NIESR
Monthly GDP Tracker

One Last Hurrah Before Belts Are Tightened?

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"Today's ONS estimates indicate that GDP grew by 0.1 per cent in November relative to October, driven by monthly growth in services which saw, among other things, a significant boost to food and beverage activity possibly associated with the start of the FIFA World Cup. Despite this, GDP contracted by 0.3 per cent in the three months to November, consistent with what we had forecast last month. Given that PMIs for services, manufacturing and construction all posted below the neutral 50 for December, we expect to see a slight fall in GDP in December relative to November; but this means a rise in quarterly GDP, possibly a sign that households are enjoying a last hurrah before they tighten their belts in 2023. Looking towards the first quarter of 2023, the risks to GDP seem to remain on the downside, driven by anaemic growth in the major sectors, fragile consumer and business confidence and a widespread fall in real incomes."

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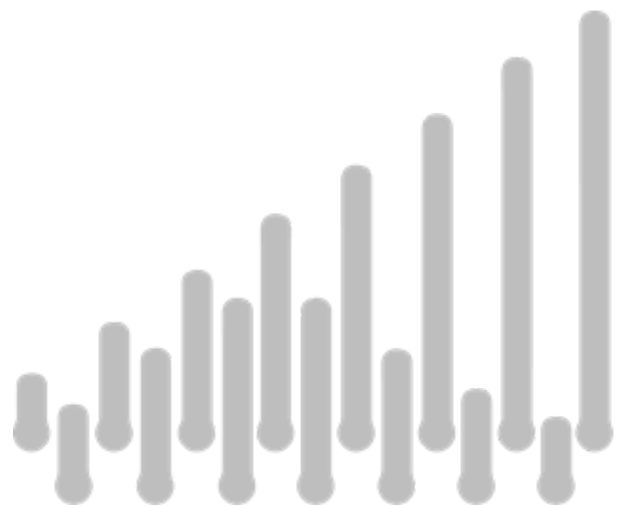
Main points

- Monthly GDP grew by 0.1 per cent in November, driven by increases in services, particularly in administrative and support activities, which offset a strike-related fall in the transportation and storage subsector. Consumer-facing services also saw a boost in November, particularly food and beverage activities, as the FIFA World Cup kicked off; that said, it is notable that this subsector remains 8.5 per cent below pre-pandemic levels, while all other services are 2 per cent above.

- GDP contracted by 0.3 per cent in the three months to November, driven by a 1.4 per cent decrease in production.

- Concerningly, the S&P Global/CIPS UK PMIs for December recorded figures below the neutral 50 (indicating contracting output) for the services, manufacturing and construction sectors. In particular, PMI data for the construction sector – which recorded negative business activity expectations in December, representing only the sixth time this has ever happened since records began in 1997 - adds downside risks to our estimate for GDP growth in the fourth quarter of last year.

- We estimate that GDP in December will fall relative to November, but overall, we expect to see services-driven GDP growth of 0.1 per cent in the fourth quarter of 2022.

Figure 1 - UK GDP
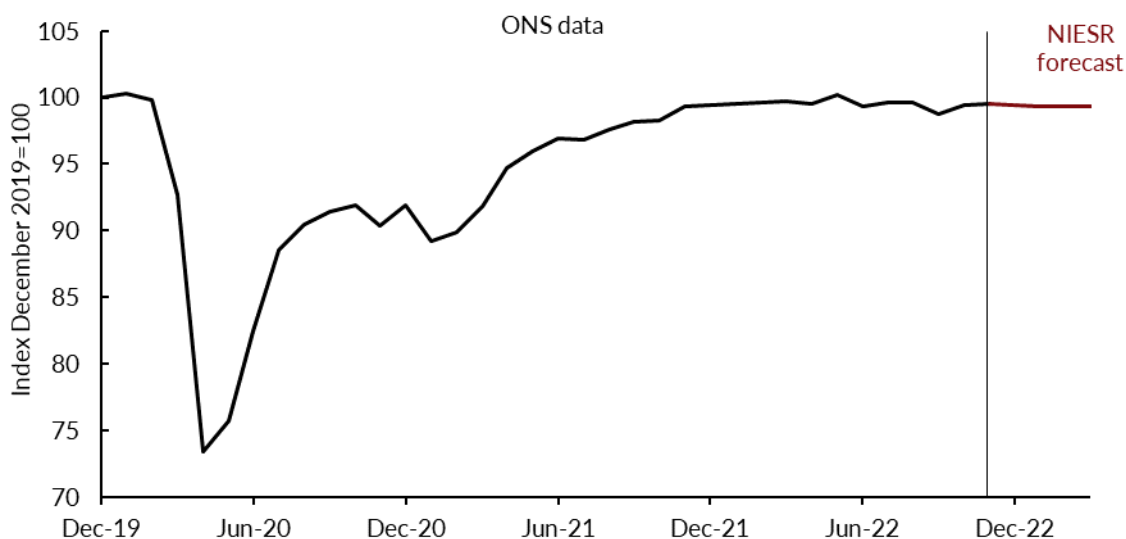
Economic setting

In our previous GDP tracker, published 12 December, we noted that positive monthly GDP growth in October largely reflected the weakness in September resulting from the additional Bank Holiday for the State Funeral of HM Queen Elizabeth II. In fact, GDP contracted by 0.3 per cent in the three months to October, driven by a significant fall in production. So, despite the positive monthly figure, we outlined that anaemic growth in the production and services sectors, fragile consumer and business confidence, a widespread fall in real incomes, low investment growth, and Brexit-related trade difficulties all pointed to an elevated risk of a contraction in GDP in the last quarter of 2022. That said, we expected growth in the construction sector alongside the seasonal increase in consumption to result in GDP remaining flat.

