

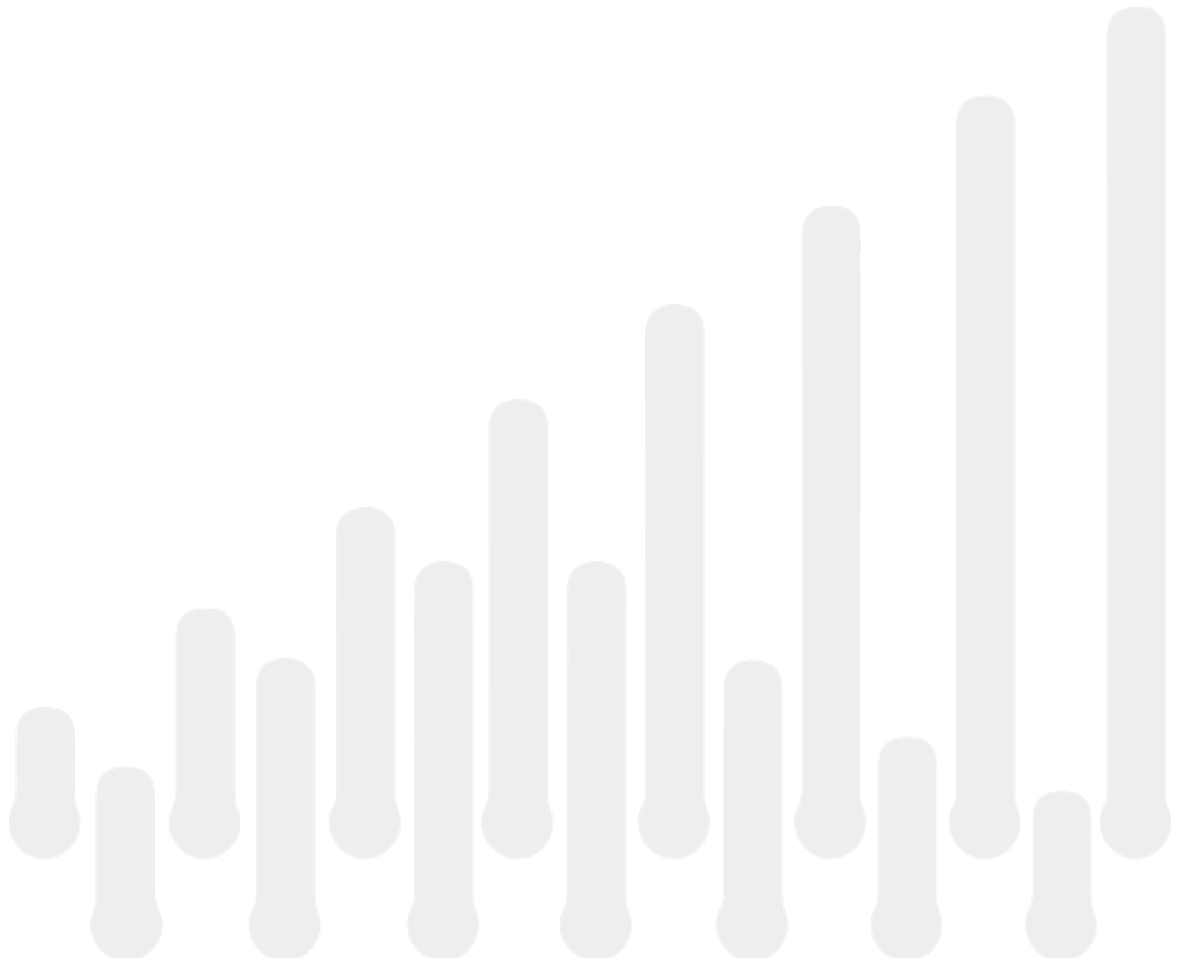
**NIESR**

# Monthly GDP Tracker

Reopening bounce slows as Delta hits

Rory Macqueen

September 2021



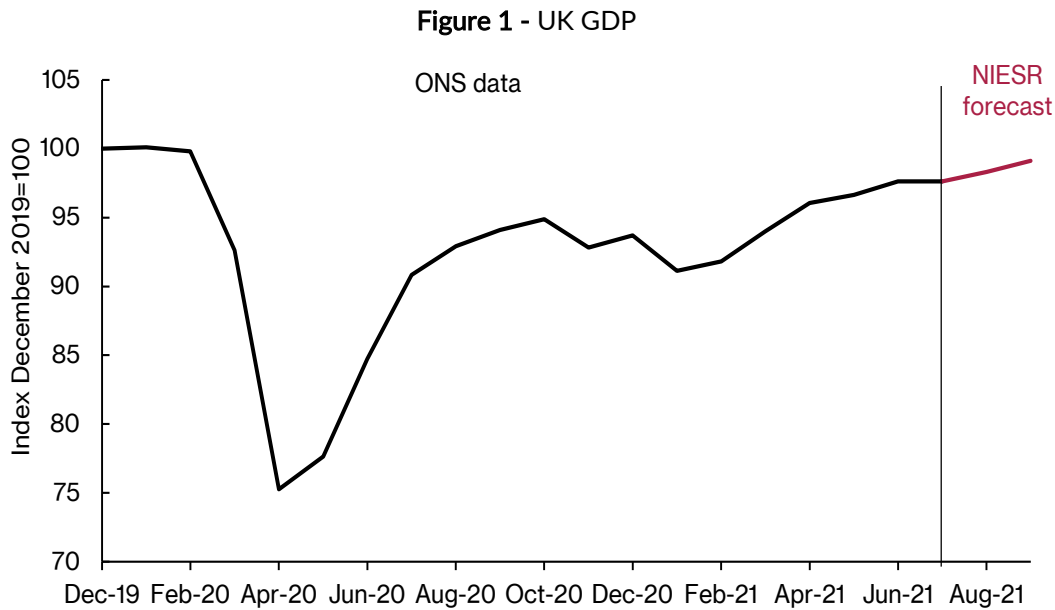
## Main points

- Growth of only 0.1 per cent in July was the lowest since January. The weaker than expected outcome resulted from the end of the spring re-opening boom at the same time as the Delta variant hit labour supply and consumer confidence.
- We forecast growth to pick up in August, thanks to the domestic tourism and hospitality industries, and forecast month-on-month growth of 0.7 per cent.
- With expected growth of 0.8 per cent in September this would lead to growth of 1.6 per cent in the third quarter overall. The return of many office workers, particularly in London, should boost both the transport and hospitality sectors.
- A steady recovery in the rest of the year is likely to be driven by 'catching up' in the hospitality, transport and arts sectors. However, there are notable downside risks to such a consumption-led recovery, including the re-emergence of Covid-19 and the response of household and business spending to the end of the furlough scheme and the planned reduction in Universal Credit.
- As of July 2021, UK monthly GDP remains 2.1 per cent below its pre-pandemic level (February 2021). NIESR's Summer UK Economic Outlook forecast quarterly output to return to its pre-Covid level (2019 fourth quarter) in the first quarter of 2022.

*"GDP growth of under 0.1 per cent in July would have been negative had it not been for the reopening of an oil field previously closed for temporary maintenance. There was also relatively good news for the arts and recreation sector, thanks to the lifting of restrictions on 19th July, but clearly the boost to GDP from reopening had slowed