NIESR
Monthly GDP Tracker

Staycations boost August growth but slowdown ahead
Rory Macqueen

October 2021

"The reopening of the economy continued to support growth in August, with the popularity of domestic holidays contributing to 23 per cent month-on-month growth for hotels and campsites in particular. The fact that consumer-facing services remain 5 per cent below their peak suggests ample room for future catch-up in future too. Elsewhere a further fall in construction output may have been down in part to a reported increase in input costs: something likely to affect the economy more broadly if shortages lead to more generalised price rises over the autumn. The coming months could see something of a two-speed recovery, with sectors most affected by shortages in decline while others continue to recover."

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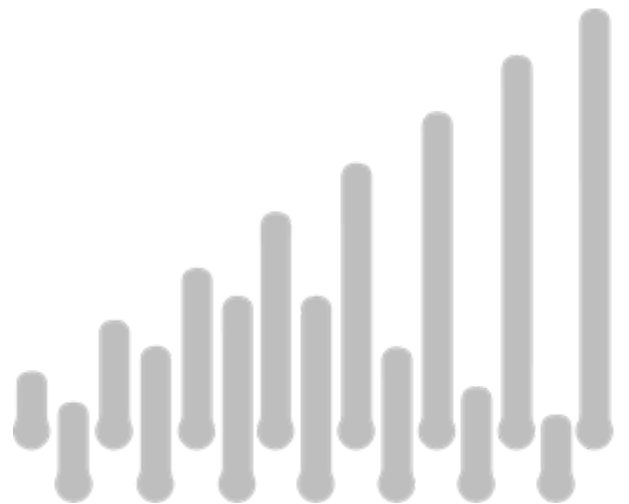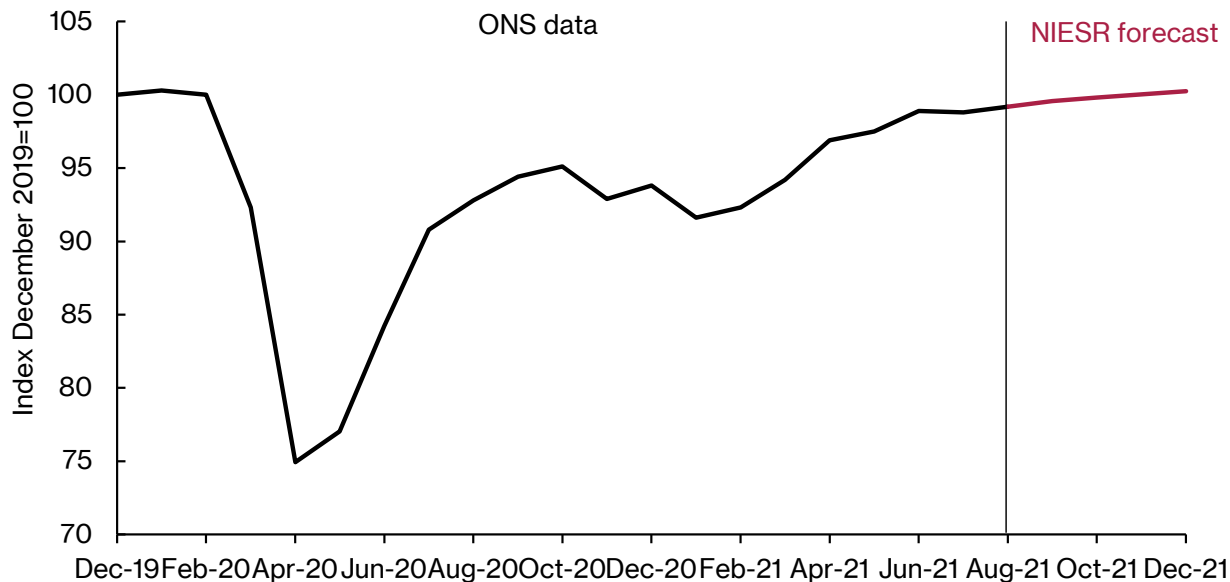**Principal Economist, NIESR**

Figure 1 - UK GDP

Main points

- Thanks to growth of 0.4 per cent in August and revisions to earlier months, the ONS now estimates that output is only 0.8 per cent below its pre-Covid February 2020 peak, with several sectors having already surpassed that level.
- But supply constraints are growing and likely to persist through the autumn, contributing to the slowdown. We forecast growth of 1.5 per cent in the third quarter of 2021, followed by 0.8 per cent in the fourth quarter.
- This includes an estimated 0.4 per cent month-on-month growth in September, when supply shortages are likely to have caused disruptions to some industries.

Economic setting

The slowdown that began this summer, as the reopening mini-boom ended, is dominated by stories of energy price rises and supply constraints. Most notably, the shortage of HGV drivers is affecting the transport sector and every other industry that relies on it. While unemployment continues to fall, the total economically active population remains noticeably below its pre-pandemic level, contributing to high rates of vacancies and rapid wage growth in some areas.

These factors, along with persistent base effects, have led to inflation rising above target, eating into wage growth. This erosion of real wages may also have contributed to what is likely to be a substantial slowing in GDP growth, following an increase of 5.5 percent in the second quarter.

