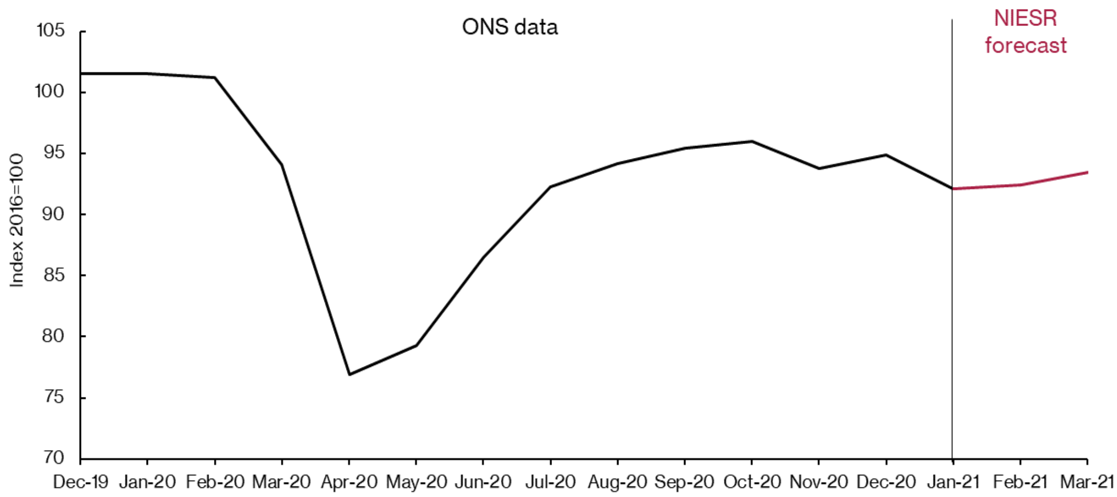
Friday, 12th March 2021 niesr.ac.uk Rory Macqueen

Brexit and Covid put winter economy in deep freeze

Figure 1 - UK GDP



Main points

- January's smaller than expected fall in GDP means that we now estimate a contraction of 2.4 per cent in the first quarter of 2021. This would leave GDP in the first quarter of 2021 around 9 per cent lower than its level in the last quarter of 2019, before the pandemic struck.
- Real-time data and NIESR analysis imply that GDP is likely to resume its growth in February and March, by 0.3% and 1.1% respectively, on the back of higher contribution from government services and improving consumer confidence as infection rates come down.
- As a result, the first quarter of 2021 is likely to see a smaller contraction than widely anticipated, increasing the upside risks to our latest 2021 forecast of 3.4 per cent. However, the pace of recovery from the second quarter will crucially depend on how the opposing effects of the vaccine roll-out and lifting lockdown affect the path of Covid-19, as well as how consumers and businesses react.
- January's data indicate that – while lockdown has reduced activity in some sectors to the levels of summer 2020 – other parts of the economy seem to have adapted

and remain relatively unaffected. The health sector, responsible for rolling out the vaccines, grew by 6 per cent in January.

- The contraction in manufacturing at the start of 2021 is likely to be partly attributable to the unwinding of December pre-Brexit stockpiling and partly to permanent reductions in UK trade.

"While January's lockdown has unsurprisingly hit the hospitality, retail and education sectors, returning to levels of output last seen in summer 2020, many other sectors have not been affected to anything like the same extent as they were last year. With February and March likely to see activity at similar levels, this provides further support for the view that the fall in the first quarter of 2021 may be smaller than expected. The pace of recovery from the second quarter will depend on whether vaccines continue to roll out according to plan, whether further mutations or outbreaks bring about a resurgence in the virus, and how quickly public confidence returns."

