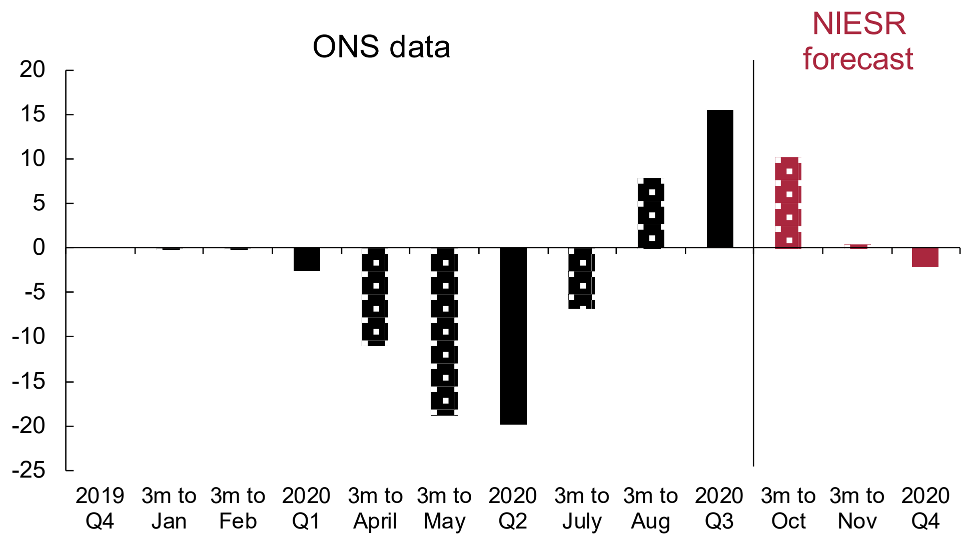
National Institute
Monthly GDP Tracker

Thursday, 12th November 2020 niesr.ac.uk Kemar Whyte

GDP forecast to contract by 2.2 per cent in Q4

Figure 1 - UK GDP growth (3 months on previous 3 months, per cent)



Main points

- Latest ONS estimates published this morning show that the UK economy grew by15 ½ per cent in the third quarter of 2020, as the economy recovered from the first phase of the Covid-19 pandemic and resultant public health measures. This is largely in line with what we expected last month and with our recent forecast in our November Review.
- Monthly estimates suggest that growth in September itself was 1.1 per cent, meaning that GDP at the end of the quarter was still 8.2 per cent below its pre-pandemic February level.
- Our outlook for the fourth quarter is for 2.2 per cent decline in growth.[1] We expect growth to be 0.3 per cent in October. The second lockdown is expected to bring a monthly fall of about 12 per cent in November in line with our previous estimates on the impact of the November lockdown.
- Our forecasts assume a return to October levels of activity in December: in other words, we expect a rapid rebound following the end of the second lockdown. Accordingly, our forecast for 2020 stand at −11.3 percent.
- There are downside risks if the lockdown is extended or does not succeed in bringing down infection rates, while upside risks would come from a smaller than anticipated fall in November as households switch to online consumption ahead of the holiday season.

[1] Before the November GDP release, we calculated that the November lockdown would contribute to a fourth quarter contraction in GDP in the region of 3 per cent. The new data release show that the economy has started the fourth quarter 1 percent higher than we expected, which implies a lower rate of quarterly contraction even if we impose the same assumptions regarding the lockdown effects and the recovery.

“Today’s ONS data suggest that the recovery from the first phase of the pandemic was already slowing by the end of the third quarter, with output remaining 8.2 per cent below pre-pandemic levels in September. Growth in the fourth quarter will be much slower than in the third quarter and is likely to turn negative, due to weaker growth in October and a second lockdown from November. Our expectations for the fourth quarter and beyond will depend on the stringency and duration of ongoing lockdowns; local and national.”