Pessimism about the effect on unemployment of the end of the furlough scheme looks unlikely to be justified, with around half of the million remaining on the CJRS in August furloughed part-time, and those who do not have jobs to return to entering a relatively tight labour market. However, the gradual withdrawal of Covid-19 related support will pose challenges for many businesses when global supply chain disruptions, rising gas prices, and labour market shortages are coming to the fore.

NIESR's Autumn UK Economic Outlook, released 9th November, will look at the consequences for different actors in and sectors of the economy, including an update to our forecasts for GDP, unemployment, and inflation in 2022.

Figure 2.1 – UK daily Covid-19 statistics

Deaths within 28 days of a positive test (LH scale)
Patients admitted to hospital (RH scale)
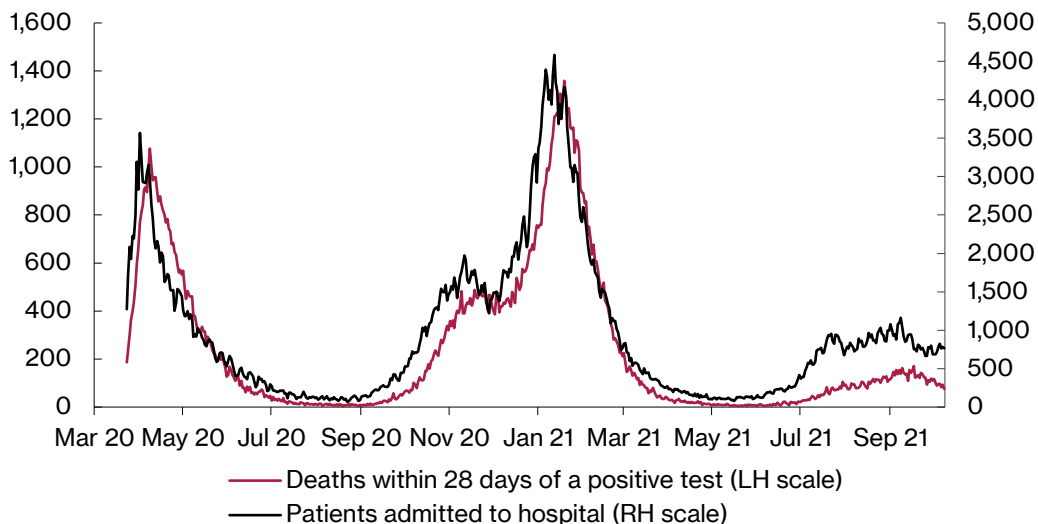
Source: Data.gov.uk. See coronavirus.data.gov.uk for further information.

Figure 2.2 – Google Mobility Indicators
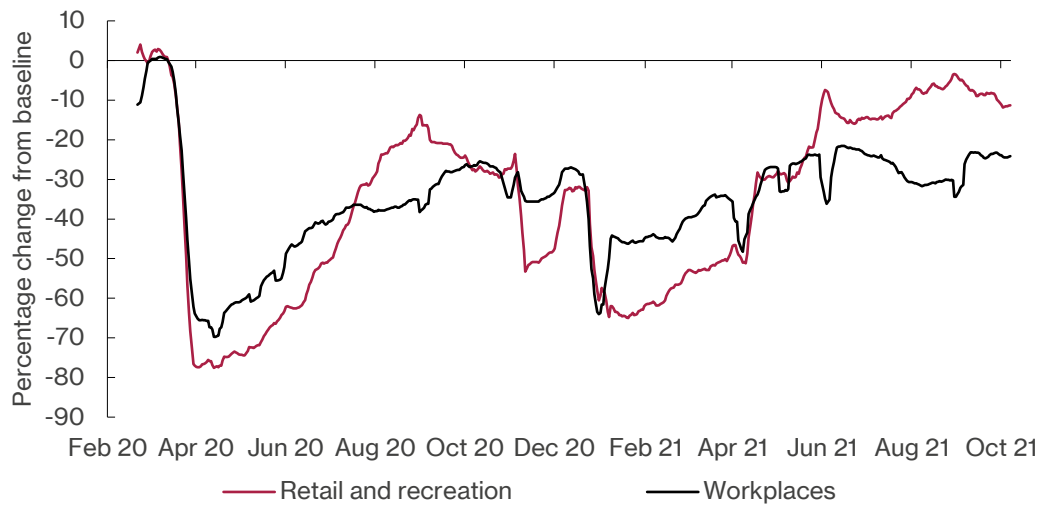
Source: Google, NIESR. Note: Baseline is median value for the day of the week Jan 3 - Feb 6, 2020. Seven-day rolling average.

