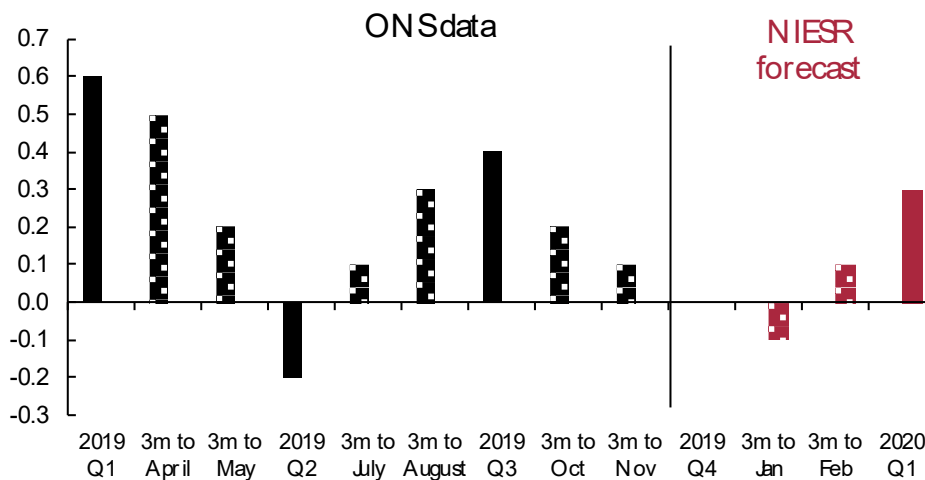


## UK OUTPUT STAGNATED AT END OF 2019

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



### Main points

- The UK economy is on course to post zero growth in the fourth quarter of 2019, consistent with growth of 1.4 per cent in 2019 as a whole. On the basis of recent trends we tentatively forecast service sector-driven growth of 0.3 per cent in the first quarter of 2020 (figure 1).
- According to new ONS statistics published this morning, the UK economy grew by 0.1 per cent in the three months to November, a little faster than we had expected last month reflecting upward revisions to the September and October data.
- Output fell by 0.3 per cent in November itself, with falls of 0.3 per cent in services and 1.7 per cent in production outweighing an increase of 1.9 per cent in construction. Monthly data is volatile and the forecast improvement in growth in the first quarter of 2020 assumes that the weakness in services in November proves to be temporary.
- Recent surveys suggest that economic activity was little changed in December, though there is some evidence of an improvement in business sentiment after the election.

*"The latest data confirm that economic growth in the United Kingdom had petered out at the end of last year. GDP was virtually flat in the three months to November and the latest surveys point to further stagnation in December. While there is some evidence of an improvement in business optimism following the general election, it is doubtful that this will do much to change the short-term economic outlook of further lacklustre growth."*

**Dr Garry Young**

**Director of Macroeconomic Modelling and Forecasting**

### Economic background

The latest Deloitte CFO survey, published on 10<sup>th</sup> January, points to a definite improvement in business optimism following the clear result of the 2019 general election. The grounds for optimism are that much of the political uncertainty that had been hanging over the business community has dissipated. It also appears likely that the government will inject a modest fiscal stimulus into the economy in its March Budget. Further, there is now some evidence that global economic conditions are beginning to improve, albeit from a subdued outlook. But, on the other hand, while it is now almost certain that the UK will leave the EU at the end of this month, there remains significant uncertainty about the future trading relationship. This is because the UK's future relationship with the EU is likely to take many years to settle. This is likely to mean that business will not have the clarity needed to invest with confidence in 2020 and economic conditions will probably remain similar to last year. The [November 2019 NIESR UK forecast](#) is for GDP growth of 1-1½ per cent in 2020, as in 2019, based on the assumption of continued uncertainty as the terms of EU trade remain unchanged but unresolved.

### News in latest ONS data

The latest monthly ONS data was slightly weaker than our expectations, and we have revised our estimate for growth in the fourth quarter of 2019 to 0.0 per cent. Figure 2 shows how our short-term forecasts for recent quarters have changed as new information has become available; the average absolute error of our estimate of quarterly GDP is around 0.2 per cent.