Dr Kemar Whyte
Senior Economist - Macroeconomic Modelling and Forecasting

“We expect the second lockdown to bring a large monthly contraction in November to be followed by a quick rebound in December provided that the lockdown succeeds in getting infection rates under control without the need for a further extension. The UK economy is likely to contract by around 11.5 percent in 2020.”

Dr Hande Küçük
Deputy Director - Macroeconomic Modelling and Forecasting

Economic setting

The recovery of the UK economy after the first phase of the Covid-19 pandemic was initially fairly rapid but looks to have stalled since the summer, partly due to the continuing lack of confidence about public health among consumers and investors, especially in sectors involving social consumption. Growth looks to have been weakening in September and October, before the second England-wide lockdown was imposed on 5th November. The full economic cost of the pandemic will not be known for some time but some of the long-term consequences of further recurrences, and the potential impact of Brexit on the recovery, were discussed in our November National Institute Economic Review. The extension of government support schemes is welcome and will help to support demand across the economy but the outlook for the first half of 2021 is highly uncertain and ultimately will depend on the progress of dealing with Covid-19.

As the economy recovered more strongly in terms of output than hours worked in the third quarter, labour productivity, measured as output per hour, displayed a quarterly rise of 5.2 percent, following a decline by 2 percent in the second quarter. Hence, output per hour now stands 2.5 percent above its pre-pandemic (2019Q4) level. However, this productivity surge is likely to be short-lived as economic recovery will slow down and the furlough extension is likely to dampen the fall in hours worked.

News in latest ONS data

The latest monthly ONS data were largely in line with what we had anticipated in our November Review and last month, confirming GDP grew by 15.5 per cent in the third quarter of 2020. Figure 2 shows how our short-term forecasts for recent quarters have changed as new information has become available.

Figure 2 - Evolution of the NIESR quarterly GDP forecast (3 months on previous 3 months, per cent)

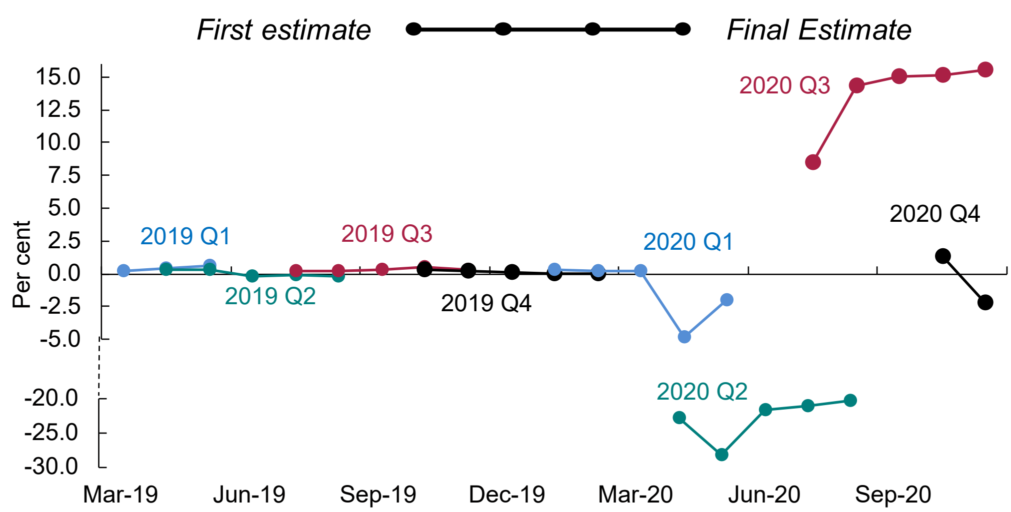


Figure 3 shows a heat map of the data surprises across sectors in the monthly data, relative to last month's GDP Tracker, highlighting the sectors where the surprises are large relative to the volatility of the output data. This month, positive surprises were seen in water supply, construction, and government, with the only negative surprise seen in transport, storage and communication.