Figure 2.3 – Spending and hiring indicators.
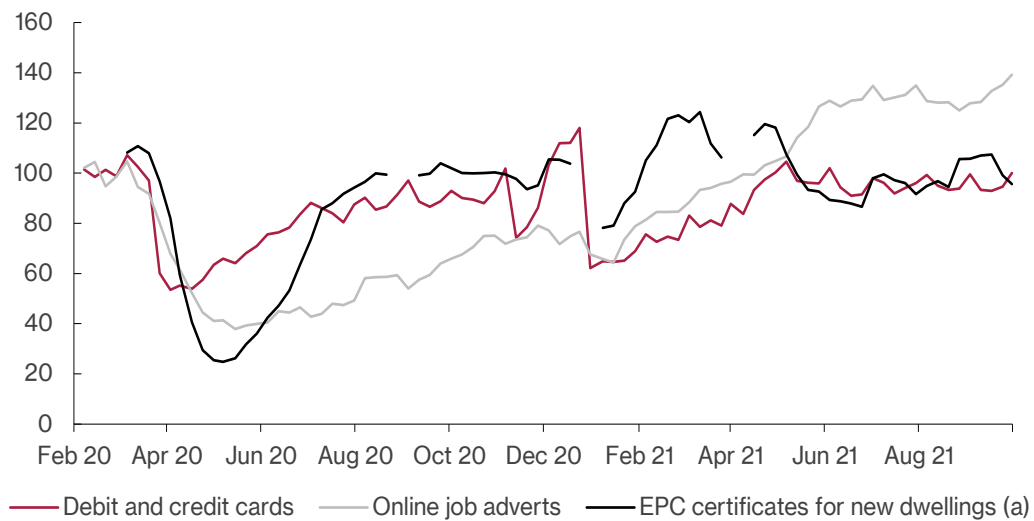
Notes: (a) England and Wales. Debit and credit cards (CHAPS-based): 100 = February 2020, percentage change on a backward looking seven-day rolling average, non-seasonally adjusted, nominal prices. Job adverts: change from the same week in 2019. EPC certificates: change from the same week in 2019/2020, four–week rolling average, adjusted for timing of holidays.

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

High frequency indicators suggest little change in recent weeks in people's recreational habits, though there was a further step change in the 'return to the office' in September. Job vacancies continue to suggest a healthy labour market but card spending has been largely flat since the start of the summer

Figure 3 – UK GDP growth (3 months on previous 3 months, per cent)
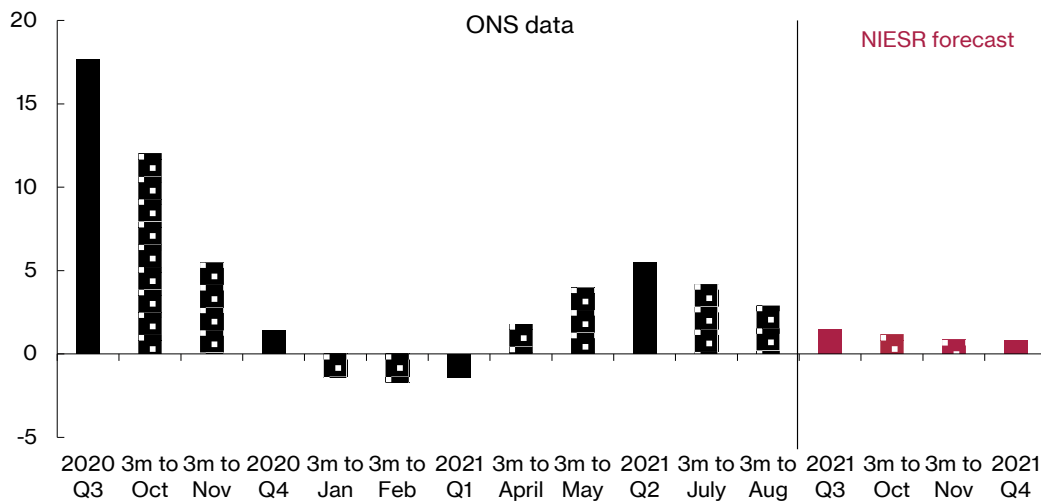
News in latest ONS data

The ONS data for August were weaker than we forecast in September, GDP growing by 0.4 per cent month-on-month instead of 0.7 per cent.

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)
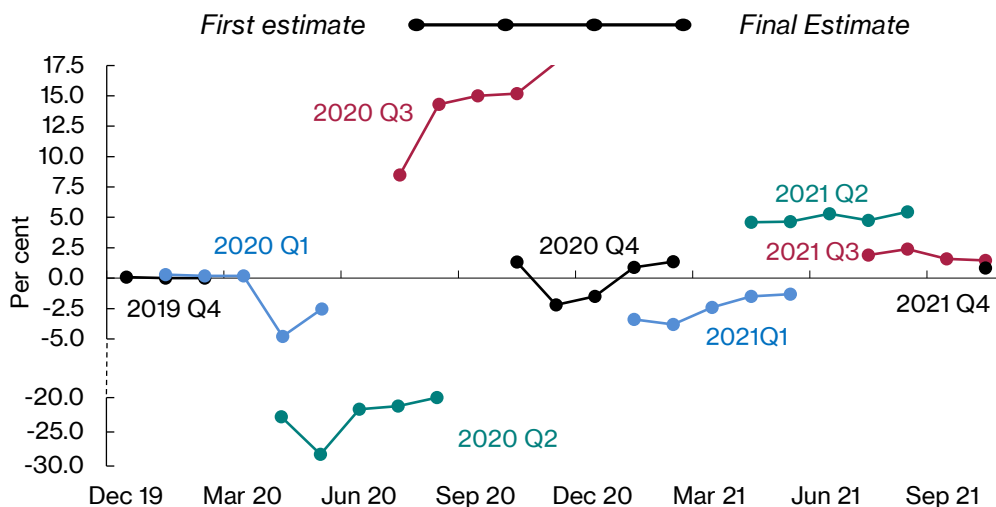
Figure 5 shows a heat map of the data surprises across sectors in the monthly data, relative to last month's GDP Tracker, highlighting the sectors where the surprises are large relative to the volatility of the output data. This month, there was a positive surprise in extraction (mining and quarrying). Negative surprises came in electricity and gas and water supply.