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

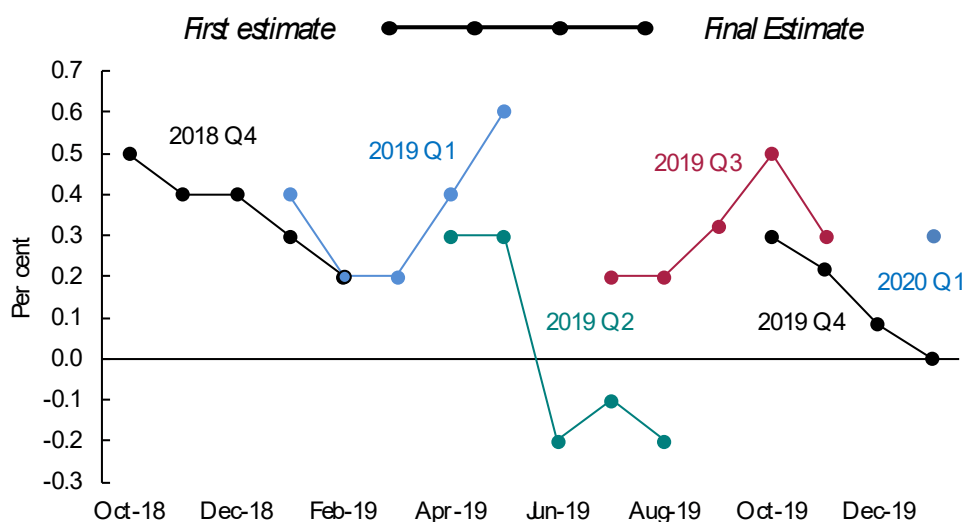
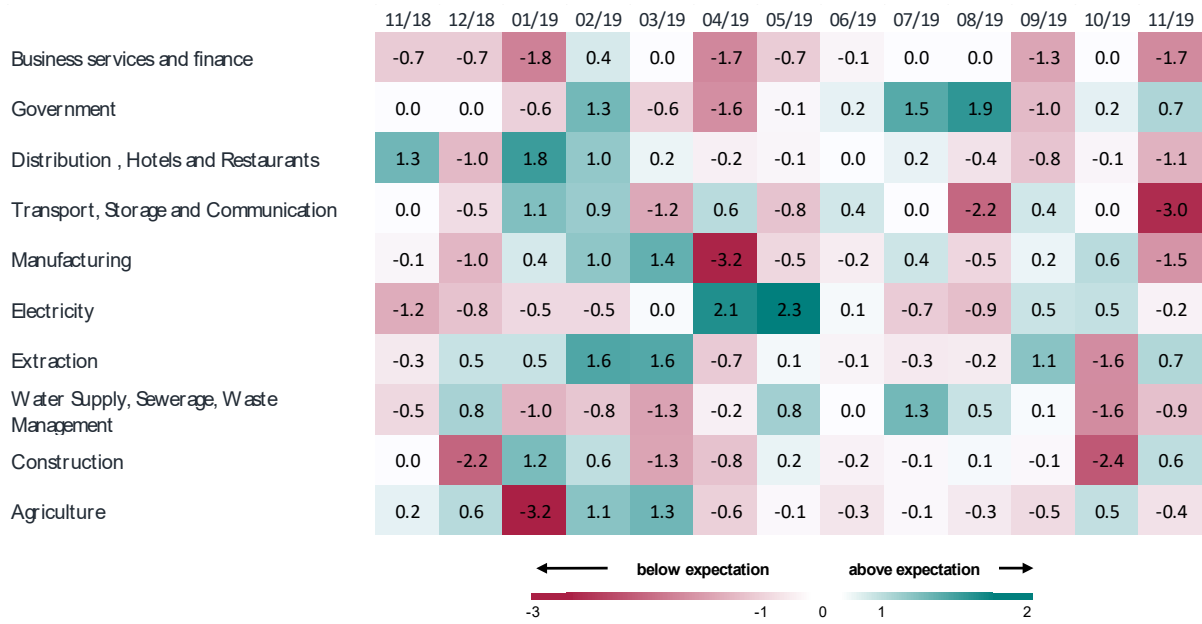


Figure 3 shows a heat map of the data surprises across sectors in the monthly data, highlighting the sectors where the surprises are large relative to the volatility of the output data. This month, there were negative surprises in manufacturing and private sector services, while there were small positive surprises in government, extraction and construction.