Rory Macqueen
Principal Economist - Macroeconomic Modelling and Forecasting

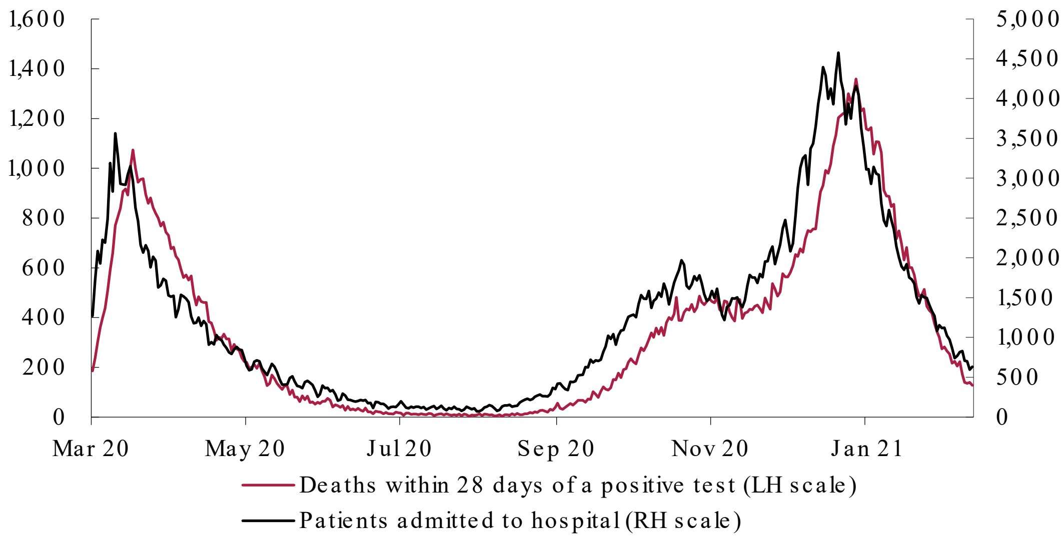
Economic setting

Following 2020's record fall of 9.9 per cent in GDP, it looks likely that 2021 will see stronger growth after a slow start in Q1. GDP in December 2020 is now believed to have been around 6 per cent below its pre-pandemic level (February 2020), despite growth in the second half of the year, and the renewed national lockdown in 2021Q1 will see a further fall.

The outlook for the year ahead largely depends on the success in combating the pandemic, with the length and stringency of social distancing restrictions key to the growth outlook. In our latest National Institute UK Economic Outlook, our forecast for 2021 is for year-on-year growth of 3.4 per cent, a downward revision from our previous forecast of 5.9 per cent, reflecting the effects of the second wave of Covid-19 and the associated lockdowns. Upside risks may come from a faster or more effective vaccine rollout than anticipated at the time of our forecast, additional fiscal support – especially to the labour market – or a faster than expected fall in the savings rate from its record highs as risks of getting infected subside (Figure 2.1)

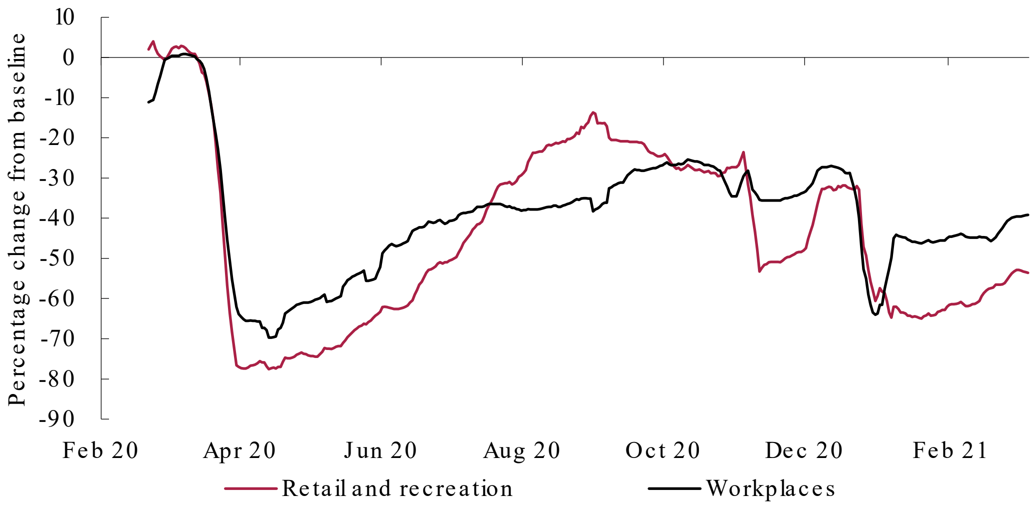
High frequency indicators suggest that economic activity in early 2021 was lower than in November but higher than during Spring 2020 (Figure 2.2 and Figure 2.3). There are notable differences in the extent of restrictions compared with the first lockdown: for example, far more children are attending schools and more employers have either invested in home working capabilities or are requiring staff to attend work. **Early indications are that there may have been a slight pick-up in consumer activity in late February, but PMI data (collected 11-24 February) suggest a slight contraction from January.**

