

NIESR

Monthly GDP Tracker

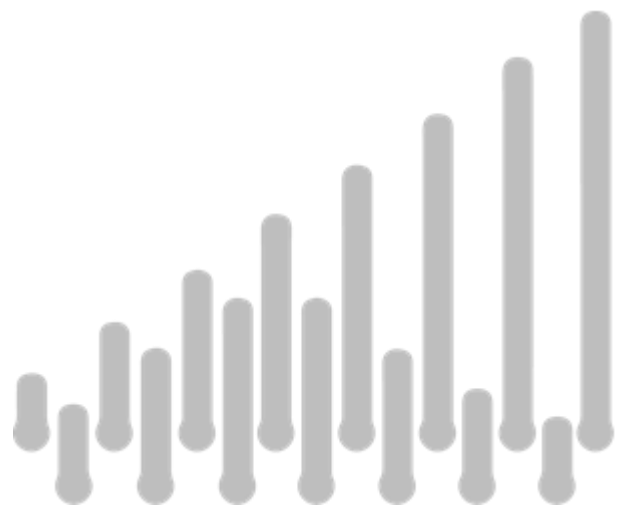
End to testing drives output down at start of second quarter of 2022

Rory Macqueen

13th June 2022

“April’s headline 0.3 per cent fall in GDP hid some strength in private services sectors: strong growth in retail, hospitality and other services suggests that some households may have been able to smooth their consumption in the face of the inflation shock. Manufacturing appears to be suffering as a result of the impact of high petrol and energy, with declines in 8 out of 13 sub-sectors, but April’s overall decline was principally driven by the winding-down of the Test and Trace programme, which had made significant positive contributions to GDP over most of the Covid-19 period”

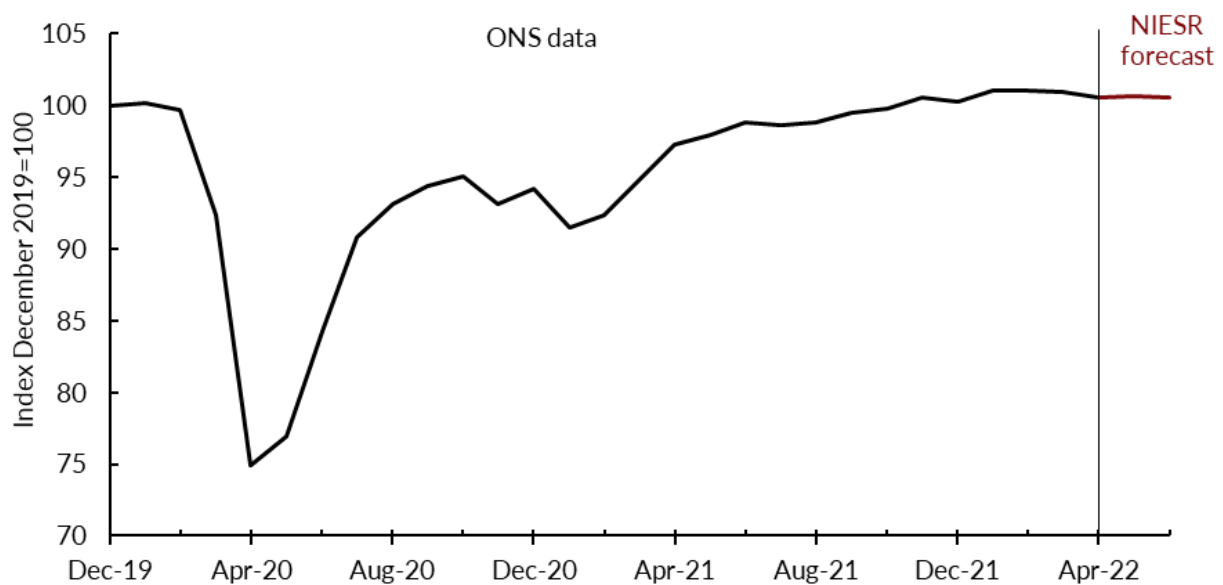
Rory Macqueen
Principal Economist, NIESR



Main points

- Negative growth of 0.3 per cent in April increases the chances of a recession, though this was largely driven by the end of the government’s Test and Trace programme rather than weakness in private demand.
- The impact of rising energy prices, particularly on manufacturing, is likely to impede recovery in the coming months. We now forecast month-on-month growth to stagnate in May and June, leading to a decline of 0.4 per cent in the second quarter overall.
- Strong April growth in retail and hospitality suggest that some households at least have been able to use Covid-19 savings to weather the initial inflation shock. The government’s latest support package may also help avert a larger and longer-term fall in demand.