Since our last tracker, the ONS has published its quarterly national accounts (QNA) for July to September 2022. GDP was revised down from -0.2 per cent to -0.3 per cent (meaning that GDP in this quarter was 0.8 per cent below its pre-pandemic level); production fell by 2.5 per cent, revised from a first estimated fall of 1.5 per cent; the household saving ratio increased to 9 per cent from 6.7 per cent in Q2; and real households' disposable income fell for the fourth consecutive quarter, by 0.5 per cent. Overall, these figures indicate that the third quarter of 2022 was marked by both sluggish supply and demand in the UK.

Today's data suggests that the services sector drove monthly growth in November; the increase in consumer-facing services output is a particularly welcome surprise that indicates that households may have not tightened their belts by as much as expected in Q4 despite the fall in real incomes and the gloomy economic outlook. At the same time, the continuing downwards trend in production resulted in a contraction in the three months to November relative to the three months to August. Though we expect that GDP fell in December relative to November, we currently expect GDP to have grown in the fourth quarter of 2022 by 0.1 per cent. It is likely that further declines in key sectors, especially manufacturing, will weigh on GDP growth in the first quarter of 2023 after the seasonal consumption boom dissipates.

To further contextualise our estimate for the fourth quarter of 2022 and our forecast for the first quarter of 2023, figure 2 compares spending and hiring indicators to pre-pandemic levels, while figure 3 records recent trends in PMIs. High frequency indicators saw credit and debit card spending peak on 23 December, as is expected in the run up to Christmas, but since fall sharply alongside falls in housing and job vacancy indicators. Figure 3 illustrates a slowing in the rate of contraction in the service sector in December, though worryingly points to steep falls in manufacturing and construction growth in the same month. Taken together, figures 2 and 3 might indicate that the short-term boost to consumption spending might be the major offsetting force to the sluggish supply-side growth in the fourth quarter of last year.

Figure 2 – Spending and hiring indicators (weekly indices)
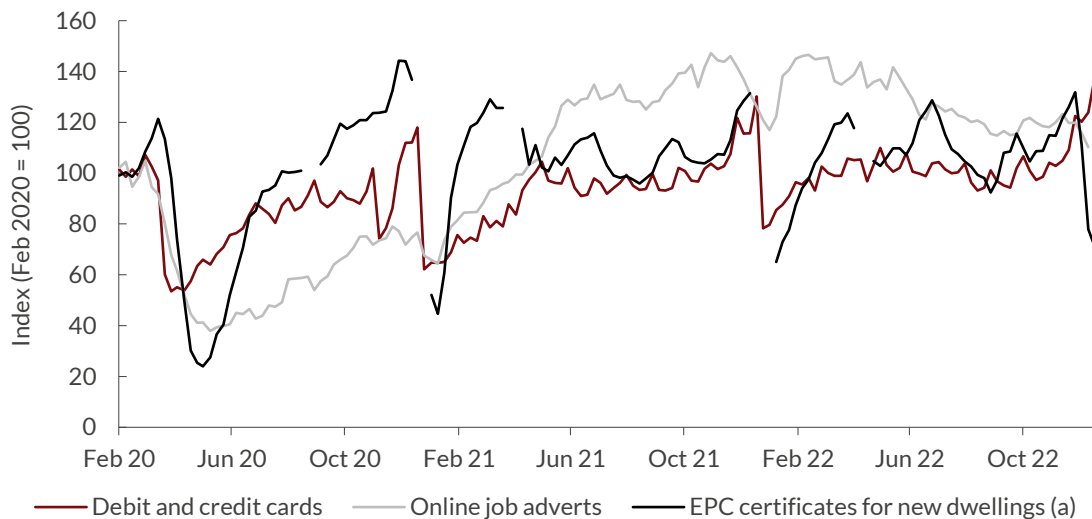
Notes: (a) England and Wales. Debit and credit cards (CHAPSbased): Index February 2020 = 100, a backward looking seven-day rolling average, non-seasonally adjusted, nominal prices. Job adverts: Index February 2020 = 100, weekly average. EPC certificates: Index February 2020 = 100, four–week rolling average, adjusted for timing of holidays.

Source: ONS, BoE, Adzuna, MHCLG, NIESR.

