

NIESR

Monthly GDP Tracker

Large Fall in GDP in July May Herald a Quarterly Decline

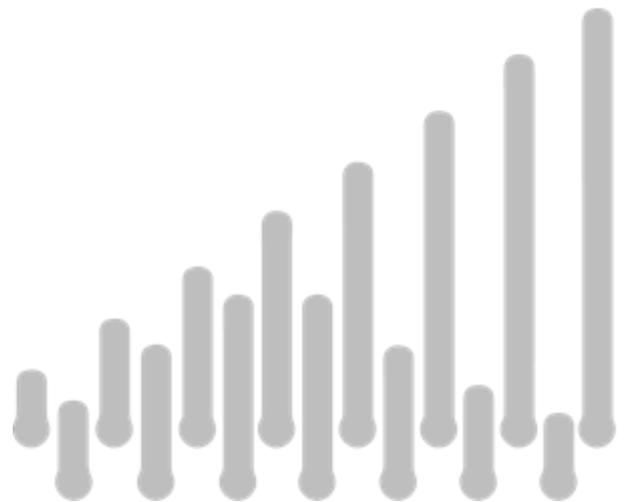
Paula Bejarano Carbo

13th September 2023

“Today’s data indicate that GDP fell by 0.5 per cent in July relative to June, generated partially by a strong June performance but also by decreasing services output in July, particularly in the health sub-sector which was affected by industrial action. More broadly, GDP grew by 0.2 per cent in the three months to July, driven by growth in manufacturing output relative to the previous three-month period. It seems that, despite the forthcoming data revisions in the 2023 Blue Book, the low but stable growth profile for the United Kingdom remains the same.”

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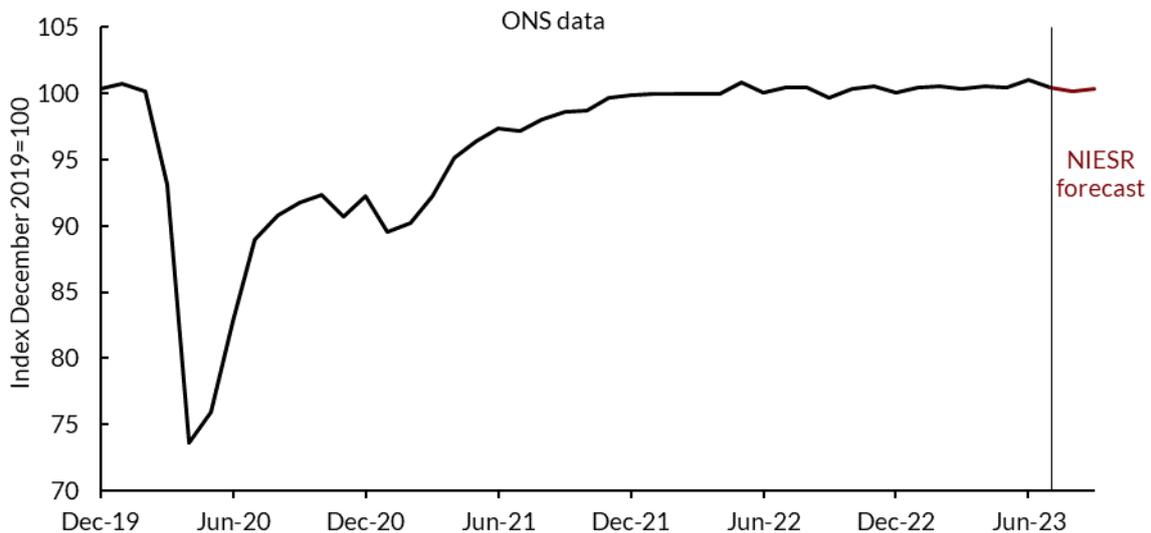
Associate Economist, NIESR