by the summer. The Delta variant and supply issues – some but not all of which are linked to Covid-19 – have also provided headwinds to growth in the third quarter but there remains potential for 'catch-up' in transport, hospitality and arts, which remained between 7 and 19 per cent below their February 2020 levels."*

**Rory Macqueen**

**Principal Economist - Macroeconomic Modelling and Forecasting**



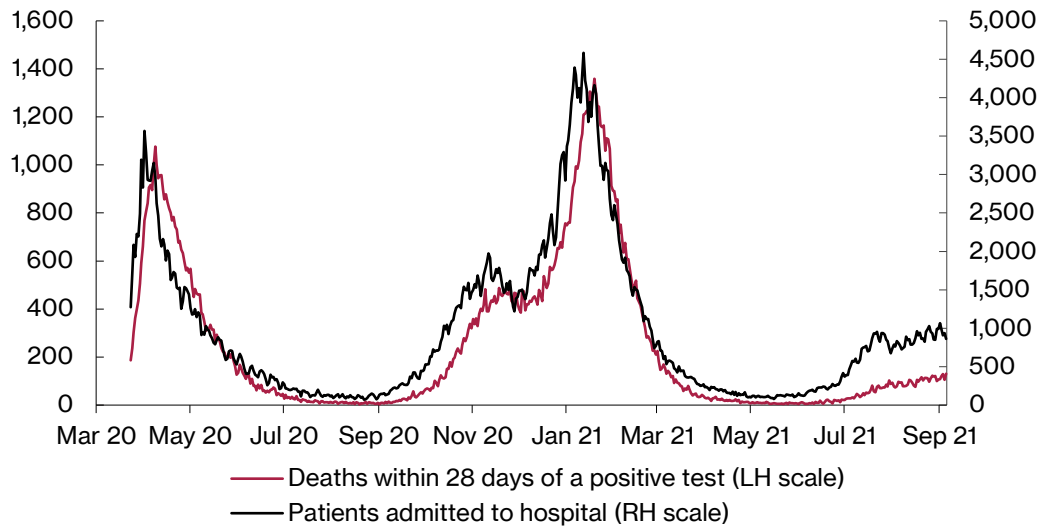
**Economic setting**

The third quarter of the year is likely to have seen slower growth than the second for three reasons: the end to the temporary boost created by the re-opening of the economy after the winter lockdown; the growth of the Delta variant leading to greater consumer caution; and restrictions on supply caused by global factors and the pandemic’s effect on labour availability.

NIESR’s Summer Economic Outlook, released in early August, forecast 6.8 per cent growth for 2021 and 5.3 per cent in 2022. The upgrade to our forecasts were driven this year by stronger investment in the housing and government sectors, and a lower share of imports in UK expenditure.

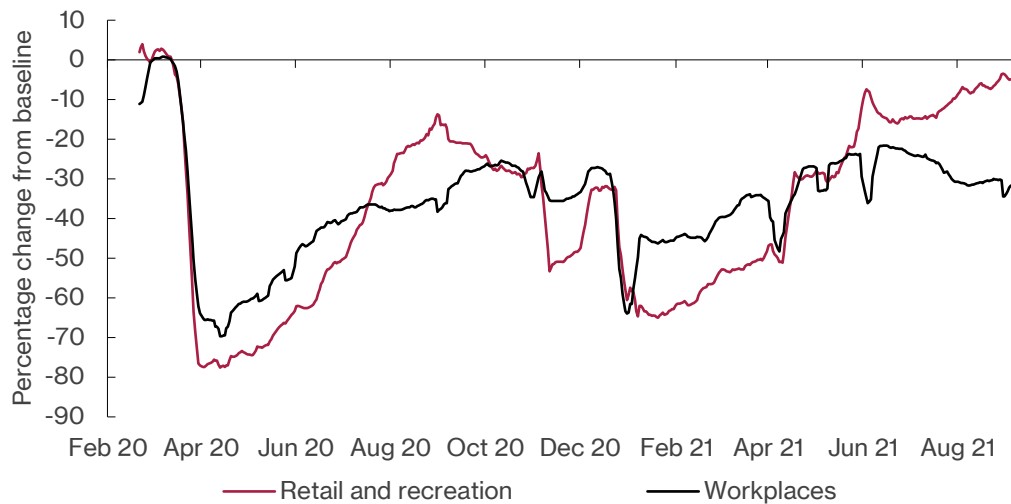
The Coronavirus Job Retention Scheme still covered 1.6 million employments – nearly 5 per cent of the UK total – at the end of July. Both the continuation of low unemployment figures and a resolution to some of the labour supply problems reported by firms (and indicated by the record numbers of vacancies) depend on a relatively smooth integration of furloughed workers into the workforce. Our Summer Economic Outlook was optimistic for the majority but noted some sectoral mismatch between furlough and vacancies and suggested that around 150,000 may be added to the unemployment figures between the third and fourth quarters.