**Figure 3 - Surprises in monthly data**

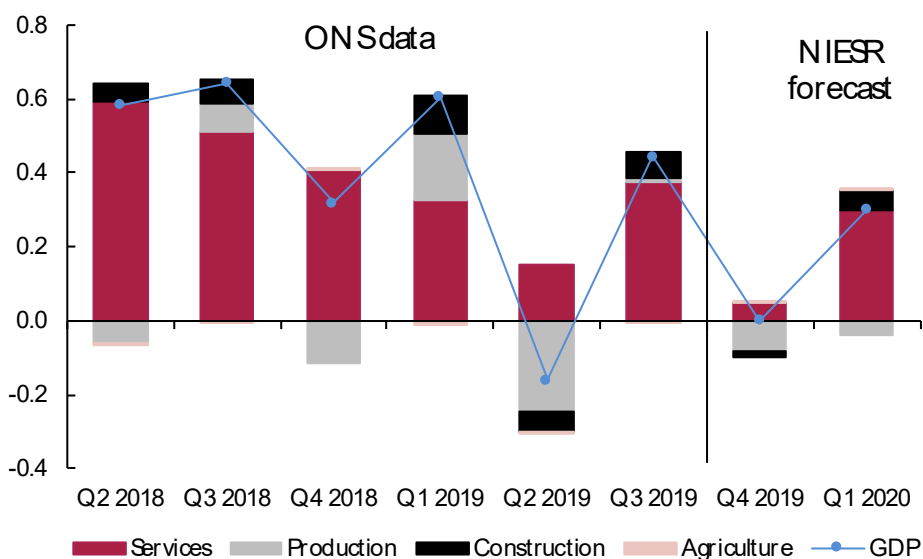


Note: Cells show forecast errors as a fraction of the standard deviation of errors for each series. Green cells are greater than expected, red cells are less than expected.

**Sectoral detail**

Economic growth of 0.1 per cent in the three months to November was driven by the service and construction sectors with a negative contribution from production. The predicted stagnation of growth in the fourth quarter is due largely to continued slow growth in the service sector and a negative contribution from production. The forecast improvement in growth in the first quarter of 2020 is predicated on a recovery in the service sector (figure 4).

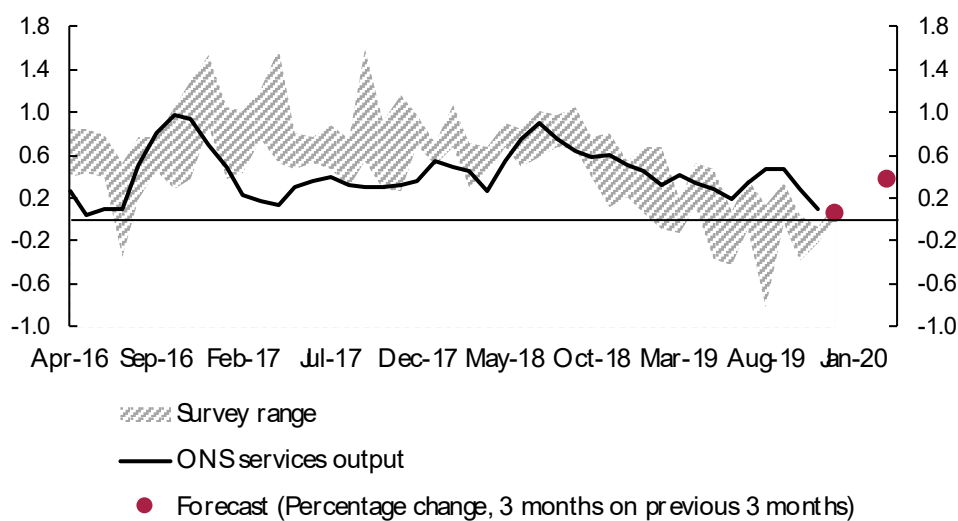
**Figure 4 - Contributions to quarterly GDP growth (percentage points)**