Main points

- Monthly GDP fell by 0.5 per cent in July following growth of 0.5 per cent in June. This monthly figure was driven partially by a strong June performance but also by decreasing output in all three major sectors. The biggest fall in services output in July came from the health sub-sector, which was affected by industrial action; the largest fall in production came from falling manufacturing output, which has been on a downwards trend for over a year; and the biggest fall in construction output came from repair and maintenance work.
- GDP grew by 0.2 per cent in the three months to July relative to the previous quarter, slightly lower than we had forecast last month. We now forecast GDP to contract by 0.1 per cent in the third quarter of 2023, remaining broadly consistent with the longer-term trend of low, but stable, economic growth in the United Kingdom. That said, as persistently high inflation continues to squeeze household budgets, alongside the effects of the high cost of borrowing, demand will be curbed in the near term. As a result, service-sector output, in particular, may falter and drag down on GDP in the coming months. The risks to GDP at the moment thus continue to be skewed downside.

Figure 1 - UK GDP



Economic setting

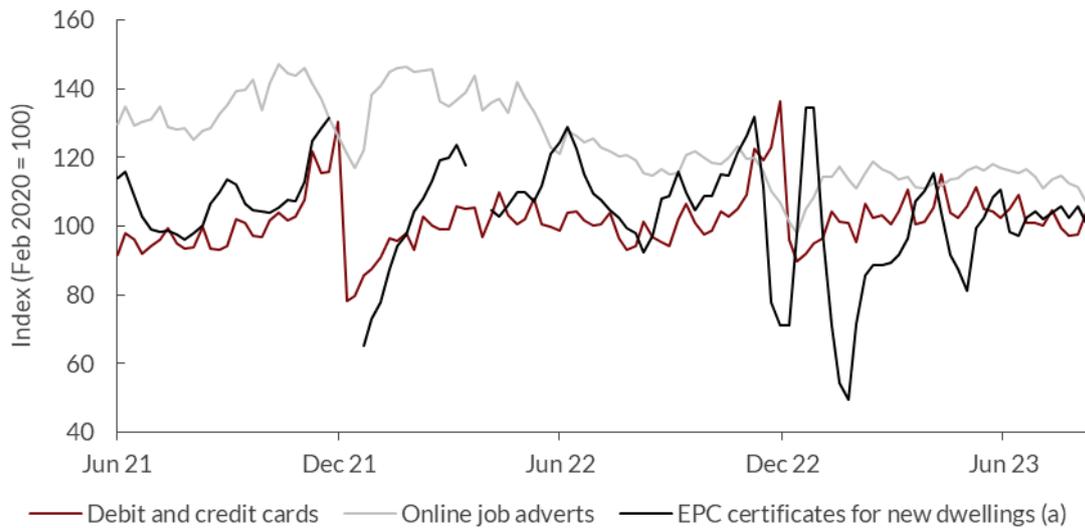
In our [previous GDP tracker](#), published on 11 August, we observed that monthly GDP grew by 0.5 per cent in June, driven both by a weaker-than-normal May performance due to the extra bank holiday, as well as stronger-than-expected growth in production and construction. As a result of these positive surprises to the June data, the quarterly data also came out stronger than expected: GDP grew by 0.2 per cent in the second quarter of this year, compared to our July forecast of no growth.

The forthcoming 2023 Blue Book will contain revisions to GDP estimates in 2020 and 2021 that will affect the current level of GDP. Annual current price GDP growth in 2021 was revised up by 0.9 percentage points to 8.5 per cent while annual volume GDP growth in 2021 was revised up by 1.1 percentage points to 8.7 per cent. Annual volume GDP growth in 2020 was revised up by 0.6 percentage points to a contraction of 10.4 per cent. Overall, these revisions are important in that they suggest that the UK economy is larger than previously thought, recovered quicker from the effects of the pandemic than previously thought, and is no longer a post-pandemic economic outlier relative to other G7 countries. That said, it is important to bear in mind that these Blue Book estimates will likely be further revised in years to come, and by historical standards, the magnitudes of the revisions are not outliers. Most importantly, despite the forthcoming data revisions in the 2023 Blue Book, the low but stable growth profile for the United Kingdom remains the same.