Figure 2.1 – UK daily Covid-19 statistics



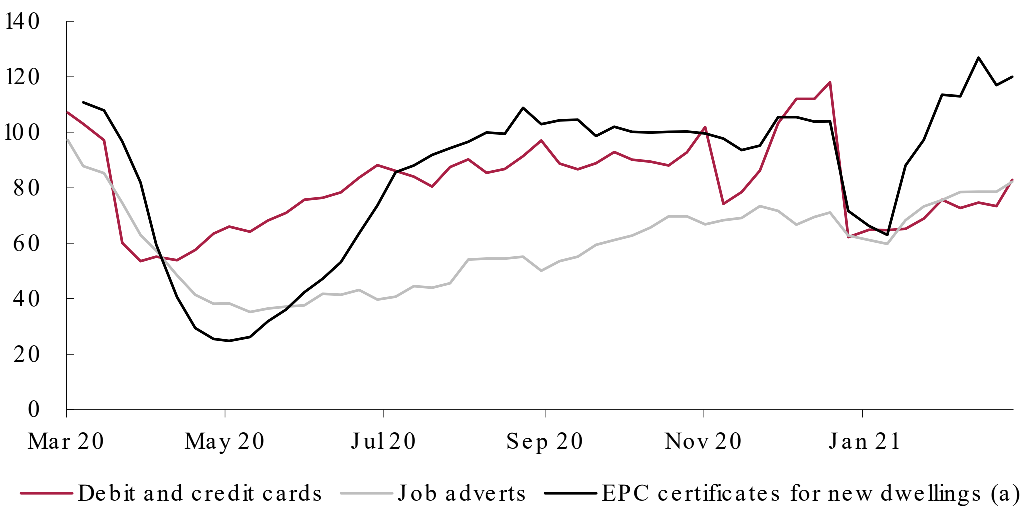
Source: Data.gov.uk. See coronavirus.data.gov.uk for further information.

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.

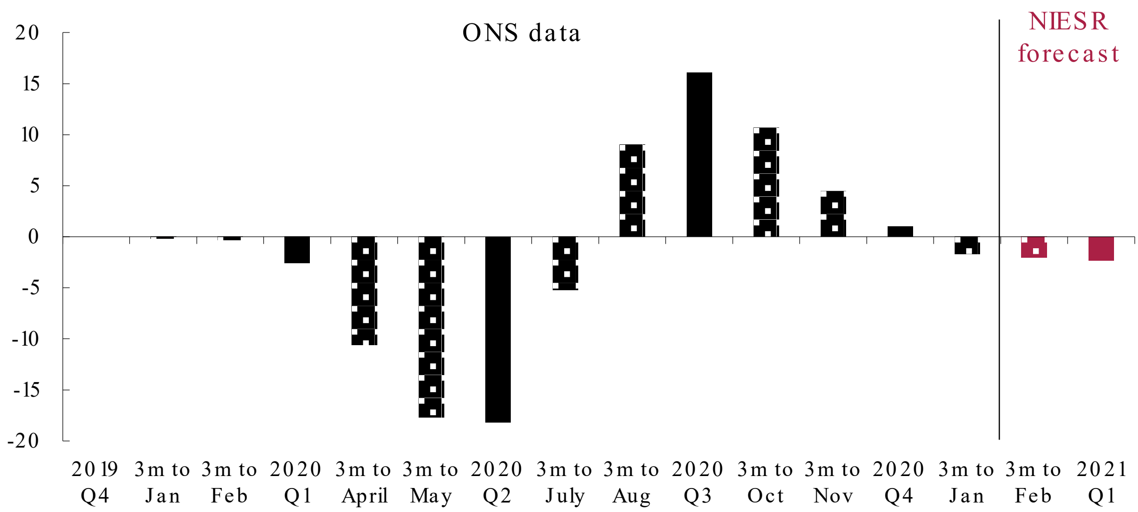
Figure 2.3 – Spending and hiring indicators



(a) England and Wales
Source: ONS, BoE, Adzuna, MHCLG. Debit and credit cards: 100 = February 2020, percentage change on a backward looking seven-day rolling average, 13 January 2020 to 14 January 2021, non-seasonally adjusted, nominal prices. Job adverts: change from the same week in the previous year. EPC certificates: change from the same week in the previous year, four-week rolling average, adjusted for timing of December holiday.

Manufacturing activity had held up, mainly due to Brexit-related stockpiling in the fourth quarter as companies built up their inventories to mitigate the risk of a disruptive, disorderly departure from the European Union. Nevertheless, now that a trade deal has been struck, companies are likely to run down their inventories, contributing to the weakening of activity in the first quarter as was evident in January's GDP data. Some of the large fall in the UK's trade with the EU observed in January is likely to reflect a permanent loss, but the amount will only become clear in time. The finance sector, which has contracted every month since October and which was largely excluded from the trade deal with the European Union, fell again by 1.1 per cent in January.

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



News in latest ONS data

The latest monthly ONS data were slightly stronger than we anticipated in our February Tracker, indicating that GDP fell by 2.9 per cent in January 2021. 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)