Figure 3 - Surprises in monthly data

	09/19	10/19	11/19	12/19	01/20	02/20	03/20	04/20	05/20	06/20	07/20	08/20	09/20
Business services and finance	-0.2	0.0	-0.2	0.1	0.0	0.0	1.5	2.7	-1.7	-3.6	0.6	-0.8	0.5
Government	-0.1	0.0	0.1	0.1	0.1	0.0	-1.7	4.4	0.5	0.0	2.4	0.1	0.7
Distribution , Hotels and Restaurants	-0.1	0.0	-0.1	-0.1	0.1	-0.1	1.1	3.9	-1.9	2.6	-0.1	1.2	0.2
Transport, Storage and Communication	0.1	0.0	-0.4	0.3	-0.4	-0.2	4.3	1.9	-1.8	0.1	-0.8	-0.5	-0.3
Manufacturing	0.1	0.2	-0.6	0.0	0.1	0.2	3.1	-1.6	1.2	3.4	0.0	-0.1	0.6
Electricity	0.3	0.3	-0.1	-0.4	-1.6	-1.0	3.0	-2.1	-1.9	1.2	0.8	0.0	0.0
Extraction	0.4	-0.7	0.3	-0.7	0.3	-0.3	-3.4	-2.8	-0.6	1.7	-0.1	-1.2	0.1
Water Supply, Sewerage, Waste Management	0.0	-1.0	-0.6	0.5	0.8	-0.9	0.5	-2.6	-0.9	2.4	1.4	-0.9	1.4
Construction	0.0	-0.6	0.2	-0.1	-0.2	-0.5	2.3	-3.2	-1.3	2.6	0.8	0.9	0.7
Agriculture	-0.1	0.1	-0.1	-0.5	0.5	-0.5	0.0	-2.7	0.3	4.1	-0.9	0.0	0.2

← below expectation   above expectation →

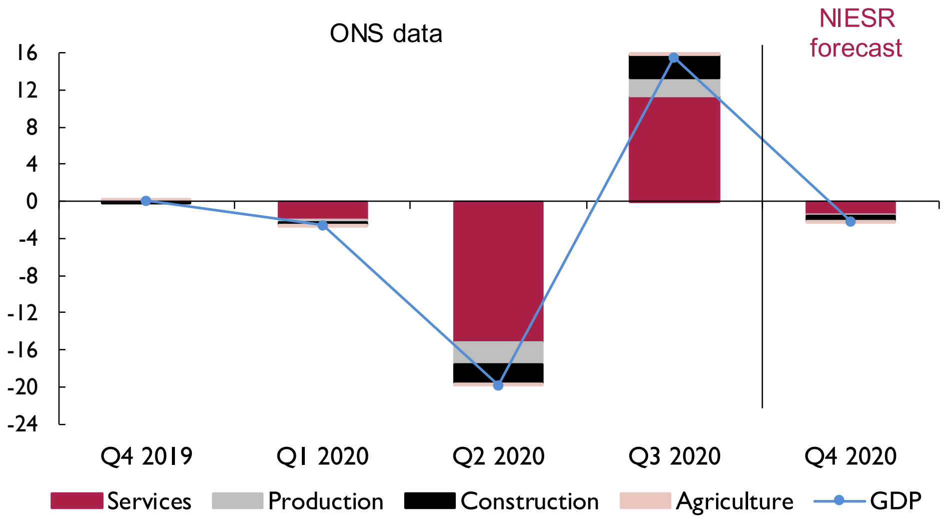
-3   -1   0   1   2

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 15.5 per cent in the three months to September. Growth in the last three months was largely underpinned by the slowdown in infection rates and associated easing in restrictions especially before September. Our forecast for the fourth quarter of 2020 is for a contraction of 2.2 per cent.