Figure 5 - Surprises in monthly data

|	08/20	09/20	10/20	11/20	12/20	01/21	02/21	03/21	04/21	05/21	06/21	07/21	08/21
Business services and finance	-0.7	0.8	0.3	3.2	0.6	0.8	0.1	0.6	-0.4	-0.1	0.5	-0.9	-0.1
Government	0.9	0.9	-0.4	-1.3	-0.5	3.1	-0.5	0.2	0.9	0.3	0.6	-0.4	-0.3
Distribution , Hotels and Restaurants	0.4	0.2	-0.1	3.1	-1.2	-0.8	0.5	-0.1	1.0	-0.9	0.0	-0.4	0.0
Transport, Storage and Communication	-0.5	-0.3	0.5	4.6	-0.3	1.1	-0.2	-0.1	-0.1	0.0	-0.1	0.4	0.4
Manufacturing	0.5	1.0	0.6	0.6	0.8	0.1	0.5	-0.1	-0.4	-0.1	-0.2	-0.4	0.0
Electricity	-0.3	-0.1	-1.0	-0.1	-1.1	1.7	0.3	-0.2	0.4	2.3	-0.2	-0.5	-1.2
Extraction	-0.8	-0.5	0.1	-0.5	-0.7	-0.4	-0.8	0.4	-2.9	-0.1	-2.4	2.6	1.9
Water Supply, Sewerage, Waste Management	-0.9	0.2	0.4	0.1	-0.5	1.6	1.1	1.1	-0.7	-0.3	0.6	0.8	-0.6
Construction	0.8	0.7	0.5	3.0	1.2	0.0	0.6	0.5	-0.2	-0.5	0.0	-0.2	0.0
Agriculture	0.9	0.9	0.4	0.4	0.5	0.1	0.5	0.0	0.2	-0.2	0.1	-0.1	-0.1

⟵ **below expectation**   **above expectation** ⟶

-3   -1   0   1   2

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 2.9 per cent in the three months to August compared with the previous three months: slightly more quickly than the 2.4 per cent in our August Tracker forecast (largely due to upward revisions to earlier months). This growth was mainly driven by the lifting of restrictions in the hospitality sector, and a rise in human health activities. We now forecast output to grow by 1.5 per cent in the third quarter of 2021 and 0.8 per cent in the fourth quarter.

Figure 6 - Contributions to quarterly GDP growth (percentage points)
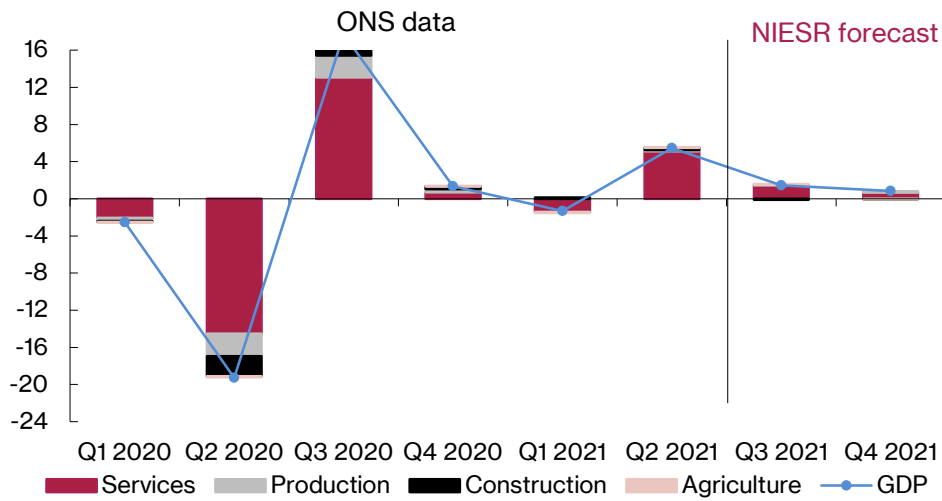
Services (80 per cent of GDP)

According to the latest ONS data, the services sector grew by 3.7 per cent in the three months to August, slightly stronger than the 3.2 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 1.8 per cent in the third quarter of 2021 and by 0.8 per cent in the fourth quarter.

