NIESR
Monthly GDP Tracker

GDP Remains Flat in Q3; Recession Avoided This Year

Paula Bejarano Carbo

"Today's data indicate that GDP grew by 0.2 per cent in September relative to August, driven mainly by growth in the services sector. More broadly, GDP remained flat in the third quarter of 2023 relative to the second quarter, as services output fell by 0.1 per cent, production output remained flat and construction output grew by 0.1 per cent. These figures are consistent with our forecast in our recent Autumn UK Economic Outlook, published earlier this week, in that the outlook for UK GDP growth remains sluggish and we do not expect a recession to ensue in the short or medium-term."

Paula Bejarano Carbo

Associate Economist, NIESR
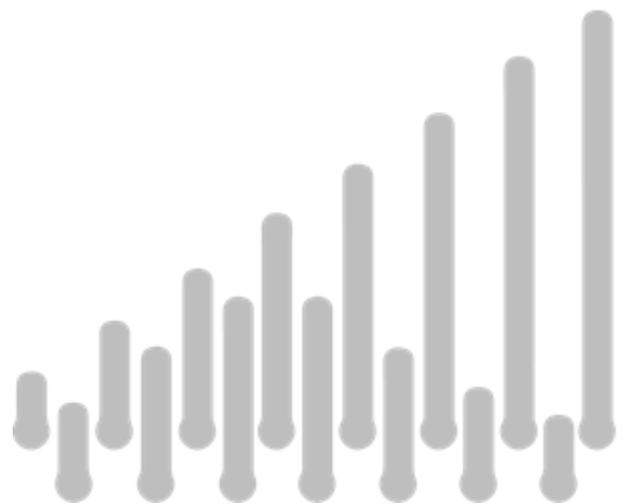
Main points

- Monthly GDP grew by 0.2 per cent in September, higher than our previous forecast of no growth, following an expansion of 0.1 per cent in August. This monthly figure was mainly driven by growth in the services sector, which saw increasing activity in the professional, scientific and technical activities, and human health and social work activities sub-sectors. The latter was likely boosted by the latest Covid-19 vaccination campaign, which offset the impact of industrial action in the healthcare sector in September.

- GDP remained flat in the third quarter of 2023 relative to the previous three-month period, slightly better than our forecast of a shallow contraction of 0.1 per cent, thanks to a positive contribution from net trade offsetting contractions in business investment, household spending and government consumption. We now forecast GDP to grow by 0.1 per cent in the fourth quarter of this year, entailing our central forecast does not expect a recession in 2023. These forecasts remain broadly consistent with the longer-term trend of low, but stable economic growth in the United Kingdom. It should be noted that this growth profile was not affected by the recent revisions to GDP estimates.

- For a comprehensive forecast of the UK economy, please see our Autumn UK Economic Outlook, published earlier this week.

Figure 1 - UK GDP
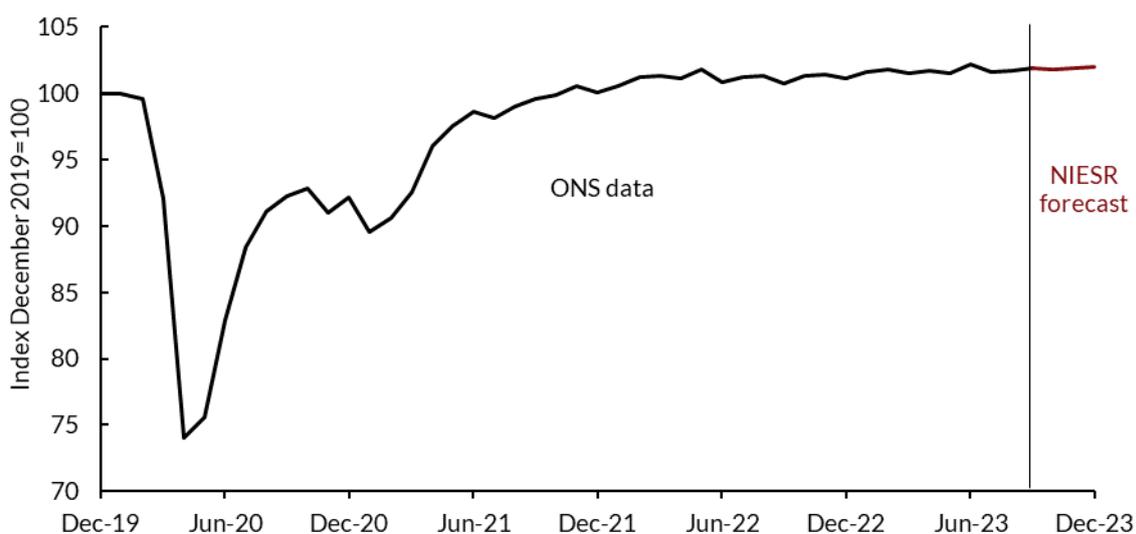
Economic setting

In our previous GDP tracker, published in October, we observed that GDP grew by 0.2 per cent in August on a monthly basis, and by 0.3 per cent in the three months to August relative to the previous three-month period. While both figures seemed positive, high frequency data indicating weaker performance in September, coupled with July's poor performance, led us to forecast a shallow contraction of 0.1 per cent in the third quarter of 2023.

