

NIESR

Monthly GDP Tracker

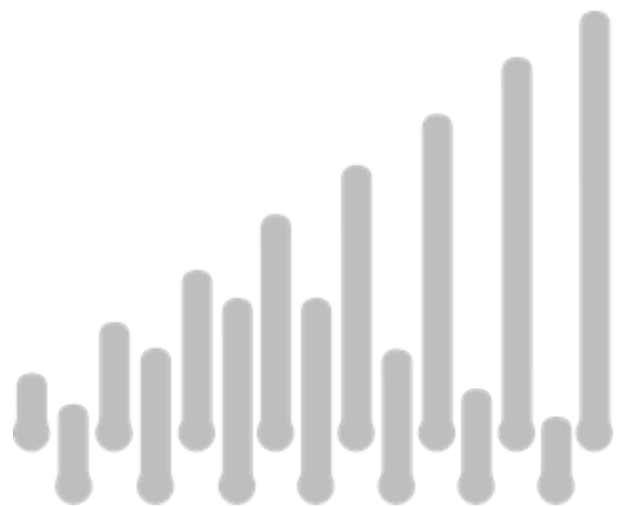
GDP gathered momentum before Omicron
Rory Macqueen

14th January 2022

“November 2021’s growth in GDP was broad-based, with output increasing almost across the board and transport and education among those returning to their pre-Covid output levels. Omicron is likely to have caused a significant slowing in growth in December, but the November data show little sign of headwinds from supply shortages: manufacturing and construction both enjoyed their strongest month-on-month growth since March 2021.”

Rory Macqueen

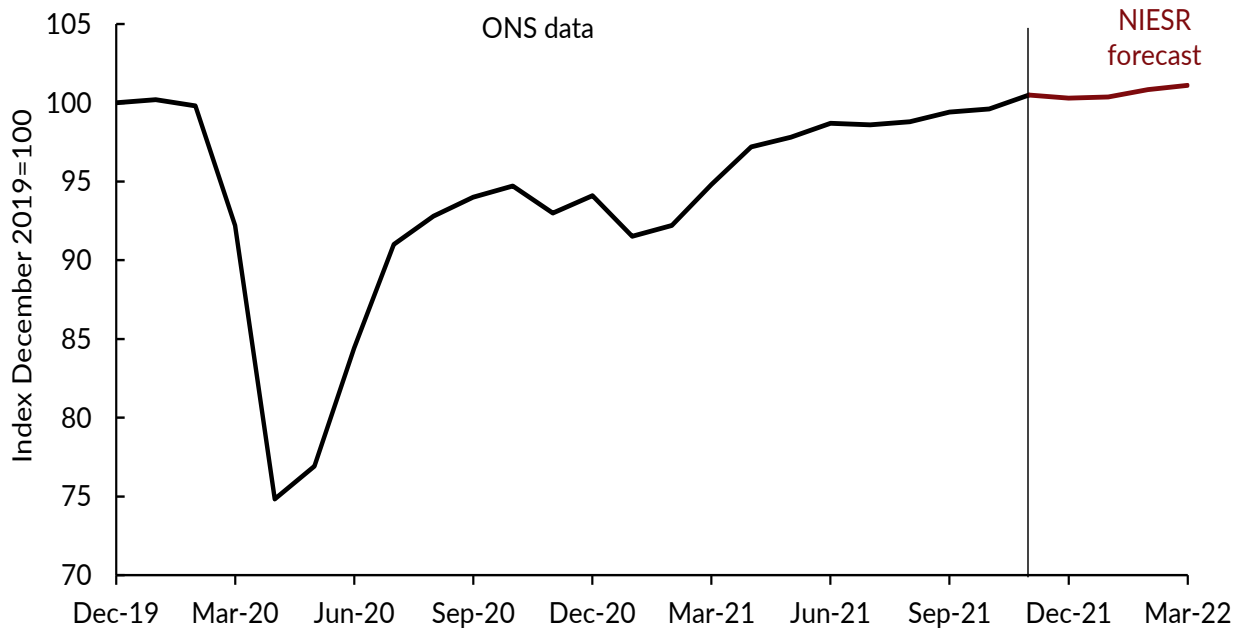
**Principal Economist - Macroeconomic Modelling and
Forecasting**



Main points

- Rapid and broad-based growth in November sees our forecast for the fourth quarter of 2021 revised up to 1.2 per cent. Our first estimate for the first quarter of 2022 is 0.6 per cent.
- November’s stronger than expected reading took output above its pre-Covid level, though still around 2½-4 per cent below its 2015-2019 trend.
- Supply constraints do not appear to have been holding back manufacturing and construction, which saw their strongest growth rates in 8 months before the onset of the omicron variant.