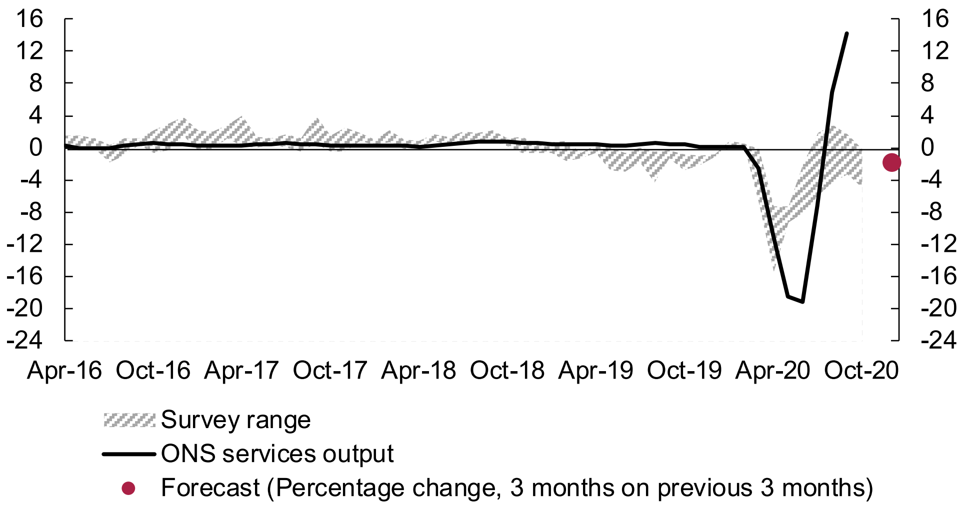
Figure 4 - Contributions to quarterly GDP growth (percentage points)



Services (80 per cent of GDP)

According to the latest ONS data, the services sector grew by 14.2 per cent in the three months to September, an outturn that is consistent with what we predicted last month. The growth in the services sector was driven by widespread increases across the industries, most notably wholesale and retail trade, which grew by 18.4 per cent, and education, which grew by 25.3 per cent. Based on recent developments we expect service sector growth to decline by about 2 per cent in the fourth quarter of 2020 (figure 5).

Figure 5 - 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 slowing of growth in the private service sector, as shown by the swathe of survey indicators in figure 5. The headline business activity balance in the IHS Markit/CIPS UK services came in at 51.4 in October, sharply down from 56.1 in September. Despite the fall, which represents the lowest reading since June, the index nevertheless pointed to a slightly positive rate of growth. Latest data suggested the first fall in new orders since June, with particularly weak demand in customer-facing service providers. On the global front, Services Activity Index registered at 52.9 in October, slightly up from 52.0 in September. Output was largely boosted by improved inflows of new business.

Production (14 per cent of GDP)

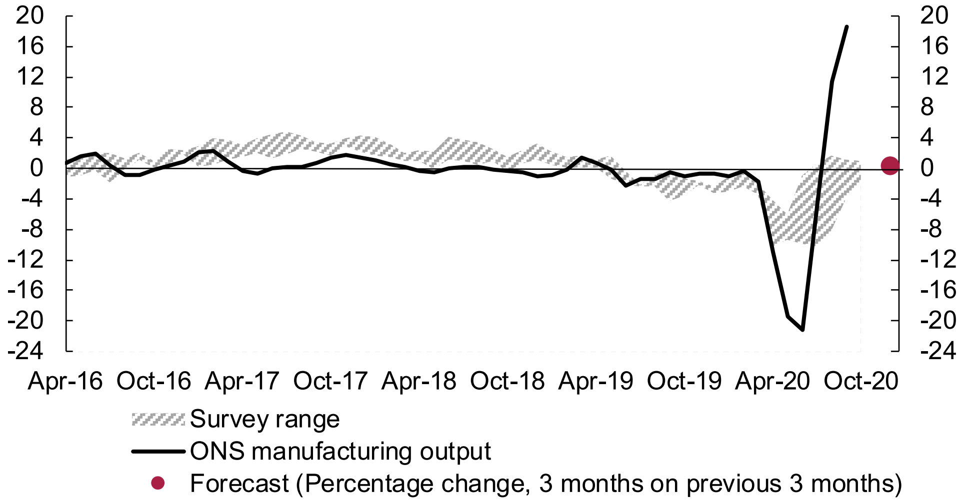
Production output grew by 14.3 per cent in the three months to September, broadly in line with what we anticipated last month. The growth in production was driven by increases in all four sub-sectors, namely; manufacturing, electricity and gas supply, water supply, and mining and quarrying. We estimate that production will fall by 0.7 per cent in the fourth quarter of 2020, 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 18.7 per cent in the three months to September. Manufacturing industries experienced widespread increases over the quarter, with 12 out of 13 sub-sectors experiencing growth. The most notable was the manufacture of transport equipment, which grew by 51.8 per cent. Our forecast for the fourth quarter is for manufacturing to now grow marginally by 0.3 per cent.