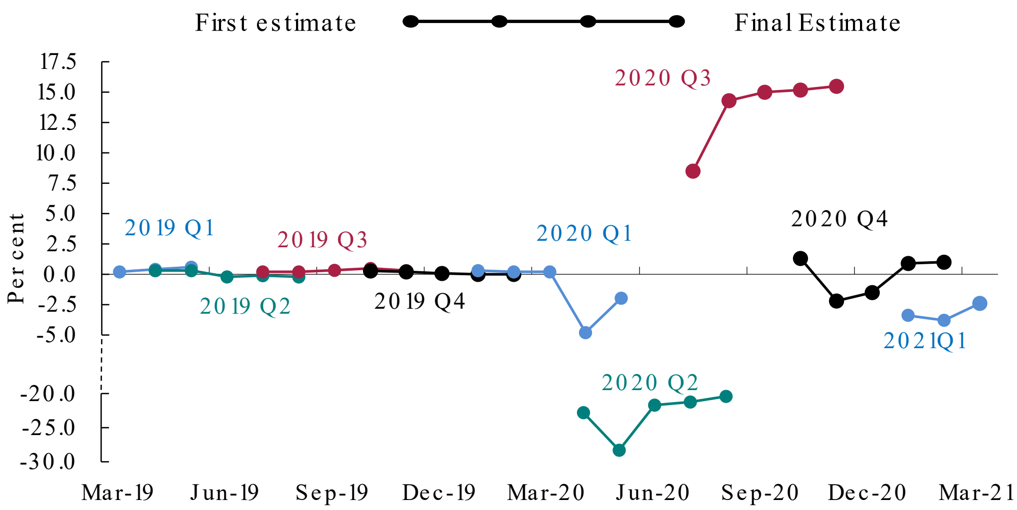


Figure 5 shows a heat map of the data surprises across sectors in the monthly data, relative to last month's GDP Tracker, highlighting the sectors where the surprises are large relative to the volatility of the output data. This month, positive surprises were seen in manufacturing, agriculture, construction, and to a lesser extent – government, and business services. Negative surprises were seen extraction, electricity, distribution and hotels, and water supply.

Figure 5 - Surprises in monthly data

	01/20	02/20	03/20	04/20	05/20	06/20	07/20	08/20	09/20	10/20	11/20	12/20	01/21
Business services and finance	0.0	-0.2	1.2	3.1	-1.2	-2.9	0.4	-0.8	0.6	0.3	2.9	0.4	0.3
Government	0.1	-0.2	-2.1	3.8	1.0	0.3	0.8	0.3	0.6	-0.3	-1.1	0.2	3.2
Distribution , Hotels and Restaurants	0.0	-0.1	0.7	3.2	-1.6	2.7	0.5	0.8	0.1	-0.1	2.9	-1.3	-1.0
Transport, Storage and Communication	-0.4	-0.1	2.9	1.9	-0.9	-0.5	-0.8	-0.5	-0.2	0.3	4.1	-0.1	0.9
Manufacturing	0.2	0.2	2.4	-1.9	1.4	4.0	0.2	0.1	0.9	0.5	0.3	1.2	-0.1
Electricity	-1.0	-0.9	3.2	-1.6	-0.6	1.1	1.6	-0.4	-0.3	-0.5	-0.7	-1.8	1.6
Extraction	-0.2	-0.2	-2.7	-0.5	-1.3	1.7	-1.1	-1.3	-1.0	0.0	-0.7	-2.0	0.1
Water Supply, Sewerage, Waste Management	0.4	-0.4	1.0	-3.3	-0.9	2.8	0.6	-1.1	0.7	0.4	0.1	-0.9	1.8
Construction	0.0	-0.2	2.5	-3.1	-0.4	1.9	0.5	1.1	0.6	0.3	2.9	0.8	0.3
Agriculture	0.0	-1.2	-1.7	-3.6	2.6	2.1	-0.1	0.7	0.6	0.0	0.5	1.0	0.0

← below expectation   above expectation →

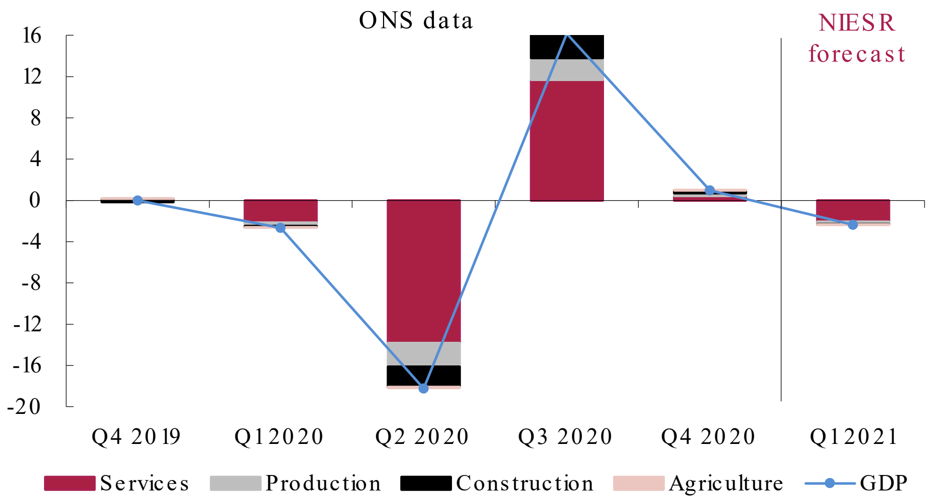
-3 -1 0 1 2

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 contracted by 1.7 per cent in the three months to January, compared with the three months previously. This was mainly driven by the distribution, hotels and restaurants sector, which includes hospitality and retail. Our forecast for the first quarter of 2021 is for output to decline by 2.4 per cent.

