

# NIESR

## Monthly GDP Tracker

UK Economy Contracts Between 2022Q1 and 2023Q4

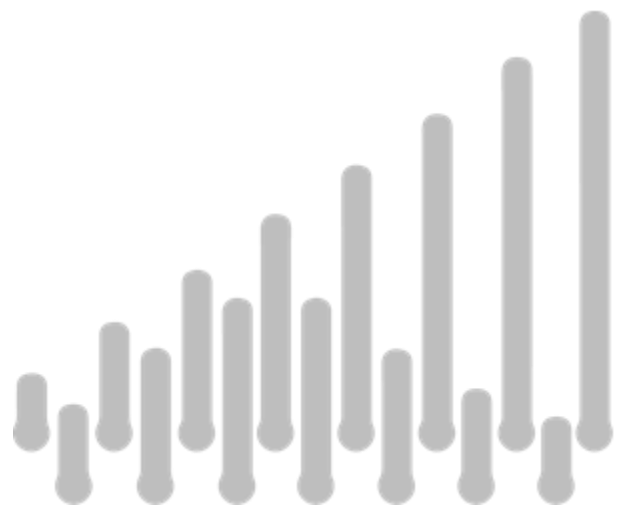
Paula Bejarano Carbo

15<sup>th</sup> February 2024

*“Today’s ONS data indicate that GDP fell by 0.3 per cent in the fourth quarter of 2023, marking two quarterly consecutive falls in GDP. By the standard metric, this means that the UK economy was in a shallow recession in the second half of last year. However, this metric is both arbitrary and not greatly informative: the state of the UK economy is better described by the fact that GDP fell between the first quarter of 2022 and the final quarter of 2023. Further, GDP per head remains lower than pre-Covid. The broader picture of flatlining growth and its adverse implications for living standards in the long-term should dominate today’s headlines, rather than technicalities.”*

