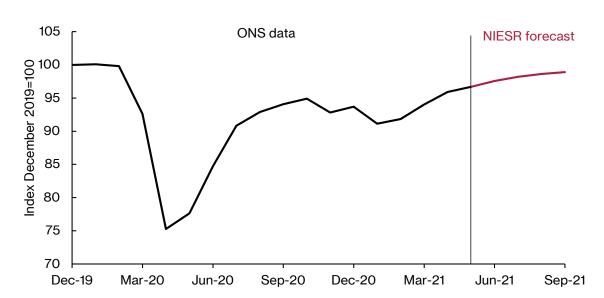
Friday, 9th July 2021

niesr.ac.uk

Continued economic recovery put in doubt by **Delta variant**

Figure 1 - UK GDP



Main points

- May's month-on-month growth of 0.8% disappointed, with little sign of momentum in either April or May outside the sectors which grew due to the lifting of Covid-19 restrictions.
- With several indicators showing slowing activity after the spring momentum, we expect growth in June of 0.9 per cent, and 4.8 per cent for the second quarter of 2021 overall.
- With catch-up potential still evident in hospitality, transport, business support and the arts, we forecast growth of 1.9 per cent in the third quarter, still notably above historical trend growth rates.
- But with Covid-19 cases rising again, and consumer caution evident, the lifting of further restrictions on July 19th risk boosting the economy in the short term at the expense of a longer lasting and more sustainable recovery. Much will depend on the roll-out and efficacy of the vaccines in the context of the Delta variant.

"Like April, May's GDP growth was faster than usual but almost entirely driven by the lifting of Covid-19 restrictions, with the hospitality sector accounting for 0.7 percentage points of May's 0.8 per cent growth. Underlying growth is moderate outside the sectors being unlocked, with supply constraints contributing to the continuing recent stagnation in manufacturing. It remains to be seen whether the lifting of further restrictions in July contributes to a continuation of strong growth in the third quarter or – if cases of Covid-19 continue to rise – increased caution among consumers and even another national lockdown."

Rory Macqueen

Principal Economist - Macroeconomic Modelling and Forecasting

Economic setting

Monthly GDP data continue to be dominated by progress on the lifting of Covid-19 restrictions. ONS quarterly national accounts for the first quarter of 2021 confirmed a GDP fall of 1.6 per cent, in line with our May UK Economic Outlook. Consumption, investment and government expenditure all shrank, but the combined effect was almost entirely offset by the fall in imports which followed the end of the Brexit transition period.

Data and soft indicators continue to suggest strong growth in the second quarter, though with a slowing towards the end, which may be related to the postponement of the $21^{\rm st}$ June date for ending Covid-1 restrictions. If so, then the increase in activity caused by reopening these sectors has simply been postponed from the second to the third quarter of the year.

The transmissibility of the Delta variant has played a part in the up-tick in Covid-19 cases over the past few weeks. The degree to which vaccines are able to nullify its threat is not fully known at this stage but the majority of remaining Covid restrictions are currently scheduled to be lifted on 19th July. This is likely to provide a short-term boost to the economy, though if it increases the chance of further lockdowns later the long-term benefits may be smaller, or even negative.

The combination of returning demand, accumulated savings, base effects and the end of reducedrate VAT for the hospitality sector are all presently putting upward pressure on inflation, which we <u>expect to remain above target in the short term</u>. Some of the same effects will play a part in raising the headline earnings growth rate <u>to 8.1 per cent in the second quarter</u>.

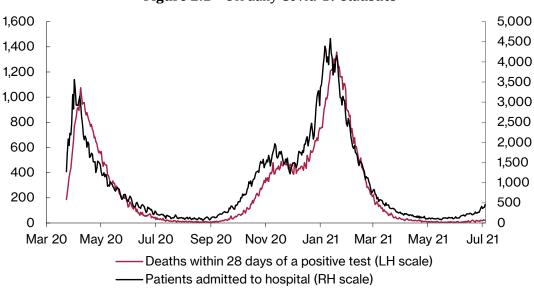


Figure 2.1 – UK daily Covid-19 statistics

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

10 Percentage change from baseline 0 -10 -20 -30 -40 -50 -60 -70 -80 -90 Feb 20 Aug 20 Oct 20 Dec 20 Apr 20 Jun 20 Feb 21 Apr 21 Jun 21 Retail and recreation Workplaces

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.