Figure 2.1 – UK daily Covid-19 statistics



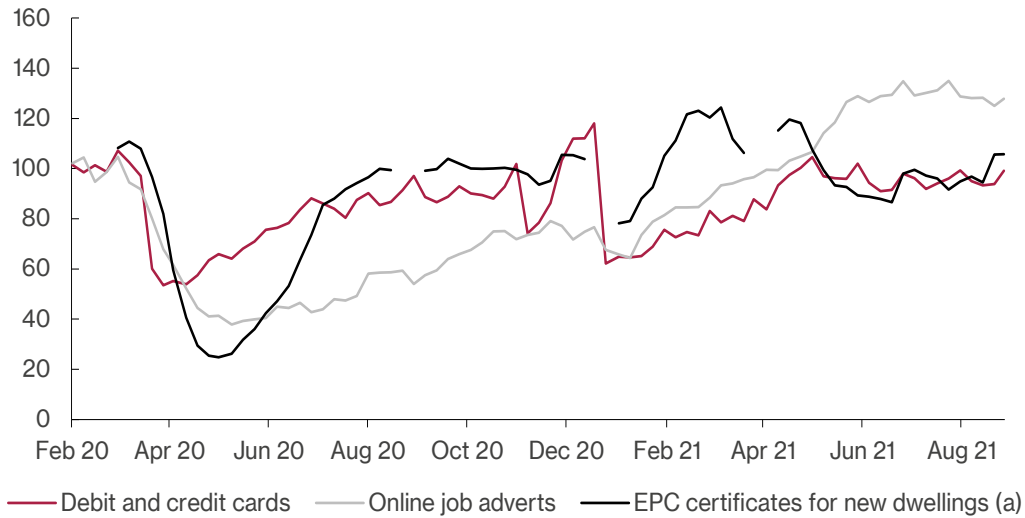
Source: Data.gov.uk. See coronavirus.data.gov.uk for further information.

Figure 2.2 – Google Mobility Indicators



Source: Google, NIESR. Note: Baseline is median value for the day of the week Jan 3 - Feb 6 2020. Seven-day rolling average.

Figure 2.3 – Spending and hiring indicators.

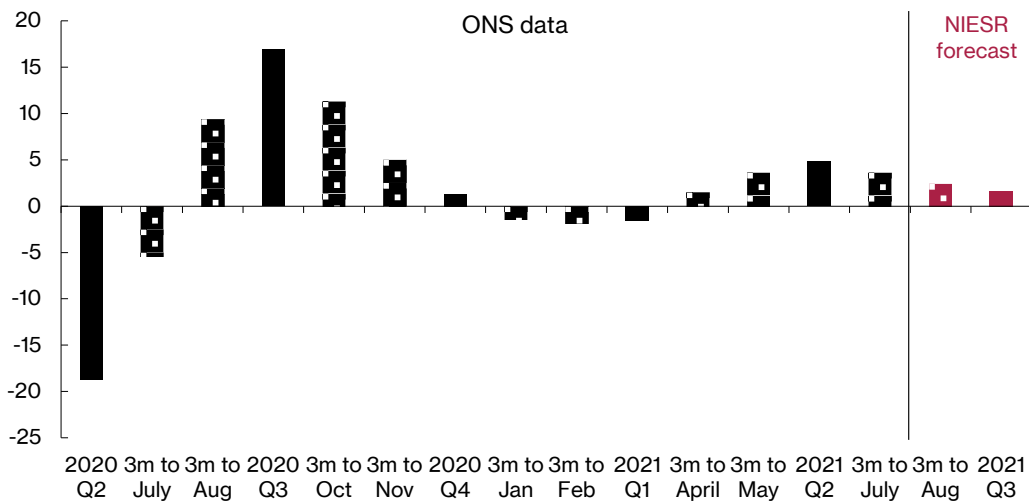


Notes: (a) England and Wales. Debit and credit cards (CHAPS-based): 100 = February 2020, percentage change on a backward looking seven-day rolling average, non-seasonally adjusted, nominal prices. Job adverts: change from the same week in 2019. EPC certificates: change from the same week in 2019/2020, four-week rolling average, adjusted for timing of holidays.

Source: ONS, BoE, Adzuna, MHCLG, NIESR.

High frequency indicators suggest that job vacancies are still strong but have plateaued since the start of the summer; labour shortages are widespread but generally concentrated in a few sectors, notably road transport. Both credit and debit card spending and EPC certificates for new dwellings (a construction sector indicator) are now steady around pre-Covid levels.

Figure 3 – UK GDP growth (3 months on previous 3 months, per cent)



### News in latest ONS data

The ONS data for July were weaker than we forecast in August, GDP growing by just 0.1 per cent month-on-month.

Figure 4 shows how our short-term forecasts for recent quarters have changed as new information has become available.