Today's figures indicate that GDP fell by 0.5 per cent in July relative to June, generated partially by a strong June performance but also by decreasing services output in July, particularly in the health sub-sector which was affected by industrial action. More broadly, GDP grew by 0.2 per cent in the three months to July, driven by growth in manufacturing output relative to the previous three-month period. Given today's data, our tracker model's forecast for the third quarter of 2023 sees GDP contracting by 0.1 per cent, remaining broadly consistent with the longer-term trend of low, but stable, economic growth in the United Kingdom. That said, as persistently high inflation continues to squeeze household budgets, alongside the effects of the high cost of borrowing, demand will be curbed in the near term. As a result, service-sector output, in particular, may falter and drag down further on GDP in the coming months. The risks to GDP at the moment thus continue to be skewed downside.

To further contextualise our forecast for the third quarter of 2023, figure 2 compares spending and hiring indicators to pre-pandemic levels, while figure 3 records recent trends in PMIs. High frequency spending and hiring indicators have remained broadly stable throughout 2023, though seem to all be trending slightly downwards. It is notable that credit and debit card spending has remained close to pre-pandemic levels throughout 2023, despite the cost-of-living crisis and uncertain economic outlook. This supports our view that high consumer spending has been keeping the economy afloat for the majority of 2023. That said, figure 3 illustrates a decline in service-sector activity since April, while the manufacturing sector has remained below the neutral 50 for over a year. Taken together, these two figures suggest that the economic outlook is likely to be one of low or slightly negative growth in the third quarter of 2023.

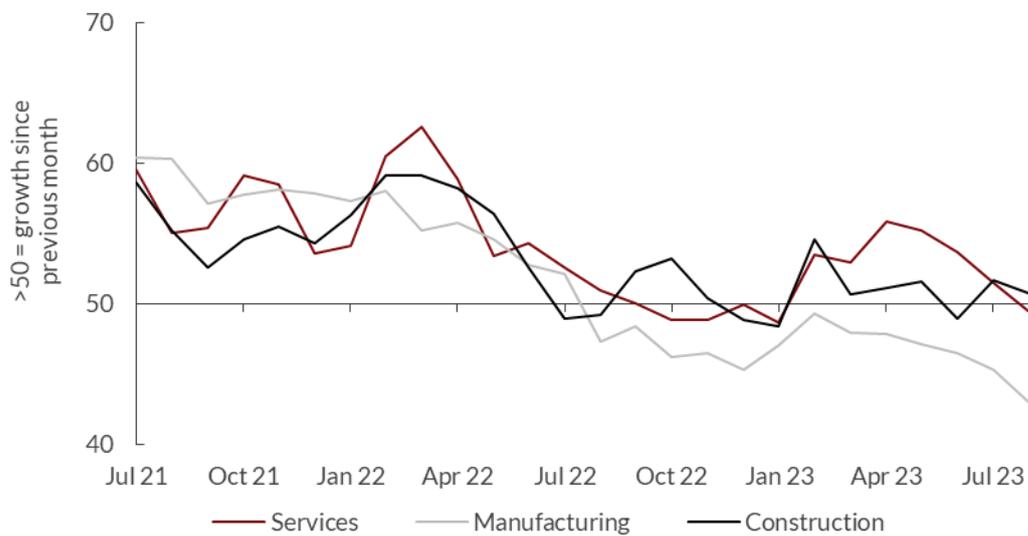
Figure 2 – Spending and hiring indicators (weekly indices)