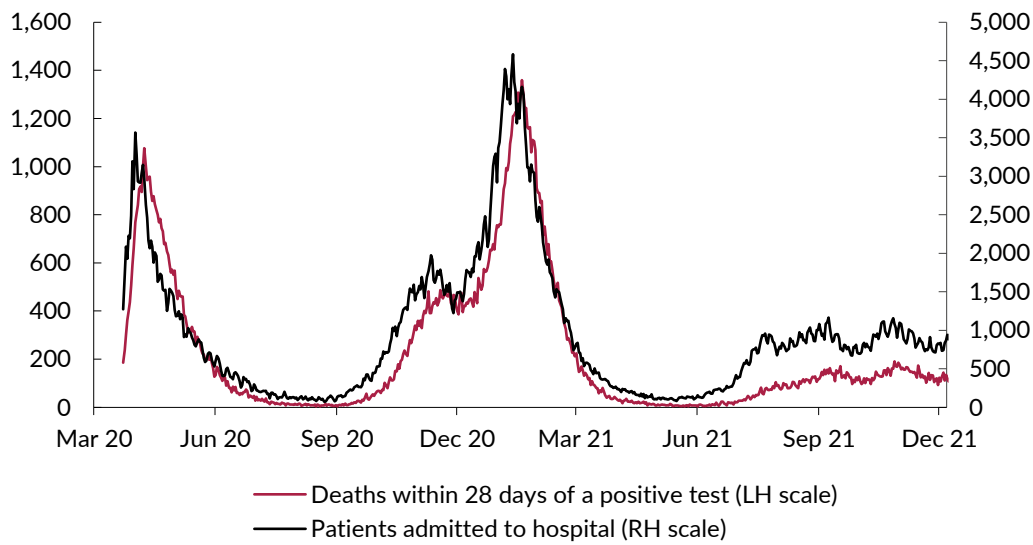
Figure 1 - UK GDP



Economic setting

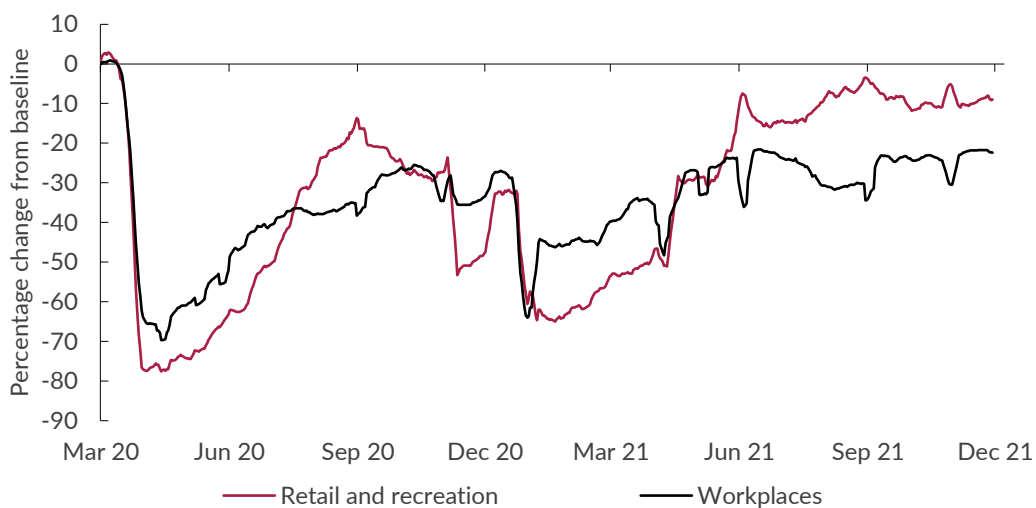
The main economic headwind at the end of 2021 and start of 2022 has been the omicron variant of Covid-19, and growth in the quarters covering this period will depend on how long it persists. NIESR's [Autumn UK Economic Outlook](#) revised down our forecasts for growth over the coming year, while revising up the outlook for inflation. We expect above-target inflation to weigh on demand, offsetting much of the nominal wage gains experienced by those in work. The Winter Economic Outlook will be published in February.