**Figure 4 - Evolution of the NIESR quarterly GDP forecast (3 months on previous 3 months, per cent)**

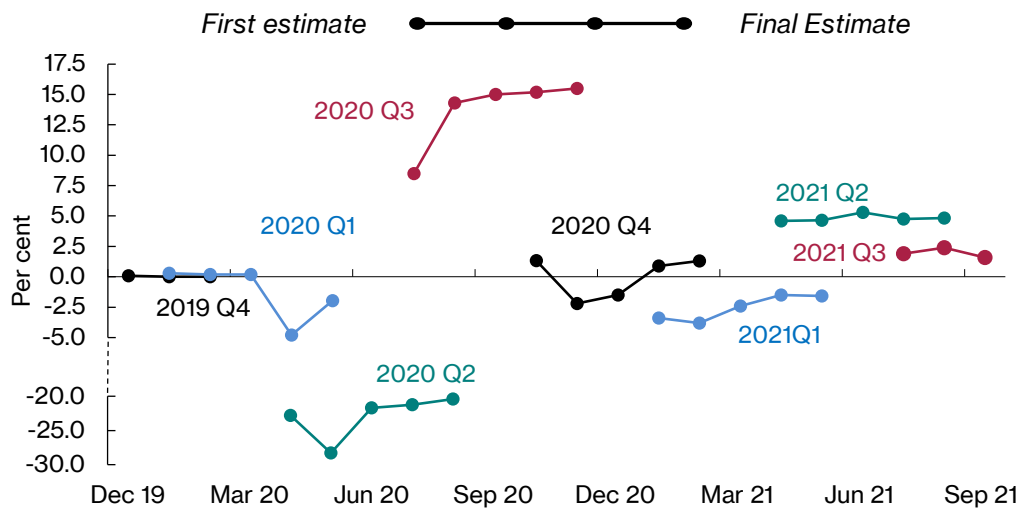
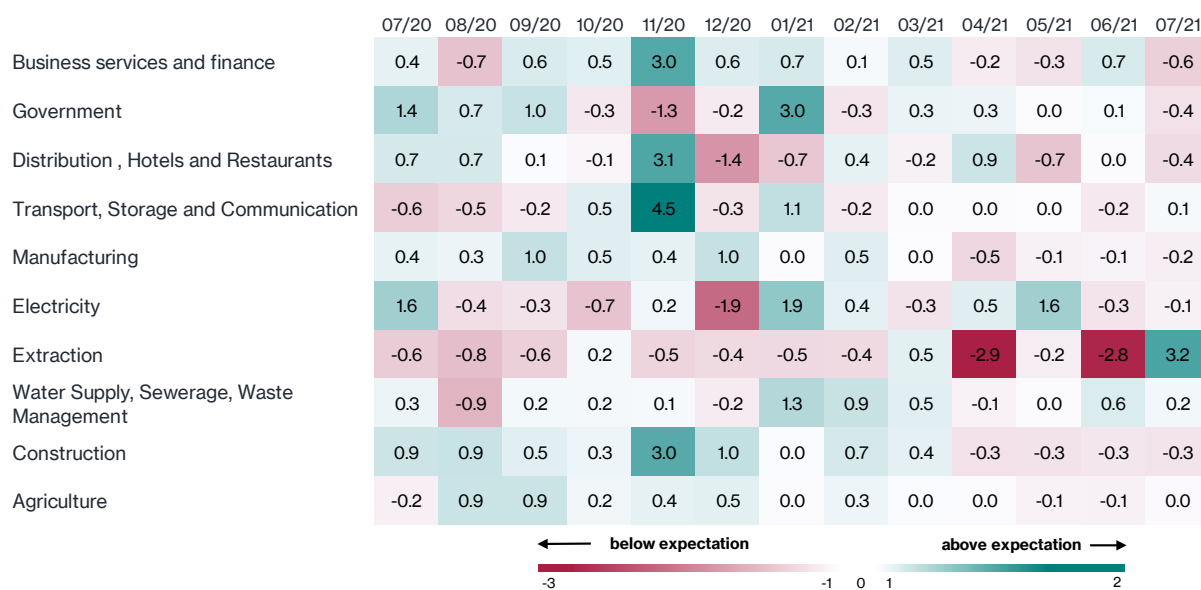


Figure 5 shows a heat map of the data surprises across sectors in the monthly data, relative to last month's GDP Tracker, highlighting the sectors where the surprises are large relative to the volatility of the output data. This month, there was a positive surprise in extraction (mining and quarrying). Negative surprises came in business services and finance, government, and distribution, hotels and restaurants.

**Figure 5 - Surprises in monthly data**

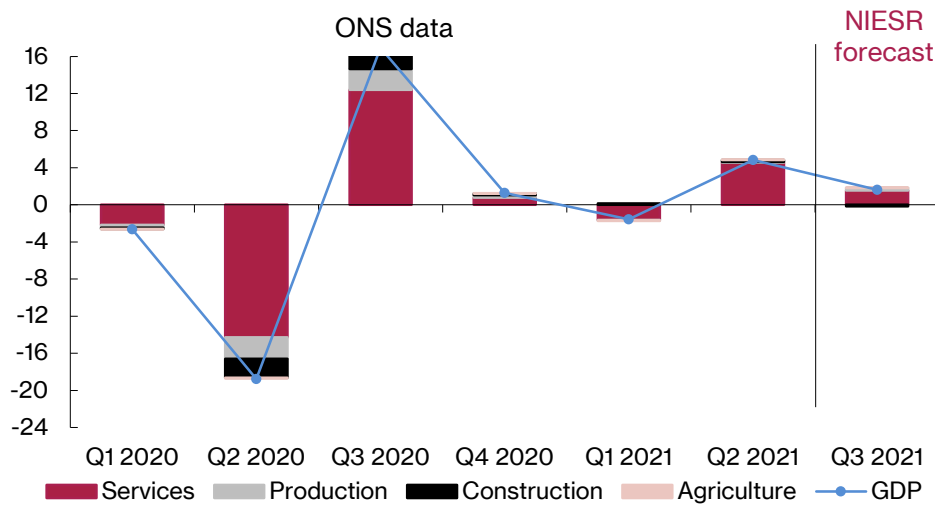


Note: Cells show forecast errors as a fraction of the standard deviation of errors for each series. Green cells are greater than expected, red cells are less than expected.

### Sectoral detail

The economy grew by 3.6 per cent in the three months to July compared with the previous three months, slightly slower than the 3.9 per cent in our August Tracker forecast. This growth was mainly driven by the lifting of restrictions in the distribution, hotels and restaurants sectors, as well as the reopening of schools. We now forecast output growing by 1.6 per cent in the third quarter of 2021.