Today's data suggest that monthly GDP grew by 0.2 per cent in September, driven mainly by increased output in the services sector. Looking at the broader picture, GDP remained flat in the third quarter of 2023 relative to the previous three-month period as services output fell by 0.1 per cent, production output remained flat and construction output grew by 0.1 per cent. In expenditure terms, the robust contribution from net trade, owing to a narrowing trade deficit, was offset by negative contributions from business investment, household spending, and government consumption. These three-month-on-three-month data imply that economic growth remains sluggish. In line with this profile, we forecast GDP to grow by 0.1 per cent in the fourth quarter of this year.

To further contextualise our forecast, 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 flatlined in the third quarter of 2023, and it is still unclear whether they will grow in a sustained manner in the fourth quarter of this year. Still, 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, supporting our view that high consumer spending kept the economy afloat for the first half 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. Concerningly, the construction sector plummet that occurred in September has only shown marginal signs of recovery in October. Taken together, these two figures suggest that the economic outlook is likely to be one of low growth in the fourth quarter of 2023.

Our Autumn UK Economic Outlook was published earlier this week. Consistent with this tracker, our wider forecast expects GDP to remain sluggish in 2023 and 2024 as monetary policy tightening continues to bear down on demand. Both our tracker and Outlook imply GDP growth of 0.6 per cent this year, and our Outlook forecast GDP to grow by 0.5 per cent in 2024; both of these figures are underwhelming compared to the pre-global financial crisis average of nearly 3 per cent yearly growth.   At the end of our forecast horizon, we expect GDP to grow by 1.7 per cent in 2027. One cause for this weak growth throughout our forecast is the continuation of the productivity slowdown, which we have experienced since the global financial crisis. There is evidence to suggest that one way to reverse the decline in productivity is to raise public sector net investment, which can trigger the effect of 'crowding in' more private investment. We therefore think it would be a good idea for the Chancellor to use any fiscal space to raise public investment to 3 per cent of GDP in his upcoming Autumn Statement.

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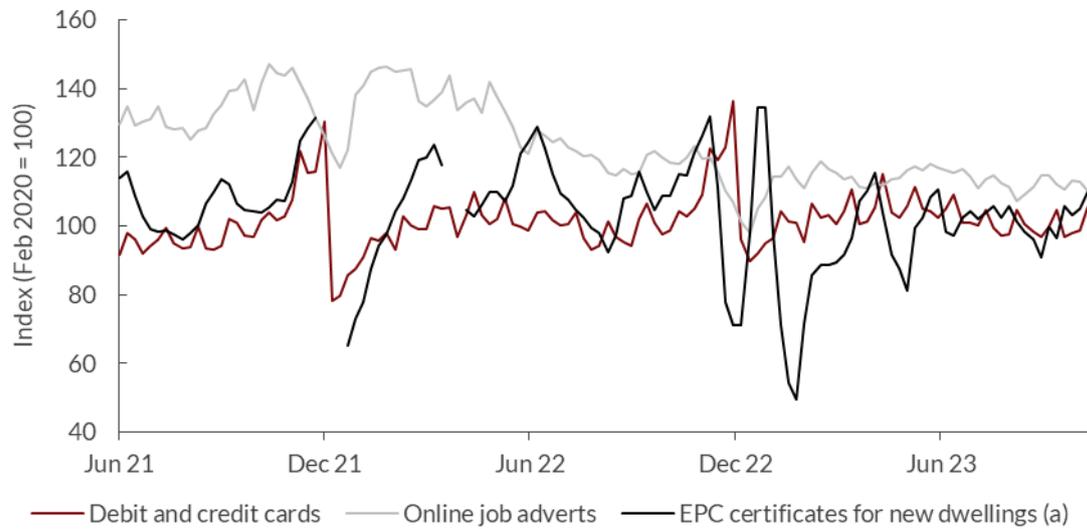
Notes: (a) England and Wales. Debit and credit cards (CHAPS based): Index February 2020 = 100, a backward looking seven-day rolling average, non-seasonally adjusted, nominal prices. Job adverts: Index February 2020 = 100, weekly average. EPC certificates: Index February 2020 = 100, four–week rolling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