**Services (80 per cent of GDP)**

According to ONS, growth in the service sector was 0.1 per cent in the three months to November, slightly less than our previous estimate of 0.2 per cent growth. Within the service sector, official data shows that growth was driven by the real estate sector. We now forecast the service sector to grow by 0.1 per cent in the fourth quarter of 2019, a downward revision of 0.2 percentage points, reflecting a weaker outturn in November, and by 0.4 per cent in the first quarter of 2020 (figure 5). The forecast improvement in the first quarter assumes that the weakness recorded in November will prove temporary.

**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 continued slow 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 PMI survey rose slightly to 50.0 in December, up from 49.3 in November, and still well below the long-run average of 54.9. There was some evidence of an improvement in sentiment after the election. There was a return to rising order books, with the sharpest rise in new work reported since July. Services activity also picked up globally, with a slight rise in the J.P. Morgan Global Services PMI survey to 52.1 in December from 51.6 in November.

The EU-collected UK services confidence indicator remained in negative territory for the fourteenth consecutive month, posting -15.7 in December, up from -16.7 in November, still almost 20 points below its long-run average. This represents the longest negative run in the indicator history since the global financial crisis. Service sector confidence in the UK is substantially lower than in the EU as a whole where the level of the index was 6.4 in November, only 3 points below its long-run average.

### Production (14 per cent of GDP)

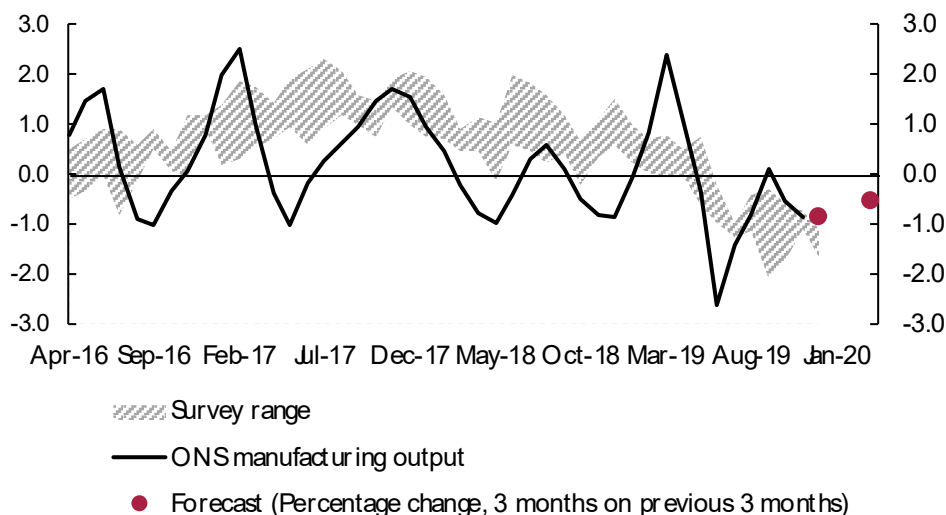
Production output fell by 0.6 per cent in the three months to November, in line with the forecast we published last month. We now forecast the production sector to contract by 0.6 per cent in the fourth quarter 2019 and by 0.3 per cent in the first quarter of 2020, though output in this sector is volatile 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 fell by 0.8 per cent in the three months to November, a little weaker than the 0.6 per cent fall we had forecast last month. This was partly due a weak outcome in November itself when manufacturing fell by 1.7 per cent on the month. This was largely driven by large falls in the manufacture of transport equipment, food, and chemicals. These industries were also the main drags on growth in April 2019, just after the UK's original planned date to exit the European Union. This may be indicative of some changes in the timing of activity around the second planned departure in October. Our central forecast is for a contraction of 0.8 per cent in the fourth quarter of 2019 and 0.6 per cent in the first quarter of 2020.