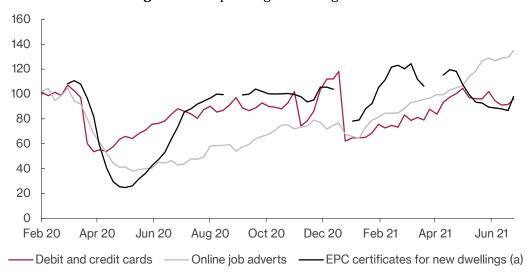


Figure 2.3 – Spending and hiring indicators

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 continued to strengthen in May, with continuing reports of recruitment difficulties, especially among non-vaccinated age groups and in sectors with a previously large number of European workers. Credit and debit card spending has slowed in recent months and remains slightly below February 2020 levels. Construction activity seems to have slowed in recent months after its boom in the early months of the year.

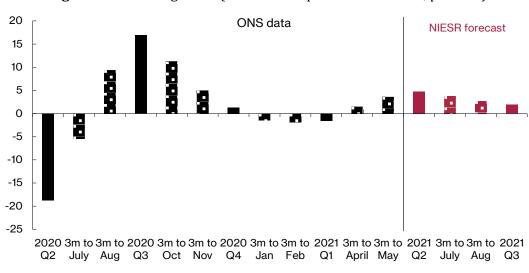
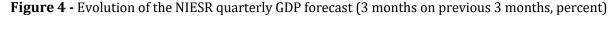


Figure 3 – UK GDP growth (3 months on previous 3 months, per cent)

News in latest ONS data

The ONS data for May were weaker than we forecast in June, GDP growing by just 0.8 per cent month-on-month.

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



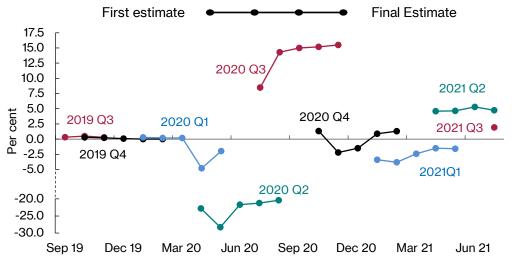
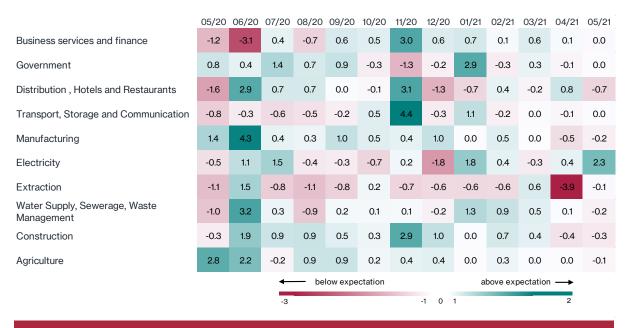


Figure 5 shows a heat map of the data surprises across sectors in the monthly data, relative to last month's GDP Tracker, highlighting the sectors where the surprises are large relative to the volatility of the output data. This month, a positive surprise was seen in electricity and gas. Negative surprises were seen in construction 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 May compared with the three months previously, slightly weaker than the 3.8 per cent in our June Tracker forecast. This growth was mainly driven by the lifting of restrictions in the government and distribution, hotels and restaurants sectors. Our forecast for the second quarter of 2021 is now for output to grow by 4.8 per cent. We forecast output to grow by 1.9 per cent in the third quarter of 2021.

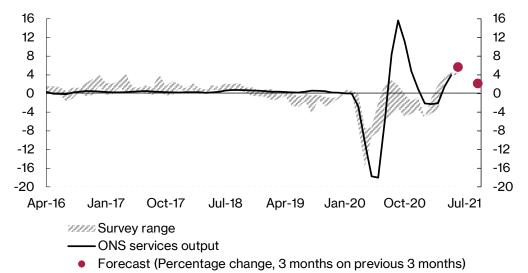
ONS data **NIESR** forecast 16 12 8 4 0 -4 -8 -12 -16 -20 -24 Q1 2020 Q2 2020 Q3 2020 Q4 2020 Q1 2021 Q2 2021 Q3 2021 Services Production Construction Agriculture -- GDP

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 4.0 per cent in the three months to May, similar to the 4.1 per cent we expected 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 5.7 per cent quarter-on-quarter in the second quarter of 2021 (figure 7) and 2.2 per cent in the third 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 plateauing of activity in June, 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 62.4 in June, slightly down from 62.9 in May, but still the second highest reading since October 2013. This included another sharp rise in new orders, though the overall rate of new business growth softened. Internationally, the JPMorgan Global Services Business Activity Index rose to 57.5 in June, down slightly from May's high.