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

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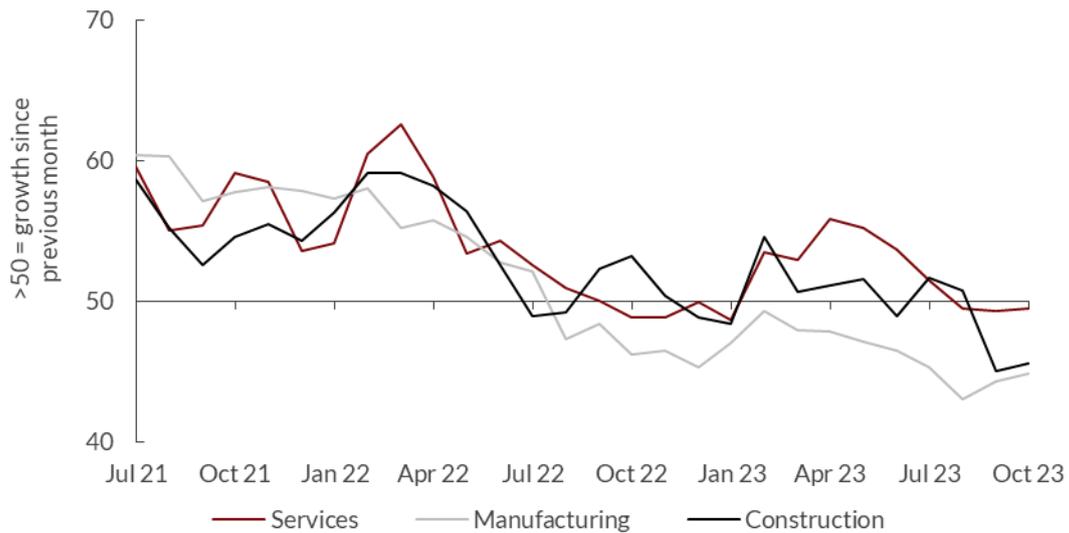
Sources: Refinitiv Datastream, S&P

News in latest ONS data

The monthly GDP data for September were better than we were expecting in October, growing by 0.2 per cent rather than remaining flat. GDP remained flat in the third quarter of 2023, higher than our previous forecast of a 0.1 per cent contraction.

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.

Figure 5 – Surprises in monthly data

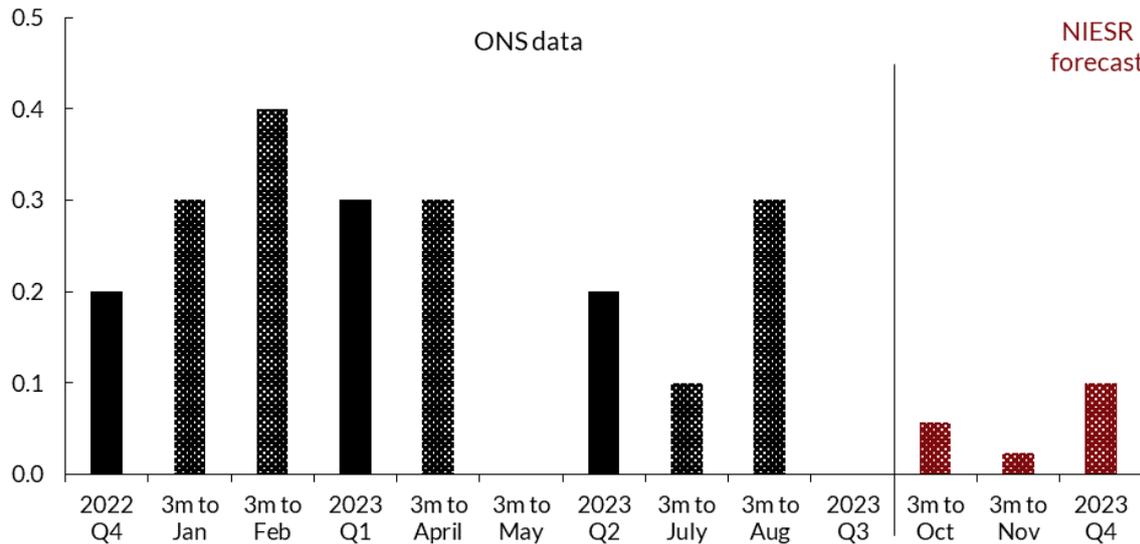|	06/22	07/22	08/22	09/22	10/22	11/22	12/22	01/23	02/23	03/23	04/23	05/23	06/23	07/23	08/23	09/23
Business services and finance	-0.4	0.0	-0.1	-0.4	0.2	0.1	0.5	-0.1	-0.3	0.0	-0.1	-0.5	-0.2	-0.3	0.1	-0.1
Government	0.0	0.3	-0.5	0.0	0.0	0.0	-0.9	0.4	0.0	0.0	-0.1	0.3	0.0	-0.3	-0.2	-0.1
Distribution , Hotels and Restaurants	0.2	0.0	0.1	-0.4	0.3	0.3	0.1	0.1	0.2	-0.2	0.2	-0.1	0.2	-0.2	0.1	0.1
Transport, Storage and Communication	-0.4	0.0	0.0	-0.7	0.1	0.0	-0.3	0.3	-0.2	-0.2	0.0	0.0	0.2	-0.7	0.0	-0.1
Manufacturing	-0.5	-0.7	-0.7	0.0	0.3	0.1	0.1	0.1	0.1	0.3	-0.1	0.0	0.7	-1.0	-0.3	-0.2
Electricity	1.1	-0.1	-0.5	0.0	-1.2	-0.7	0.4	0.1	-0.4	1.0	0.3	-0.2	0.2	-0.6	-0.8	0.2
Extraction	-0.4	0.5	-1.3	-0.1	-0.3	0.7	-0.7	-0.6	0.2	-0.8	-0.3	-0.1	-0.5	0.4	0.7	0.1
Water Supply, Sewerage, Waste Management	0.6	-1.8	-0.4	-0.2	-1.4	-0.2	0.2	0.1	-0.8	2.0	-0.1	-1.1	0.9	-0.4	-1.1	-0.5
Construction	-0.2	0.0	0.1	0.0	0.1	0.0	0.3	-0.4	0.6	-0.5	-0.1	-0.1	0.4	-0.1	-0.4	0.0
Agriculture	-0.1	-0.2	-0.2	-0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	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.