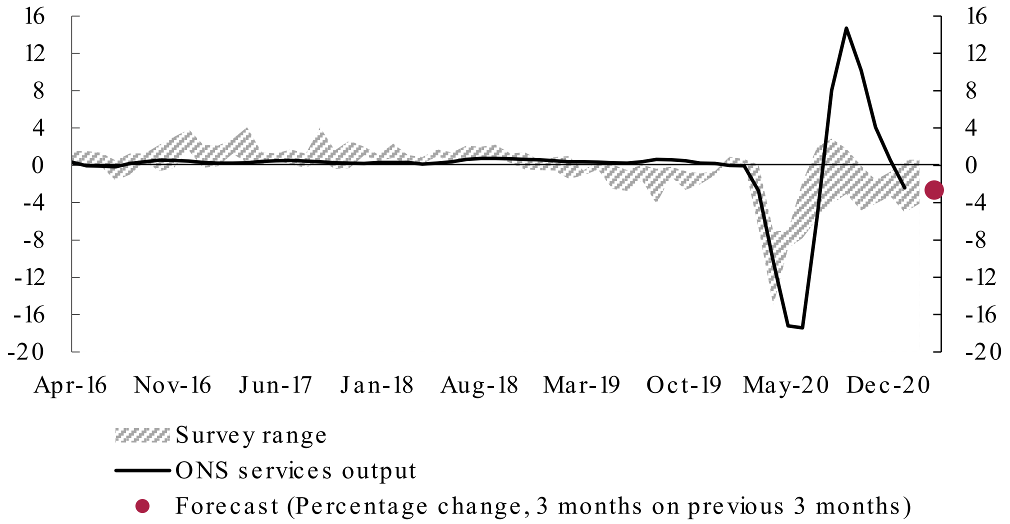
Figure 6 - Contributions to quarterly GDP growth (percentage points)



Services (80 per cent of GDP)

According to the latest ONS data, the services sector shrank by 2.3 per cent in the three months to January, a smaller fall than the 3.3 per cent we expected a month ago. Transport, storage and communications was the only of the four sectors to see growth. Based on recent developments we expect service sector activity to decline by 2.6 per cent in the first quarter of 2021 (figure 7).

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 little change in services activity in February, as shown by the swathe of survey indicators in figure 7. The headline business activity balance in the IHS Markit/CIPS UK services PMI came in at 49.5 in February, up from 39.5 in January, with both output and employment falling but at a slower rate than in January. The decline in activity was attributed to the continuing lockdown and client hesitancy, as well as some Brexit-related difficulties. Internationally, the JPMorgan Global Services Business Activity Index rose to 52.8 in February, up from 51.6 in January, and a four-month high.

Production (14 per cent of GDP)

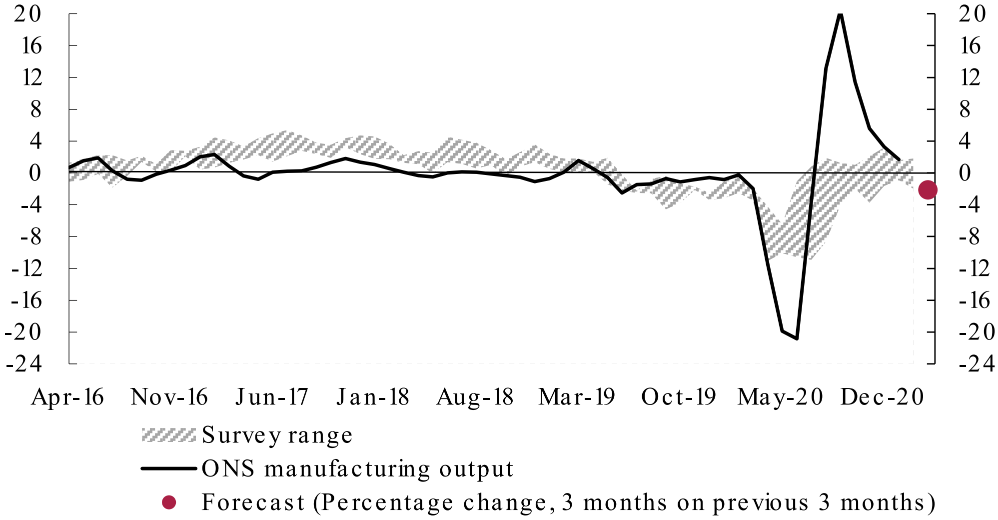
Production output fell by 0.3 per cent in the three months to January, weaker than we forecast a month ago. This drop was principally driven by manufacturing, including a 16.9 per cent fall in the manufacture of motor vehicles in January. We estimate that production will decline by 1.7 per cent in the first quarter of 2021, 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 was flat in the three months to January. 9 out of 13 manufacturing sub-sectors contracted in January. Our forecast for the first quarter of 2021 is for manufacturing to decline by 2.2 per cent.