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



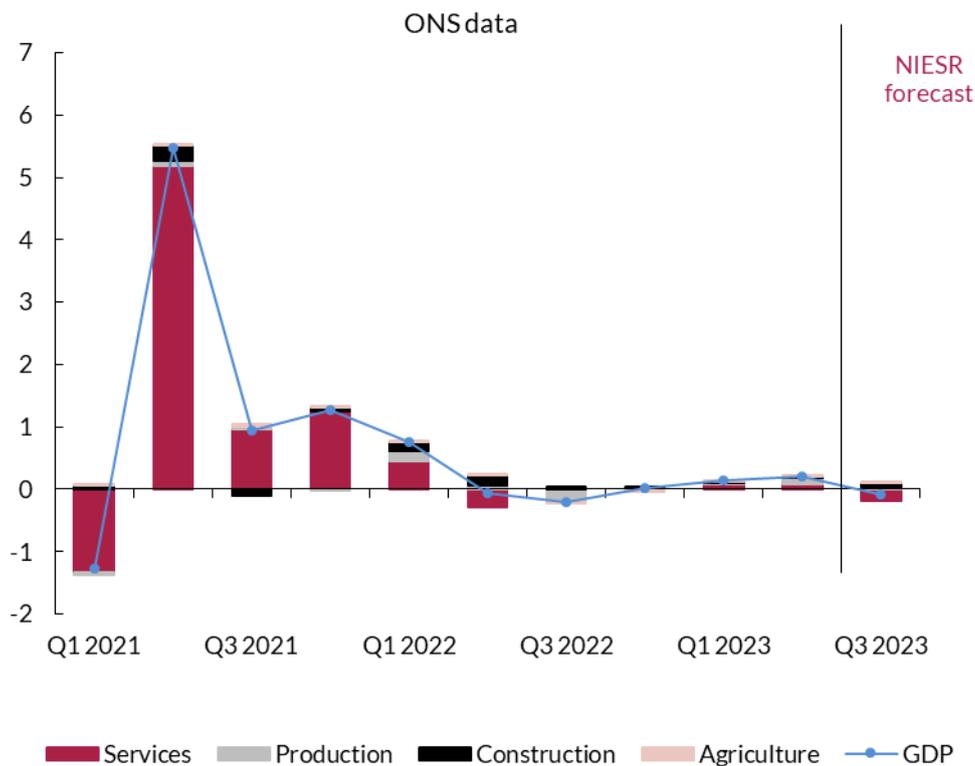
Sources: Refinitiv Datastream, S&P

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

Sectoral detail

We forecast GDP to contract by 0.1 per cent in the third quarter of this year. As seen in Figure 6 below, we expect to see a fall in services output offset by slight increases in construction and agriculture.

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

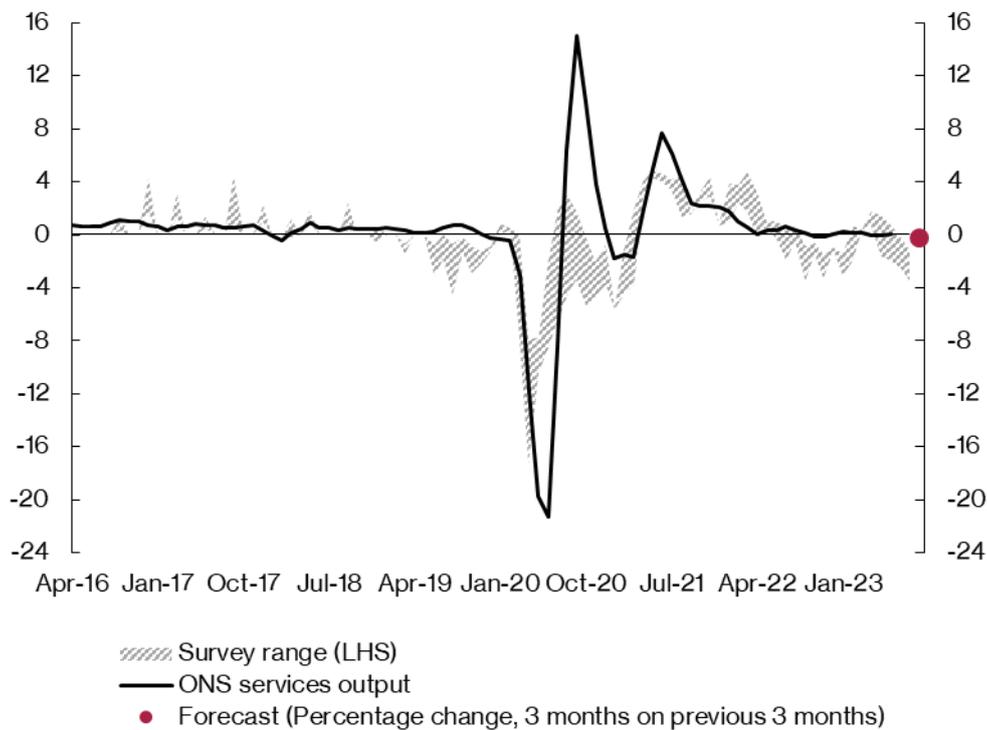


Services (80 per cent of GDP)