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

Sectoral detail

We forecast GDP to grow by 0.1 per cent in the fourth quarter of this year. As seen in Figure 6 below, we expect the services sector to drive growth in Q4.

**Figure 6** - Contributions to quarterly GDP growth (percentage points)
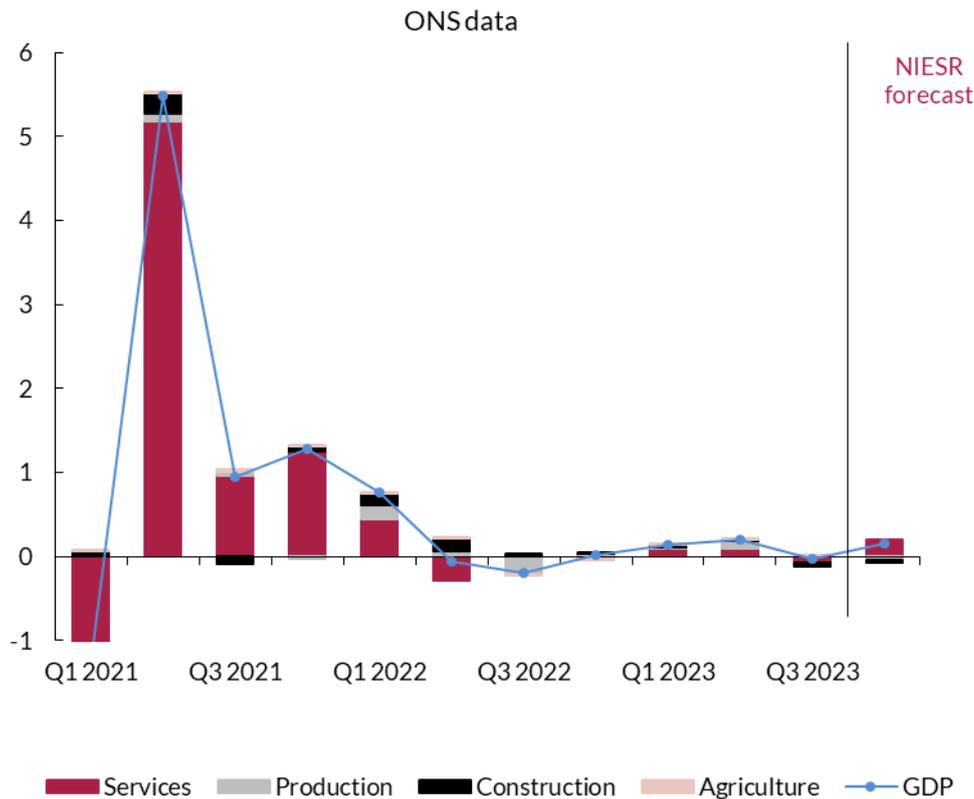
Services (80 per cent of GDP)

The survey balances point to weak 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 October, marginally up from 49.3 in September. That said, the figure remains below the neutral 50 mark - which indicates declining output in this sector – for the third consecutive month. Survey respondents cited a lack of new business opportunities due to the sluggish economic outlook and squeezed household budgets as the main cause of anaemic performance in October. Moreover, the degree of optimism reported in the survey was the lowest since December 2022. Though raw material costs fell in October, elevated wages, fuel costs and food prices led to average prices charged by service sector firms to increase in October. That said, service sector firms will likely face a big boost in activity in the run-up to Christmas.

Altogether, we forecast UK service-sector activity to grow by 0.2 per cent in the fourth quarter of 2023.