Figure 6 - 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 marginally to 53.7 in October, from 54.1 in September. Growth in the sector reflected higher intakes of new work and catching up on orders delayed by lockdown. Investment and intermediate goods industries saw marked expansions while the consumer goods sector contracted. There was an acceleration in the rate of manufacturing job losses.

The J.P.Morgan Global Manufacturing Output rose to 53.0 in October, up from 52.4 in September, its strongest reading since May 2018. The fastest expansion was in the investment goods sector.

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 grew by 1.3 per cent in the three months to September, due to a recovery in quarrying. We now forecast a decline of 5.6 per cent in the fourth quarter of 2020.

Construction (6 per cent of GDP)

Output in the construction sector grew by 41.7 per cent in the three months to September, a slightly stronger outturn than what we had forecast last month. The main contributor to this increase was private new housing, which grew by a record 84.3 per cent. We anticipate output to decline by around 10 ½ per cent in the fourth quarter of 2020.

The IHS Markit/CIPS construction PMI survey continued to suggest expansion but at the slowest rate in five months, falling to 53.1 in October, compared with 56.8 in September. Underlying data suggested that house building continued to grow rapidly, while civil engineering activity shrank for the third month running, the index falling at its fastest rate since May.

Table 1 - Summary Table of GDP growth (2016=100)