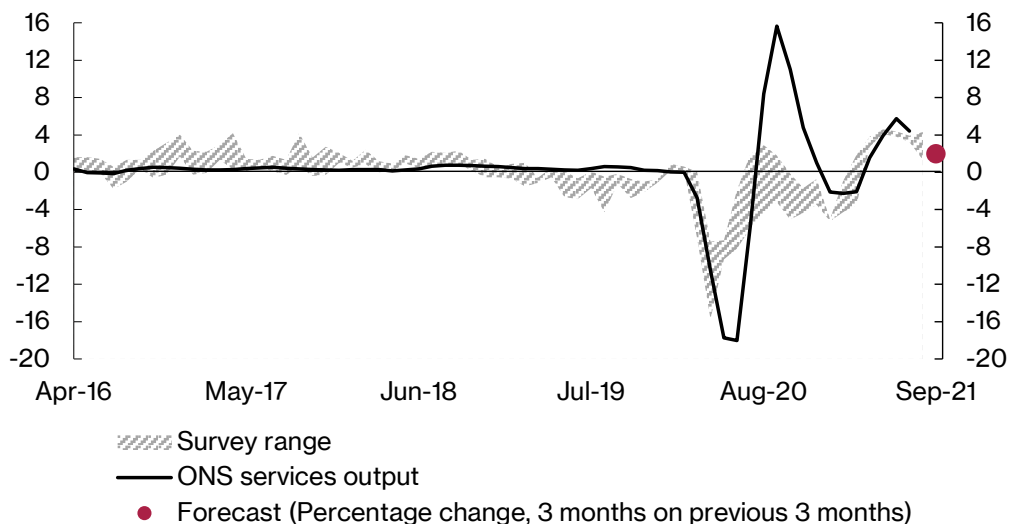
**Figure 6 - Contributions to quarterly GDP growth (percentage points)**



### Services (80 per cent of GDP)

According to the latest ONS data, the services sector grew by 4.4 per cent in the three months to July, slightly slower than the 4.8 per cent we forecast a month ago. All sub-sectors grew compared with the previous three-month period, with the fastest growth in distribution, hotels and restaurants. Based on recent developments we expect service sector activity to grow by 2.0 per cent in the third quarter of 2021.

**Figure 7 - ONS service sector growth (3 months on previous 3 months, per cent) compared with swathe of business survey balances (standardised)**



Note: The shaded swathe shows the highest and lowest values each month of a range of business survey balances that have been standardised so that they have the same mean and standard deviation as the quarterly growth of the ONS series.  
Source: ONS, CBI, Markit, Bank of England Agents, EC, NIESR calculations.



The survey balances point to a slight slowing of activity in August, as shown by the swathe of survey indicators in figure 7. The headline business activity balance in the IHS Markit/CIPS UK services PMI registered 55.0 in August, down from 59.6 in July: the slowest reading since March, due to the levelling off of the demand recovery as well as supply constraints. Internationally, the JPMorgan Global Services Business Activity Index fell sharply in August, from 56.3 to 52.9.

### Production (14 per cent of GDP)

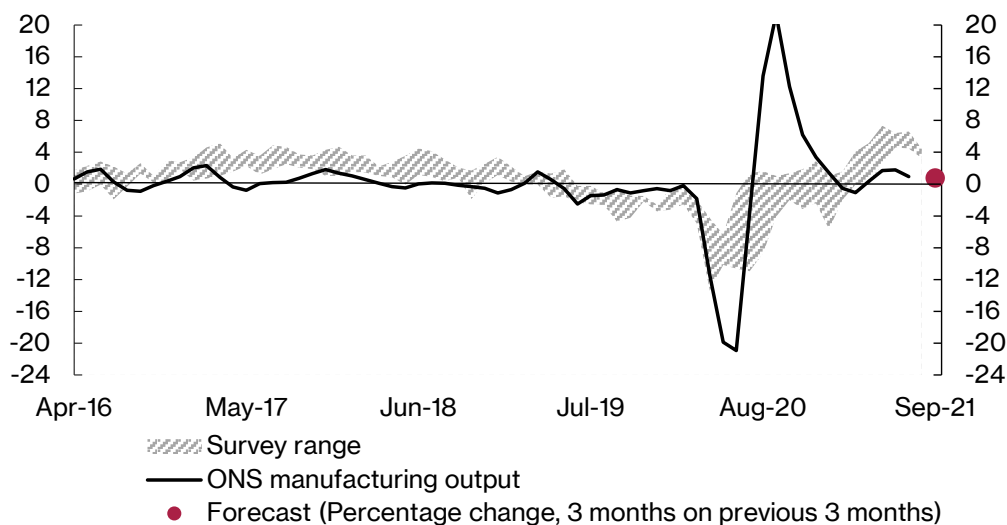
Production output grew by 0.5 per cent in the three months to July, slightly stronger than the 0.2 per cent growth we forecast a month ago. The fastest growth was in electricity and gas, while the largest fall was in mining and quarrying, related to scheduled closures of oilfields for planned maintenance. We forecast that production sector output will grow by 1.8 per cent in the third quarter, though output in this sector is volatile and difficult to predict with accuracy on a quarterly basis.

The production sector comprises manufacturing; mining and quarrying; electricity gas, steam and air conditioning; water supply and sewerage; and oil and gas extraction. The largest of these sectors is manufacturing, accounting for 10 per cent of GDP.

### Manufacturing (10 per cent of GDP)

Within production, output in the manufacturing sector grew by 1.0 per cent in the three months to July, similar to the 1.1 per cent growth we forecast in July. Four out of the 13 manufacturing sub-sectors grew in July, including growth of 5.9 per cent in the manufacture of transport equipment. Our forecast for the third quarter of 2021 is for manufacturing to grow by 0.8 per cent.

**Figure 8 - ONS manufacturing sector growth (3 months on previous 3 months, per cent) compared with swathe of business survey balances (standardised)**



Note: The shaded swathe shows the highest and lowest values each month of a range of business survey balances that have been standardised so that they have the same mean and standard deviation as the quarterly growth of the ONS series. Source: ONS, CBI, Markit, Bank of England Agents, EC, NIESR calculations.

The IHS Markit/CIPS UK manufacturing PMI was almost unchanged at 60.3 in August, from 60.4 in July, still a strong rate of growth despite scarcities and price rises. Growth was seen in outputs, new orders and employment.

The JPMorgan Global Manufacturing Output PMI slowed to 54.1 from 55.4 in July.