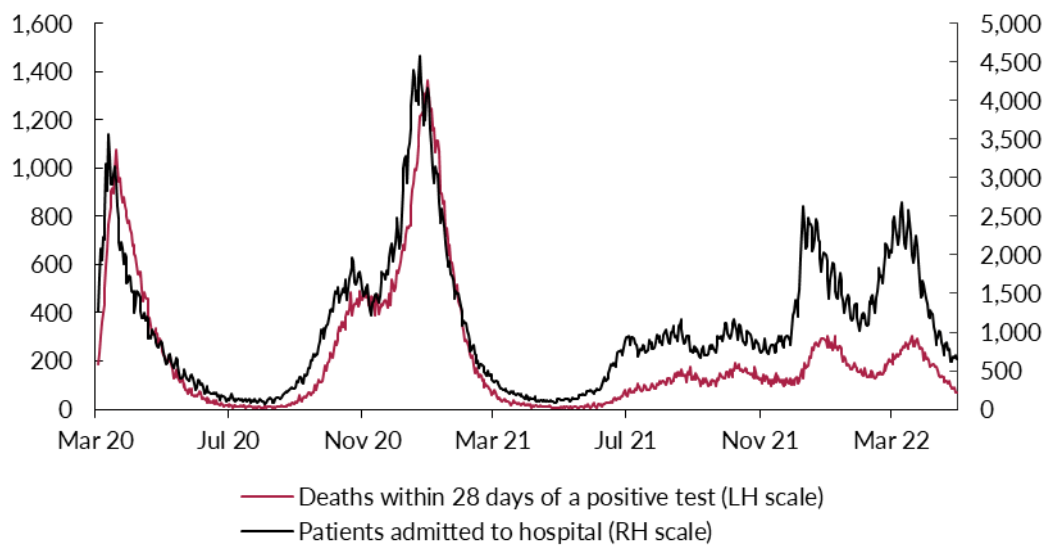
Figure 1 - UK GDP



Economic setting

NIESR's Spring Economic Outlook was [published](#) on 10th May and forecast 3.5 per cent growth for 2022. The UK faced above-target and rising inflation even before the war in Ukraine began, with consumer confidence indicators turning downwards though businesses appear to be more optimistic. Since then, CPI inflation has climbed to 9.0 per cent in April and surveys suggest rising energy prices and their implications for inflation across the board remain major concerns for UK households and businesses.

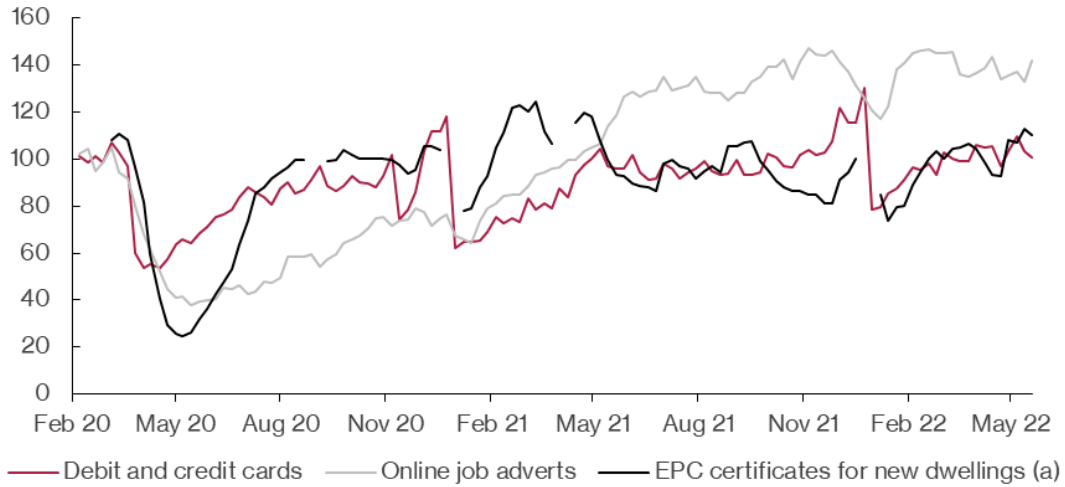
Figure 2.1 – UK daily Covid-19 statistics



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

High frequency indicators suggest that vacancies remain close to record levels. Card spending is at a similar level to pre-Covid while construction of new dwellings rebounded in recent weeks.