**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 balance fell to 47.5 in December, down from 48.9 in November, consistent with falling output. There was evidence of falling demand for new

work from both domestic and overseas clients as well as efforts to reduce stocks built up before the end-October Brexit deadline, that was eventually extended to end-January 2020.

The CBI survey for December was similarly weak, though the survey was conducted before the general election. Total order books remained weak and below their long-run average, while export order books worsened to one of their weakest positions since the financial crisis. Stocks of finished goods rose further above “adequate” levels. Looking ahead, manufacturers expect output volumes to fall slightly in the next three months.

The J.P.Morgan Global Manufacturing Output Index fell slightly to 50.1 in December from a seven-month high of 50.3 in November.

### **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 fell by 0.1 per cent in the three months to November. We now forecast a 1.3 per cent contraction in output in the fourth quarter.

### **Construction (6 per cent of GDP)**

Output in the construction sector rose by 1.1 per cent in the three months to November. This was much higher than the 0.9 per cent fall we had forecast last month, largely reflecting a sharp rise in output in November and some upward revisions to the September and October data. The increase on the month was driven by a 2.4 per cent increase in new work and a 0.9 per cent increase in repair and maintenance. We now forecast a 0.3 per cent contraction in construction output in the fourth quarter.

The latest reading from the IHS Markit/CIPS construction PMI survey signalled further falls in construction activity, with the headline business activity balance at 44.4 in December, down from 45.3 in November. Some of the weakness in construction activity was attributed to uncertainty ahead of the general election. In particular, anecdotal evidence suggested political indecision and delays with contracts had led to falling activity in civil engineering.