Figure 3 – Recent trends in PMIs
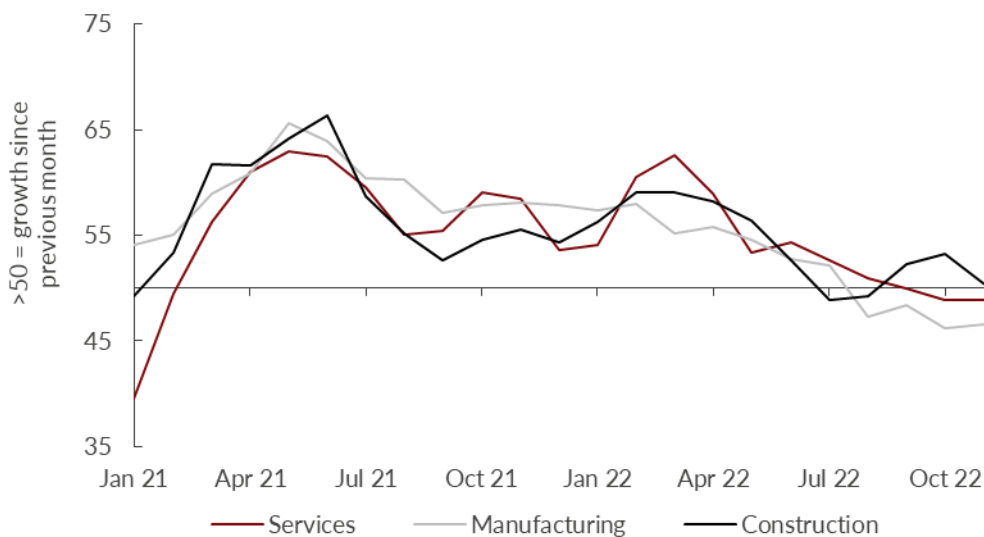
Sources: Refinitiv Datastream, S&P

News in latest ONS data

The monthly GDP data for November were higher than our December estimate, growing by 0.1 per cent rather than falling by 0.2 per cent. GDP contracted by 0.3 per cent on a rolling three-month basis, consistent with our previous forecast.

Figure 4 – UK GDP growth (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 was a large negative surprise in the electricity sector, as November 2022 was the third warmest on record for the UK; there was also a large positive surprise in the extraction sector, though this sector tends to be volatile.

Figure 5 – Surprises in monthly data

	11/21	12/21	01/22	02/22	03/22	04/22	05/22	06/22	07/22	08/22	09/22	10/22	11/22
Business services and finance	0.4	0.1	-0.1	0.2	-0.1	0.0	0.4	-0.4	0.0	-0.1	-0.4	0.2	0.0
Government	0.9	0.1	-0.4	-0.5	0.1	-0.1	0.1	0.0	0.3	-0.5	0.0	0.0	0.0
Distribution , Hotels and Restaurants	-0.1	0.1	0.1	0.0	0.0	-0.1	-0.1	0.2	0.0	0.1	-0.4	0.3	0.3
Transport, Storage and Communication	0.2	0.4	0.4	0.2	-0.2	0.1	0.2	-0.4	0.0	0.0	-0.6	0.1	0.0
Manufacturing	-0.2	0.0	-0.7	-0.4	0.0	-0.4	0.1	-0.4	-0.7	-0.6	0.0	0.3	0.1
Electricity	0.1	-0.1	0.6	0.3	-0.5	0.4	1.1	1.0	-0.1	-0.5	0.0	-1.1	-0.6
Extraction	-0.5	-0.8	0.6	0.1	0.1	-0.2	0.4	-0.4	0.4	-1.2	0.0	-0.3	0.7
Water Supply, Sewerage, Waste Management	0.1	0.6	0.7	-0.3	0.3	1.3	-0.4	0.6	-1.8	-0.4	-0.2	-1.4	-0.2
Construction	0.3	0.2	0.4	-0.1	0.1	0.0	0.2	-0.2	0.0	0.1	0.0	0.1	0.0
Agriculture	-0.3	-0.1	-0.1	0.1	0.1	0.0	0.0	-0.1	-0.1	-0.1	-0.1	-0.1	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.

For more information on our forecast estimates relative to ONS data, please see the 'Health Warning' section below.

Sectoral detail

We estimate GDP to have grown by 0.1 per cent in the fourth quarter of 2022. Our first forecast for GDP growth in the first quarter in 2023 is for a contraction of 0.1 per cent.