Production (14 per cent of GDP)

Production output grew by 0.8 per cent in the three months to May, weaker than the 1.1 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 estimate that production grew by 0.8 per cent in the second quarter of 2021

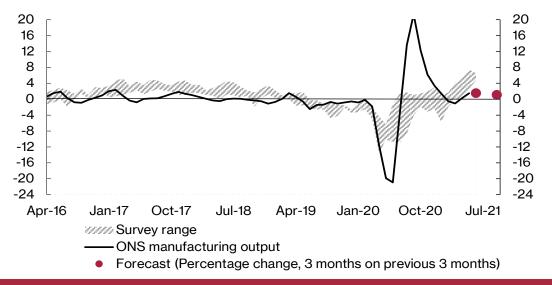
and will grow by 1.2 per cent in the third quarter, though output in this sector is volatile and difficult to predict on a quarterly basis with any accuracy.

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, worth 10 per cent of GDP.

Manufacturing (10 per cent of GDP)

Within production, output in the manufacturing sector grew by 1.5 per cent in the three months to May, weaker than the 2.2 per cent growth we forecast in June. Six out of the 13 manufacturing sub-sectors contracted, with the largest contribution to the fall coming from the manufacture of transport equipment, thanks to microchip shortages. Our forecast for the second quarter of 2021 is for manufacturing to grow by 1.5 per cent, followed by growth of 1.1 in the third quarter of the year.

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 fell slightly to 63.9 in June, from a record 65.6 in May, still a strong rate of growth despite supply-chain and distributional difficulties. Growth was seen in consumer, intermediate and investment goods sub-sectors.

The JPMorgan Global Manufacturing Output dipped to 55.5 in June from 56.0 in May, a twelfth straight month of expansion.

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 recovered in May but still fell by 10 per cent in the three months to May, driven by planned maintenance closures. We now forecast a contraction of 11 per cent in the second quarter of 2021 and growth of 0.9 per cent in the third quarter.

Construction (6 per cent of GDP)

Output in the construction sector grew by 6.4 per cent in the three months to April, almost in line with the 6.5 per cent we had forecast a month ago, though both new work and repairs & maintenance contracted in May. We anticipate construction output to grow by 3.2 per cent in the second quarter of 2021 and by 0.3 per cent in the third quarter.

The IHS Markit/CIPS construction PMI survey hit its highest level since 1997 in June, rising to 66.3 from 64.2 in May. House building (index at 68.2) increased at its fastest pace since November 2003.