The survey balances point to decreasing 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 reported a balance of 49.5 in August, down from 51.5 in July. High interest rates and inflation were often cited by survey respondents as the causes behind this loss in momentum in service sector growth. At the same time, businesses faced high cost-inflation due to rising salary payments and rising fuel prices. Altogether, weakened demand and higher costs seem to have stopped the strong momentum in this sector seen in the second quarter of 2023.

Based on recent developments we forecast UK service-sector activity to contract by 0.2 per cent in the third quarter of 2023 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.

Construction (6 per cent of GDP)

The S&P Global/CIPS UK Construction PMI survey registered a decrease from its previous 5-month high of 51.7 in July to 50.8 in August. While commercial building expanded at a strong pace, decreasing activity in house building (generated by high interest rates) continues to weigh down on this sector.

Our forecast for the third quarter of 2023 sees this sector growing by 0.9 per cent relative to the second quarter of 2023.

Production (14 per cent of GDP)

We forecast production sector output to grow by 0.3 per cent in the third 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 (which includes oil and gas extraction); electricity, gas, steam and air conditioning; and water supply and sewerage. 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 posted 43.0 in August, down from 45.3 in July, representing the 13th consecutive month this sector has contracted. This sustained decline has been driven by a continuing combination of weakened domestic and export demand, eroding consumer confidence, Brexit-related trade difficulties, and a preference for reduced inventory holdings (as a cashflow-improving measure). That said, 56 per cent of respondents forecast growth over the coming 12 months.

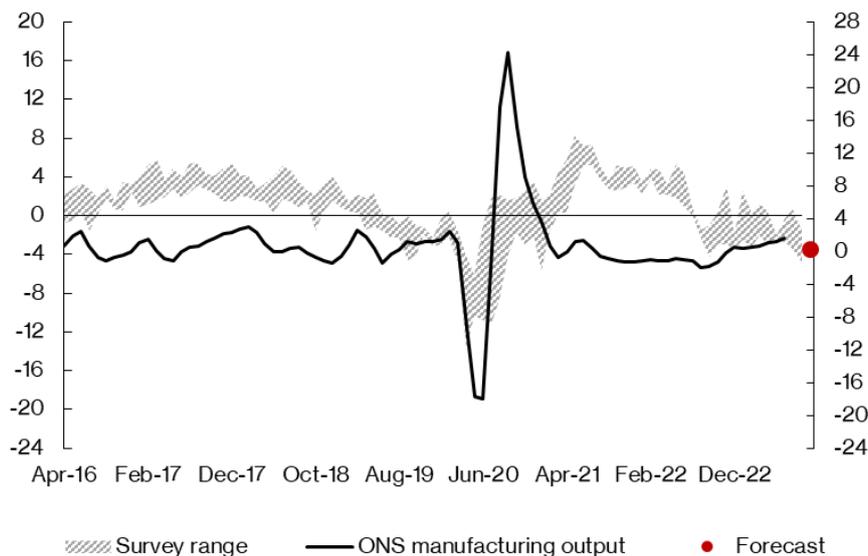
Our forecast for the third quarter of 2023 sees output growing by 0.7 per cent in this sector.

The S&P Global/CIPS UK Composite PMI – which combines comparable services and manufacturing indices – fell to 48.6 in August from 50.8 in July. It seems that the rebound in private sector output that took place in early 2023 may be starting to dwindle down.

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 forecast a contraction of 1.2 per cent in this sector in the third quarter of 2023.

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.