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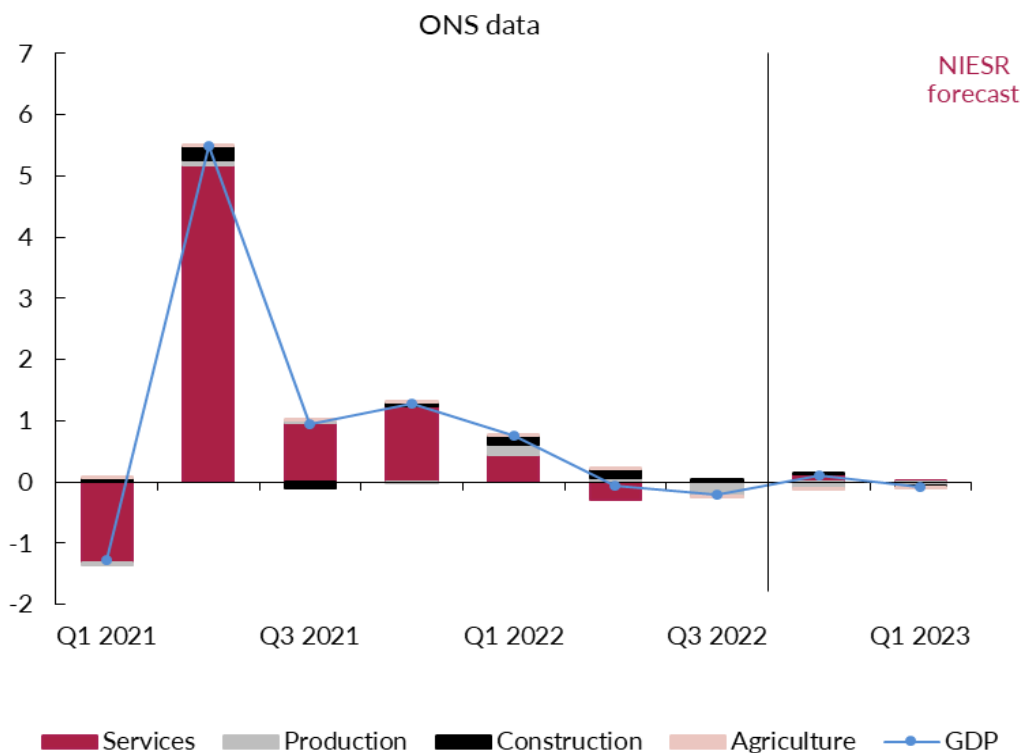

Services (80 per cent of GDP)

The survey balances point to the fourth consecutive month of contracting business activity in the services sector, as shown by the survey indicators in figures 3 and 7. The S&P Global/CIPS UK Services PMI registered a headline business activity balance of 49.9 in December, a welcome rise from 48.8 in November, which had represented the weakest service sector performance since January 2021, when the United Kingdom remained in a national lockdown. Despite the seasonal increase in spending, the cost-of-living crisis and depressed business and consumer confidence contributed to overall contracting business activity in the sector.

Internationally, the JPMorgan Global Services Business Activity index remained unchanged in December from the 29-month low of 48.1 recorded in November. The JPMorgan Global

Composite Output Index increased to 48.2 in December from to 48.0 in November. Overall, these figures indicate a continuation of the global economic downturn in services.

Based on recent developments we expect UK service sector activity to have grown by 0.2 per cent in the fourth quarter of 2022. Our early forecast for the first quarter of 2023 is for the sector to remain flat relative to the previous quarter.

Figure 7 - ONS service sector growth (3 months on previous 3 months, per cent) compared with swathe of business survey balances (standardised)
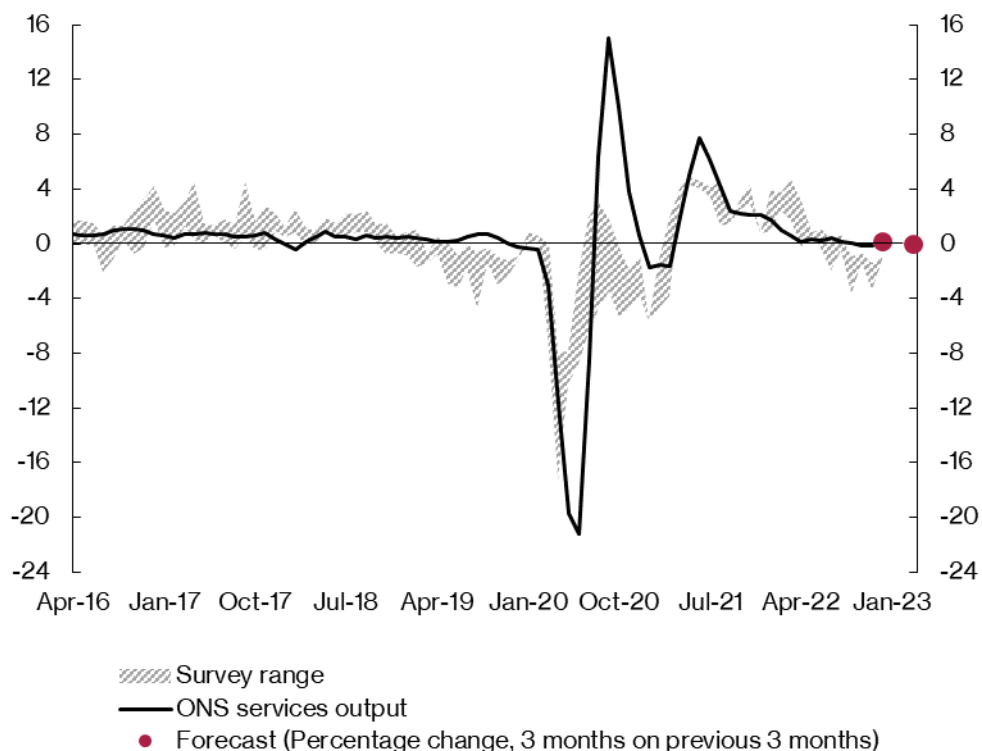
Note: The shaded swathe shows the highest and lowest values each month of a range of business survey balances that have been standardised so that they have the same mean and standard deviation as the quarterly growth of the ONS series. Source: ONS, CBI, Markit, Bank of England Agents, EC, NIESR calculations.