Figure 2.2 – 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.

News in latest ONS data

The monthly GDP data for April were slightly weaker than we forecast in May, GDP falling by 0.3 per cent rather than stagnating month-on-month, and growing by 0.2 per cent on a rolling three-month basis (see Figure 3).

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

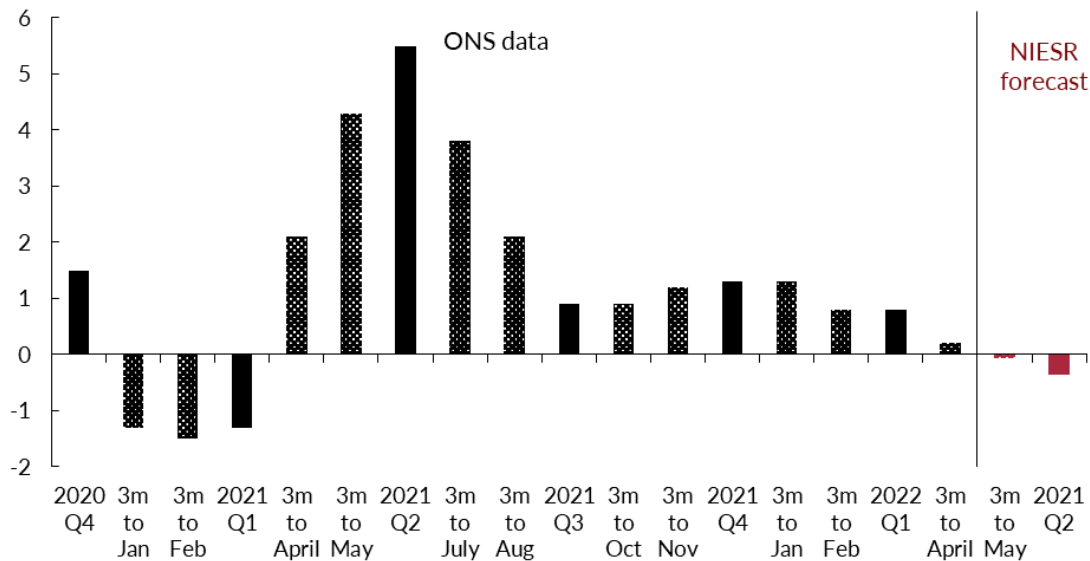


Figure 4 shows how our short-term forecasts for recent quarters have changed as new information has become available.

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

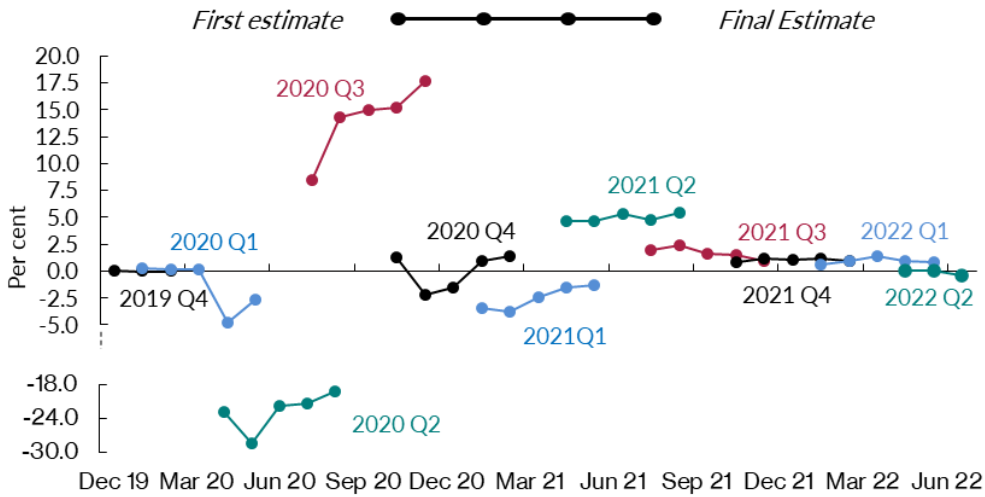


Figure 5 shows a heat map of the data surprises across sectors in the monthly data, relative to last month's GDP Tracker, highlighting the sectors where the surprises are large relative to the volatility of the output data. This month, there were large negative surprises in manufacturing and government but a positive surprise in water and sewerage.