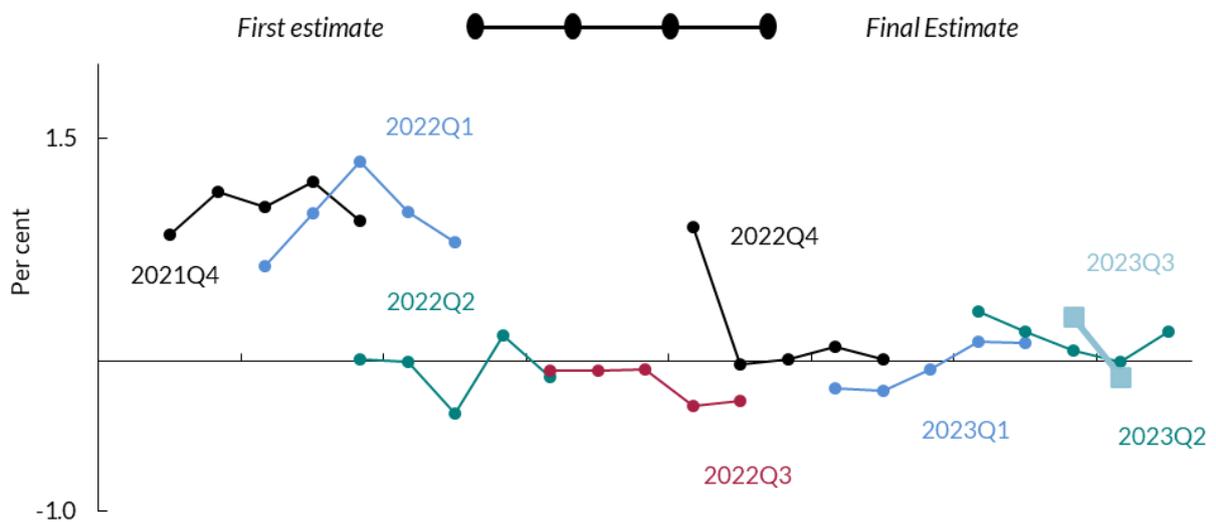
Table 1 - Summary Table of GDP growth (2019=100)