**Paula Bejarano Carbo**

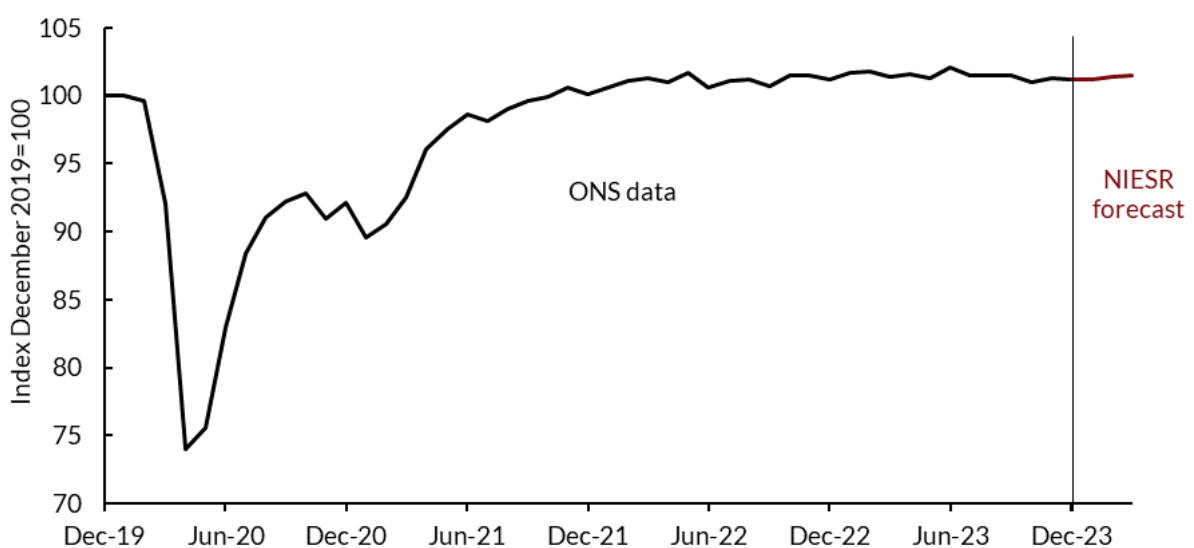
**Economist, NIESR**



### Main points

- Monthly GDP fell by 0.1 per cent in December, following growth of 0.2 per cent in November. This monthly figure was mainly driven by decreasing output in the services sectors, particularly in the wholesale and retail trade category, as well as the construction sector.
- GDP contracted by 0.3 per cent in the fourth quarter of 2023 relative to the previous three-month period. This was generated by contractions in all main sectors: in Q4 services output fell by 0.2 per cent, production output fell by 1.0 per cent and construction output fell by 1.3 per cent.
- The Q4 data marks two quarterly consecutive falls in GDP, following a fall in GDP by 0.1 per cent in Q3. By the standard metric, this means that the UK economy was in a shallow recession in the second half of last year. However, this metric is both arbitrary and not greatly informative: the state of the UK economy is better described by the fact that GDP fell between the first quarter of 2022 and the final quarter of 2023. Further, GDP per head remains lower than pre-Covid.
- We forecast GDP to grow by 0.2 per cent in the first quarter of 2024. This forecast remains broadly consistent with the longer-term trend of low, but stable economic growth in the United Kingdom (Figure 1).

Figure 1 - UK Monthly GDP



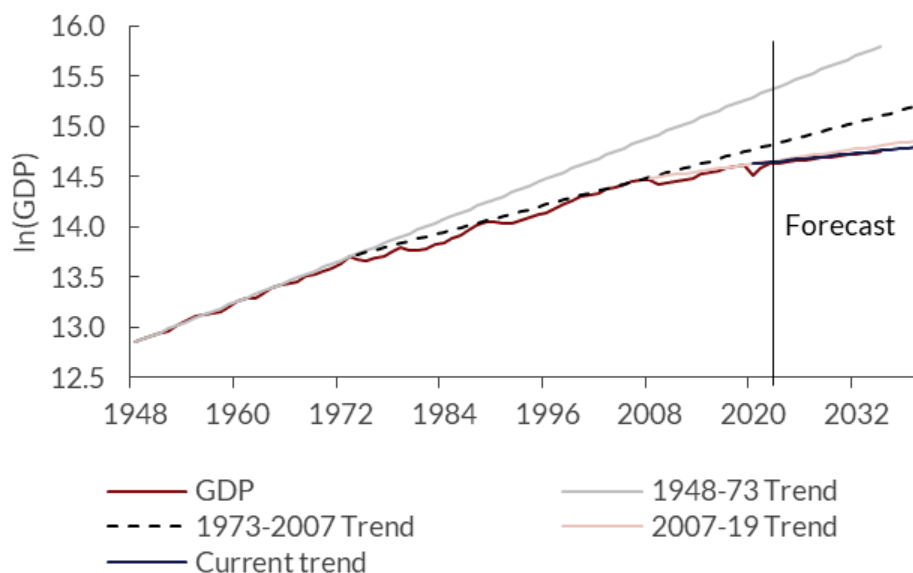
## Economic setting

In our [previous GDP tracker](#), published in January, we observed that GDP grew by 0.3 per cent in November, but contracted by 0.2 per cent in the three months to November relative to the previous quarter. In line with this profile of subdued economic activity, we forecast GDP to remain flat in the fourth quarter of this year.

Today's data suggest that monthly GDP fell by 0.1 per cent in December, following growth of 0.2 per cent in November. This monthly figure was mainly driven by decreasing output in the services sectors, particularly in the wholesale and retail trade category. Looking at the broader picture, GDP contracted by 0.3 per cent in the fourth quarter of 2023 relative to the previous three-month period. This was generated by contractions in all main sectors: in Q4 services output fell by 0.2 per cent, production output fell by 1.0 per cent and construction output fell by 1.3 per cent.

As shown in figures 1, 5 and 7, GDP growth has been near zero since early 2022. In fact, GDP fell between the first quarter of 2022 and the final quarter of 2023. In our recent [UK Economic Outlook](#), published last week, we projected that UK GDP growth will likely remain sluggish into the medium-term. Specifically, we forecast GDP to grow by 0.9 per cent in 2024 and at a similar rate throughout the rest of the forecast horizon. This outlook for economic growth is quite low by historical standards (Figure 2).