Figure 2.1 – UK daily Covid-19 statistics



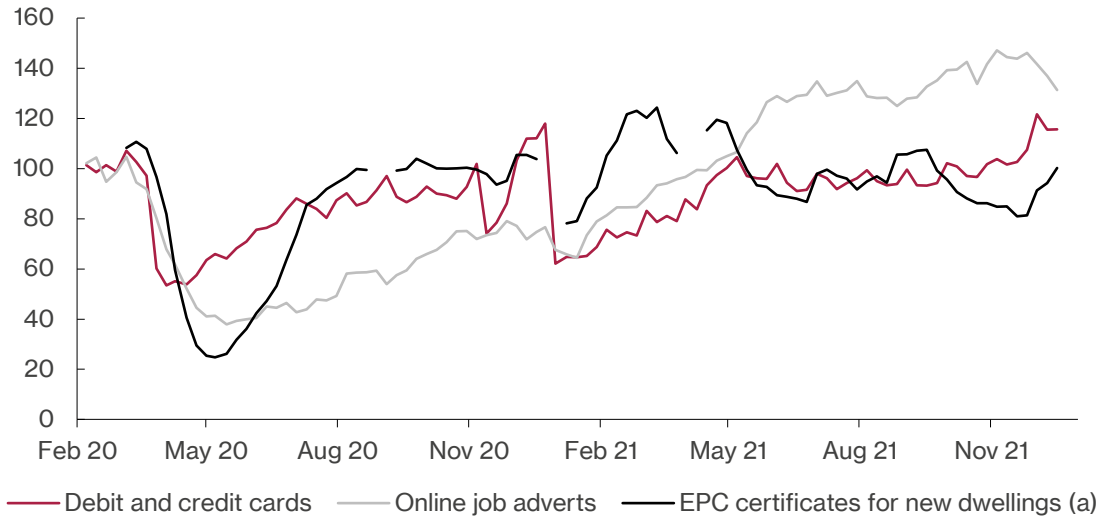
Source: Data.gov.uk. See coronavirus.data.gov.uk for further information.

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.

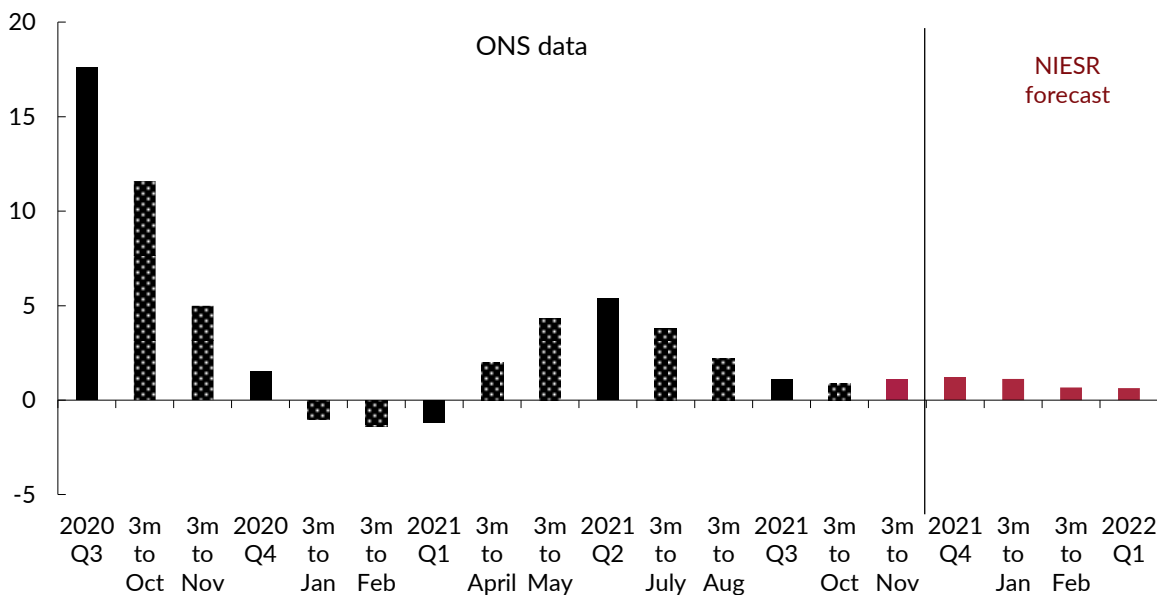


Notes: (a) England and Wales. Debit and credit cards (CHAPS-based): 100 = February 2020, percentage change on a backward looking seven-day rolling average, non-seasonally adjusted, nominal prices. Job adverts: change from the same week in 2019. EPC certificates: change from the same week in 2019/2020,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

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

High frequency indicators suggest that hiring remains close to record levels, with vacancies partly due to labour shortages in certain sectors but also potentially thanks to the smaller workforce post-Covid. Card spending rose as expected in December.

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



News in latest ONS data

The monthly GDP data for November were stronger than we forecast in November, GDP growing by 0.9 per cent month-on-month instead of 0.6 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)