2016=100	*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 Constructio*	*Agriculture*
			Index of Services - Components					*Index of Production - Components*					
Latest weights	*1000*	*796*	*339*	*217*	*133*	*108*	*136*	*102*	*15*	*6*	*13*	*61*	*7*
Dec-18	100.5	100.9	100.2	100.5	100.7	104.0	98.9	98.9	98.5	99.0	99.2	98.9	103.1
Jan-19	100.9	101.1	100.1	100.6	102.0	104.4	99.4	99.6	100.8	97.1	98.4	101.0	103.3
Feb-19	101.3	101.4	100.3	101.0	102.2	104.4	99.8	100.2	97.6	99.3	98.8	103.4	103.1
Mar-19	101.5	101.4	100.3	101.1	102.4	104.4	101.3	101.7	98.4	103.7	98.9	102.3	103.6
April-19	101.0	101.4	100.0	101.1	102.5	105.1	98.1	97.7	101.2	97.3	98.8	102.2	104.4
May-19	101.3	101.5	100.1	101.2	102.4	105.1	99.3	98.7	102.2	100.3	100.8	102.5	105.3
Jun-19	101.4	101.8	100.5	101.7	102.5	105.4	98.9	98.2	103.1	97.8	100.5	101.1	105.9
Jul-19	101.7	102.1	100.9	101.8	102.8	105.9	98.7	98.4	100.5	97.3	100.0	102.1	106.8
Aug-19	101.5	102.1	101.0	102.0	102.7	105.0	97.9	97.3	99.7	98.3	100.7	102.0	107.8
Sep-19	101.6	102.0	100.7	102.0	102.5	105.5	98.3	97.2	99.4	104.5	100.7	102.5	108.4
Oct-19	101.8	102.4	101.1	102.2	102.9	106.0	98.8	97.9	103.7	98.5	99.9	100.6	108.8
Nov-19	101.5	102.0	100.7	102.6	102.3	104.6	97.8	96.5	103.8	99.6	100.0	101.7	108.9
Dec-19	101.6	102.3	101.0	102.8	102.3	105.4	97.3	96.4	101.8	96.5	100.4	100.6	108.7
Jan-20	101.7	102.4	101.1	102.9	103.4	104.4	97.2	96.6	98.9	96.8	100.4	100.8	108.3
Feb-20	101.4	102.2	101.1	102.2	102.9	104.4	97.6	97.4	98.2	96.7	99.4	99.5	107.4
Mar-20	94.0	94.1	98.8	89.0	86.9	98.6	93.1	91.5	98.1	91.2	101.4	94.0	105.5
Apr-20	75.7	77.3	88.7	72.8	53.3	81.5	74.9	68.5	91.3	89.7	93.9	55.3	99.1
May-20	77.7	78.7	88.1	74.2	60.2	82.1	79.1	73.9	91.7	92.1	95.3	60.3	99.9
Jun-20	84.8	85.2	91.2	77.5	79.2	90.0	86.9	82.8	95.6	98.8	99.5	73.5	103.1
Jul-20	90.1	90.1	92.6	83.6	91.8	93.2	91.5	88.5	99.9	97.1	100.6	86.3	105.9
Aug-20	92.1	92.2	93.0	86.2	99.3	93.2	91.7	89.3	100.5	92.9	100.0	89.6	106.8
Sep-20	93.0	93.2	94.0	88.6	97.7	94.2	92.1	89.4	100.9	94.1	101.8	92.2	106.7
Oct-20	93.3	93.6	93.9	90.4	96.9	94.9	92.0	89.2	101.6	94.0	101.7	91.5	106.0
Nov-20	81.8	82.2	84.2	79.7	84.0	78.7	89.1	88.6	100.2	80.7	86.4	57.8	106.3
Dec-20	94.1	94.6	94.0	94.1	89.9	103.0	92.3	90.1	100.3	93.6	99.0	91.0	105.9
	Percentage change, 3 months on previous 3 months												