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		
Latest weights	1000	796	338	220	134	103	135	102	15	6	13	62	7
Jul-22	100.4	99.3	104.8	95.2	88.4	104.0	105.2	104.9	110.9	91.3	113.4	104.0	106.2
Aug-22	100.4	99.4	105.0	95.3	87.7	105.3	103.9	104.0	110.2	83.8	113.7	104.6	106.0
Sep-22	99.7	98.5	104.2	94.9	86.3	102.9	104.0	104.0	110.0	84.6	114.2	104.5	105.4
Oct-22	100.4	99.2	104.7	95.8	87.7	103.2	104.4	105.2	106.7	84.4	112.8	105.2	105.5
Nov-22	100.5	99.5	104.9	95.4	87.9	104.8	104.4	104.6	106.7	86.7	115.1	105.5	105.3
Dec-22	100.0	98.7	105.4	93.2	87.7	103.7	104.6	104.7	110.7	82.3	115.9	106.3	105.3
Jan-23	100.5	99.5	105.3	94.7	88.3	104.8	104.4	105.2	108.6	79.5	115.2	104.4	105.3
Feb-23	100.5	99.4	105.7	94.1	88.1	104.6	104.3	105.3	106.4	81.3	113.8	107.1	105.4
Mar-23	100.3	98.9	105.5	94.1	87.2	103.6	105.1	106.1	109.2	78.9	116.1	106.9	105.4
Apr-23	100.5	99.3	105.0	93.9	88.3	104.6	105.2	106.5	110.2	76.8	113.8	108.1	105.5
May-23	100.4	99.3	105.0	95.0	87.8	104.7	104.5	106.3	107.0	77.1	111.3	105.8	105.5
Jun-23	101.0	99.5	105.0	94.9	88.9	105.5	106.4	108.8	107.0	75.5	113.5	107.5	105.6
Jul-23	100.4	99.0	104.8	94.3	88.3	103.5	105.7	108.0	105.4	76.9	112.9	107.0	105.8
Aug-23	100.6	99.1	105.1	94.5	88.3	104.3	105.6	107.9	107.3	75.2	113.5	107.6	105.9
Sep-23	100.7	99.2	105.3	94.4	88.4	104.6	105.8	108.0	108.2	74.6	113.8	107.6	106.0
Percentage change, 3 months on previous 3 months													
Jul-22	0.5	0.6	0.8	0.6	0.3	0.8	-1.0	-1.1	0.0	-0.9	-1.6	1.5	0.4
Aug-22	0.0	0.4	0.3	0.4	0.1	1.2	-1.8	-2.0	-0.7	-2.1	-1.5	-0.1	0.2
Sep-22	-0.1	0.2	0.0	0.6	-0.9	1.1	-1.8	-1.9	-1.5	-1.1	-2.1	0.6	-0.1
Oct-22	-0.3	-0.1	-0.3	0.3	-1.2	0.3	-1.6	-1.3	-2.4	-5.0	-1.1	0.7	-0.4
Nov-22	-0.1	-0.1	-0.2	0.4	-0.9	-0.4	-0.6	-0.2	-2.8	-2.1	-0.4	1.2	-0.7
Dec-22	0.1	0.1	0.3	-0.4	0.3	-0.2	0.0	0.5	-2.1	-2.4	0.7	1.3	-0.5
Jan-23	0.2	0.1	0.5	-0.9	0.8	0.6	0.3	0.4	-0.3	-1.7	1.6	0.6	-0.3
Feb-23	0.2	0.1	0.8	-1.4	0.8	0.7	0.2	0.4	0.7	-4.9	0.8	0.8	-0.1
Mar-23	0.1	0.1	0.5	-0.5	0.1	0.4	0.1	0.6	0.0	-5.4	0.3	0.4	0.0
Apr-23	0.1	0.0	0.2	-0.4	-0.1	-0.2	0.4	1.0	0.0	-4.6	-0.7	1.2	0.1
May-23	0.1	0.0	-0.3	0.4	-0.3	-0.1	0.5	1.2	0.2	-4.2	-1.1	0.3	0.1
Jun-23	0.2	0.1	-0.5	0.3	0.5	0.6	0.7	1.6	0.0	-4.3	-1.8	0.3	0.2
Jul-23	0.2	0.1	-0.4	0.7	0.5	0.3	0.6	1.7	-2.0	-3.2	-1.7	0.1	0.2
Aug-23	0.2	0.0	-0.2	0.2	0.9	0.1	0.9	1.8	-2.1	-2.2	-0.4	1.0	0.3
Sep-23	-0.1	-0.2	0.0	-0.2	0.0	-0.7	0.3	0.7	-1.1	-1.2	0.4	0.9	0.3
Percentage change, month on same month in previous year													
Jul-22	3.3	4.4	3.6	5.3	0.1	9.8	-3.3	-4.9	-3.3	11.4	-0.9	6.4	2.4
Aug-22	2.5	3.5	3.6	3.7	-2.9	10.5	-5.0	-5.6	-0.1	-13.7	0.4	7.5	1.0