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

2016=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
Apr-18	103.1	103.1	102.7	101.6	104.1	105.9	102.3	102.7	98.7	108.2	100.4	104.5	102.5
May-18	103.4	103.5	102.7	101.7	105.8	106.6	101.9	103.0	91.7	106.5	101.9	105.8	102.4
Jun-18	103.7	103.6	102.8	101.9	105.9	107.0	102.9	103.8	94.3	106.4	104.6	106.6	101.9
Jul-18	104.0	103.9	103.0	101.9	106.9	107.2	103.2	103.5	97.2	111.1	104.3	106.7	101.7
Aug-18	104.1	104.1	102.9	102.1	106.6	109.0	103.1	103.3	97.0	112.1	104.0	106.3	101.8
Sep-18	104.1	104.2	102.8	102.2	106.1	109.9	102.5	103.0	94.9	108.0	104.3	107.2	102.4
Oct-18	104.4	104.5	103.4	102.4	106.8	109.5	102.4	102.5	96.2	111.4	103.7	107.7	103.0
Nov-18	104.6	104.8	103.4	102.4	107.7	110.0	102.2	102.6	95.7	107.9	103.2	107.3	103.0
Dec-18	104.2	104.5	103.0	102.6	106.7	110.6	101.6	102.1	94.6	107.3	102.9	105.2	102.0
Jan-19	104.8	104.9	102.8	102.7	108.1	111.5	102.8	103.9	95.7	104.8	101.6	107.7	101.3
Feb-19	105.1	105.1	103.2	103.0	108.3	111.5	103.1	104.7	91.3	108.3	101.7	109.7	100.7
Mar-19	105.2	105.1	103.0	103.2	108.5	111.5	104.2	105.9	91.6	109.8	102.1	108.4	100.6
April-19	104.7	105.1	102.7	103.2	108.3	112.3	100.9	101.4	94.4	106.0	101.9	107.7	100.6
May-19	104.9	105.2	102.9	103.4	108.5	111.8	101.9	102.4	94.9	106.8	104.0	108.2	100.6
Jun-19	105.0	105.4	103.2	103.7	108.6	112.3	101.9	102.4	95.0	106.4	104.1	106.7	100.6
Jul-19	105.4	105.8	103.5	103.7	108.7	113.3	102.1	102.8	93.7	105.6	104.6	108.3	100.5
Aug-19	105.3	105.7	103.5	104.1	108.7	112.1	101.4	102.0	92.8	105.3	105.1	108.2	100.5
Sep-19	105.3	105.7	103.4	104.0	108.4	112.9	101.4	101.7	92.6	107.9	105.3	109.9	100.5
Oct-19	105.5	105.9	103.8	104.0	108.6	113.4	101.7	102.3	95.2	103.9	104.0	107.5	100.5
Nov-19	105.1	105.6	103.5	104.2	108.0	112.0	100.5	100.6	95.4	105.2	103.8	109.5	100.6
Dec-19	105.3	105.9	103.8	104.2	108.4	112.8	100.9	101.0	95.2	105.5	104.3	108.5	100.8
Jan-20	105.5	106.0	104.0	104.2	108.6	113.1	100.8	100.8	95.7	104.8	104.4	109.1	100.9
Feb-20	105.6	106.2	104.2	104.2	108.7	113.2	100.7	100.7	95.7	104.7	104.6	109.5	101.0
Mar-20	105.8	106.4	104.4	104.2	108.9	113.8	100.7	100.7	95.4	104.9	104.7	110.0	101.1
<b>Percentage change, 3 months on previous 3 months</b>													
Feb-19	0.3	0.3	-0.2	0.4	0.8	1.3	0.1	0.8	-1.8	-2.1	-1.6	0.1	-1.4
Mar-19	0.6	0.4	-0.3	0.5	1.2	1.3	1.3	2.4	-2.8	-1.1	-1.4	1.7	-1.8
April-19	0.4	0.4	-0.1	0.6	0.8	1.0	0.5	1.1	-3.0	1.3	-0.6	1.7	-1.4
May-19	0.2	0.3	-0.1	0.5	0.7	0.6	-0.2	-0.3	-0.2	0.7	0.6	0.5	-0.7
Jun-19	-0.2	0.2	-0.1	0.5	0.2	0.6	-1.7	-2.6	2.0	-1.1	1.5	-1.0	-0.3
Jul-19	0.1	0.3	0.2	0.5	0.2	0.6	-0.7	-1.4	2.3	-1.6	2.3	-0.8	-0.1
Aug-19	0.3	0.5	0.5	0.5	0.2	0.6	-0.5	-0.8	0.2	-1.6	1.9	-0.3	-0.1
Sep-19	0.4	0.5	0.5	0.5	0.1	0.6	0.1	0.1	-1.8	-0.1	1.6	1.2	-0.1