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

			Index of Services - Components				In	dex of Productio	n - Components	s			
2018=100	GDP index	Index of Services	Business	Government	Distribution,	Transport,	Index of Production		Electricity, gas, steam and	Mining and	Water Supply, Sewerage and	Index of Construction	Agriculture
		Gervices	services and finance	and other services	Hotels and Restaurants	Storage and Communications	Troduction	Manufacturing	air	Quarrying	Waste	Construction	
	1000	796					136		conditioning		Management	61	7
Latest weights			339	217	133	108		102	15	6	13		
Dec-19 Jan-20	101.5 101.6	102.3 102.4	101.0 101.0	102.9 103.3	102.2 102.9	105.2 104.3	97.2 97.5	96.3 96.9	101.8 99.1	96.4 96.5	100.1 101.0	100.2 99.8	108.9 108.0
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 May-20	76.4 78.8	78.4 79.9	89.3 89.0	74.4 75.6	53.8 60.8	83.3 84.2	74.2 78.9	68.0 74.0	89.8 90.9	88.4 90.6	93.3 93.5	55.9 63.5	89.4 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 Sep-20	94.3 95.5	94.6 96.0	94.2 95.5	91.5 95.6	100.3 97.7	95.2 96.0	93.0 93.5	91.4 92.5	99.7 99.1	91.2 88.8	99.7 100.0	92.5 94.2	95.2 96.9
Oct-20	96.3	96.8	96.4	96.8	96.4	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		95.5	96.2
Dec-20 Jan-21	95.1 92.5	95.2 92.2	96.9 96.4	95.1 89.6	89.7 82.0	97.6 97.7	95.0 93.5	94.3 92.2	99.5 101.1	89.2 85.8	101.4 101.6	93.4 93.0	94.8 93.5
Feb-21	93.2	92.8	96.7	90.2	84.0	97.0	94.0	93.0	101.6	83.8		96.4	92.3
Mar-21	95.4	95.0	97.9	94.5	86.0	98.4	95.4	94.6	100.6	86.1	103.6	101.0	92.4
Apr-21 May-21	97.4 98.1	97.7 98.6	97.9 98.0	96.7 96.9	97.5 102.3	99.2 99.1	94.4 95.1	94.6 94.5	101.8 107.7	72.6 75.3	103.7 103.7	100.3 99.5	93.6 94.9
Jun-21	99.0	99.6	98.2	98.2	105.0	99.7	95.7	95.0	106.6	79.1	104.0		96.0
Jul-21	99.7 100.1	100.3 100.8	98.5 98.8	98.8 99.0	107.6 109.2	100.1 100.3	95.9 96.2	95.4 95.8	106.7 107.3	76.9 76.0	104.2 104.3	100.0 100.2	96.3 96.0
Aug-21 Sep-21	100.1	100.8	99.1	99.0	109.2	100.8	96.2	96.1	107.3	76.0	104.5		95.6
											'		
Dec-19	Percentage char 0.0	nge, 3 months o 0.2	on previous 3 mo 0.0	nths 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	-0.8	-0.2	-2.5	-5.2	0.5		-1.3
Mar-20 Apr-20	-2.6 -10.8	-2.7 -10.5	-0.9 -4.7	-4.1 -13.7	-4.9 -20.9	-3.1 -9.1	-2.0 -9.6	-1.8 -11.4	-4.6 -6.2	-4.0 -5.9	1.0 -2.0	-2.3 -16.7	-4.2 -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 -3.2	-15.8 -5.5	-16.4	-20.9 -3.6	-6.8 -0.4	-2.4	-5.5 -0.7	-33.7 -8.6	-13.6
Jul-20 Aug-20	-5.4 9.3	-5.7 8.4	-4.7 1.3	-8.9 8.1	-3.2 36.4	-5.5 5.8	-2.3 10.9	13.6	5.4	2.8 5.2		20.0	-6.8 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 Nov-20	11.3 5.0	11.0 4.8	4.0 2.7	16.8 10.7	25.1 1.8	7.2 3.9	8.7 3.8	12.3 6.2	4.0 0.5	-4.7 -6.9	2.5 0.5	22.9 10.2	5.2 3.6
Dec-20	1.3	1.0	2.0	4.1	-7.1	2.7	2.0	3.4	-0.8	-3.8		2.7	0.8
Jan-21	-1.5	-2.1	1.0	-1.8	-12.6	1.0	1.0	1.4	1.0	-3.3	1.1	0.1	-1.5
Feb-21 Mar-21	-1.8 -1.6	-2.3 -2.1	0.8	-4.1 -4.1	-8.6 -7.3	-0.1 -0.4	-0.1 -0.5	-0.5 -1.1	2.3 2.5	-1.9 -3.3	1.9 2.2		-3.2 -3.3
Apr-21	1.5	1.5	1.2	0.9	3.9	0.6	0.1	0.3	1.5	-6.9	2.3	5.6	-2.2
May-21	3.6	4.0	1.3	4.8	11.8	1.5	0.8	1.5	2.6	-9.6	1.7		0.1