Figure 5 – Surprises in monthly data

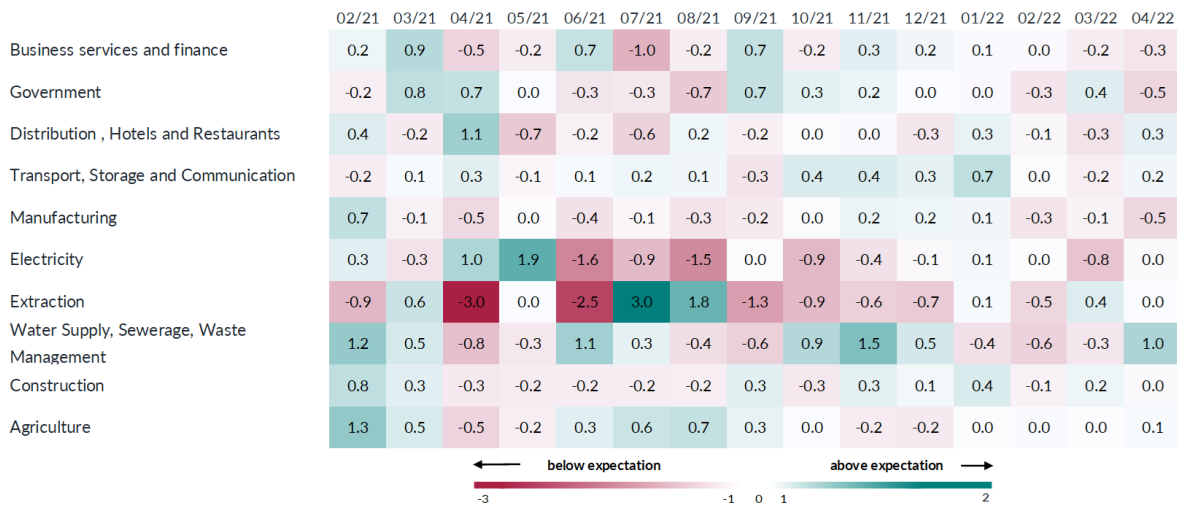


Table 1 shows the growth in each sector for the three months to April, compared with the previous three months, against the forecast for each in our May GDP Tracker.

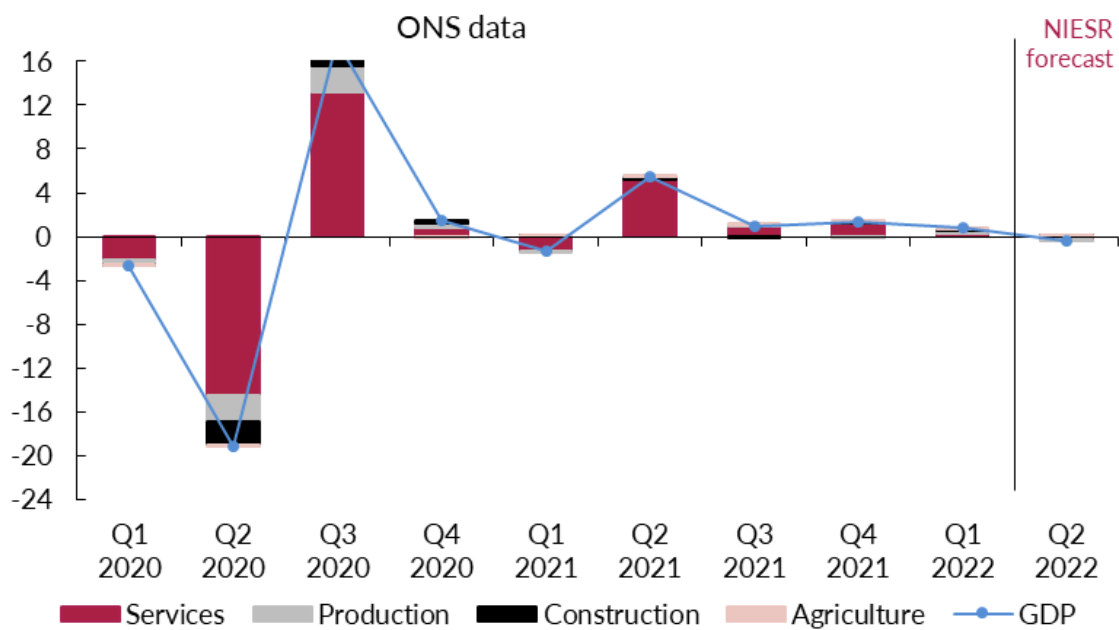
Table 1 - 3-month-on-3-month growth to April

	GDP	Index of Services	Index of Production	Manufacturing	Mining and Quarrying	Index of Construction
Forecast	0.3	0.1	0.4	0.2	1.6	3.0
Outturn	0.2	0.0	0.1	-0.2	1.7	2.9

Sectoral detail

We forecast GDP to decline by 0.4 per cent in the second quarter of 2022.