Production (14 per cent of GDP)

We estimate that production sector output contracted by 0.7 per cent in the fourth quarter of 2022 and will contract by 0.4 in the first quarter of 2023, 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 are manufacturing, accounting for 10 per cent of GDP, and mining and quarrying, accounting for 1 per cent of GDP.

Manufacturing

The S&P Global/CIPS UK manufacturing PMI for December fell to a 31-month low of 45.3 in December from 46.5 in November. This marks the fifth consecutive month this sector has contracted (as noted by recording figures below the neutral 50), driven by a continuing combination of weakened domestic and export demand, eroding consumer confidence and Brexit-related trade difficulties. The survey also highlights that business activity resulted in the third consecutive month of job cuts in this sector, with the fall in manufacturing employment the steepest in over two years.

The S&P Global/CIPS UK Composite PMI – which combines comparable services and manufacturing indices – saw a welcome rise to 49.0 in December from 48.2 in November. That said, this measure has remained below the neutral 50 for a fifth consecutive month, indicating reduced overall private sector output.

The JPMorgan Global Manufacturing Output PMI fell to a 30-month low of 48.6 in December from 48.8 in November. This global manufacturing downturn was driven by reduced output in the intermediate goods sector for the third consecutive month.

Our estimate for the fourth quarter of 2022 is for manufacturing output to have contracted by 0.3 per cent. Our early forecast for the first quarter of 2023 sees a contraction of 0.8 per cent.

Mining and quarrying

Mining and quarrying (extraction) is a small but erratic component of industrial production that can have an influence on overall GDP growth. We estimate a contraction of 0.8 per cent in the fourth quarter of 2022 and a contraction of 0.4 per cent in the first quarter of 2023.

Construction (6 per cent of GDP)

The S&P Global/CIPS UK Construction PMI survey registered a decrease from to 50.4 in November to 48.8 in December, driven by contractions in residential and civil engineering sectors and representing an end to the three-month growth streak in UK construction. Worryingly, December survey data indicates that businesses in this sector recorded the largest fall in new orders in over two-and-a-half years, causing respondents to record negative business activity expectations; this is only the sixth time a negative outlook in the construction sector has been recorded since the survey began in 1997.

We expect construction output to have grown by 0.2 per cent in the fourth quarter of 2022. Our early forecast for the first quarter of 2023 sees a contraction of 0.2 per cent.

Figure 8 - ONS manufacturing sector growth (3 months on previous 3 months, per cent) compared with swathe of business survey balances (standardised)
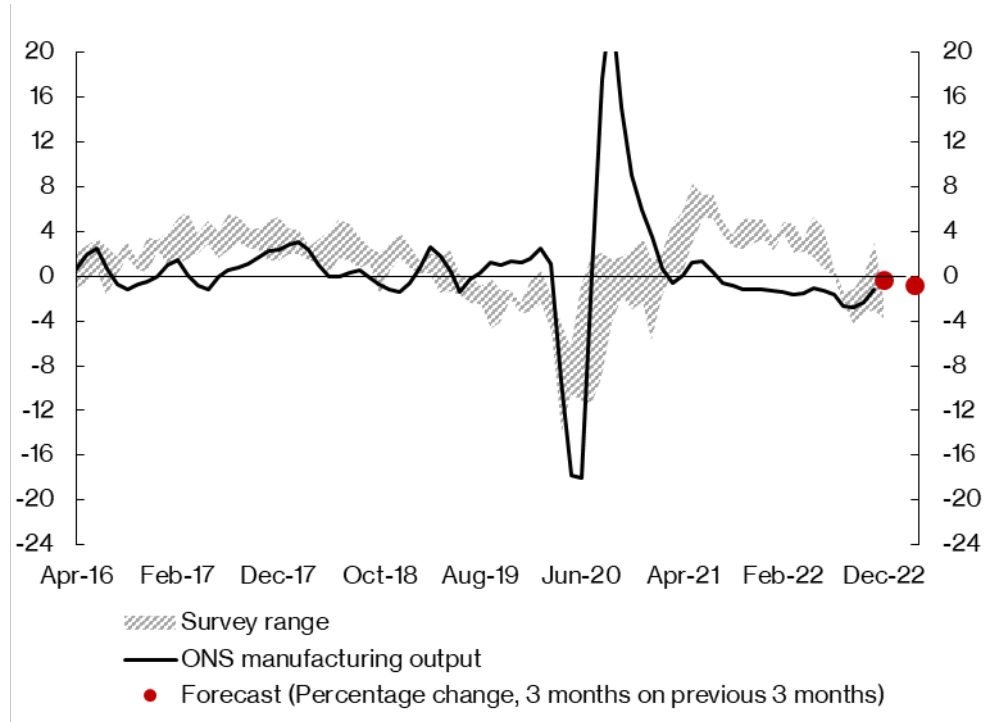
Note: The shaded swathe shows the highest and lowest values each month of a range of business survey balances that have been standardised so that they have the same mean and standard deviation as the quarterly growth of the ONS series.
Source: ONS, CBI, Markit, Bank of England Agents, EC, NIESR calculations.