Figure 2- UK GDP growth trends

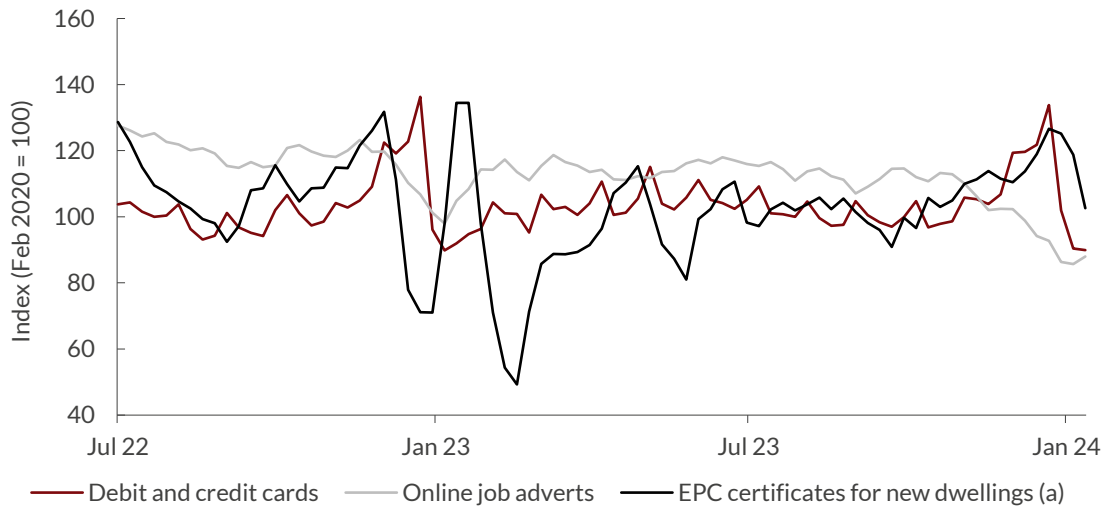


Source: ONS, NIESR calculations

To further contextualise the near-term outlook for GDP, figure 3 compares spending and hiring indicators to pre-pandemic levels, while figure 4 records recent trends in PMIs. High frequency credit and debit card spending indicators began their seasonal uptick in November, peaking on 22 December, and plummeted thereafter – as is expected seasonally. At the same time, the

services PMI continues to suggest growth in the service sector, rising from 53.4 in December to 54.3 in January. The S&P Global/CIPS UK Composite PMI – which combines comparable services and manufacturing indices – increased from 52.1 in December to 52.9 in January. It is encouraging that overall, private-sector output showed signs of expansion in January following a year marked by subdued growth. Taken together, these early indicators suggest that, though GDP growth was subdued in 2023, we can be cautiously optimistic that GDP will grow in 2024.

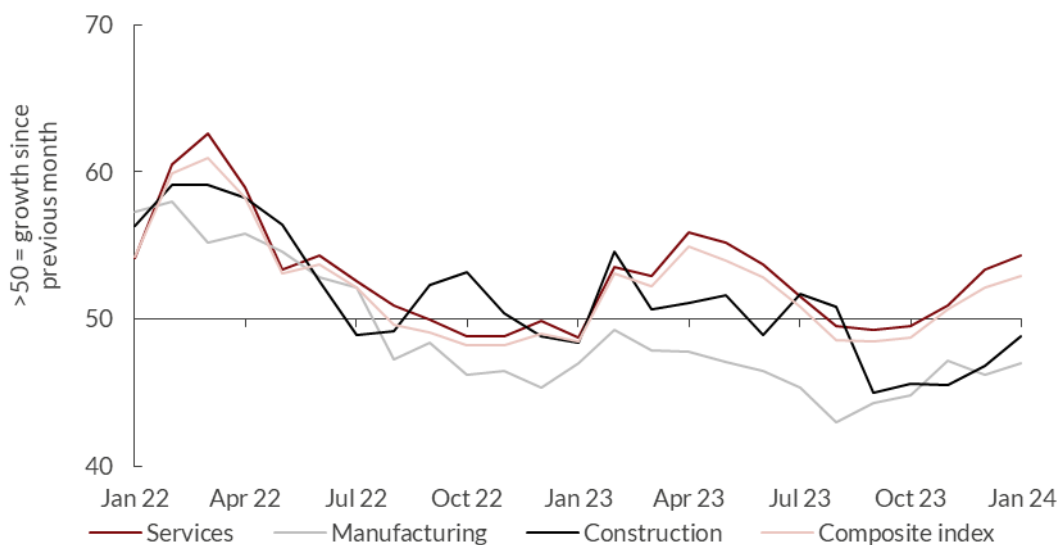
**Figure 3 – Spending and hiring indicators (weekly indices)**



