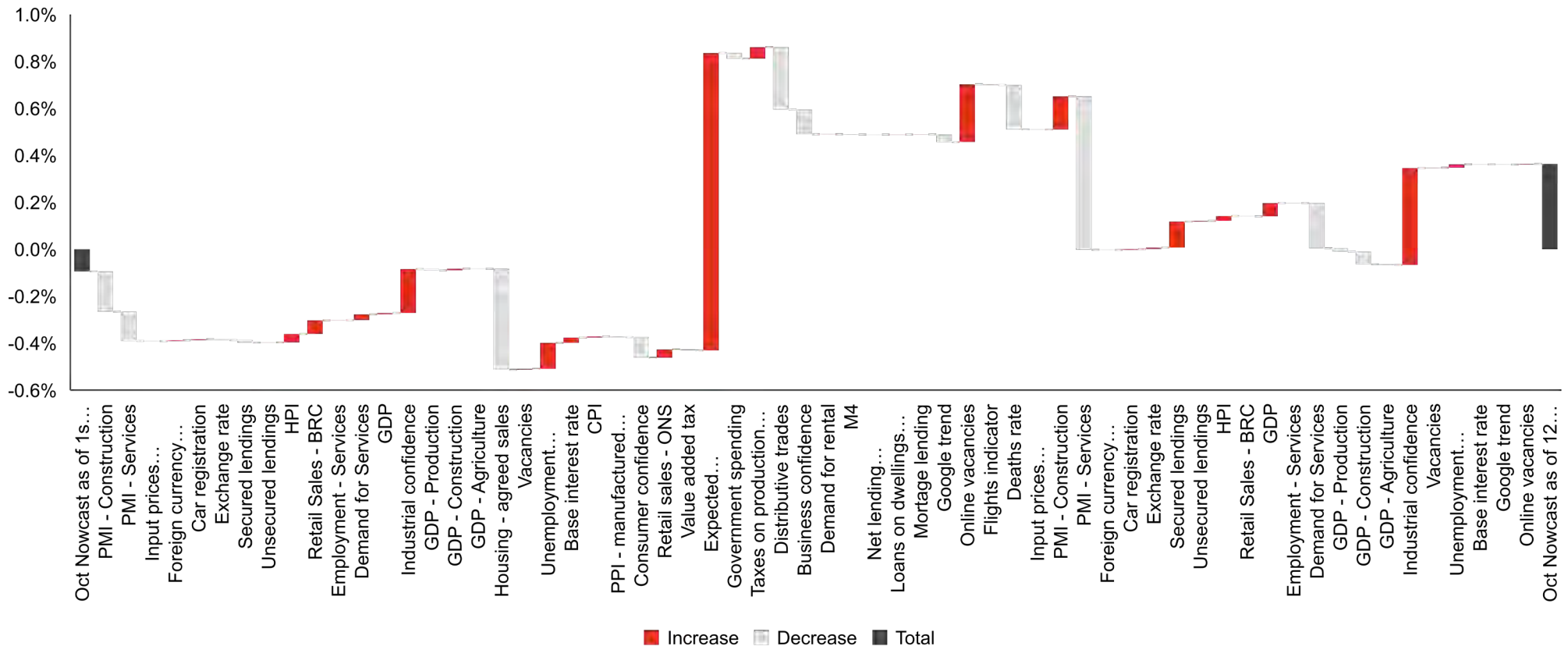
	Pre-COVID	Post-COVID
<b>RMSE, 1-month ahead</b>	0.2%	8.4% (used)

This suggests that the performance of our model is sensitive to the level of uncertainty in the economy. Therefore, we would expect a large predictive interval throughout the rest of this year.

# Nowcasting: Understanding the output

This chart shows the result of a simulation exercise on what we would have predicted on the 1st of October, and what we would have subsequently predicted when receiving more data points on different variables overtime. The purpose of this is to show the process of taking into account news and also to show which piece of news might have contributed the most in our revisions. In particular, for each additional data point received, our nowcasting estimates could go up or down. For example, if the change in the Expected manufacturing output is larger than what we have expected, our nowcasting model would internalise this and revise our prediction for monthly GDP growth rate.