Table 1 - 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		
Sep-21	98.6	96.9	102.8	93.5	90.4	94.7	108.3	109.6	108.3	93.7	111.3	97.8	104.7
Oct-21	98.7	97.3	102.6	94.3	89.6	97.2	107.2	108.8	102.9	90.0	115.0	97.5	104.8
Nov-21	99.7	98.4	103.8	96.2	88.7	98.6	107.5	108.5	108.9	87.7	115.0	99.3	104.6
Dec-21	99.8	98.4	104.1	97.5	85.8	99.1	107.5	108.5	109.7	85.6	115.7	100.2	104.8
Jan-22	99.9	98.6	103.8	95.8	88.0	101.4	107.1	107.2	112.2	89.3	116.0	101.5	104.8
Feb-22	100.0	98.6	104.4	94.9	88.3	102.7	106.7	106.6	112.1	89.4	115.7	101.8	105.4
Mar-22	100.1	98.7	104.4	95.3	88.3	102.2	106.7	106.8	110.2	90.0	115.9	102.9	105.7
Apr-22	99.9	98.6	104.5	94.0	88.4	102.5	105.9	105.9	110.2	87.4	117.2	103.1	105.9
May-22	100.6	99.4	105.6	95.4	88.4	103.0	105.8	106.1	110.3	87.9	114.3	104.1	106.1
Jun-22	99.7	98.6	104.9	94.4	88.4	101.4	104.6	104.5	109.4	86.0	115.8	102.3	106.1
Jul-22	100.0	99.1	105.1	95.1	88.5	102.7	103.8	103.5	108.3	90.5	112.8	102.8	106.3
Aug-22	100.0	99.3	105.3	95.1	88.0	103.2	102.3	102.3	107.3	83.0	113.4	103.2	106.1
Sep-22	99.2	98.4	104.8	94.9	86.6	100.9	102.2	101.9	107.4	84.4	114.0	102.9	105.5
Oct-22	99.8	99.0	105.0	96.0	88.0	101.7	102.1	102.6	104.2	84.1	112.1	103.2	105.5
Nov-22	99.9	99.2	105.2	95.9	88.6	102.0	101.9	102.1	103.7	86.5	112.3	103.2	105.4
Dec-22	99.8	99.1	104.8	96.0	87.8	101.9	102.1	102.0	106.4	85.2	112.8	102.9	105.3
Jan-23	99.8	99.1	104.9	96.0	87.6	101.9	101.7	101.7	105.2	84.5	112.9	102.9	105.3
Feb-23	99.8	99.1	105.0	95.9	87.5	101.9	101.6	101.4	105.2	85.1	113.0	102.9	105.4
Mar-23	99.8	99.2	105.1	96.0	87.3	102.0	101.5	101.2	105.2	85.1	113.2	102.9	105.5

Percentage change, 3 months on previous 3 months

2019=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
Sep-21	1.8	2.4	0.9	3.8	4.8	2.0	-0.4	-0.9	-9.5	24.4	0.9	-1.6	3.7
Oct-21	1.5	2.2	1.2	3.6	2.6	2.3	-0.9	-1.1	-11.4	23.4	0.1	-0.9	2.5
Nov-21	1.5	2.1	1.7	4.0	0.5	2.5	-1.2	-1.2	-7.3	9.5	0.0	0.4	1.0
Dec-21	1.5	2.1	1.7	4.4	-1.9	3.6	-1.3	-1.2	-3.5	-3.4	2.0	1.4	0.2
Jan-22	1.4	1.8	1.8	3.5	-2.9	4.1	-0.9	-1.3	2.9	-6.5	2.1	2.9	-0.1
Feb-22	0.9	1.0	1.0	1.5	-2.5	4.4	-0.5	-1.4	4.3	-2.6	1.8	3.0	0.2
Mar-22	0.6	0.6	0.7	-0.7	0.2	3.9	-0.5	-1.6	4.0	2.1	0.5	3.1	0.6
Apr-22	0.2	0.2	0.5	-1.8	1.0	2.8	-0.9	-1.5	0.5	1.8	0.6	2.3	1.0
May-22	0.3	0.4	0.7	-1.2	1.1	1.5	-0.9	-1.1	-1.0	0.4	0.0	2.2	0.9
Jun-22	0.1	0.2	0.8	-0.8	0.2	0.2	-1.3	-1.3	-1.4	-2.8	-0.1	1.1	0.7
Jul-22	0.1	0.4	0.7	0.2	0.1	-0.1	-1.6	-1.6	-1.4	-0.9	-1.7	0.5	0.5
Aug-22	-0.3	0.1	0.3	0.0	-0.1	-0.1	-2.4	-2.7	-1.7	-2.2	-1.6	-0.6	0.3
Sep-22	-0.3	0.1	0.1	0.5	-0.8	0.0	-2.5	-2.8	-2.1	-1.3	-2.0	-0.2	-0.1
Oct-22	-0.4	-0.1	-0.2	0.4	-1.0	-0.4	-2.4	-2.3	-2.8	-4.9	-1.0	0.0	-0.4
Nov-22	-0.3	-0.1	-0.1	0.8	-0.6	-0.9	-1.4	-1.2	-3.0	-1.7	-1.1	0.3	-0.7
Dec-22	0.1	0.2	-0.1	1.0	0.5	-0.4	-0.7	-0.3	-2.7	-0.8	-0.9	0.2	-0.5
Jan-23	0.2	0.2	-0.1	0.6	0.5	0.0	-0.3	-0.3	-1.1	1.9	-0.4	-0.1	-0.3
Feb-23	0.1	0.3	-0.1	0.4	-0.1	0.4	-0.2	-0.5	0.5	0.0	0.1	-0.2	-0.1
Mar-23	-0.1	0.0	0.0	0.0	-0.7	0.1	-0.4	-0.8	0.4	-0.4	0.6	-0.2	0.0