Jun-19	0.0	0.3	0.0	0.4	0.3	0.8	-1.4	-2.3	3.3	-1.6	1.4	-0.3	1.8
Jul-19	0.2	0.4	0.3	0.5	0.2	0.8	-0.8	-1.4	2.9	-1.6	1.6	-0.7	2.2
Aug-19	0.3	0.6	0.7	0.7	0.2	0.5	-1.1	-1.4	0.5	-2.6	0.9	-0.6	2.3
Sep-19	0.4	0.5	0.7	0.6	0.2	0.3	-0.5	-0.6	-2.3	1.6	0.4	0.3	2.3
Oct-19	0.2	0.4	0.4	0.5	0.1	0.0	-0.6	-1.0	-1.0	2.0	0.0	-0.2	2.2
Nov-19	0.1	0.1	0.0	0.4	-0.1	-0.1	-0.2	-0.8	1.2	3.1	-0.2	-0.1	1.7
Dec-19	0.0	0.2	0.1	0.6	-0.2	-0.1	-0.3	-0.7	3.2	-1.8	-0.4	-1.2	1.1
Jan-20	0.0	0.1	0.0	0.7	0.0	-0.7	-0.9	-1.0	0.6	-2.8	-0.2	-0.7	0.3
Feb-20	-0.1	0.2	0.2	0.4	0.3	-0.6	-0.9	-0.4	-2.6	-4.2	-0.1	-1.3	-0.5
Mar-20	-2.6	-2.6	-0.6	-4.4	-4.7	-2.7	-2.0	-1.8	-4.6	-3.4	0.3	-2.8	-1.6
Apr-20	-11.1	-10.8	-4.7	-14.4	-21.1	-9.5	-9.1	-11.1	-5.6	-5.2	-2.0	-17.9	-4.3
May-20	-18.8	-18.5	-9.1	-23.4	-35.1	-16.5	-15.4	-19.5	-6.0	-5.9	-3.2	-30.3	-6.1
Jun-20	-19.8	-19.3	-11.0	-23.7	-34.3	-17.5	-16.3	-21.1	-5.6	-1.4	-4.2	-35.7	-5.9
Jul-20	-6.8	-7.2	-5.8	-10.9	-4.9	-6.7	-3.0	-4.7	-0.1	3.7	0.2	-11.5	-1.0
Aug-20	7.9	7.0	0.4	4.8	34.9	5.4	9.3	11.4	5.3	5.8	3.3	19.0	3.7
Sep-20	15.5	14.2	4.3	15.1	49.9	10.6	14.3	18.7	8.1	1.2	4.7	41.8	5.7
Oct-20	10.2	9.8	3.3	12.7	27.1	6.4	7.1	9.3	5.5	-2.4	2.7	24.2	3.4
Nov-20	0.4	0.5	-1.7	4.6	3.1	-3.1	1.2	2.5	2.3	-6.9	-3.4	-3.1	1.0
Dec-20	-2.2	-1.9	-2.7	2.3	-6.2	-1.4	-0.7	0.3	0.3	-5.6	-5.1	-10.4	-0.3
	Percentage change, month on same month in previous year												
Jun-19	1.5	2.0	0.8	2.0	2.2	6.0	-1.3	-2.4	6.5	-1.2	-1.7	0.2	6.5
Jul-19	1.4	2.0	0.8	1.9	1.4	6.9	-1.9	-1.8	0.6	-7.1	-1.0	1.0	7.2
Aug-19	1.1	1.7	0.9	1.9	1.7	4.1	-2.3	-2.5	0.1	-6.6	-0.1	1.6	8.0
Sep-19	1.2	1.6	0.6	1.9	2.1	3.5	-2.1	-3.4	0.1	3.8	0.6	1.4	8.5
Oct-19	1.1	1.6	0.4	1.8	1.7	4.3	-0.8	-1.6	5.5	-2.8	0.0	-0.9	8.6
Nov-19	0.7	1.0	0.0	2.2	0.2	2.5	-1.1	-2.4	5.6	-0.4	0.8	0.5	7.5
Dec-19	1.1	1.4	0.8	2.3	1.6	1.3	-1.6	-2.5	3.4	-2.5	1.2	1.7	5.4
Jan-20	0.8	1.3	1.0	2.3	1.4	0.0	-2.2	-3.0	-1.9	-0.3	2.0	-0.2	4.8
Feb-20	0.1	0.8	0.8	1.2	0.7	0.0	-2.2	-2.8	0.6	-2.6	0.6	-3.8	4.2
Mar-20	-7.4	-7.2	-1.5	-12.0	-15.1	-5.6	-8.1	-10.0	-0.3	-12.1	2.5	-8.1	1.8
Apr-20	-25.0	-23.8	-11.3	-28.0	-48.0	-22.5	-23.6	-29.9	-9.8	-7.8	-5.0	-45.9	-5.1
May-20	-23.3	-22.5	-12.0	-26.7	-41.2	-21.9	-20.3	-25.1	-10.3	-8.2	-5.5	-41.2	-5.1
Jun-20	-16.4	-16.3	-9.3	-23.8	-22.7	-14.6	-12.1	-15.7	-7.3	1.0	-1.0	-27.3	-2.6
Jul-20	-11.4	-11.8	-8.2	-17.9	-10.7	-12.0	-7.3	-10.1	-0.6	-0.2	0.6	-15.5	-0.8