Figure 7 - ONS service sector growth (3 months on previous 3 months, per cent) compared with swathe of business survey balances (standardised)

Survey range (LHS)
ONS services output
Forecast (Percentage change, 3 months on previous 3 months)
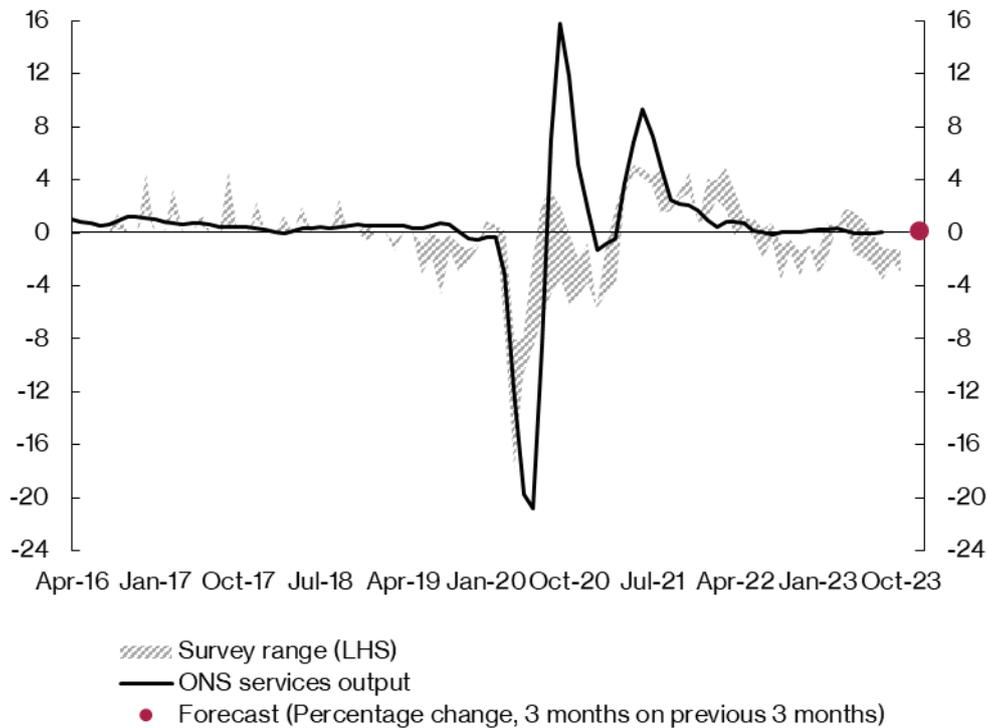
Note: The shaded swathe shows the highest and lowest values each month of a range of business survey balances that have been standardised so that they have the same mean and standard deviation as the quarterly growth of the ONS series.
Source: ONS, CBI, Markit, Bank of England Agents, EC, NIESR calculations.

Construction (6 per cent of GDP)

The S&P Global/CIPS UK Construction PMI survey registered a slight increase from 45.0 in September to 45.6 in October. While commercial building declined only at a soft pace (index at 49.7), decreasing activity in residential house building (index at 38.5, generated by the effect of high interest rates) continues to weigh down on this sector.

Our forecast for the fourth quarter of 2023 expects this trend to continue, with a contraction of 0.7 per cent relative to the third quarter.

Production (14 per cent of GDP)

We forecast production sector output to contract by 0.3 per cent in the fourth 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 44.8 in October, rising marginally from 44.3 in September, and representing the 15th consecutive month this sector has contracted. This sustained decline has been driven by a continuing combination of weakened domestic and export demand, tight financial conditions, eroding consumer confidence, Brexit-related trade difficulties, and a preference for reduced inventory holdings (as a cashflow-improving measure). Further, business optimism fell to a 10-month low in October, with 36 per cent of respondents forecasting stagnating activity.

Our forecast for the fourth quarter of 2023 sees output contracting by 0.3 per cent in this sector.

The S&P Global/CIPS UK Composite PMI – which combines comparable services and manufacturing indices – increased only slightly from 48.5 in September to 48.7 in October. It seems that the rebound in private sector output that took place in early 2023 may have dwindled.

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. Mining and quarrying grew by 0.6 per cent in the third quarter of 2023. Given Prime Minister Rishi Sunak's announcement on 31 July that the government will issue hundreds of new oil and gas licenses in the North Sea in Autumn and the re-iteration of this policy plan in the King's speech, we might expect to see further growth in this sector in the coming months. While this may boost GDP in the short-run, it is important to remember that the long-run costs of further fossil fuel extraction – not just in terms of GDP but also in terms of environmental and human costs- are not being accounted for.

That said, we forecast a contraction of 1.8 per cent in this sector in the fourth quarter of this year due to seasonal factors.