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

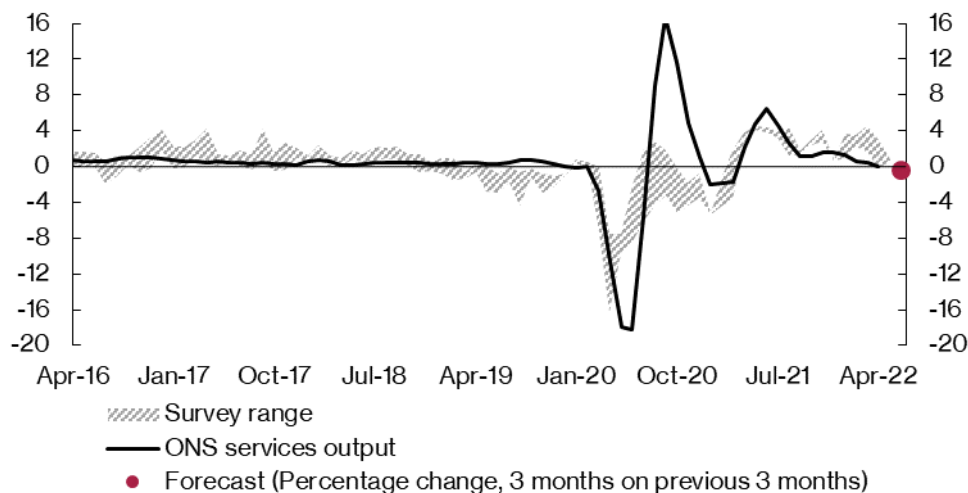


Services (80 per cent of GDP)

The survey balances point to further weakening in the growth rate of activity in May, 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 53.4 in May, down from 58.9 in April. This rate of slowing (5.5 points) is the largest fall since 1996, aside from Covid-19 lockdowns. Internationally, the JPMorgan Global Services Business Activity Index was unchanged at 52.2.

Based on recent developments we expect service sector activity to fall by 0.4 per cent in the second 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.

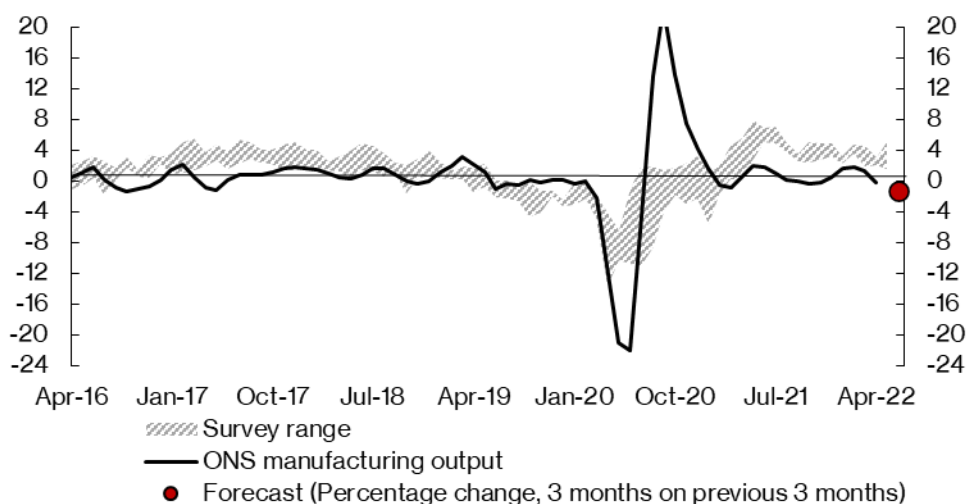
Production (14 per cent of GDP)

We forecast that production sector output will decline by 0.9 per cent in the second 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 read 54.6 in May, down from 55.8 in April. The JPMorgan Global Manufacturing Output PMI was almost unchanged at 52.4. Our forecast for the second quarter of 2022 is for manufacturing to decline by 1.3 per cent (Figure 8).