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 rose to 55.1 in February, lower than in December when pre-Brexit stockpiling took place, but up from 54.1 in January. This represented the continuation of a nine-month expansion, but at the slowest rate during that period. Investment goods rose at the sharpest pace, in contrast with consumer goods manufacturing, which continued to slow.

The JPMorgan Global Manufacturing Output rose marginally in February to 53.9, up from 53.6 in January, despite a slowing in new order intakes.

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 continued to fall, contracting by 3.7 per cent in the three months to January. We now forecast a decline of 2.2 per cent in the first quarter of 2021.

Construction (6 per cent of GDP)

Output in the construction sector grew by 1.7 per cent in the three months to January, a stronger outturn than we had forecast a month ago. The main contributors to this increase were private commercial and infrastructure. We anticipate output to fall by 0.4 per cent in the first quarter of 2021.

The IHS Markit/CIPS construction PMI survey returned to positive territory in February, rising to 53.3 from 49.2 in January. A slowdown in house building was offset by the sharpest rise in commercial work since last September.

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

			Index of Services - Components					Index of Production - Components					
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 Construction	Agriculture
Latest weights	1000	796	339	217	133	108	136	102	15	6	13	61	7
Mar-19	101.4	101.4	100.2	101.1	102.4	104.2	101.2	101.5	98.3	103.4	100.0	102.6	103.6
April-19	101.0	101.4	100.0	101.1	102.4	105.0	98.1	97.6	101.3	96.8	100.2	102.4	104.4
May-19	101.2	101.4	100.1	101.3	102.4	104.6	99.3	98.5	102.6	99.7	101.8	102.7	105.3
Jun-19	101.4	101.8	100.4	101.5	102.6	105.5	99.0	98.2	103.6	97.3	102.3	101.4	105.9
Jul-19	101.7	102.1	101.0	101.5	102.8	106.0	98.7	98.4	100.6	96.4	100.8	102.5	106.8
Aug-19	101.6	102.2	101.1	102.0	102.6	105.3	97.7	96.9	99.6	98.1	101.1	102.2	107.8
Sep-19	101.6	102.1	100.7	102.1	102.5	106.2	98.2	96.9	99.2	106.3	100.8	102.5	108.5
Oct-19	101.9	102.5	101.1	102.3	102.9	106.6	98.8	98.0	103.7	99.1	99.7	100.2	108.9
Nov-19	101.5	102.2	100.7	102.8	102.5	105.0	97.6	96.2	104.1	99.6	99.5	101.3	109.0
Dec-19	101.5	102.3	101.0	102.9	102.2	105.2	97.2	96.3	101.8	96.4	100.1	100.2	108.9
Jan-20	101.5	102.3	101.1	103.1	102.8	103.5	97.3	96.8	98.9	96.2	100.7	100.2	108.0
Feb-20	101.2	102.0	101.0	102.6	102.4	103.3	97.4	97.3	98.1	95.4	99.8	99.8	105.1
Mar-20	94.1	94.3	98.5	90.6	87.0	97.6	92.2	90.7	97.8	89.2	100.2	96.2	100.0