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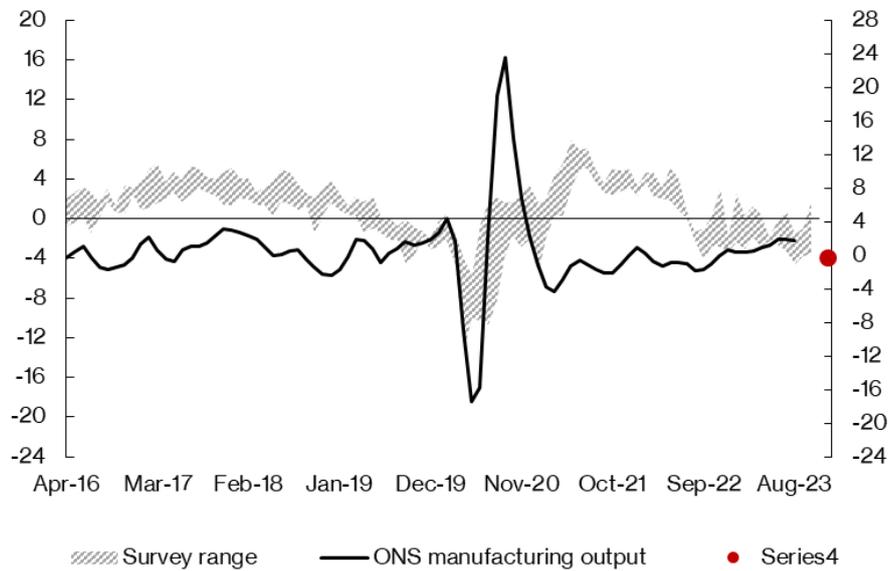
Note: The shaded swathe shows the highest and lowest values each month of a range of business survey balances that have been standardised so that they have the same mean and standard deviation as the quarterly growth of the ONS series.
Source: ONS, CBI, Markit, Bank of England Agents, EC, NIESR calculations.

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
Sep-22	101.5	102.9	104.0	101.1	99.1	107.8	93.7	99.0	62.8	74.4	105.4	104.5	85.7
Oct-22	102.1	103.6	104.5	101.5	100.7	108.5	94.0	100.1	61.5	72.5	103.7	105.2	85.7
Nov-22	102.2	103.7	104.5	101.7	100.7	108.9	93.9	99.5	61.6	74.5	105.3	105.5	85.5
Dec-22	101.9	103.1	104.7	100.2	100.0	108.2	93.9	99.7	63.9	68.8	105.7	106.3	85.5
Jan-23	102.4	104.0	104.8	101.6	101.0	110.2	93.9	100.0	62.9	66.8	106.1	104.4	85.5
Feb-23	102.6	104.0	105.0	101.6	100.8	109.8	93.8	100.0	61.9	68.4	104.9	107.1	85.6
Mar-23	102.3	103.5	104.7	101.8	99.5	108.1	94.5	100.7	63.4	66.4	106.4	106.9	85.6
Apr-23	102.5	103.8	104.7	101.5	100.8	109.3	94.7	101.3	63.0	66.4	105.1	106.1	85.6
May-23	102.3	103.7	104.2	102.2	100.3	109.3	94.2	101.1	61.2	66.7	103.3	105.8	85.6
Jun-23	103.0	104.0	104.2	102.6	101.2	110.2	96.6	103.9	63.1	66.0	105.6	107.5	85.6
Jul-23	102.4	103.4	104.2	101.9	100.5	108.1	95.5	102.6	63.0	65.9	104.1	107.0	85.7
Aug-23	102.5	103.8	104.4	102.0	101.0	109.1	95.0	101.9	62.7	68.0	102.9	104.7	85.8
Sep-23	102.7	104.0	104.5	102.7	100.8	109.2	95.1	102.0	62.4	66.4	104.4	104.7	85.9
Oct-23	102.6	103.9	104.6	102.6	100.9	109.2	94.8	101.8	63.3	65.6	104.5	104.7	86.0
Nov-23	102.7	104.0	104.8	102.7	100.8	109.2	94.9	101.8	63.9	65.7	104.4	104.7	86.0
Dec-23	102.8	104.1	105.0	102.8	100.7	109.3	95.0	102.0	64.2	65.4	104.7	104.7	86.1