Percentage change, month on same month in previous year

2019=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
Sep-21	7.4	8.8	6.9	14.3	7.6	7.0	1.7	2.4	-5.4	1.2	5.7	5.3	8.2
Oct-21	6.9	8.7	6.1	14.4	9.0	7.6	-0.4	0.3	-7.2	-5.4	7.3	3.0	9.2
Nov-21	9.9	13.0	7.3	19.5	24.8	9.9	-1.6	-2.5	-1.4	-4.7	6.8	4.3	9.1
Dec-21	8.1	10.4	4.4	19.0	14.7	10.9	-2.4	-2.3	-3.4	-11.6	4.5	6.9	7.6
Jan-22	11.5	14.5	5.2	26.1	29.6	12.8	-1.3	-1.2	-4.4	-5.0	5.2	10.1	7.6
Feb-22	10.9	14.0	5.0	25.4	25.8	15.4	-1.9	-2.6	-5.8	2.5	3.6	6.4	7.1
Mar-22	8.6	11.3	3.3	19.4	22.1	13.4	-2.7	-3.5	-5.4	1.5	3.3	4.3	6.1
Apr-22	5.0	6.7	4.0	9.0	8.2	10.0	-2.7	-4.4	-8.1	18.8	5.5	3.1	6.8
May-22	4.5	6.1	5.0	7.4	2.4	11.4	-4.2	-4.8	-13.7	14.5	2.9	5.0	5.5
Jun-22	2.5	3.5	3.3	4.1	-0.3	8.4	-3.7	-5.6	-9.1	25.0	1.8	4.0	3.7
Jul-22	2.9	4.2	4.0	5.2	0.1	8.4	-4.6	-6.1	-5.6	10.5	-1.4	5.2	2.5
Aug-22	2.0	3.3	3.8	3.5	-2.5	8.3	-6.5	-7.1	-2.7	-14.5	0.2	6.1	1.1
Sep-22	0.6	1.5	1.9	1.5	-4.2	6.5	-5.6	-7.0	-0.8	-9.9	2.4	5.2	0.8
Oct-22	1.1	1.7	2.3	1.8	-1.8	4.6	-4.8	-5.7	1.3	-6.6	-2.5	5.9	0.7
Nov-22	0.2	0.8	1.3	-0.3	-0.1	3.4	-5.2	-5.9	-4.8	-1.4	-2.3	4.0	0.8
Dec-22	0.0	0.7	0.8	-1.6	2.3	2.8	-5.0	-6.0	-3.0	-0.4	-2.5	2.7	0.7
Jan-23	-0.1	0.5	1.0	0.2	-0.4	0.5	-5.0	-5.1	-6.2	-5.4	-2.7	1.3	0.5
Feb-23	-0.2	0.5	0.5	1.1	-0.9	-0.8	-4.8	-4.8	-6.1	-4.8	-2.3	1.1	0.0
Mar-23	-0.3	0.5	0.8	0.7	-1.1	-0.2	-4.9	-5.2	-4.8	-5.4	-2.3	0.0	-0.2