Figure 7 - ONS service sector growth (3 months on previous 3 months, per cent) compared with swathe of business survey balances (standardised)
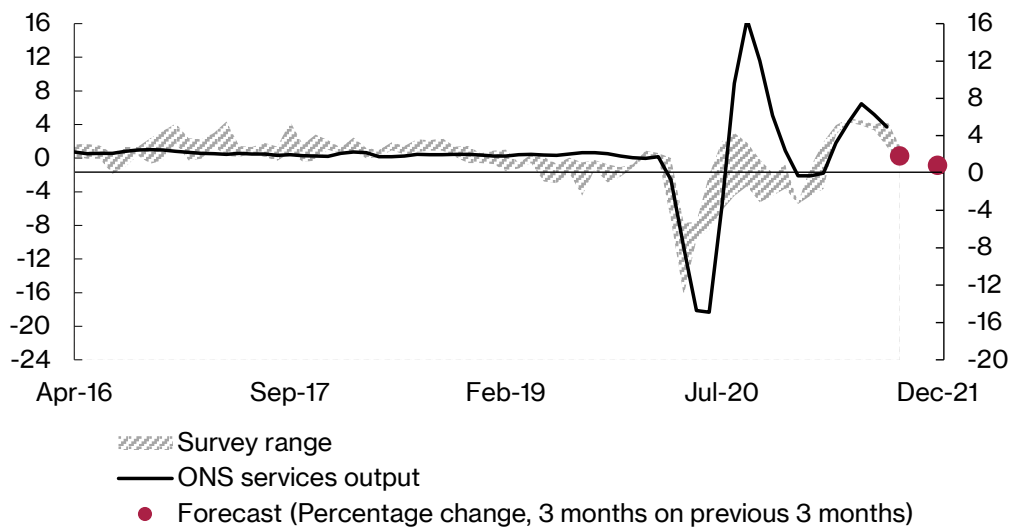
Note: The shaded swathe shows the highest and lowest values each month of a range of business survey balances that have been standardised so that they have the same mean and standard deviation as the quarterly growth of the ONS series.
Source: ONS, CBI, Markit, Bank of England Agents, EC, NIESR calculations.

The survey balances point to a slight slowing of activity, 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 55.4 in September, a slight acceleration from 55.0 in August but still well short of the May peak: severe supply constraints were reported to have contributed to escalating inflationary pressures and the slowest rise in new orders since the end of the winter lockdown. Internationally, the JPMorgan Global Services Business Activity Index rose slightly in August, from 53.4 to 52.8.

Production (14 per cent of GDP)

Production output grew by 0.3 per cent in the three months to August, slightly slower than the 0.5 per cent growth we forecast a month ago. The fastest growth was in mining and quarrying, due to the reopening of oilfields following planned maintenance. We forecast that production sector output will grow by 0.8 per cent in the third quarter and 1.2 per cent in the fourth 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 contracted by 0.1 per cent in the three months to August, a weaker reading than the 0.5 per cent growth we forecast in September. Nine out of the 13 manufacturing sub-sectors grew in August itself, with the largest contribution coming from a 6.6 per cent increase in the manufacture of motor vehicles, recovering from the global microchip shortage. Our forecast for the third quarter of 2021 is for manufacturing to contract by 0.2 per cent, followed by growth of 0.7 per cent in the fourth quarter.

The IHS Markit/CIPS UK manufacturing PMI slower to 57.1 in September, from 60.3 in August, reflecting supply chain delays, slower new order growth and rising material and labour shortages. The JPMorgan Global Manufacturing Output PMI was unchanged at 54.1 in August.

Figure 8 - ONS manufacturing sector growth (3 months on previous 3 months, per cent) compared with swathe of business survey balances (standardised)
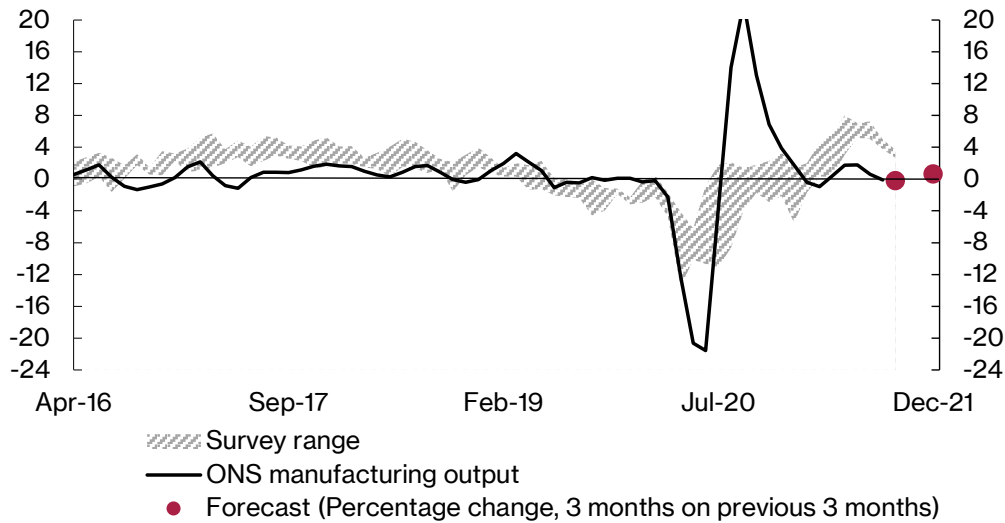
Note: The shaded swathe shows the highest and lowest values each month of a range of business survey balances that have been standardised so that they have the same mean and standard deviation as the quarterly growth of the ONS series.
Source: ONS, CBI, Markit, Bank of England Agents, EC, NIESR calculations.