Percentage change, 3 months on previous 3 months

Sep-22	-0.2	0.1	0.3	-0.1	-1.4	1.2	-1.8	-1.8	-1.4	-2.9	-1.9	0.6	0.0
Oct-22	-0.2	0.0	0.0	0.2	-1.2	0.9	-1.5	-1.1	-1.3	-7.2	-1.3	0.7	-0.4
Nov-22	0.0	0.1	-0.1	0.8	-1.0	0.3	-0.5	0.0	-0.9	-4.7	-1.3	1.2	-0.7
Dec-22	0.2	0.2	0.2	0.2	0.0	0.1	0.0	0.6	-0.3	-5.9	-0.6	1.3	-0.6
Jan-23	0.3	0.2	0.3	0.0	0.3	0.5	0.1	0.4	1.1	-4.9	0.7	0.6	-0.4
Feb-23	0.4	0.3	0.5	-0.3	0.4	0.9	0.0	0.4	1.5	-7.9	0.7	0.8	-0.1
Mar-23	0.3	0.4	0.3	0.5	0.0	0.8	0.1	0.5	0.6	-6.6	0.9	0.4	0.0
Apr-23	0.3	0.2	0.1	0.5	-0.2	0.0	0.5	0.9	-0.1	-4.2	-0.2	1.2	0.1
May-23	0.0	0.0	-0.3	0.7	-0.4	-0.5	0.6	1.1	-0.6	-2.2	-0.6	0.3	0.1
Jun-23	0.2	0.0	-0.4	0.4	0.3	0.2	1.2	1.9	-0.5	-1.2	-1.1	0.3	0.0
Jul-23	0.1	-0.1	-0.6	0.6	0.3	0.1	1.2	1.9	-0.5	-1.3	-1.1	0.1	0.0
Aug-23	0.3	0.1	-0.3	0.3	0.7	0.2	1.3	1.8	0.6	0.2	-0.7	0.1	0.1
Sep-23	0.0	-0.1	0.0	0.1	0.0	-0.7	0.0	0.1	0.4	0.6	-0.8	-0.9	0.2
Oct-23	0.1	0.2	0.3	0.2	0.2	0.0	-0.5	-0.6	0.6	0.7	-0.4	-1.9	0.3
Nov-23	0.0	0.2	0.3	0.5	-0.1	0.1	-0.8	-0.9	0.5	-1.1	0.2	-1.6	0.3
Dec-23	0.1	0.2	0.4	0.5	0.0	0.4	-0.3	-0.3	1.8	-1.8	0.7	-0.7	0.3

Percentage change, month on same month in previous year

Sep-22	1.1	1.3	1.9	2.0	-5.8	7.2	-2.3	-3.0	4.7	-7.2	1.2	6.8	0.0
Oct-22	1.4	1.4	2.6	0.0	-2.8	5.6	-1.2	-1.1	5.1	-6.2	-3.0	7.9	-1.2
Nov-22	0.8	1.0	1.7	-0.9	-1.5	5.2	-2.8	-3.6	0.5	0.8	-1.1	6.2	-0.3
Dec-22	1.0	1.1	1.9	-2.3	2.0	4.8	-3.0	-3.4	0.9	-6.1	-0.6	6.1	0.7
Jan-23	1.0	1.4	2.3	-0.6	0.4	3.6	-2.6	-2.1	-2.3	-13.5	-0.8	3.2	0.6
Feb-23	0.6	0.7	2.1	-1.1	-1.5	2.1	-2.5	-1.8	-3.9	-11.3	-1.8	5.8	0.0
Mar-23	0.2	0.1	1.5	-1.3	-2.2	1.4	-1.5	-0.9	0.3	-14.7	-0.5	3.5	-0.3
Apr-23	0.6	0.7	1.2	0.4	-1.9	2.5	-1.3	0.3	-1.4	-16.1	-3.4	2.9	-0.3
May-23	-0.3	0.0	-0.4	0.5	-1.5	1.4	-2.1	-0.6	-3.5	-16.2	-2.7	0.3	-0.6
Jun-23	1.4	1.1	0.1	2.4	0.0	3.2	1.8	3.8	0.5	-14.8	-1.9	4.6	-0.7
Jul-23	0.4	0.0	-0.2	1.1	-0.8	0.0	1.1	3.1	0.6	-18.5	-1.1	2.8	-0.7
Aug-23	0.4	0.2	-0.3	1.2	0.1	-0.2	1.5	3.0	1.0	-8.1	-2.7	0.1	-0.5
Sep-23	1.2	1.1	0.4	1.6	1.8	1.3	1.5	3.0	-0.6	-10.8	-0.9	0.2	0.2
Oct-23	0.5	0.3	0.1	1.1	0.2	0.6	0.9	1.7	3.0	-9.5	0.7	-0.5	0.3
Nov-23	0.5	0.3	0.3	1.0	0.1	0.3	1.0	2.3	3.8	-11.9	-0.8	-0.7	0.6
Dec-23	0.9	1.0	0.3	2.6	0.7	1.0	1.2	2.3	0.4	-4.9	-1.0	-1.5	0.7