### Mining and quarrying (1 per cent of GDP)

Mining and quarrying is a small but erratic component of industrial production that can have an influence on overall GDP growth. Output fell by 8.9 per cent in the three months to July, driven by planned maintenance closures, despite a 22 per cent rise in July itself. We forecast growth of 18 per cent in the third quarter of 2021.

### Construction (6 per cent of GDP)

Output in the construction sector fell by 0.6 per cent in the three months to July, weaker than the 0.1 per cent contraction we forecast a month ago, driven by a fall in repair and maintenance of 2.9 per cent. We expect construction output to fall by 2.5 per cent in the third quarter of 2021.

The IHS Markit/CIPS construction PMI survey registered 55.2 in August, down from 58.7 in July: the slowest rate of growth since February. Growth slowed in housebuilding, commercial work and civil engineering activity.

Table 1 - Summary Table of GDP growth (2018=100)

2018=100	GDP index	Index of Services	Index of Services - Components				Index of Production	Index of Production - Components				Index of Construction	Agriculture
			Business services and finance	Government and other services	Distribution, Hotels and Restaurants	Transport, Storage and Communications		Manufacturing	Electricity, gas, steam and air conditioning	Mining and Quarrying	Water Supply, Sewerage and Waste Management		
Latest weights	1000	796	339	217	133	108	136	102	15	6	13	61	7
Dec-19	101.5	102.3	101.0	102.9	102.2	105.2	97.2	96.3	101.8	96.4	100.1	100.2	108.9
Jan-20	101.6	102.4	101.0	103.3	102.9	104.3	97.5	96.9	99.1	96.5	101.0	99.8	108.0
Feb-20	101.3	102.1	100.8	102.6	102.5	104.2	97.6	97.4	98.3	96.3	100.3	99.2	105.1
Mar-20	94.0	94.1	98.4	89.6	87.0	98.5	92.5	90.9	98.1	90.4	101.0	95.8	100.0
Apr-20	76.4	78.4	89.3	74.4	53.8	83.3	74.2	68.0	89.8	88.4	93.3	55.9	89.4
May-20	78.8	79.9	89.0	75.6	60.8	84.2	78.9	74.0	90.9	90.6	93.5	63.5	89.9
Jun-20	86.0	86.5	92.2	79.6	80.2	91.0	87.2	83.5	94.7	97.5	99.0	76.1	91.3
Jul-20	92.2	92.5	93.8	87.8	94.4	95.2	92.1	89.7	99.5	94.8	100.1	89.6	93.4
Aug-20	94.3	94.6	94.2	91.5	100.3	95.2	93.0	91.4	99.7	91.2	99.7	92.5	95.2
Sep-20	95.5	96.0	95.5	95.6	97.7	96.0	93.5	92.5	99.1	88.8	100.0	94.2	96.9
Oct-20	96.3	96.8	96.4	96.8	98.8	98.8	94.2	93.6	97.6	89.5	100.1	94.9	96.8
Nov-20	94.2	93.9	95.8	94.2	85.7	97.7	95.0	94.9	98.8	85.6	100.1	95.5	96.2
Dec-20	95.1	95.2	96.9	95.1	89.6	97.6	95.0	94.3	99.5	89.2	101.4	93.4	94.8
Jan-21	92.5	92.2	96.4	89.7	81.8	97.6	93.5	92.2	101.1	85.8	101.6	93.0	93.5
Feb-21	93.2	92.8	96.7	90.3	83.9	96.9	94.0	93.0	101.6	83.8	102.9	96.4	92.3
Mar-21	95.4	95.0	97.8	94.5	86.0	98.4	95.4	94.6	100.6	86.1	103.6	101.0	92.4
Apr-21	97.5	97.8	97.2	97.9	97.0	99.5	94.6	94.8	102.1	72.7	103.4	100.8	93.6
May-21	98.1	98.4	96.7	98.1	102.3	99.5	95.2	94.9	105.5	74.8	103.7	100.1	94.9
Jun-21	99.1	99.9	98.3	99.7	104.9	99.1	94.5	95.1	103.5	65.9	104.9	98.9	95.7
Jul-21	99.1	99.9	98.1	99.7	104.6	100.3	95.6	95.1	102.6	80.4	105.1	97.3	95.8
Aug-21	99.8	100.6	98.9	100.0	105.6	100.8	96.4	95.6	103.6	84.4	105.1	97.3	95.4
Sep-21	100.6	101.5	99.9	100.7	106.6	101.6	97.3	96.3	104.3	87.8	105.3	97.6	95.0