Jun-21 Jul-21	4.8 3.8	5.7 4.6	1.1 0.8	6.4 4.5	20.9 17.7	1.7 1.5	0.8 1.0	1.5 0.9	4.2 5.6	-11.2 -4.6	1.1 0.5	3.2 0.5	2.3 3.2
Aug-21	2.7	3.2	0.6	2.8	12.6	1.1	1.0	0.8	3.4	-0.9	0.5	-0.3	2.6
Sep-21	1.9	2.2	0.8	1.8	7.0	1.0	1.2	1.1	1.9	0.9	0.5	0.3	1.2
	Percentage char	nge, month on s	ame month in pr	evious year									
Dec-19	1.0	1.4	0.8	2.4	1.5	1.2	-1.7	-2.6	3.4	-2.6			5.6
Jan-20 Feb-20	0.6 0.0	1.2 0.8	0.9 0.4	2.7 1.8	0.9 0.4	-0.2 -0.1	-2.2 -2.4	-3.1 -3.0	-1.8 0.6	-0.5 -2.8	2.2 0.7	-1.1 -3.9	4.5 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		-14.4
May-20 Jun-20	-22.1 -15.2	-21.2 -15.0	-11.1 -8.2	-25.4 -21.6	-40.6 -21.8	-19.5 -13.7	-20.5 -11.9	-24.9 -15.0	-11.4 -8.6	-9.1 0.2	-8.2 -3.2	-38.2 -25.0	-14.6 -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 Sep-20	-7.2 -6.0	-7.4 -6.0	-6.8 -5.2	-10.3 -6.4	-2.2 -4.7	-9.6 -9.6	-4.8 -4.8	-5.7 -4.5	0.1 -0.1	-7.0 -16.5	-1.4 -0.8	-9.5 -8.1	-11.7 -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		-11.7
Dec-20 Jan-21	-6.3 -9.0	-6.9 -10.0	-4.1 -4.6	-7.6 -13.2	-12.3 -20.4	-7.2 -6.4	-2.3 -4.1	-2.1 -4.9	-2.3 2.0	-7.5 -11.1	1.3 0.6		-12.9 -13.4
Feb-21	-8.0	-9.1	-4.1	-12.1	-18.1	-6.9	-3.7	-4.5	3.4	-13.0	2.6		-12.2
Mar-21	1.5	1.0	-0.5	5.4	-1.1	-0.1	3.1	4.1	2.5	-4.8			-7.6
Apr-21 May-21	27.4 24.5	24.6 23.4	9.6 10.1	29.9 28.2	81.2 68.2	19.1 17.7	27.2 20.5	39.1 27.7	13.4 18.5	-17.9 -16.9	11.1 10.9	79.4 56.7	4.7 5.6
Jun-21	15.1	15.1	6.5	23.4	30.9	9.6	9.8	13.7	12.6	-18.9	5.1	31.1	5.2
Jul-21	8.1 6.2	8.5 6.6	5.1 4.9	12.5 8.2	14.0 8.9	5.1	4.1	6.3 4.8	7.3	-18.9	4.1 4.7	11.6 8.3	3.1 0.8
Aug-21 Sep-21	5.1	5.3		3.9	11.7	5.4 5.0	3.4 3.2		7.6 9.0	-16.7 -14.3			
•													
Dec-19	Percentage char 0.0	nge, month on p 0.1	orevious month 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			-0.8
Feb-20	-0.3	-0.3	-0.2	-0.7	-0.4	-0.1	0.1	0.5	-0.8	-0.2			-2.7
Mar-20 Apr-20	-7.2 -18.7	-7.8 -16.7	-2.4 -9.2	-12.7 -17.0	-15.1 -38.2	-5.5 -15.4	-5.2 -19.8	-6.7 -25.2	-0.2 -8.5	-6.1 -2.2		-3.4 -41.6	-4.9 -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			1.6
Jul-20 Aug-20	7.2 2.3	6.9 2.3	1.7 0.4	10.3 4.2	17.7 6.3	4.6 0.0	5.6 1.0	7.4 1.9	5.1 0.2	-2.8 -3.8		17.7	2.3 1.9
Sep-20	1.3	1.5	1.4	4.5	-2.6	0.8	0.5	1.2	-0.6	-2.6		1.8	1.8
Oct-20	0.9	0.8	0.9	1.3	-1.3	2.9	0.7	1.2	-1.5	0.8		0.7	-0.1
Nov-20 Dec-20	-2.2 1.0	-3.0 1.4	-0.6 1.1	-2.7 1.0	-11.1 4.6	-1.1 -0.1	0.8 0.0	1.4 -0.6	1.2 0.7	-4.4 4.2	0.0		-0.6 -1.5
Jan-21	-2.7	-3.2	-0.5	-5.8	-8.6	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	2.5	-0.7	0.5	0.9	0.5	-2.3	1.3		-1.3
Mar-21 Apr-21	2.4 2.0	2.4 2.8	1.2 0.0	4.7 2.4	2.5 13.3	1.5 0.8	1.5 -1.0	1.7 0.0	-1.0 1.2	2.7 -15.7	0.7 0.1	4.8 -0.7	0.1 1.3
May-21	0.8	0.9	0.0	0.3	4.9	-0.1	0.7	-0.1	5.8	3.7	0.0	-0.7	1.4
Jun-21	0.9	1.0	0.2	1.3	2.7	0.6	0.7	0.5	-1.0	5.0	0.3		1.2
Jul-21 Aug-21	0.7 0.4	0.8 0.5	0.3 0.3	0.6 0.2	2.5 1.5	0.4 0.3	0.2 0.3	0.4 0.4	0.1 0.5	-2.7 -1.2	0.2 0.1	0.2 0.2	0.2 -0.3
Sep-21	0.3	0.3		0.3	0.0	0.4	0.4	0.4	0.7	0.2			-0.4

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
2020QI	-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	
2021QI			-3.8		
Average absolute error				0.22	0.08

Notes for editors

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