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 (extraction) is a small but erratic component of industrial production that can have an influence on overall GDP growth. We forecast a rise of 0.5 per cent in the second quarter of 2022.

Construction (6 per cent of GDP)

The IHS Markit/CIPS construction PMI survey registered 56.4 in May, down from 58.2 in April. We expect construction output to grow by 0.7 per cent in the second 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	43	61	7
Jun-20	84.3	84.8	91.5	78.7	77.2	84.9	87.2	84.4	95.8	89.5	97.8	72.7	86.4
Jul-20	90.9	91.3	92.9	89.6	89.9	89.4	92.2	91.0	101.0	92.6	99.0	85.6	87.5
Aug-20	93.2	93.6	93.3	93.8	97.2	89.4	93.8	93.8	101.0	78.6	98.8	88.2	88.6
Sep-20	94.5	94.8	95.1	97.3	94.1	89.9	94.6	95.0	101.4	76.0	99.3	91.2	89.1
Oct-20	95.2	95.5	95.6	97.7	92.9	92.5	95.5	96.3	98.2	78.7	99.8	92.9	87.7
Nov-20	93.2	92.7	95.2	95.6	82.8	91.8	96.5	98.2	97.4	75.4	99.6	93.5	87.0
Dec-20	94.3	94.4	96.3	97.1	86.6	91.8	96.1	98.8	100.9	77.0	101.0	92.1	87.1
Jan-21	91.6	91.3	96.0	91.4	78.9	91.5	94.8	95.0	101.9	76.4	101.2	90.4	88.5
Feb-21	92.5	92.0	96.4	92.3	80.7	91.0	95.6	96.2	102.1	72.1	102.9	93.6	89.8
Mar-21	95.0	94.6	98.0	97.7	82.4	92.7	96.7	97.5	101.0	75.0	103.6	97.3	90.9
Apr-21	97.4	97.8	96.8	102.3	94.2	95.0	96.1	97.8	104.1	61.9	102.4	97.7	90.8
May-21	98.1	98.5	96.6	102.7	99.3	94.7	97.1	98.3	108.8	64.5	102.3	97.7	91.9
Jun-21	98.9	99.7	98.1	103.2	101.1	95.5	95.8	97.9	102.2	57.3	104.2	97.1	93.8
Jul-21	98.7	99.5	97.2	103.4	100.3	96.7	96.6	98.2	98.9	80.1	104.5	96.1	95.5
Aug-21	98.9	99.6	97.6	101.7	102.2	97.7	96.9	98.0	95.1	71.7	103.9	95.3	96.9
Sep-21	99.6	100.5	99.1	103.6	101.7	97.5	96.4	97.7	94.1	79.8	103.3	96.7	96.9
Oct-21	99.9	101.1	98.9	104.4	101.8	99.6	95.7	97.5	91.4	75.3	105.0	95.8	97.0
Nov-21	100.7	101.8	99.9	105.0	101.9	101.3	96.7	98.5	92.7	73.1	107.4	97.2	96.9
Dec-21	100.4	101.4	100.3	105.6	97.0	101.4	97.0	99.2	92.9	70.9	107.9	97.9	96.7
Jan-22	101.1	101.9	99.9	105.2	99.6	104.1	97.9	100.1	94.2	72.4	107.2	100.0	97.1
Feb-22	101.1	101.9	100.2	104.2	100.1	104.3	97.6	99.6	94.9	72.2	107.2	100.2	97.5
Mar-22	101.0	101.7	100.2	104.8	98.4	103.9	97.4	99.3	93.0	74.2	107.3	101.9	97.7
Apr-22	100.7	101.5	99.7	103.1	100.2	104.5	96.8	98.4	93.6	73.6	103.0	101.5	97.9
May-22	100.7	101.4	100.0	102.9	99.8	104.8	96.7	98.3	92.4	73.1	108.8	101.4	98.0
Jun-22	100.7	101.4	100.1	102.8	99.7	104.7	96.8	98.4	92.1	73.2	108.8	101.3	98.1