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 rose by 3.6 per cent in the three months to July, as many oilfields re-opened after planned maintenance in the Spring. We forecast growth of 26 per cent in the third quarter of 2021 and 14 per cent in the fourth quarter.

Construction (6 per cent of GDP)

Output in the construction sector fell by 1.3 per cent in the three months to August, better than the 2.8 per cent contraction we forecast a month ago; this was largely driven by a fall in repair and maintenance of 4.7 per cent. We expect construction output to fall by 1.4 per cent in the third quarter of 2021 and by 0.1 per cent in the fourth quarter.

The IHS Markit/CIPS construction PMI survey registered 52.6 in September, down from 55.2 in August; the survey reported the steepest rise in sub-contractor charges since it began in April 1997.

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
Mar-20	92.4	92.2	98.0	88.0	84.9	93.0	93.4	93.1	99.9	79.7	99.8	92.3	95.2
Apr-20	75.0	76.8	88.7	72.9	52.1	78.8	74.1	69.1	90.3	76.9	92.3	53.8	83.0
May-20	77.1	78.2	88.7	73.2	59.4	79.8	78.7	75.4	89.5	79.2	92.7	58.9	83.6
Jun-20	84.3	84.8	91.6	77.1	79.3	86.2	87.5	85.3	94.7	85.6	98.2	72.0	85.2
Jul-20	90.9	91.2	93.2	87.4	93.1	90.1	92.6	91.7	100.3	83.4	99.1	84.6	87.3
Aug-20	92.9	93.2	93.7	91.9	97.3	90.0	94.0	93.9	100.6	80.4	98.7	86.7	89.2
Sep-20	94.5	94.9	95.3	96.2	95.7	90.6	94.7	95.0	100.7	78.5	99.0	89.5	91.0
Oct-20	95.2	95.5	95.8	97.0	94.2	93.3	95.5	96.4	98.0	79.0	99.5	91.2	91.5
Nov-20	93.0	92.5	95.5	94.0	83.4	92.2	96.5	98.1	98.3	75.7	99.5	92.0	91.0
Dec-20	93.9	93.8	96.7	94.1	87.9	92.1	96.3	97.0	101.0	77.9	100.4	90.6	89.8
Jan-21	91.7	91.3	96.5	90.2	79.6	92.1	94.9	95.2	102.5	75.1	101.1	89.8	88.7
Feb-21	92.4	91.8	96.7	90.2	82.1	91.5	95.5	96.1	102.8	72.0	102.7	92.8	88.3
Mar-21	94.3	93.7	97.9	94.2	84.3	92.5	96.6	97.4	102.0	73.5	104.4	97.4	88.3
Apr-21	97.0	97.1	96.9	99.6	96.4	93.4	96.2	97.9	103.4	62.4	103.3	97.7	90.0
May-21	97.6	97.9	96.9	100.7	100.2	93.5	97.1	98.0	109.6	64.4	103.1	96.3	91.1
Jun-21	99.0	99.7	98.1	104.0	102.6	93.6	96.5	97.9	107.7	58.6	104.3	96.6	92.4
Jul-21	98.9	99.7	97.3	103.8	102.2	95.6	96.7	97.3	105.6	69.0	105.4	95.7	92.3
Aug-21	99.3	100.0	97.8	103.0	103.1	97.6	97.5	97.8	102.6	80.0	104.5	95.5	91.7
Sep-21	99.7	100.4	98.0	102.9	103.5	98.6	98.0	98.1	101.6	84.8	104.8	95.4	91.1
Oct-21	99.9	100.6	98.3	102.9	103.8	99.3	98.1	98.1	101.1	86.7	105.1	95.5	90.7
Nov-21	100.1	100.8	98.6	102.8	104.0	99.9	98.6	98.4	101.5	89.1	105.2	95.4	90.7
Dec-21	100.3	101.1	98.9	102.9	104.1	100.1	98.9	98.6	101.6	89.8	105.4	95.4	90.9