Percentage change, month on previous month

2019=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
Sep-21	0.6	0.8	1.4	1.7	0.1	-0.6	-1.0	-0.5	-1.8	-3.5	-1.7	0.5	-0.2
Oct-21	0.1	0.4	-0.2	0.9	-0.9	2.6	-1.0	-0.7	-5.0	-3.9	3.3	-0.3	0.1
Nov-21	1.0	1.1	1.2	2.0	-1.0	1.4	0.3	-0.3	5.8	-2.6	0.0	1.8	-0.2
Dec-21	0.1	0.0	0.3	1.4	-3.3	0.5	0.0	0.0	0.7	-2.4	0.6	0.9	0.0
Jan-22	0.1	0.2	-0.3	-1.7	2.6	2.3	-0.4	-1.2	2.3	4.3	0.3	1.3	0.2
Feb-22	0.1	0.0	0.8	-0.9	0.3	1.3	-0.4	-0.6	-0.1	0.1	-0.3	0.3	0.6
Mar-22	0.1	0.1	0.0	0.4	0.0	-0.5	0.0	0.2	-1.7	0.7	0.2	1.1	0.3
Apr-22	-0.2	-0.1	0.1	-1.4	0.1	0.3	-0.7	-0.8	0.0	-2.9	1.1	0.2	0.2
May-22	0.7	0.8	1.1	1.5	0.0	0.5	-0.1	0.2	0.1	0.6	-2.5	1.0	0.2
Jun-22	-0.9	-0.8	-0.7	-1.0	0.0	-1.6	-1.1	-1.5	-0.8	-2.2	1.3	-1.7	0.0
Jul-22	0.3	0.5	0.2	0.7	0.1	1.3	-0.8	-1.0	-1.0	5.2	-2.6	0.5	0.2
Aug-22	0.0	0.2	0.2	0.0	-0.6	0.5	-1.4	-1.2	-0.9	-8.3	0.5	0.4	-0.2
Sep-22	-0.8	-0.9	-0.5	-0.2	-1.6	-2.2	-0.1	-0.4	0.1	1.7	0.5	-0.3	-0.6
Oct-22	0.6	0.6	0.2	1.2	1.6	0.8	-0.1	0.7	-3.0	-0.4	-1.7	0.4	0.0
Nov-22	0.1	0.2	0.2	-0.1	0.7	0.3	-0.2	-0.5	-0.5	2.9	0.2	0.0	-0.1
Dec-22	-0.1	-0.1	-0.4	0.1	-0.9	-0.1	0.2	-0.1	2.6	-1.5	0.4	-0.3	-0.1
Jan-23	0.0	0.0	0.1	0.0	-0.2	0.0	-0.4	-0.3	-1.1	-0.9	0.1	0.0	0.0
Feb-23	0.0	0.0	0.1	0.0	-0.2	0.0	-0.1	-0.3	0.0	0.8	0.1	0.0	0.1
Mar-23	0.0	0.0	0.1	0.0	-0.2	0.1	-0.1	-0.2	-0.1	0.0	0.0	0.0	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 was published in January and then updated four times (in February, March, April and May) before the ONS published 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. Figure 9 shows how our short-term forecasts for recent quarters have changed as new information has become available.

Figure 9 - Evolution of the NIESR quarterly GDP forecast (3 months on previous 3 months, per cent)
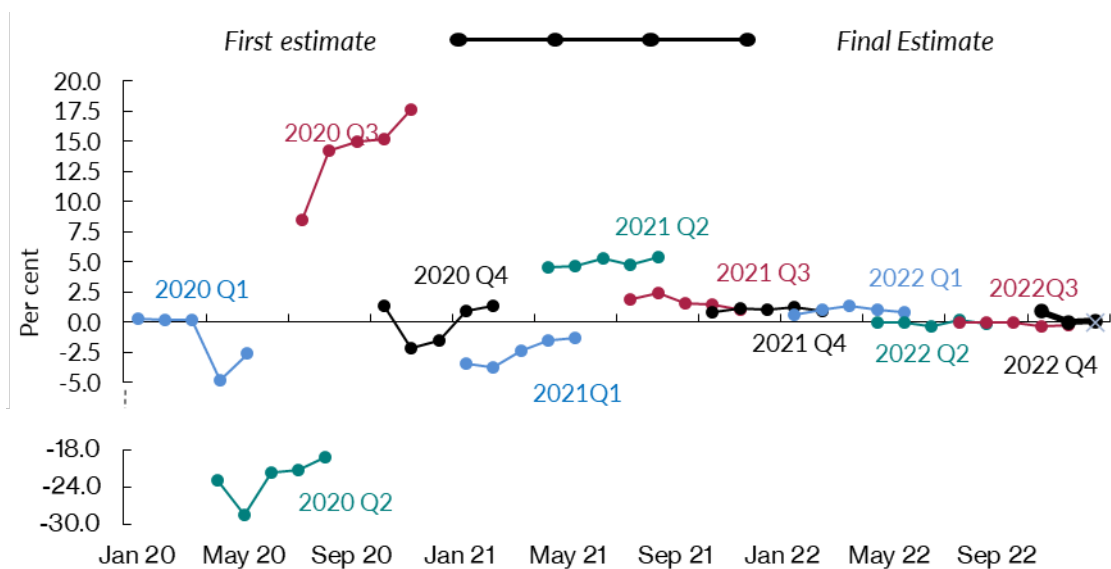
NIESR's short-term predictions of monthly GDP growth are based on bottom-up analysis of recent trends in the monthly sub-components of GDP. These predictions are constructed by aggregating statistical model forecasts of ten sub-components of GDP. The statistical models that have been developed make use 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. Table 2 shows the growth in each sector for the three months to November, compared with the previous three months, against the forecast for each in our December GDP Tracker.

Table 2 - 3-month-on-3-month growth to November (per cent)

	GDP	Index of Services	Index of Production	Manufacturing	Mining and Quarrying	Index of Construction
Forecast	-0.3	-0.3	-1.0	-0.8	-4.0	1.4
Outturn	-0.3	-0.1	-1.4	-1.2	-1.7	0.3

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 (see, e.g. Figure 5).

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 the second quarter of 2020 when our GDP tracker in May pointed to growth of -22.8 per cent, 2.4 percentage points lower than the ONS first estimate of GDP growth.

Table 3 - Forecast Error Analysis: Quarterly GDP growth (per cent)

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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