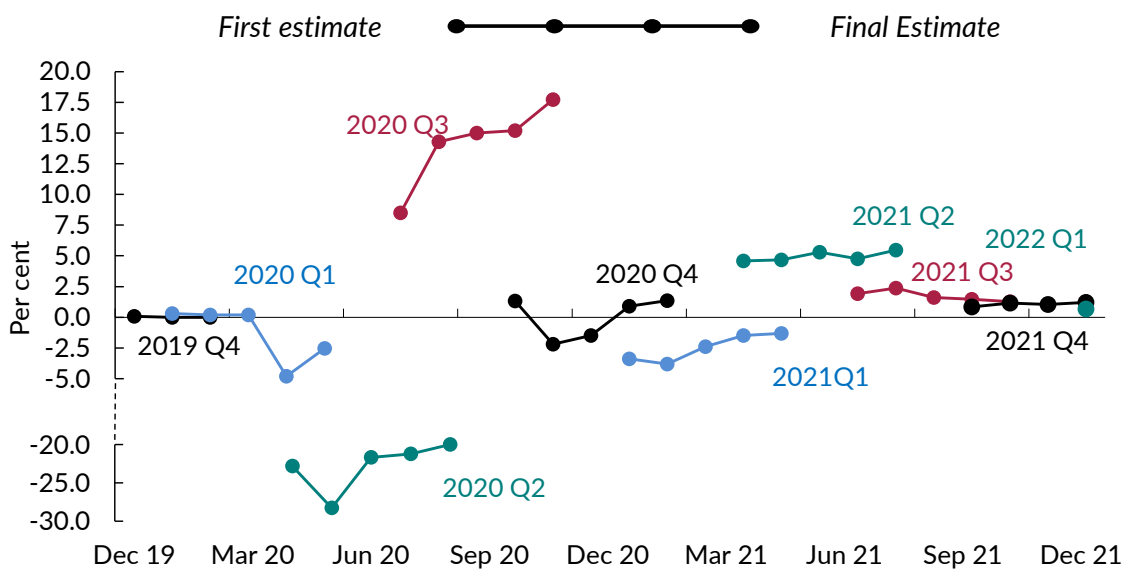
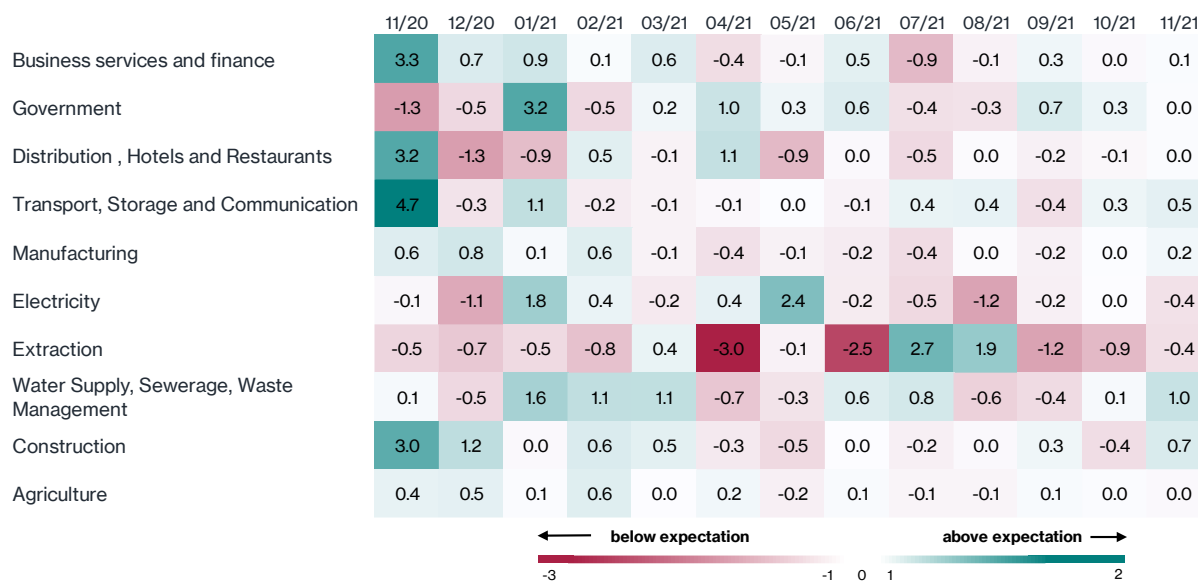


Figure 5 shows a heat map of the data surprises across sectors in the monthly data, relative to last month’s GDP Tracker, highlighting the sectors where the surprises are large relative to the volatility of the output data. This month, there was again a positive surprise in government and other services (which includes healthcare) and a negative surprise in extraction.

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.

Table 1 shows the growth in each sector for the three months to November, compared with the previous three months, against the forecast for each in our December GDP Tracker.