Aug-20	-9.3	-9.7	-7.9	-15.5	-3.3	-11.2	-6.3	-8.2	0.8	-5.5	-0.7	-12.2	-0.9
Sep-20	-8.5	-8.6	-6.7	-13.1	-4.7	-10.7	-6.3	-8.0	1.5	-10.0	1.1	-10.0	-1.6
Oct-20	-8.3	-8.6	-7.1	-11.5	-5.8	-10.5	-6.9	-8.9	-2.0	-4.6	1.8	-9.0	-2.5
Nov-20	-19.4	-19.4	-16.4	-22.3	-17.9	-24.8	-8.8	-8.2	-3.5	-19.0	-13.6	-43.2	-2.3
Dec-20	-7.4	-7.6	-6.9	-8.5	-12.1	-2.2	-5.2	-6.5	-1.5	-3.0	-1.4	-9.5	-2.6
	Percentage change, month on previous month												
Jun-19	0.1	0.3	0.4	0.5	0.1	0.3	-0.4	-0.5	0.9	-2.5	-0.3	-1.4	0.6
Jul-19	0.3	0.3	0.4	0.1	0.3	0.5	-0.2	0.2	-2.5	-0.5	-0.5	1.0	0.8
Aug-19	-0.2	0.0	0.1	0.2	-0.1	-0.8	-0.8	-1.1	-0.8	1.0	0.7	-0.1	0.9
Sep-19	0.1	-0.1	-0.3	0.0	-0.2	0.5	0.4	-0.1	-0.3	6.3	0.0	0.5	0.6
Oct-19	0.2	0.4	0.4	0.2	0.4	0.5	0.5	0.7	4.3	-5.7	-0.8	-1.9	0.4
Nov-19	-0.3	-0.4	-0.4	0.4	-0.6	-1.3	-1.0	-1.4	0.1	1.1	0.1	1.1	0.1
Dec-19	0.1	0.3	0.3	0.2	0.0	0.8	-0.5	-0.1	-1.9	-3.1	0.4	-1.1	-0.2
Jan-20	0.1	0.1	0.1	0.1	1.1	-0.9	-0.1	0.2	-2.8	0.3	0.0	0.2	-0.4
Feb-20	-0.3	-0.2	0.0	-0.7	-0.5	0.0	0.4	0.8	-0.7	-0.1	-1.0	-1.3	-0.8
Mar-20	-7.3	-7.9	-2.3	-12.9	-15.5	-5.6	-4.6	-6.1	-0.1	-5.7	2.0	-5.5	-1.8
Apr-20	-19.5	-17.9	-10.2	-18.2	-38.7	-17.3	-19.5	-25.1	-6.9	-1.6	-7.4	-41.2	-6.1
May-20	2.6	1.8	-0.7	1.9	12.9	0.7	5.6	7.9	0.4	2.7	1.5	9.0	0.8
Jun-20	9.1	8.3	3.5	4.4	31.6	9.6	9.9	12.0	4.3	7.3	4.4	21.9	3.2
Jul-20	6.3	5.8	1.5	7.9	15.9	3.6	5.3	6.9	4.5	-1.7	1.1	17.4	2.7
Aug-20	2.2	2.3	0.4	3.1	8.2	0.0	0.2	0.9	0.6	-4.3	-0.6	3.8	0.8
Sep-20	1.0	1.1	1.1	2.8	-1.6	1.1	0.4	0.1	0.4	1.3	1.8	2.9	-0.1
Oct-20	0.3	0.4	-0.1	2.0	-0.8	0.7	-0.1	-0.2	0.7	-0.1	-0.1	-0.7	-0.6
Nov-20	-12.3	-12.2	-10.3	-11.8	-13.3	-17.1	-3.1	-0.7	-1.3	-14.2	-15.0	-36.8	0.3
Dec-20	15.0	15.1	11.7	18.0	7.0	31.0	3.5	1.7	0.1	16.0	14.5	57.4	-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 0.2 % points. The largest error was for 2019Q2 when our GDP tracker in May pointed to growth of 0.3 per cent, 0.5% points higher than the ONS first estimate of GDP growth. As shown in figure 2, we correctly revised our estimate of 2019Q2 growth down to -0.2 per cent in June when monthly GDP figures for April indicated a fall in output.

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		15.0	0.5	
2020Q4			-2.2		
Average absolute error				0.22	0.08

Notes for editors

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