Oct-19	0.3	0.3	0.4	0.4	0.0	0.3	-0.5	-0.5	-1.1	-0.5	0.5	0.7	-0.1
Nov-19	0.1	0.1	0.2	0.2	-0.3	0.2	-0.6	-0.8	0.6	-0.1	-0.2	1.1	0.0
Dec-19	0.0	0.1	0.2	0.2	-0.2	0.0	-0.6	-0.8	2.4	-1.3	-0.9	-0.3	0.1
Jan-20	-0.1	0.1	0.2	0.2	-0.2	-0.1	-0.7	-1.2	2.1	-0.5	-0.6	0.5	0.2
Feb-20	0.1	0.3	0.4	0.1	0.2	0.3	-0.4	-0.7	1.2	-0.6	0.1	0.1	0.4
Mar-20	0.3	0.4	0.5	0.1	0.4	0.6	-0.3	-0.6	0.4	0.0	0.5	0.9	0.4
<b>Percentage change, month on same month in previous year</b>													
Feb-19	2.3	2.6	1.1	1.8	4.6	6.8	0.2	1.1	-9.8	5.7	2.1	4.5	-2.3
Mar-19	2.4	2.3	0.6	1.7	5.3	5.8	1.4	2.7	-11.5	10.4	1.0	5.1	-2.0
April-19	1.6	1.9	0.0	1.6	4.0	6.0	-1.4	-1.3	-4.4	-2.0	1.5	3.1	-1.9
May-19	1.5	1.6	0.2	1.7	2.6	4.9	0.0	-0.6	3.5	0.3	2.1	2.3	-1.8
Jun-19	1.3	1.7	0.4	1.8	2.5	5.0	-1.0	-1.3	0.7	0.0	-0.5	0.1	-1.3
Jul-19	1.3	1.8	0.5	1.8	1.7	5.7	-1.1	-0.7	-3.6	-5.0	0.3	1.5	-1.2
Aug-19	1.2	1.5	0.6	2.0	2.0	2.8	-1.6	-1.3	-4.3	-6.1	1.1	1.8	-1.3
Sep-19	1.2	1.4	0.6	1.8	2.2	2.7	-1.1	-1.3	-2.4	-0.1	1.0	2.5	-1.9
Oct-19	1.1	1.3	0.4	1.6	1.7	3.6	-0.7	-0.2	-1.0	-6.7	0.3	-0.2	-2.4
Nov-19	0.5	0.8	0.1	1.8	0.3	1.8	-1.7	-1.9	-0.3	-2.5	0.6	2.1	-2.3
Dec-19	1.1	1.3	0.8	1.5	1.6	2.0	-0.6	-1.1	0.7	-1.7	1.3	3.1	-1.2
Jan-20	0.6	1.1	1.2	1.5	0.5	1.5	-1.9	-2.9	0.0	0.0	2.8	1.3	-0.4
Feb-20	0.5	1.0	1.0	1.2	0.4	1.6	-2.3	-3.8	4.8	-3.3	2.8	-0.2	0.3
Mar-20	0.5	1.2	1.4	1.0	0.4	2.0	-3.4	-4.9	4.1	-4.5	2.6	1.4	0.5
<b>Percentage change, month on previous month</b>													
Feb-19	0.3	0.2	0.4	0.3	0.2	0.0	0.3	0.8	-4.6	3.3	0.1	1.9	-0.6
Mar-19	0.1	0.0	-0.2	0.2	0.2	0.0	1.1	1.1	0.3	1.4	0.4	-1.2	-0.1
April-19	-0.5	0.0	-0.3	0.0	-0.2	0.7	-3.2	-4.2	3.1	-3.5	-0.2	-0.6	0.0
May-19	0.2	0.1	0.2	0.2	0.2	-0.4	1.0	1.0	0.5	0.8	2.1	0.5	0.0
Jun-19	0.1	0.2	0.3	0.3	0.1	0.4	0.0	0.0	0.1	-0.4	0.1	-1.4	0.0
Jul-19	0.4	0.4	0.3	0.0	0.1	0.9	0.2	0.4	-1.4	-0.8	0.5	1.5	-0.1
Aug-19	-0.1	-0.1	0.0	0.4	0.0	-1.1	-0.7	-0.8	-1.0	-0.3	0.5	-0.1	0.0
Sep-19	0.0	0.0	-0.1	-0.1	-0.3	0.7	0.0	-0.3	-0.2	2.5	0.2	1.6	0.0
Oct-19	0.2	0.2	0.4	0.0	0.2	0.4	0.3	0.6	2.8	-3.7	-1.2	-2.2	0.0
Nov-19	-0.4	-0.3	-0.3	0.2	-0.6	-1.2	-1.2	-1.7	0.2	1.3	-0.2	1.9	0.1
Dec-19	0.2	0.3	0.3	0.0	0.4	0.7	0.4	0.4	-0.2	0.3	0.5	-0.9	0.2
Jan-20	0.1	0.1	0.2	0.0	0.2	0.3	-0.1	-0.2	0.5	-0.6	0.1	0.5	0.1
Feb-20	0.1	0.1	0.2	0.0	0.1	0.1	-0.1	-0.1	0.0	-0.1	0.1	0.4	0.1
Mar-20	0.2	0.2	0.2	0.0	0.2	0.5	0.0	0.0	-0.3	0.1	0.2	0.4	0.1

## 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 this month 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	0.5	-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			0.2		
Average absolute error				0.22	0.08

\* Made in the second month of the quarter, 3 months ahead of ONS first estimate

\*\* ONS first estimate - NIESR estimate

### Notes for editors

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