Percentage change, 3 months on previous 3 months

	GDP index	Index of Services	Business services and finance	Government and other services	Distribution, Hotels and Restaurants	Transport, Storage and Communications	Index of Production	Manufacturing	Electricity, gas, steam and air conditioning	Mining and Quarrying	Water Supply, Sewerage and Waste Management	Index of Construction	Agriculture
Mar-20	-2.5	-2.6	-0.7	-3.7	-4.1	-3.0	-2.4	-2.3	-4.4	-4.7	0.6	-1.8	-7.7
Apr-20	-11.0	-10.6	-4.5	-13.9	-20.9	-9.2	-10.3	-12.2	-6.9	-6.3	-2.4	-17.1	-12.1
May-20	-18.7	-18.1	-8.5	-23.6	-34.9	-15.5	-17.0	-20.6	-8.3	-7.5	-4.7	-29.8	-15.2
Jun-20	-19.3	-18.3	-9.9	-23.7	-33.5	-15.9	-17.4	-21.5	-8.8	-3.2	-5.4	-35.6	-16.0
Jul-20	-5.7	-5.7	-4.7	-9.7	-2.6	-5.4	-2.8	-3.8	-1.9	2.8	-0.5	-11.3	-8.2
Aug-20	9.7	8.9	1.1	9.5	37.3	5.8	11.3	14.0	5.7	5.8	3.9	18.7	0.0
Sep-20	17.7	16.5	4.9	23.4	49.9	10.6	17.1	22.1	9.9	0.2	4.8	41.2	6.2
Oct-20	12.0	11.6	4.1	19.9	23.9	7.0	9.8	13.0	5.2	-4.1	2.5	24.1	6.1
Nov-20	5.4	5.1	2.9	12.0	1.3	3.7	4.6	6.9	0.5	-6.5	0.7	12.1	4.5
Dec-20	1.4	0.9	2.1	3.5	-7.2	2.5	2.5	3.9	-1.4	-4.0	0.9	5.0	1.8
Jan-21	-1.4	-2.1	1.4	-2.4	-12.6	0.9	1.2	1.8	0.8	-3.9	1.3	1.9	-0.8
Feb-21	-1.7	-2.1	1.2	-4.4	-8.7	-0.1	0.0	-0.4	3.1	-3.5	2.1	0.2	-2.4
Mar-21	-1.3	-1.8	1.1	-3.7	-7.3	-0.5	-0.5	-1.0	3.4	-5.2	2.9	2.3	-2.6
Apr-21	1.8	1.8	1.0	2.0	4.7	0.4	0.2	0.4	2.1	-9.1	3.1	5.7	-1.1
May-21	3.9	4.3	0.6	7.3	12.5	1.3	1.1	1.7	2.8	-11.0	2.2	6.7	1.0
Jun-21	5.5	6.5	0.3	10.8	21.6	1.6	1.0	1.8	4.4	-16.0	0.8	3.8	3.1
Jul-21	4.2	5.2	0.3	8.6	16.1	1.9	0.7	0.6	4.8	-7.6	0.8	0.2	3.5
Aug-21	2.9	3.7	0.5	5.5	9.6	2.6	0.3	-0.1	0.3	3.6	1.1	-1.2	2.6
Sep-21	1.5	1.8	0.4	1.8	3.2	4.0	0.8	-0.2	-3.4	26.1	1.3	-1.4	0.6
Oct-21	1.1	1.2	0.6	0.1	1.8	4.5	1.2	0.3	-5.5	31.0	0.5	-0.8	-0.9
Nov-21	0.8	0.8	0.6	-0.7	1.1	3.8	1.4	0.5	-3.7	25.5	0.3	-0.5	-1.4
Dec-21	0.8	0.8	0.9	-0.3	1.0	2.6	1.2	0.7	-1.8	13.6	0.3	-0.1	-1.0

Percentage change, month on same month in previous year

	GDP index	Index of Services	Business services and finance	Government and other services	Distribution, Hotels and Restaurants	Transport, Storage and Communications	Index of Production	Manufacturing	Electricity, gas, steam and air conditioning	Mining and Quarrying	Water Supply, Sewerage and Waste Management	Index of Construction	Agriculture
Mar-20	-7.5	-7.3	-1.5	-11.2	-15.1	-6.3	-8.7	-8.9	6.2	-32.2	-0.1	-7.2	3.1
Apr-20	-24.8	-22.8	-10.8	-26.5	-48.0	-21.4	-25.3	-30.1	-9.1	-24.8	-8.1	-48.2	-10.7
May-20	-22.8	-21.6	-10.9	-26.4	-40.7	-20.0	-21.5	-24.7	-11.5	-20.2	-8.3	-42.9	-11.9
Jun-20	-15.8	-15.2	-8.1	-23.0	-20.9	-14.2	-12.1	-14.6	-7.3	-5.0	-3.3	-29.5	-12.3
Jul-20	-9.4	-9.1	-7.1	-12.6	-7.2	-10.8	-7.3	-8.6	-0.2	-11.1	-1.4	-15.7	-14.2
Aug-20	-7.3	-7.2	-7.0	-8.6	-2.6	-10.0	-5.1	-5.5	2.2	-13.8	-1.9	-12.5	-15.9
Sep-20	-5.8	-5.6	-5.1	-4.4	-4.6	-10.1	-4.9	-4.7	-0.3	-18.2	-0.8	-9.0	-17.1
Oct-20	-5.2	-5.2	-5.0	-3.7	-5.6	-7.4	-4.6	-4.3	-6.5	-11.4	0.3	-5.8	-17.5
Nov-20	-7.0	-7.7	-4.3	-7.3	-16.3	-7.4	-2.8	-1.4	-7.3	-13.9	0.3	-5.9	-16.9
Dec-20	-6.2	-6.7	-3.6	-7.5	-12.0	-7.6	-2.6	-2.5	-2.8	-8.1	1.3	-7.2	-13.9
Jan-21	-8.7	-9.4	-3.9	-12.0	-21.3	-7.0	-3.9	-4.5	1.1	-11.8	0.8	-8.1	-14.4
Feb-21	-7.7	-8.7	-3.6	-11.7	-18.6	-7.6	-3.3	-4.0	3.1	-15.2	3.4	-4.2	-12.4
Mar-21	2.1	1.6	-0.1	7.0	-0.7	-0.5	3.4	4.6	2.1	-7.8	4.6	5.5	-7.2
Apr-21	29.3	26.4	9.2	36.6	85.0	18.5	29.8	41.7	14.5	-18.9	11.9	81.6	8.4
May-21	26.6	25.2	9.2	37.6	68.7	17.2	23.4	30.0	22.5	-18.7	11.2	63.5	9.0
Jun-21	17.4	17.6	7.1	34.9	29.4	8.6	10.3	14.8	13.7	-31.5	6.2	34.2	8.5
Jul-21	8.8	9.3	4.4	18.8	9.8	6.1	4.4	6.1	5.3	-17.3	6.4	13.1	5.7
Aug-21	6.9	7.3	4.4	12.1	6.0	8.4	3.7	4.2	2.0	-0.5	5.9	10.1	2.8
Sep-21	5.5	5.7	2.8	7.0	8.2	8.8	3.5	3.3	0.9	8.0	5.8	6.6	0.1
Oct-21	5.0	5.4	2.6	6.1	10.2	6.4	2.8	1.8	3.1	9.7	5.6	4.7	-0.9
Nov-21	7.7	9.0	3.3	9.4	24.7	8.3	2.2	0.3	3.3	17.7	5.7	3.7	-0.4
Dec-21	6.9	7.7	2.3	9.4	18.4	8.7	2.7	1.7	0.6	15.3	4.9	5.3	1.2