Apr-20	76.9	78.9	89.3	76.6	53.8	82.7	74.1	68.0	89.7	87.4	92.6	57.1	89.2
May-20	79.3	80.6	89.0	78.5	60.7	83.3	78.7	74.0	90.7	89.6	92.7	64.4	89.8
Jun-20	86.5	87.1	92.4	82.4	79.9	89.4	86.9	83.4	94.5	96.1	98.1	77.7	91.4
Jul-20	92.3	92.5	94.1	89.8	93.0	92.7	91.6	89.3	99.2	93.1	99.7	90.0	93.7
Aug-20	94.2	94.6	94.4	92.7	99.7	92.4	92.1	90.6	99.3	89.4	98.8	93.9	95.3
Sep-20	95.4	95.8	95.7	96.1	97.6	93.2	92.7	91.6	98.7	86.8	99.9	96.4	96.3
Oct-20	96.0	96.3	96.3	97.2	96.0	95.0	93.5	92.7	98.0	86.8	100.5	97.6	95.8
Nov-20	93.8	93.3	95.6	94.6	85.0	94.0	93.8	93.7	96.4	83.6	100.4	99.2	95.6
Dec-20	94.9	94.9	96.3	96.6	88.7	94.8	94.0	94.0	97.2	82.9	100.5	96.3	95.9
Jan-21	92.1	91.6	95.0	92.9	78.8	94.5	92.6	91.8	98.0	82.3	101.7	97.2	94.5
Feb-21	92.4	92.1	95.1	94.3	78.9	94.7	92.0	91.3	97.2	82.6	101.6	97.2	92.6
Mar-21	93.4	93.4	95.2	97.9	79.6	95.5	92.0	91.3	97.1	82.8	101.7	97.6	91.3
	Percentage change, 3 months on previous 3 months												
Sep-19	0.4	0.6	0.8	0.6	0.2	0.8	-0.6	-0.7	-2.6	2.4	-0.5	0.2	2.4
Oct-19	0.3	0.5	0.5	0.7	0.1	0.6	-0.8	-1.1	-1.4	3.4	-1.1	-0.6	2.3
Nov-19	0.1	0.2	0.0	0.7	0.0	0.3	-0.3	-0.8	1.1	4.5	-1.4	-0.7	1.8
Dec-19	0.0	0.2	0.0	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	0.0	0.8	-0.2	-1.4	-0.9	-0.9	0.8	-3.7	-0.4	-1.0	0.2
Feb-20	-0.3	-0.1	0.2	0.5	-0.2	-1.8	-0.9	-0.2	-2.7	-5.6	0.2	-1.3	-1.3
Mar-20	-2.7	-2.7	-0.7	-3.8	-5.0	-3.9	-2.3	-2.0	-4.8	-4.8	0.5	-1.8	-4.2
Apr-20	-10.6	-10.3	-4.6	-12.6	-20.9	-9.6	-9.7	-11.5	-6.3	-6.9	-2.6	-16.1	-9.7
May-20	-17.7	-17.2	-8.7	-20.4	-34.5	-15.5	-16.1	-19.9	-6.9	-7.6	-5.0	-27.5	-13.4
Jun-20	-18.2	-17.4	-9.9	-19.8	-33.5	-16.1	-16.5	-20.9	-6.8	-2.7	-5.8	-32.7	-13.6
Jul-20	-5.2	-5.5	-4.6	-7.1	-3.9	-6.4	-2.5	-3.6	-0.4	2.5	-0.7	-8.3	-6.6
Aug-20	9.1	8.0	1.5	7.8	35.3	4.1	10.4	13.1	5.3	4.7	3.9	20.2	0.5
Sep-20	16.2	14.7	5.0	17.3	49.3	9.0	15.3	20.5	8.1	-1.4	5.3	40.7	5.5
Oct-20	10.7	10.2	4.0	14.1	25.6	5.7	8.2	11.4	4.1	-5.7	3.0	24.0	4.5
Nov-20	4.5	4.1	2.4	8.7	2.2	2.8	3.5	5.6	0.0	-7.7	1.4	12.1	2.6
Dec-20	1.0	0.6	1.4	3.5	-7.1	2.0	1.8	3.3	-1.9	-5.9	1.0	4.6	0.7
Jan-21	-1.7	-2.4	0.2	-0.7	-13.9	1.0	0.8	1.7	-1.5	-5.4	1.1	1.7	-0.5
Feb-21	-2.0	-2.4	-0.4	-1.4	-11.6	0.6	-0.5	-0.3	-0.2	-3.7	1.0	-0.9	-1.6
Mar-21	-2.4	-2.6	-1.0	-1.1	-12.0	0.3	-1.7	-2.2	0.2	-2.2	1.2	-0.4	-3.1
	Percentage change, month on same month in previous year												
Sep-19	1.2	1.7	0.6	2.0	2.1	4.2	-2.2	-3.7	-0.1	5.6	0.7	1.4	8.6
Oct-19	1.2	1.7	0.4	1.9	1.7	4.9	-0.7	-1.5	5.5	-2.2	-0.2	-1.3	8.7
Nov-19	0.7	1.2	0.0	2.4	0.4	2.9	-1.3	-2.7	5.9	-0.4	0.3	0.1	7.6
Dec-19	1.0	1.4	0.8	2.4	1.5	1.2	-1.7	-2.6	3.4	-2.6	0.9	1.3	5.6