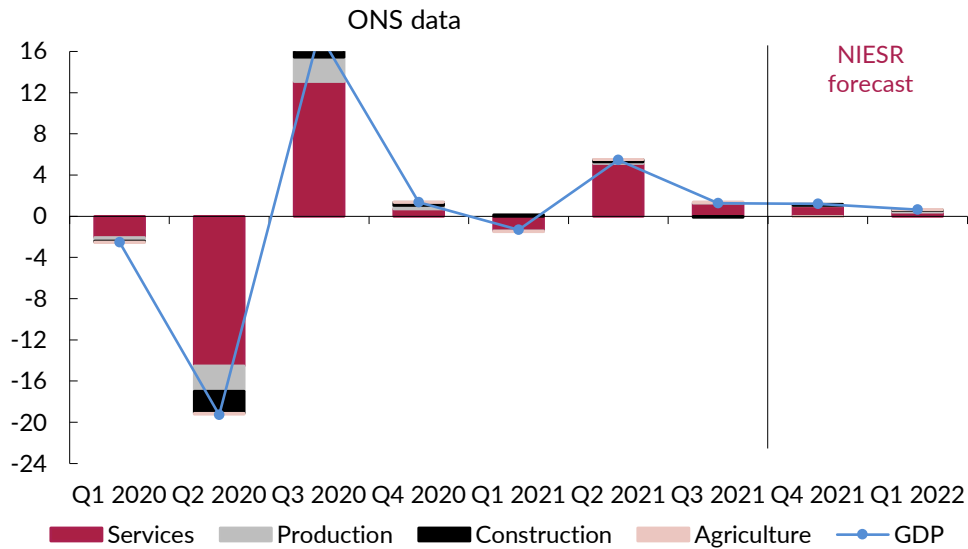
Table 1 - 3-month-on-3-month growth to November

	Index of Services	Index of Production	Manufacturing	Mining and Quarrying	Index of Construction
Forecast	1.1	0.1	-0.1	12.6	-0.6
Outturn	1.3	-0.1	-0.1	10.7	1.6

Sectoral detail

We now forecast GDP to grow by 1.2 per cent in the fourth quarter of 2021 and by 0.6 per cent in the first quarter of 2022.

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

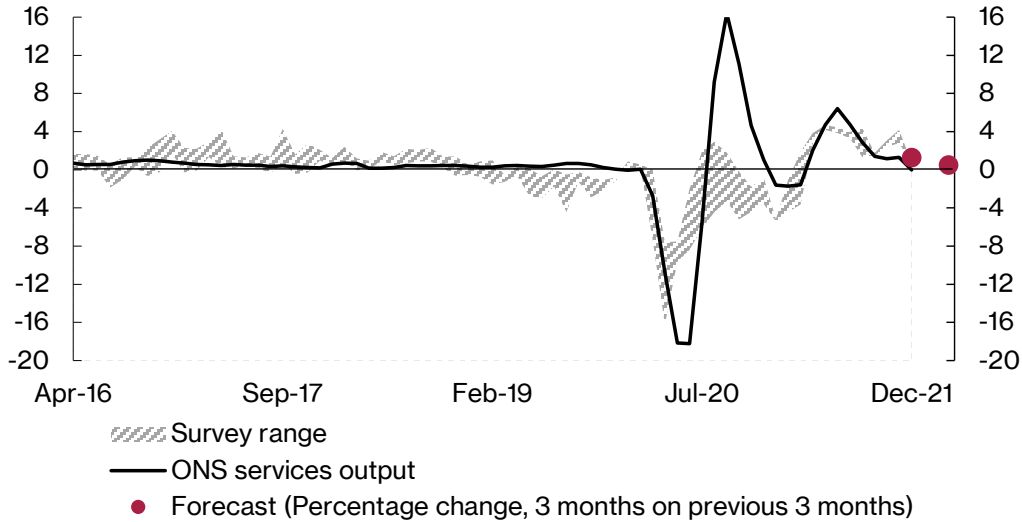


Services (80 per cent of GDP)

The survey balances point to a slowing in the growth rate of activity in December, 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 53.6 in December, down from 58.5 in November. Internationally, the JPMorgan Global Services Business Activity Index fell to a three-month low of 54.6.

Based on recent developments we expect service sector activity to grow by 1.3 per cent in the fourth quarter of 2021 and by 0.5 per cent in the first quarter of 2022.

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.

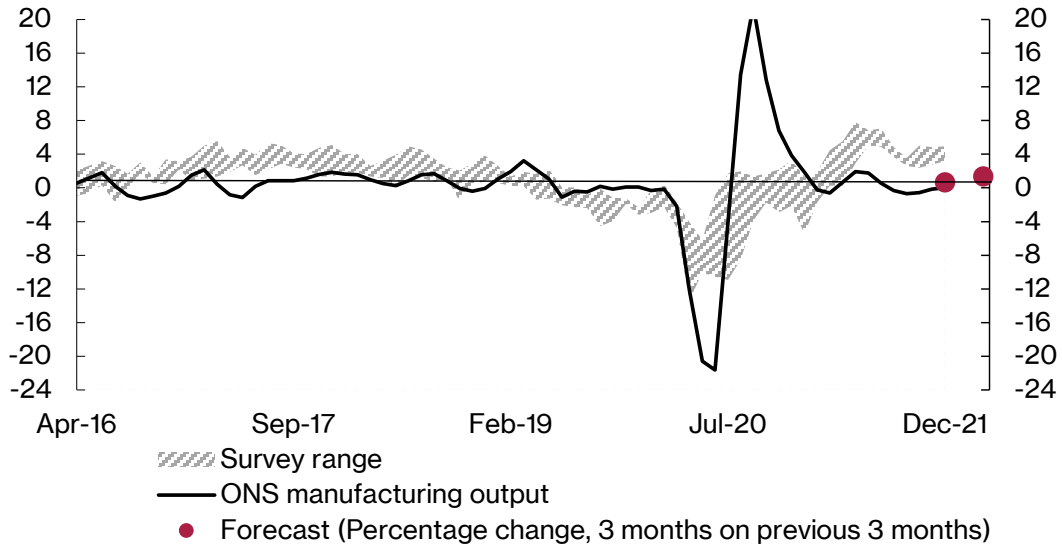
Production (14 per cent of GDP)