Percentage change, 3 months on previous 3 months

Jun-20	-19.2	-18.2	-9.9	-23.2	-34.3	-16.4	-17.6	-22.0	-8.0	-2.4	-5.8	-35.6	-15.1
Jul-20	-5.6	-5.6	-4.7	-7.9	-3.9	-6.9	-3.1	-4.4	-0.6	2.9	-0.6	-11.2	-7.7
Aug-20	9.8	9.1	1.1	12.1	36.5	4.3	11.2	13.6	7.0	5.6	4.2	18.7	-0.7
Sep-20	17.9	16.7	4.7	25.3	50.7	10.0	17.1	22.5	10.4	3.6	5.5	41.6	4.0
Oct-20	12.2	11.7	4.1	19.7	25.5	7.1	10.1	13.8	5.0	-7.2	3.1	24.7	2.6
Nov-20	5.4	4.9	3.0	10.9	1.7	4.0	4.9	7.5	-0.3	-8.2	1.0	12.6	0.5
Dec-20	1.5	1.0	2.1	3.5	-7.1	2.8	2.7	4.1	-2.3	-2.6	1.1	5.1	-1.3
Jan-21	-1.3	-1.9	1.2	-1.6	-12.6	1.2	1.2	1.7	-0.1	-1.9	1.3	1.4	-1.1
Feb-21	-1.6	-1.9	1.0	-3.4	-8.7	0.0	0.0	-0.5	2.7	-2.0	2.1	-0.5	0.6
Mar-21	-1.3	-1.7	1.1	-3.1	-7.7	-0.3	-0.3	-0.9	2.9	-3.3	2.4	1.0	2.8
Apr-21	2.1	2.2	1.3	2.9	3.6	1.3	0.3	0.5	2.3	-8.7	2.4	4.6	3.4
May-21	4.3	4.8	0.9	7.8	12.1	3.0	1.2	1.9	3.0	-10.7	1.0	6.0	3.1
Jun-21	5.5	6.5	0.4	9.5	21.7	3.6	0.7	1.8	3.3	-17.8	0.4	4.0	2.7
Jul-21	3.8	4.7	0.2	5.8	16.9	2.9	0.4	1.0	0.9	-8.2	0.7	0.8	3.6
Aug-21	2.1	2.7	0.5	1.9	10.0	2.7	-0.2	0.2	-5.6	3.8	1.4	-1.4	4.6
Sep-21	1.0	1.2	0.8	0.2	3.3	2.3	0.3	0.0	-8.6	26.1	0.9	-1.5	4.6
Oct-21	0.9	1.2	1.3	0.1	1.7	2.8	-0.2	-0.4	-9.5	23.4	0.4	-1.1	3.4
Nov-21	1.2	1.5	1.7	1.5	0.6	2.9	-0.2	-0.1	-6.1	9.1	1.0	0.4	1.6
Dec-21	1.3	1.6	1.8	2.0	-1.2	3.6	-0.2	0.4	-3.9	-5.3	2.8	1.0	0.4
Jan-22	1.3	1.3	1.5	2.0	-2.4	4.1	0.9	1.6	-0.3	-8.6	3.3	2.5	0.0
Feb-22	0.8	0.6	0.8	0.6	-2.8	3.8	1.3	1.8	1.4	-5.6	2.1	2.9	0.2
Mar-22	0.7	0.4	0.4	-0.3	-0.9	3.3	1.2	1.3	1.8	-0.2	0.4	3.9	0.6
Apr-22	0.2	0.0	0.0	-1.2	0.1	1.9	0.1	-0.2	0.6	1.7	0.3	2.9	0.8
May-22	-0.1	-0.2	-0.2	-1.3	0.6	1.1	-0.6	-1.0	-1.1	2.5	0.9	2.2	0.8
Jun-22	-0.4	-0.4	-0.2	-1.7	0.5	0.5	-0.9	-1.3	-1.4	0.5	1.5	0.7	0.6