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 4 – Recent trends in PMIs**



Sources: Refinitiv Datastream, S&P

### News in latest ONS data

The monthly GDP data for December were worse than we were expecting in last month's Tracker, contracting by 0.1 per cent compared to our forecast of no growth. GDP contracted by 0.3 per cent in the fourth quarter rather than our forecast of no growth.

**Figure 5 – UK GDP growth (3 months on previous 3 months, per cent)**

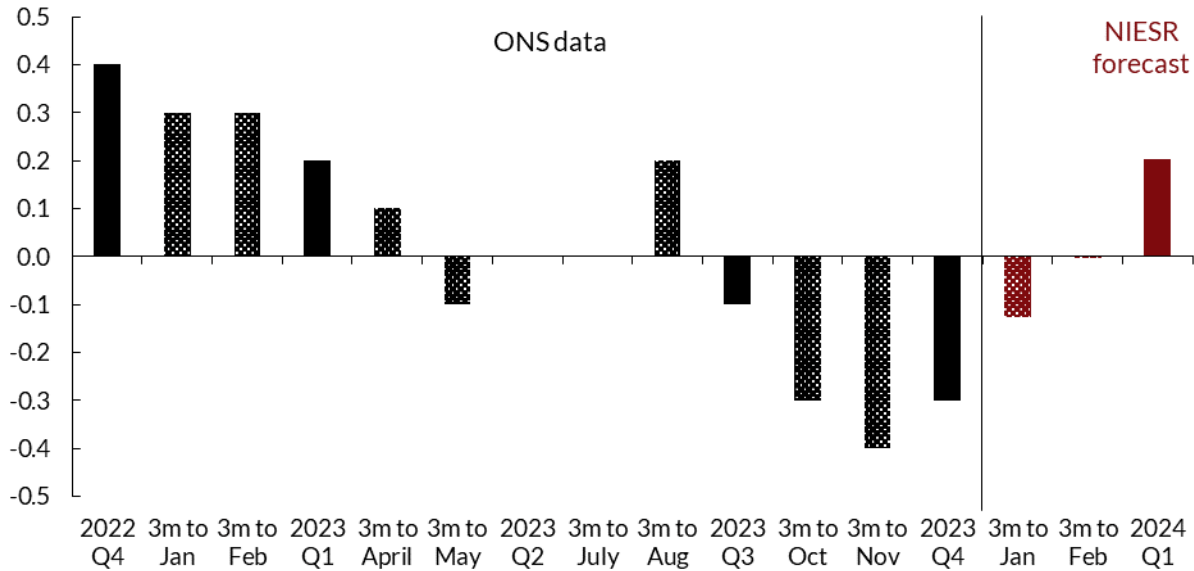
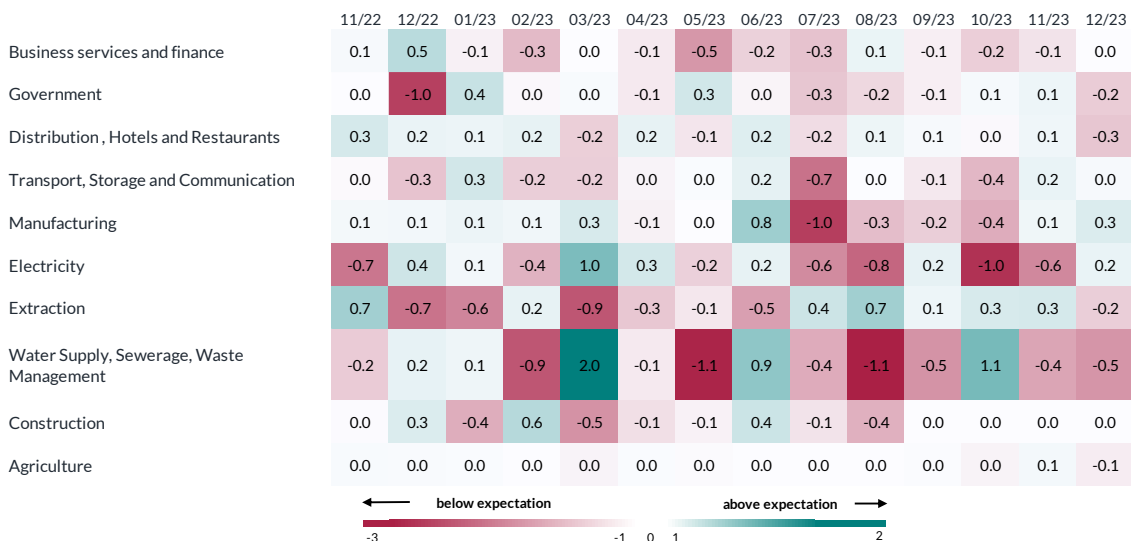