Percentage change, month on previous month

Sep-22	-0.6	-0.7	-0.7	0.3	-1.8	-1.4	0.1	0.0	1.1	0.5	-0.4	-0.1	-0.6
Oct-22	0.6	0.7	0.5	0.4	1.6	0.6	0.3	1.1	-2.1	-2.6	-1.6	0.7	0.0
Nov-22	0.1	0.1	0.0	0.2	0.0	0.4	-0.1	-0.6	0.2	2.8	1.5	0.2	-0.2
Dec-22	-0.3	-0.6	0.2	-1.5	-0.7	-0.6	0.0	0.2	3.7	-7.7	0.4	0.8	0.0
Jan-23	0.5	0.9	0.1	1.4	1.0	1.8	0.0	0.3	-1.6	-2.9	0.4	-1.8	0.0
Feb-23	0.1	0.0	0.2	0.0	-0.2	-0.4	-0.1	0.0	-1.6	2.4	-1.1	2.6	0.1
Mar-23	-0.3	-0.5	-0.3	0.2	-1.3	-1.5	0.7	0.7	2.4	-2.9	1.4	-0.2	0.0
Apr-23	0.2	0.3	0.0	-0.3	1.3	1.1	0.2	0.6	-0.6	0.0	-1.2	-0.7	0.0
May-23	-0.2	-0.1	-0.5	0.7	-0.5	0.0	-0.5	-0.2	-2.9	0.5	-1.7	-0.3	0.0
Jun-23	0.7	0.3	0.0	0.4	0.9	0.8	2.5	2.8	3.1	-1.0	2.2	1.6	0.0
Jul-23	-0.6	-0.6	0.0	-0.7	-0.7	-1.9	-1.1	-1.3	-0.2	-0.2	-1.4	-0.5	0.1
Aug-23	0.1	0.4	0.3	0.1	0.5	0.9	-0.5	-0.7	-0.5	3.2	-1.2	-2.1	0.1
Sep-23	0.2	0.2	0.0	0.8	-0.2	0.1	0.0	0.1	-0.5	-2.4	1.5	0.0	0.1
Oct-23	-0.1	-0.1	0.1	-0.1	0.1	0.0	-0.3	-0.2	1.5	-1.2	0.1	0.0	0.1
Nov-23	0.1	0.1	0.2	0.1	-0.1	0.0	0.0	-0.1	0.9	0.1	0.0	0.0	0.1
Dec-23	0.1	0.1	0.2	0.2	0.0	0.1	0.2	0.2	0.4	-0.3	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)
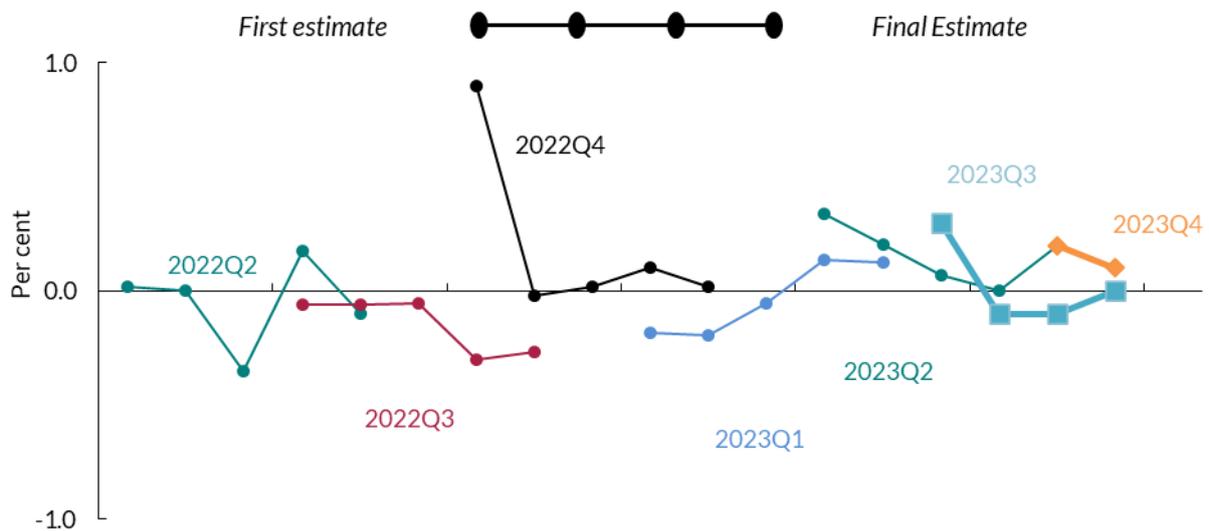
NIESR's short-term predictions of monthly GDP growth are based on bottom-up analysis of recent trends in the monthly sub-components of GDP. These predictions are constructed by aggregating statistical model forecasts of ten sub-components of GDP. The statistical models that have been developed make use 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 August, compared with the previous three months, against the forecast for each in our October GDP Tracker.

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

	GDP	Index of Services	Index of Production	Manufacturing	Mining and Quarrying	Index of Construction
Forecast	-0.1	-0.2	-0.1	0.1	0.7	-0.6
Outturn	0.0	-0.1	0.0	0.1	0.6	-0.9

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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