Percentage change, month on same month in previous year

Jun-20	-15.8	-15.2	-8.2	-21.4	-23.0	-15.5	-12.4	-15.5	-6.3	-0.7	-3.6	-26.9	-11.1
Jul-20	-9.4	-9.0	-7.4	-10.4	-9.4	-11.5	-7.7	-9.3	0.5	-11.9	-1.5	-14.6	-14.0
Aug-20	-7.0	-6.8	-7.3	-6.7	-2.7	-10.6	-5.3	-5.6	2.6	-15.8	-1.8	-12.2	-16.5
Sep-20	-5.8	-5.7	-5.3	-3.9	-6.2	-10.8	-5.0	-4.7	0.4	-20.8	-0.5	-8.9	-18.9
Oct-20	-5.2	-5.2	-5.2	-3.0	-6.9	-8.2	-4.6	-4.4	-6.3	-11.8	0.6	-5.9	-20.9
Nov-20	-6.8	-7.5	-4.6	-5.7	-16.9	-7.8	-2.8	-1.3	-8.1	-14.2	0.4	-6.0	-20.5
Dec-20	-5.8	-6.1	-4.0	-4.5	-13.3	-7.9	-2.8	-2.7	-2.9	-9.2	1.9	-7.0	-16.5
Jan-21	-8.7	-9.3	-4.5	-10.7	-21.6	-7.8	-4.0	-4.8	1.6	-10.4	0.9	-8.6	-14.8
Feb-21	-7.3	-8.2	-3.7	-8.7	-19.1	-8.4	-3.4	-4.0	3.0	-16.0	3.8	-4.8	-11.0
Mar-21	2.7	2.5	0.4	10.4	-2.3	-1.0	3.8	5.0	1.8	-7.4	3.9	4.3	-4.9
Apr-21	29.9	27.3	9.1	41.3	82.6	19.2	30.0	41.7	16.2	-19.9	11.5	79.9	8.2
May-21	27.4	26.1	9.2	40.7	70.0	19.0	23.7	30.9	21.7	-18.6	11.1	62.6	8.4
Jun-21	17.3	17.6	7.2	31.1	31.0	12.5	9.9	16.0	6.7	-36.0	6.5	33.6	8.6
Jul-21	8.6	9.0	4.6	15.4	10.3	8.2	4.8	7.9	-2.1	-15.1	5.6	12.3	9.1
Aug-21	6.1	6.4	4.6	8.4	5.1	9.3	3.3	4.5	-5.8	3.9	5.2	8.0	9.4
Sep-21	5.4	6.0	4.2	6.5	8.1	8.5	1.9	2.8	-7.2	5.0	4.0	6.0	8.8
Oct-21	4.9	5.9	3.5	6.9	9.6	7.7	0.2	1.2	-6.9	-4.3	5.2	3.1	10.6
Nov-21	8.0	9.8	4.9	9.8	23.1	10.3	0.2	0.3	-4.8	-3.1	7.8	4.0	11.4
Dec-21	6.5	7.4	4.2	8.8	12.0	10.5	0.9	2.5	-7.9	-9.8	6.8	6.3	11.0
Jan-22	10.4	11.6	4.1	15.1	26.2	13.8	3.3	5.4	-7.6	-5.2	5.9	10.6	9.7
Feb-22	9.3	10.8	3.9	12.9	24.0	14.6	2.1	3.5	-7.1	0.1	4.2	7.1	8.6
Mar-22	6.3	7.5	2.2	7.3	19.4	12.1	0.7	1.8	-7.9	-1.1	3.6	4.7	7.5
Apr-22	3.4	3.8	3.0	0.8	6.4	10.0	0.7	0.6	-10.1	18.9	6.4	3.9	7.8
May-22	2.7	2.9	3.5	0.2	0.5	10.6	-0.4	0.0	-15.1	13.3	6.4	3.8	6.7
Jun-22	1.8	1.7	2.0	-0.4	-1.4	9.6	1.0	0.5	-9.8	27.8	4.4	4.3	4.6

Percentage change, month on previous month

Jun-20	9.5	8.6	3.4	7.8	32.2	6.7	11.1	12.4	7.2	13.0	6.2	21.0	1.9
Jul-20	7.8	7.7	1.5	13.9	17.7	5.3	5.7	7.8	5.4	-7.7	1.2	17.7	1.3
Aug-20	2.5	2.5	0.4	4.7	6.9	0.0	1.7	3.1	0.0	-4.8	-0.2	3.0	1.3
Sep-20	1.4	1.3	1.9	3.7	-3.2	0.6	0.9	1.3	0.4	-3.3	0.5	3.4	0.6
Oct-20	0.7	0.7	0.5	0.4	-1.3	2.9	1.0	1.4	-3.2	3.6	0.5	1.9	-1.6
Nov-20	-2.1	-2.9	-0.4	-2.1	-10.9	-0.8	1.0	2.0	-0.9	-4.2	-0.2	0.6	-0.8
Dec-20	1.2	1.8	1.2	1.5	4.6	0.0	-0.4	-1.4	3.6	2.1	1.4		

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 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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