Jan-20	0.5	1.1	1.0	2.5	0.8	-1.0	-2.4	-3.2	-2.0	-0.8	1.9	-0.7	4.5
Feb-20	-0.1	0.7	0.6	1.8	0.3	-1.0	-2.6	-3.1	0.4	-3.7	0.2	-3.3	1.9
Mar-20	-7.2	-7.0	-1.7	-10.4	-15.0	-6.3	-8.9	-10.6	-0.5	-13.7	0.2	-6.2	-3.5
Apr-20	-23.9	-22.2	-10.7	-24.2	-47.5	-21.2	-24.5	-30.3	-11.5	-9.7	-7.6	-44.2	-14.6
May-20	-21.6	-20.5	-11.1	-22.5	-40.7	-20.4	-20.7	-24.9	-11.6	-10.1	-8.9	-37.3	-14.7
Jun-20	-14.7	-14.4	-8.0	-18.8	-22.1	-15.3	-12.2	-15.1	-8.8	-1.2	-4.1	-23.4	-13.7
Jul-20	-9.2	-9.4	-6.8	-11.5	-9.5	-12.5	-7.2	-9.2	-1.4	-3.4	-1.1	-12.2	-12.3
Aug-20	-7.3	-7.4	-6.6	-9.1	-2.8	-12.3	-5.7	-6.5	-0.3	-8.9	-2.3	-8.1	-11.6
Sep-20	-6.1	-6.2	-5.0	-5.9	-4.8	-12.2	-5.6	-5.5	-0.5	-18.3	-0.9	-6.0	-11.2
Oct-20	-5.8	-6.0	-4.7	-5.0	-6.7	-10.9	-5.4	-5.4	-5.5	-12.4	0.8	-2.6	-12.0
Nov-20	-7.6	-8.7	-5.1	-8.0	-17.1	-10.5	-3.9	-2.6	-7.4	-16.1	0.9	-2.1	-12.3
Dec-20	-6.6	-7.2	-4.7	-6.1	-13.2	-9.9	-3.3	-2.4	-4.5	-14.0	0.4	-3.9	-11.9
Jan-21	-9.3	-10.5	-6.0	-9.9	-23.3	-8.7	-4.8	-5.2	-0.9	-14.4	1.0	-3.0	-12.5
Feb-21	-8.7	-9.7	-5.9	-8.1	-22.9	-8.3	-5.6	-6.2	-0.9	-13.4	1.8	-2.6	-11.9
Mar-21	-0.7	-1.0	-3.4	8.1	-8.5	-2.1	-0.2	0.6	-0.7	-7.2	1.5	1.5	-8.7
	Percentage change, month on previous month												
Sep-19	0.0	-0.1	-0.4	0.1	-0.1	0.9	0.5	0.0	-0.4	8.4	-0.3	0.3	0.6
Oct-19	0.3	0.4	0.4	0.2	0.4	0.4	0.6	1.1	4.5	-6.8	-1.1	-2.2	0.4
Nov-19	-0.4	-0.3	-0.4	0.5	-0.4	-1.5	-1.2	-1.8	0.4	0.5	-0.2	1.1	0.1
Dec-19	0.0	0.1	0.3	0.1	-0.3	0.2	-0.4	0.1	-2.2	-3.2	0.6	-1.1	-0.1
Jan-20	0.0	0.0	0.1	0.2	0.6	-1.6	0.1	0.5	-2.8	-0.2	0.6	0.0	-0.8
Feb-20	-0.3	-0.3	-0.1	-0.5	-0.4	-0.2	0.1	0.5	-0.8	-0.8	-0.9	-0.4	-2.7
Mar-20	-7.0	-7.5	-2.5	-11.7	-15.0	-5.5	-5.3	-6.8	-0.3	-6.5	0.4	-3.6	-4.9
Apr-20	-18.3	-16.3	-9.3	-15.5	-38.2	-15.3	-19.6	-25.0	-8.3	-2.0	-7.6	-40.6	-10.8
May-20	3.1	2.2	-0.3	2.5	12.8	0.7	6.2	8.8	1.1	2.5	0.1	12.8	0.7
Jun-20	9.1	8.1	3.8	5.0	31.6	7.3	10.4	12.7	4.2	7.3	5.8	20.7	1.8
Jul-20	6.7	6.2	1.8	9.0	16.4	3.7	5.4	7.1	5.0	-3.1	1.6	15.8	2.5
Aug-20	2.1	2.3	0.3	3.2	7.2	-0.3	0.5	1.5	0.1	-4.0	-0.9	4.3	1.7
Sep-20	1.3	1.3	1.4	3.7	-2.1	0.9	0.7	1.1	-0.6	-2.9	1.1	2.7	1.0
Oct-20	0.6	0.5	0.6	1.1	-1.6	1.9	0.9	1.2	-0.7	0.0	0.6	1.2	-0.5
Nov-20	-2.3	-3.1	-0.7	-2.7	-11.5	-1.1	0.3	1.1	-1.6	-3.7	-0.1	1.6	-0.2
Dec-20	1.2	1.7	0.7	2.1	4.4	0.9	0.2	0.3	0.8	-0.8	0.1	-2.9	0.3
Jan-21	-2.9	-3.5	-1.3	-3.8	-11.2	-0.3	-1.5	-2.3	0.8	-0.7	1.2	0.9	-1.5
Feb-21	0.3	0.5	0.1	1.5	0.1	0.2	-0.7	-0.5	-0.8	0.4	-0.1	0.0	-2.0
Mar-21	1.1	1.4	0.2	3.8	0.9	0.8	0.0	0.0	-0.1	0.2	0.1	0.5	-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 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
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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