Percentage change, month on previous month

	GDP index	Index of Services	Business services and finance	Government and other services	Distribution, Hotels and Restaurants	Transport, Storage and Communications	Index of Production	Manufacturing	Electricity, gas, steam and air conditioning	Mining and Quarrying	Water Supply, Sewerage and Waste Management	Index of Construction	Agriculture
Mar-20	-7.7	-8.3	-2.3	-13.9	-15.9	-6.1	-5.5	-7.0	0.2	-6.1	0.5	-4.7	-5.6
Apr-20	-18.8	-16.7	-9.5	-17.2	-38.6	-15.3	-20.7	-25.8	-9.6	-3.5	-7.5	-41.7	-12.8
May-20	2.8	1.8	0.0	0.4	14.0	1.3	6.2	9.1	-0.9	3.0	0.4	9.5	0.7
Jun-20	9.3	8.4	3.3	5.3	33.5	8.0	11.2	13.1	5.8	8.1	5.9	22.2	1.9
Jul-20	7.8	7.5	1.7	13.4	17.4	4.5	5.8	7.5	5.9	-2.6	0.9	17.5	2.5
Aug-20	2.2	2.2	0.5	5.1	4.5	-0.1	1.5	2.4	0.3	-3.6	-0.4	2.5	2.2
Sep-20	1.7	1.8	1.7	4.7	-1.6	0.7	0.7	1.2	0.1	-2.4	0.3	3.2	2.0
Oct-20	0.7	0.6	0.5	0.8	-1.6	3.0	0.8	1.5	-2.7	0.6	0.5	1.9	0.5
Nov-20	-2.3	-3.1	-0.3	-3.1	-11.5	-1.2	1.0	1.8	0.3	-4.2	0.0	0.9	-0.5
Dec-20	1.0	1.4	1.3	0.1	5.4	-0.1	-0.2	-1.1	2.7	2.9	0.9	-1.5	-1.3
Jan-21	-2.3	-2.7	-0.2	-4.1	-9.4	0.0	-1.5	-1.9	1.5	-3.6	0.7	-0.9	-1.2
Feb-21	0.8	0.5	0.2	0.0	3.1	-0.7	0.6	0.9	0.3	-4.1	1.6	3.3	-0.5
Mar-21	2.1	2.1	1.2	4.4	2.7	1.1	1.2	1.4	-0.8	2.1	1.7	5.0	0.0
Apr-21	2.9	3.6	-1.0	5.7	14.4	1.0	-0.4	0.5	1.4	-15.1	-1.1	0.3	1.9
May-21	0.6	0.8	0.0	1.1	3.9	0.1	0.9	0.1	6.0	3.2	-0.2	-1.4	1.2
Jun-21	1.4	1.8	1.2	3.3	2.4	0.1	-0.6	-0.1	-1.7	-9.0	1.2	0.3	1.4
Jul-21	-0.1	0.0	-0.8	-0.2	-0.4	2.1	0.2	-0.6	-1.9	17.7	1.1	-0.9	-0.1
Aug-21	0.4	0.3	0.5	-0.8	0.9	2.1	0.8	0.5	-2.8	15.9	-0.9	-0.2	-0.7
Sep-21	0.4	0.4	0.2	-0.1	0.4	1.0	0.5	0.3	-1.0	6.0	0.3	-0.1	-0.7
Oct-21	0.2	0.3	0.3	0.0	0.3	0.7	0.1	0.0	-0.5	2.2	0.5	0.1	-0.4
Nov-21	0.2	0.2	0.3	-0.1	0.2	0.6	0.5	0.3	0.5	2.8	0.1	-0.1	0.0
Dec-21	0.2	0.2	0.3	0.2	0.1	0.2	0.3	0.3	0.1	0.8	0.2	0.0	0.3

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	0.2	-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			-2.2	3.2	
2021Q1			-3.8		
Average absolute error				0.22	0.08

Notes for Editors

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