We forecast that production sector output will grow by 0.1 per cent in the fourth quarter of 2021, and by 1.2 per cent in the first quarter of 2022, 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)

The IHS Markit/CIPS UK manufacturing PMI was largely unchanged at 57.9 in December from 58.1 in November. The JPMorgan Global Manufacturing Output PMI was unchanged at 54.2. Our forecast for the fourth quarter of 2021 is for manufacturing to grow by 0.6 per cent, followed by 1.3 per cent in first quarter of 2022.

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. We forecast a fall of 1.4 per cent in the fourth quarter of 2021 and of 0.1 per cent in the first quarter of 2022.

Construction (6 per cent of GDP)

The IHS Markit/CIPS construction PMI survey registered 54.3 in December, down from 55.5 in November. We expect construction output to grow by 2.0 per cent in the fourth quarter of 2021 and by 0.9 per cent in the first quarter of 2022.

Table 2 - Summary Table of GDP growth (2019=100)

2019=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	92.3	92.1	97.6	87.4	84.7	93.8	93.4	93.1	99.3	81.1	99.7	93.9	95.1
Apr-20	74.9	76.7	88.9	71.5	51.8	79.7	74.1	69.2	89.7	77.6	92.2	54.7	83.0
May-20	77.0	78.1	88.6	72.8	58.7	80.1	78.8	75.5	88.6	80.7	92.7	59.7	83.6
Jun-20	84.5	85.0	91.9	79.0	77.4	86.2	87.8	85.0	95.0	91.3	98.4	72.9	85.3
Jul-20	91.1	91.4	93.5	89.0	91.3	90.0	92.4	91.3	100.6	83.9	99.0	85.7	87.2
Aug-20	92.9	93.3	93.7	91.7	97.2	89.6	93.6	93.5	100.9	78.9	98.9	88.2	89.2
Sep-20	94.1	94.4	95.3	94.7	94.5	90.7	94.4	94.6	101.7	75.9	99.4	90.9	91.0
Oct-20	94.8	95.1	95.9	95.6	93.1	93.0	95.2	95.9	98.3	78.5	99.7	92.4	91.5
Nov-20	93.1	92.7	95.6	95.0	83.0	91.9	96.2	97.7	98.4	75.4	99.7	93.4	91.1
Dec-20	94.2	94.3	96.5	96.5	86.5	92.3	95.9	96.5	101.0	77.2	100.5	91.8	89.9
Jan-21	91.6	91.3	96.4	90.6	79.6	91.7	94.6	95.0	101.0	75.2	100.8	91.1	88.7
Feb-21	92.3	91.8	96.7	90.8	81.5	91.2	95.3	96.0	101.5	72.5	102.2	93.8	88.3
Mar-21	94.9	94.6	98.2	96.9	82.9	92.6	96.5	97.3	100.8	74.9	103.4	98.0	88.3
Apr-21	97.3	97.6	97.0	101.5	94.6	93.9	96.2	97.9	103.5	62.9	102.2	98.5	90.1
May-21	97.9	98.3	97.1	102.3	99.5	94.0	96.7	97.9	106.2	65.7	102.1	97.2	91.1
Jun-21	98.8	99.6	98.2	103.0	102.0	94.7	95.5	97.6	101.8	58.5	103.5	97.5	92.3
Jul-21	98.7	99.6	97.7	103.0	101.4	96.0	95.8	97.3	98.6	68.5	104.8	96.6	92.3
Aug-21	98.9	99.7	98.0	102.0	102.7	97.1	96.0	97.3	96.5	80.5	104.6	95.5	91.3
Sep-21	99.5	100.4	98.7	103.8	102.1	96.6	95.8	96.8	93.7	79.7	104.5	98.1	90.9