	Percentage change, 3 months on previous 3 months												
Dec-19	0.0	0.2	0.0	0.8	-0.1	-0.2	-0.3	-0.6	3.4	-1.9	-1.1	-1.8	1.1
Jan-20	-0.2	0.0	-0.1	0.8	-0.1	-1.1	-0.8	-0.8	0.8	-3.6	-0.3	-1.2	0.2
Feb-20	-0.2	0.0	0.1	0.5	-0.1	-1.3	-2.0	-0.2	-2.5	-5.2	0.5	-1.6	-1.3
Mar-20	-2.6	-2.7	-0.9	-4.1	-4.9	-3.1	-0.8	-1.0	-4.6	-4.0	1.0	-2.3	-4.2
Apr-20	-10.8	-10.5	-4.7	-13.7	-20.9	-9.1	-9.6	-11.4	-6.2	-5.9	-2.0	-16.7	-9.6
May-20	-18.1	-17.7	-8.6	-22.4	-34.5	-15.2	-16.0	-19.9	-6.8	-6.8	-4.5	-28.1	-13.3
Jun-20	-18.8	-18.0	-9.9	-22.3	-33.4	-15.8	-16.4	-20.9	-6.8	-2.4	-5.5	-33.7	-13.6
Jul-20	-5.4	-5.7	-4.7	-8.9	-3.2	-5.5	-2.3	-3.6	-0.4	2.8	-0.7	-8.6	-6.8
Aug-20	9.3	8.4	1.3	8.1	36.4	5.8	10.9	13.6	5.4	5.2	3.8	20.0	0.2
Sep-20	16.9	15.6	4.8	19.7	50.1	10.8	15.9	21.3	8.3	-0.6	4.9	41.3	5.5
Oct-20	11.3	11.0	4.0	16.8	25.1	7.2	8.7	12.3	4.0	-4.7	2.5	22.9	5.2
Nov-20	5.0	4.8	2.7	10.7	1.8	3.9	3.8	6.2	0.5	-6.9	0.5	10.2	3.6
Dec-20	1.3	1.0	2.0	4.1	-7.1	2.7	2.0	3.4	-0.8	-3.8	0.6	2.7	0.8
Jan-21	-1.5	-2.1	1.0	-1.7	-12.7	1.0	1.0	1.4	1.0	-3.3	1.1	0.1	-1.5
Feb-21	-1.8	-2.3	0.8	-4.0	-8.8	-0.1	-0.1	-0.5	2.3	-1.9	1.9	-0.6	-3.2
Mar-21	-1.6	-2.1	0.6	-4.1	-7.4	-0.4	-0.5	-1.1	2.5	-3.3	2.2	2.3	-3.3
Apr-21	1.5	1.5	0.9	1.3	4.0	0.6	0.2	0.4	1.6	-6.9	2.2	5.8	-2.2
May-21	3.6	3.9	0.6	5.6	12.0	1.8	1.0	1.7	2.0	-9.7	1.6	6.8	0.1
Jun-21	4.8	5.8	0.4	7.7	21.1	1.8	0.5	1.8	2.6	-16.5	1.3	3.2	2.2
Jul-21	3.6	4.4	0.5	5.2	16.6	1.4	0.5	1.0	2.4	-8.9	1.2	-0.6	2.9
Aug-21	2.4	3.2	1.2	3.1	10.2	0.9	0.5	0.5	0.5	-1.2	1.4	-2.8	2.1
Sep-21	1.6	2.0	1.6	1.6	4.0	1.5	1.8	0.8	-0.2	18.4	1.1	-2.5	0.7

	Percentage change, month on same month in previous year												
Dec-19	1.0	1.4	0.8	2.4	1.5	1.2	-1.7	-2.6	3.4	-2.6	0.9	1.3	5.6
Jan-20	0.6	1.2	0.9	2.7	0.9	-0.2	-2.2	-3.1	-1.8	-0.5	2.2	-1.1	4.5
Feb-20	0.0	0.8	0.4	1.8	0.4	-0.1	-2.4	-3.0	0.6	-2.8	0.7	-3.9	1.9
Mar-20	-7.3	-7.2	-1.8	-11.4	-15.0	-5.5	-8.6	-10.4	-0.2	-12.6	1.0	-6.6	-3.5
Apr-20	-24.4	-22.7	-10.7	-26.4	-47.5	-20.7	-24.4	-30.3	-11.4	-8.7	-6.9	-45.4	-14.4
May-20	-22.1	-21.2	-11.1	-25.4	-40.6	-19.5	-20.5	-24.9	-11.4	-9.1	-8.2	-38.2	-14.6
Jun-20	-15.2	-15.0	-8.2	-21.6	-21.8	-13.7	-11.9	-15.0	-8.6	0.2	-3.2	-25.0	-13.8
Jul-20	-9.3	-9.4	-7.1	-13.5	-8.2	-10.2	-6.7	-8.8	-1.1	-1.7	-0.7	-12.6	-12.5
Aug-20	-7.2	-7.4	-6.8	-10.3	-2.2	-9.6	-4.8	-5.7	0.1	-7.0	-1.4	-9.5	-11.7
Sep-20	-6.0	-6.0	-5.2	-6.4	-4.7	-9.6	-4.8	-4.5	-0.1	-16.5	-0.8	-8.1	-10.7
Oct-20	-5.5	-5.6	-4.6	-5.4	-6.3	-7.3	-4.7	-4.5	-5.9	-9.7	0.4	-5.3	-11.1
Nov-20	-7.2	-8.1	-4.9	-8.4	-16.4	-7.0	-2.7	-1.4	-5.1	-14.1	0.6	-5.7	-11.7
Dec-20	-6.3	-6.9	-4.1	-7.6	-12.3	-7.2	-2.3	-2.1	-2.3	-7.5	1.3	-6.8	-12.9
Jan-21	-9.0	-10.0	-4.6	-13.2	-20.5	-6.4	-4.1	-4.9	2.0	-11.1	0.6	-6.8	-13.4
Feb-21	-8.0	-9.1	-4.1	-12.0	-18.1	-7.0	-3.7	-4.5	3.4	-13.0	2.6	-2.8	-12.2
Mar-21	1.5	1.0	-0.6	5.5	-1.1	-0.1	3.1	4.1	2.5	-4.8	2.6	5.4	-7.6
Apr-21	27.6	24.7	8.8	31.6	81.4	19.4	27.5	39.4	13.7	-17.8	10.8	80.3	4.7
May-21	24.5	23.2	8.7	29.8	68.3	18.2	20.7	28.2	16.1	-17.4	10.9	57.6	5.6
Jun-21	15.2	15.5	6.6	25.3	30.8	8.9	8.4	13.9	9.3	-32.4	6.0	30.0	4.8
Jul-21	7.5	8.0	4.6	13.6	10.8	5.4	3.8	6.0	3.1	-15.2	5.0	8.6	2.6
Aug-21	5.8	6.3	5.0	9.3	5.3	5.9	3.7	4.6	3.9	-7.4	5.4	5.2	0.2
Sep-21	5.3	5.7	4.6	5.3	9.1	5.8	4.0	4.1	5.2	-1.1	5.3	3.6	-2.0