UK real GDP October growth rate nowcast revisions (From 1 October to 12 November)



# Variables used by nowcasting analysis (1/4)

Variable	Description	Source
GDP	Monthly change in real GDP (%)	ONS
Google Trends	UK search interest in restaurants	Google
Online vacancies	Total job adverts posted online (indexed to 2019)	ONS
Flights indicator	Inbound and outbound flights from UK airports	EUROCONTROL
Death rate	Deaths registered in England and Wales	ONS
PMI - Construction	Indicator of construction sector growth	Reuters
CPI	Change in the prices of goods and services purchased by most UK households	ONS
Vacancies	Three-month average of external vacancies	ONS
Exchange rate	Strength of GBP relative to other currencies	Bank of England
PMI – Services	Indicator of services sector growth	Reuters
Industrial confidence	Evaluation of manufacturing sector	OECD

# Variables used by nowcasting analysis (2/4)

Variable	Description	Source
<b>Secured lendings</b>	Average advertised interest rate for mortgages	Bank of England
<b>Broad money supply (M4)</b>	Total quantity of money in circulation	Bank of England
<b>Retail sales – BOE</b>	Business conditions of retail sector	Bank of England
<b>Retail sales – ONS</b>	Total retail sales (indexed to 2018)	ONS
<b>Housing – agreed sales</b>	Newly agreed house sales in England and Wales	RICS
<b>Employment – Services</b>	Total employment in the services sector	OECD
<b>Retail sales – BRC</b>	Annual growth in total retail sales (%)	BRC
<b>Demand for Services</b>	Level of demand in the services sector	OECD
<b>Base interest rate</b>	Interest rate that banks and lenders pay when they borrow from the Bank of England	Bank of England
<b>Unsecured lendings</b>	Volume of consumer borrowing	Bank of England
<b>Car registration</b>	Number of newly registered vehicles	SMMT

# Variables used by nowcasting analysis (3/4)

Variable	Description	Source
<b>Business confidence</b>	Business expectations of developments in production, orders and stocks	Lloyds Banking Group
<b>Unemployment claims</b>	Number of people claiming benefit due to unemployment	ONS
<b>VAT receipts</b>	Tax receipts from VAT	HMRC
<b>Consumer confidence</b>	Consumer expectations of their financial situation and the economy	Reuters
<b>Government spending</b>	Difference between government's day-to-day spending and its revenues	ONS
<b>GDP – Production</b>	Production sector output (GVA, constant prices, indexed to 2018)	ONS
<b>GDP – Construction</b>	Construction sector output (GVA, constant prices, indexed to 2018)	ONS
<b>GDP – Agriculture</b>	Agriculture sector output (GVA, constant prices, indexed to 2018)	ONS
<b>Foreign currency reserves</b>	UK's official international reserves of foreign currencies	HM Treasury
<b>Production and import taxes</b>	HMRC receipts from taxes on production and imports	ONS
<b>Distributive trades</b>	Volume of sales in retail, wholesale and motor trades	CBI

# Variables used by nowcasting analysis (4/4)

<b>Variable</b>	<b>Description</b>	<b>Source</b>
<b>PPI – manufactured products</b>	Change in prices received for output of manufacturing sector	ONS
<b>Expected manufacturing output</b>	Expected output of manufacturing firms over the next three months	CBI
<b>Input prices (construction)</b>	Change in prices of construction inputs such as labour, plant and materials	BIS
<b>Net lending (construction)</b>	Net lending to construction companies	Bank of England
<b>HPI</b>	Indicator of UK house prices	IHS Markit
<b>Approved loans on dwellings</b>	Total number of mortgage approvals	Bank of England
<b>Mortgage lending</b>	Total value of gross mortgage lending	Bank of England
<b>Construction output – BOE</b>	Business conditions of construction sector	Bank of England
<b>Rental properties demand</b>	Surveyors' evaluation of demand for rental properties	RICS

# For more information about this report, please contact members of our team

And with additional thanks to Edmond Lee, Jake Finney and Zixuan Xiong for their analytical support in producing this update.

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](https://www.pwc.co.uk/economics)



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