Oct-21	99.7	100.9	99.0	105.1	102.0	98.0	95.4	97.0	91.2	75.5	104.9	96.4	90.9
Nov-21	100.6	101.5	99.5	105.2	102.6	99.9	96.3	98.0	92.5	74.5	106.6	99.8	91.2
Dec-21	100.4	101.2	99.6	105.8	99.3	98.9	96.7	98.3	92.9	75.5	106.4	99.8	91.6
Jan-22	100.5	101.3	99.7	105.8	99.4	98.9	97.0	98.7	93.1	75.3	106.4	99.0	91.9
Feb-22	100.9	101.7	100.0	105.8	101.1	99.9	97.4	99.2	94.1	74.9	106.7	100.2	92.1
Mar-22	101.2	102.1	100.3	106.0	101.9	100.5	97.4	99.4	91.9	75.1	106.8	99.6	92.1
Percentage change, 3 months on previous 3 months													
Mar-20	-2.7	-2.7	-0.9	-4.3	-4.7	-2.6	-2.4	-2.2	-5.1	-3.7	0.5	-1.9	-7.7
Apr-20	-11.1	-10.7	-4.7	-14.9	-21.3	-8.6	-10.3	-12.1	-7.1	-5.2	-2.5	-17.0	-12.1
May-20	-18.7	-18.1	-8.6	-24.1	-35.0	-15.0	-17.0	-20.6	-8.5	-6.4	-4.7	-29.8	-15.3
Jun-20	-19.2	-18.2	-9.7	-23.2	-34.1	-15.8	-17.3	-21.6	-8.5	-1.0	-5.3	-35.7	-15.9
Jul-20	-5.4	-5.4	-4.4	-7.4	-3.8	-6.0	-4.7	-4.1	-1.4	4.7	-0.3	-11.6	-8.2
Aug-20	10.0	9.2	1.5	12.1	36.2	4.8	4.8	11.2	6.8	6.1	4.1	18.5	0.0
Sep-20	17.6	16.4	4.9	23.3	50.6	9.9	16.5	21.6	10.9	-4.4	4.9	41.4	6.2
Oct-20	11.6	11.1	4.0	17.1	25.2	6.6	9.3	12.8	5.9	-8.8	2.7	24.4	6.1
Nov-20	5.0	4.6	2.8	9.9	1.8	3.7	4.4	6.8	0.6	-9.6	0.8	12.1	4.5
Dec-20	1.4	1.1	1.9	4.2	-7.2	2.6	2.5	3.8	-1.8	-3.2	0.9	4.8	1.9
Jan-21	-1.0	-1.6	1.3	0.0	-12.5	1.0	1.2	1.8	-0.2	-2.4	1.0	1.8	-0.7
Feb-21	-1.4	-1.7	1.0	-2.6	-8.5	-0.1	0.0	-0.2	1.7	-2.1	1.6	0.0	-2.4
Mar-21	-1.2	-1.6	1.1	-3.1	-7.1	-0.6	-0.3	-0.6	1.9	-3.7	2.2	1.9	-2.6
Apr-21	2.0	2.0	1.2	2.5	4.0	0.7	0.5	0.7	1.8	-7.7	2.3	5.1	-1.1
May-21	4.3	4.7	0.9	8.2	11.9	1.9	1.3	1.9	2.3	-9.5	1.4	6.1	1.0
Jun-21	5.5	6.4	0.3	10.2	21.4	2.6	0.7	1.8	2.7	-15.9	0.5	3.6	3.1
Jul-21	3.8	4.8	0.4	6.6	16.9	2.5	0.0	0.5	0.3	-8.4	0.8	0.3	3.4
Aug-21	2.2	2.9	0.5	2.4	10.5	2.6	-0.6	-0.3	-4.4	2.0	1.7	-1.4	2.4
Sep-21	1.1	1.4	0.7	0.7	3.4	2.5	-0.1	-0.7	-7.3	22.2	2.0	-1.0	0.4
Oct-21	0.9	1.2	0.9	0.8	1.3	2.5	-0.1	-0.6	-8.2	22.3	1.2	-0.4	-0.9
Nov-21	1.1	1.3	1.1	2.0	0.2	2.3	-0.1	-0.1	-6.6	10.7	1.0	1.6	-1.1
Dec-21	1.2	1.3	1.3	2.3	-0.7	2.5	0.1	0.6	-4.2	-1.4	1.3	2.0	-0.3
Jan-22	1.1	1.0	1.0	1.9	-1.8	2.1	0.8	1.3	-1.1	-4.4	1.7	3.0	0.6
Feb-22	0.7	0.4	0.7	1.0	-2.2	1.1	1.3	1.5	1.0	-1.8	1.1	1.6	0.9
Mar-22	0.6	0.5	0.6	0.5	-0.5	0.8	1.2	1.3	0.9	-0.1	0.6	0.9	0.9
Percentage change, month on same month in previous year													
Mar-20	-7.6	-7.4	-1.9	-11.8	-15.3	-5.4	-8.7	-8.9	5.5	-31.0	-0.2	-6.5	3.0
Apr-20	-24.9	-22.9	-10.6	-27.9	-48.3	-20.5	-25.3	-30.0	-9.7	-24.1	-8.2	-45.6	-10.7