	Percentage change, month on previous month												
Dec-19	0.0	0.1	0.3	0.1	-0.3	0.2	-0.4	0.1	-2.2	-3.2	0.6	-1.1	-0.1
Jan-20	0.1	0.1	0.0	0.4	0.7	-0.9	0.3	0.6	-2.7	0.1	0.9	-0.4	-0.8
Feb-20	-0.3	-0.3	-0.2	-0.7	-0.4	-0.1	0.1	0.5	-0.8	-0.2	-0.7	-0.6	-2.7
Mar-20	-7.2	-7.8	-2.4	-12.7	-15.1	-5.5	-5.2	-6.7	-0.2	-6.1	0.7	-3.4	-4.9
Apr-20	-18.7	-16.7	-9.2	-17.0	-38.2	-15.4	-19.8	-25.2	-8.5	-2.2	-7.6	-41.6	-10.6
May-20	3.1	1.9	-0.3	1.6	13.0	1.1	6.3	8.8	1.2	2.5	0.2	13.6	0.6
Jun-20	9.1	8.3	3.6	5.3	31.9	8.1	10.5	12.8	4.2	7.6	5.9	19.8	1.6
Jul-20	7.2	6.9	1.7	10.3	17.7	4.6	5.6	7.4	5.1	-2.8	1.1	17.7	2.3
Aug-20	2.3	2.3	0.4	4.2	6.3	0.0	1.0	1.9	0.2	-3.8	-0.4	3.2	1.9
Sep-20	1.3	1.5	1.4	4.5	-2.6	0.8	0.5	1.2	-0.6	-2.6	0.3	1.8	1.8
Oct-20	0.8	0.8	0.9	1.3	-1.3	2.9	0.7	1.2	-1.5	0.8	0.1	0.7	-0.1
Nov-20	-2.2	-3.0	-0.6	-2.7	-11.1	-1.1	0.8	1.4	1.2	-4.4	0.0	0.6	-0.6
Dec-20	1.0	1.4	1.1	1.0	4.6	-0.1	0.0	-0.6	0.7	4.2	1.3	-2.2	-1.5
Jan-21	-2.7	-3.2	-0.5	-5.7	-8.7	0.0	-1.6	-2.2	1.6	-3.8	0.2	-0.4	-1.4
Feb-21	0.8	0.7	0.3	0.7	2.6	-0.7	0.5	0.9	0.5	-2.3	1.3	3.7	-1.3
Mar-21	2.4	2.4	1.1	4.7	2.5	1.5	1.5	1.7	-1.0	2.7	0.7	4.8	0.1
Apr-21	2.2	2.9	-0.6	3.6	13.5	1							

## Health warning

The NIESR GDP Tracker provides a rolling monthly forecast for GDP growth. Our first estimate of growth for any particular quarter starts in the first month of that quarter and is then updated each month until the first official release in the second month of the following quarter. So, for example, our first estimate of growth in the first quarter of 2020 is published in January and will then be updated four times (in February, March, April and May) before the ONS publishes its first estimate for the first quarter of 2020 in May 2020. In other words, we publish four estimates of GDP for any particular quarter before the official release and change them as new evidence becomes available.

NIESR's short-term predictions of monthly GDP growth are based on bottom-up analysis of recent trends in the monthly sub-components of GDP. These predictions are constructed by aggregating statistical model forecasts of ten sub-components of GDP. The statistical models that have been developed make use of past trends in the data as well as survey evidence to build short-term predictions of the sub-components of monthly GDP. These provide a statistically-based guide to current trends based on the latest available data. Each month these predictions are updated as new ONS data and new surveys become available.

It is important to stress that the timelier NIESR guide to quarterly GDP growth is less reliable than the subsequent ONS data releases as its data content is lower, particularly for estimates of the current quarter which in some months will be based only on forecasts rather than hard data. To mitigate this issue, NIESR provides a guide to average errors based on past performance. NIESR also provides clear guidance on how the latest news has caused its estimates of GDP growth in the current and preceding quarter to change and thereby quantify how the short-term outlook is being affected by recent data releases.

As the bottom-up methodology for producing estimates of GDP growth for the current and preceding quarters is still relatively new, we do not yet have a long track record of estimates produced by this approach. To check how our methodology would work in real time we went back to late 2016 to produce judgement-free forecasts of GDP growth in future months based on the monthly data series available for the components in November 2016 (this was the earliest vintage then available on the ONS website) and in each subsequent three months. These are shown in Table 2, which has been updated to include estimates since we started producing the GDP Tracker in July 2018. We calculate the forecast quarter-on-quarter growth rates for the current quarter and compare these to the ONS first estimates of quarterly growth. The average absolute error for the quarters considered was 0.22 percentage points. The largest error was for 2020Q2 when our GDP tracker in May pointed to growth of -22.8 per cent, 2.4 points lower than the ONS first estimate of GDP growth.

**Table 2 - Forecast Error Analysis: Quarterly GDP growth (%)**

Quarter	ONS first estimate	ONS latest estimate	NIESR nowcast*	Error in NIESR nowcast**	ONS latest – first
2016Q4	0.6	0.7	0.7	-0.1	0.1
2017Q1	0.3	0.6	0.6	-0.3	0.3
2017Q2	0.3	0.3	0.4	-0.1	0.0
2017Q3	0.4	0.3	0.4	0.0	-0.1
2017Q4	0.5	0.4	0.4	0.1	-0.1
2018Q1	0.1	0.0	0.5	-0.4	-0.1
2018Q2	0.4	0.5	0.0	0.4	0.1
2018Q3	0.6	0.6	0.5	0.1	0.0
2018Q4	0.2	0.2	0.4	-0.2	0.0
2019Q1	0.5	0.6	0.2	0.3	0.1
2019Q2	-0.2	-0.2	0.3	-0.5	0.0
2019Q3	0.3	0.4	0.2	0.1	0.1
2019Q4	0.0	0.0	0.2	-0.2	0.0
2020Q1	-2.0	-2.1	0.2	-2.2	-0.1
2020Q2	-20.4	-20.4	-22.8	2.4	0.0
2020Q3	15.5	16.1	15.0	0.5	0.6
2020Q4	1.0	1.3	-2.2	3.2	0.3
2021Q1	-1.5	-1.6	-3.8	2.3	-0.1
2021Q2	4.8		4.7	0.1	
2021Q3			2.4		
Average absolute error				0.74	0.12

\* Made in the second month of the quarter, 3 months ahead of ONS first estimate

\*\* ONS first estimate - NIESR estimate

### Notes for Editors

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