Sep-22	1.1	1.6	1.4	1.5	-4.5	8.6	-4.0	-5.1	1.5	-9.6	2.6	6.8	0.7
Oct-22	1.7	2.0	2.1	1.6	-2.1	6.2	-2.6	-3.3	3.8	-6.3	-1.9	7.9	0.7
Nov-22	0.9	1.1	1.1	-0.8	-1.0	6.4	-2.9	-3.6	-2.1	-1.2	0.1	6.2	0.7
Dec-22	0.2	0.3	1.2	-4.4	2.2	4.7	-2.7	-3.5	0.9	-3.9	0.2	6.1	0.7
Jan-23	0.5	0.9	1.8	-1.3	0.8	2.9	-2.9	-2.3	-3.1	-11.8	-0.7	3.2	0.6
Feb-23	0.6	0.8	1.6	-0.6	-0.3	1.7	-2.7	-1.8	-5.2	-9.7	-1.7	5.8	0.0
Mar-23	0.3	0.4	1.4	-0.8	-0.3	1.2	-1.9	-1.1	-1.2	-12.8	-0.2	3.5	-0.4
Apr-23	0.6	0.7	0.8	0.1	-0.1	2.0	-1.4	-0.1	-1.5	-12.6	-3.3	2.9	-0.3
May-23	-0.3	-0.1	-0.3	-0.3	-0.6	1.1	-2.1	-0.6	-4.9	-12.9	-2.8	0.3	-0.5
Jun-23	0.9	0.7	0.4	0.4	0.9	2.5	0.7	3.1	-4.0	-12.5	-2.5	4.6	-0.5
Jul-23	0.0	-0.3	-0.1	-1.0	-0.2	-0.5	0.4	3.0	-5.0	-15.7	-0.4	2.8	-0.4
Aug-23	0.2	-0.3	0.1	-0.9	0.7	-1.0	1.6	3.7	-2.6	-10.2	-0.2	2.8	-0.1
Sep-23	1.0	0.7	1.0	-0.5	2.4	1.7	1.7	3.8	-1.6	-11.9	-0.4	3.0	0.6
Percentage change, month on previous month													
Jul-22	0.4	0.4	0.2	0.7	0.4	1.2	-0.4	-0.6	-0.6	5.8	-2.6	1.2	0.1
Aug-22	0.0	0.2	0.2	0.1	-0.9	1.2	-1.2	-0.8	-0.7	-8.2	0.3	0.6	-0.2
Sep-22	-0.7	-0.9	-0.7	-0.4	-1.5	-2.3	0.1	0.0	-0.2	1.1	0.5	-0.1	-0.6
Oct-22	0.7	0.7	0.4	0.9	1.6	0.3	0.3	1.1	-2.9	-0.3	-1.2	0.7	0.1
Nov-22	0.2	0.2	0.2	-0.4	0.2	1.6	0.0	-0.5	-0.1	2.7	2.0	0.2	-0.2
Dec-22	-0.5	-0.8	0.5	-2.3	-0.3	-1.1	0.2	0.1	3.8	-5.1	0.7	0.8	0.0
Jan-23	0.4	0.8	-0.1	1.5	0.7	1.1	-0.2	0.4	-1.9	-3.3	-0.7	-1.8	0.0
Feb-23	0.1	-0.1	0.3	-0.6	-0.2	-0.2	-0.1	0.1	-2.0	2.3	-1.2	2.6	0.1
Mar-23	-0.2	-0.4	-0.2	0.1	-1.0	-1.0	0.8	0.7	2.6	-3.0	2.0	-0.2	0.0
Apr-23	0.2	0.3	-0.4	-0.2	1.2	1.0	0.0	0.4	1.0	-2.7	-1.9	-0.7	0.1
May-23	-0.1	0.0	0.0	1.1	-0.6	0.1	-0.6	-0.1	-3.0	0.4	-2.2	-0.3	0.0
Jun-23	0.5	0.2	0.0	-0.1	1.3	0.7	1.8	2.4	0.0	-2.1	2.0	1.6	0.1
Jul-23	-0.5	-0.5	-0.2	-0.6	-0.7	-1.8	-0.7	-0.8	-1.5	1.9	-0.5	-0.5	0.1
Aug-23	0.1	0.1	0.3	0.2	0.0	0.8	0.0	-0.1	1.8	-2.2	0.5	0.6	0.1
Sep-23	0.1	0.1	0.2	-0.1	0.1	0.3	0.2	0.1	0.8	-0.9	0.2	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 June, compared with the previous three months, against the forecast for each in our August GDP Tracker.

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

	GDP	Index of Services	Index of Production	Manufacturing	Mining and Quarrying	Index of Construction
Forecast	0.3	0.3	0.6	1.3	-3.8	0.2
Outturn	0.2	0.1	0.6	1.7	-3.2	0.1

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:

For further information please contact the NIESR Press Office: press@niesr.ac.uk or Luca Pieri on 020 3948 4488 / l.pieri@niesr.ac.uk

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