May-20	-22.9	-21.7	-11.0	-26.8	-41.4	-19.7	-21.4	-24.6	-12.4	-18.6	-8.3	-40.6	-11.9
Jun-20	-15.6	-15.0	-7.8	-21.1	-22.8	-14.2	-11.8	-14.9	-7.0	1.3	-3.1	-26.7	-12.2
Jul-20	-9.2	-8.9	-6.8	-11.0	-9.0	-10.9	-7.5	-9.0	0.1	-10.6	-1.5	-14.5	-14.3
Aug-20	-7.3	-7.1	-7.0	-8.8	-2.7	-10.4	-5.5	-5.9	2.5	-15.4	-1.7	-12.2	-15.9
Sep-20	-6.2	-6.1	-5.1	-5.9	-5.8	-10.0	-5.2	-5.1	0.7	-20.9	-0.4	-9.2	-17.1
Oct-20	-5.6	-5.6	-4.9	-5.1	-6.7	-7.7	-4.9	-4.8	-6.2	-12.0	0.5	-6.4	-17.5
Nov-20	-6.9	-7.5	-4.2	-6.3	-16.7	-7.7	-3.1	-7.2	-14.2	-0.5	-6.1	-16.8	-16.8
Dec-20	-5.9	-6.2	-3.8	-5.1	-13.4	-7.4	-3.0	-3.0	-2.8	-9.0	1.4	-7.3	-13.8
Jan-21	-8.7	-9.4	-4.1	-11.4	-21.0	-7.6	-4.3	-4.8	0.7	-11.8	0.5	-8.2	-14.4
Feb-21	-7.6	-8.5	-3.4	-10.2	-18.3	-8.2	-3.6	-4.2	2.4	-15.5	3.1	-4.7	-12.5
Mar-21	2.8	2.7	0.6	10.9	-2.1	-1.3	3.3	4.5	1.5	-7.6	3.7	4.4	-7.2
Apr-21	29.9	27.2	9.1	42.0	82.6	17.8	29.8	41.5	15.4	-18.9	10.8	80.1	8.6
May-21	27.1	25.9	9.6	40.5	69.5	17.4	22.7	29.7	19.9	-18.6	10.1	62.8	9.0
Jun-21	16.9	17.2	6.9	30.4	31.8	9.9	8.8	14.8	7.2	-35.9	5.2	33.7	8.2
Jul-21	8.3	9.0	4.5	15.7	11.1	6.7	3.7	6.6	-2.0	-18.4	5.9	12.7	5.8
Aug-21	6.5	6.9	4.6	11.2	5.7	8.4	3.1	4.1	-4.4	2.0	5.8	8.3	2.4
Sep-21	5.7	6.4	3.6	9.6	8.0	6.5	1.5	2.3	-7.9	5.0	5.1	7.9	-0.1
Oct-21	5.2	6.1	3.2	9.9	9.6	5.4	0.2	1.1	-7.2	-3.8	5.2	4.3	-0.7
Nov-21	8.1	9.5	4.1	10.7	23.6	8.7	0.1	0.3	-6.0	-1.2	6.9	6.9	0.1
Dec-21	6.6	7.3	3.2	9.6	14.8	7.2	0.6	1.9	-8.0	-2.2	5.8	8.7	1.9
Jan-22	9.7	10.9	3.4	16.7	24.9	7.9	2.5	3.9	-7.9	0.1	5.5	8.7	3.6
Feb-22	9.4	10.8	3.4	16.6	24.0	9.5	2.2	3.3	-7.3	3.3	4.4	6.8	4.3
Mar-22	6.6	7.9	2.1	9.4	22.9	8.5	0.9	2.2	-8.9	0.3	3.3	1.6	4.3
Percentage change, month on previous month													
Mar-20	-7.6	-8.2	-2.5	-13.6	-15.1	-5.5	-5.6	-7.1	0.2	-5.5	0.6	-4.6	-5.7
Apr-20	-18.9	-16.7	-8.9	-18.2	-38.8	-15.0	-20.7	-25.7	-9.7	-4.3	-7.5	-41.7	-12.7
May-20	2.8	1.8	-0.3	1.8	13.3	0.5	6.3	9.1	-1.2	4.0	0.5	9.1	0.7
Jun-20	9.7	8.8	3.7	8.5	31.9	7.6	11.4	12.6	7.2	13.1	6.1	22.1	2.0
Jul-20	7.8	7.5	1.7	12.7	18.0	4.4	5.2	7.4	5.9	-8.1	0.6	17.6	2.2
Aug-20	2.0	2.1	0.2	3.0	6.5	-0.4	1.3	2.4	0.3	-6.0	-0.1	2.9	2.3
Sep-20	1.3	1.2	1.7	3.3	-2.8	1.2	0.9	1.2	0.8	-3.8	0.5	3.1	2.0
Oct-20	0.7	0.7	0.6	1.0	-1.5	2.5	0.8	1.4	-3.3	3.4	0.3	1.7	0.5
Nov-20	-1.8	-2.5	-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 3, 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 3 - 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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