Figure 6 shows a heat map of the data surprises across sectors in the monthly data, relative to last month's GDP Tracker, highlighting the sectors where the surprises are large relative to the volatility of the output data.

**Figure 6 – Surprises in monthly data**



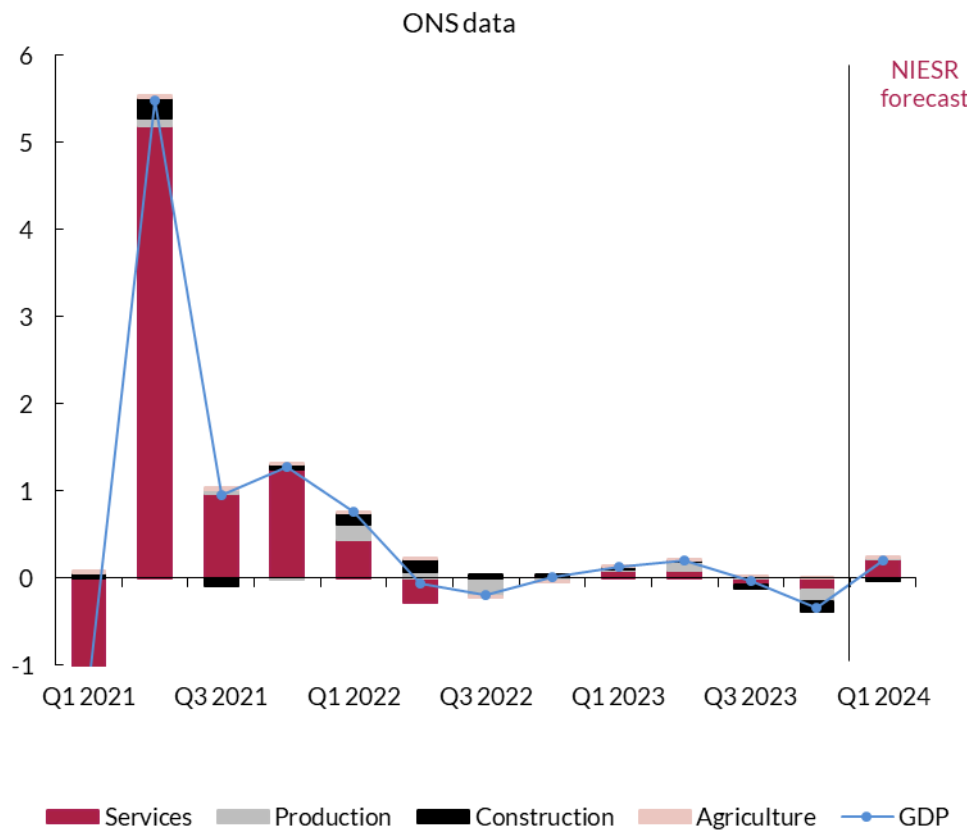
Note: Cells show forecast errors as a fraction of the standard deviation of errors for each series.

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

### Sectoral detail

GDP contracted in the fourth quarter of 2023, driven by declining output in all sectors (Figure 7). Our forecast for the first quarter of 2024 sees the service sector generating growth.

**Figure 7 - Contributions to quarterly GDP growth (percentage points)**

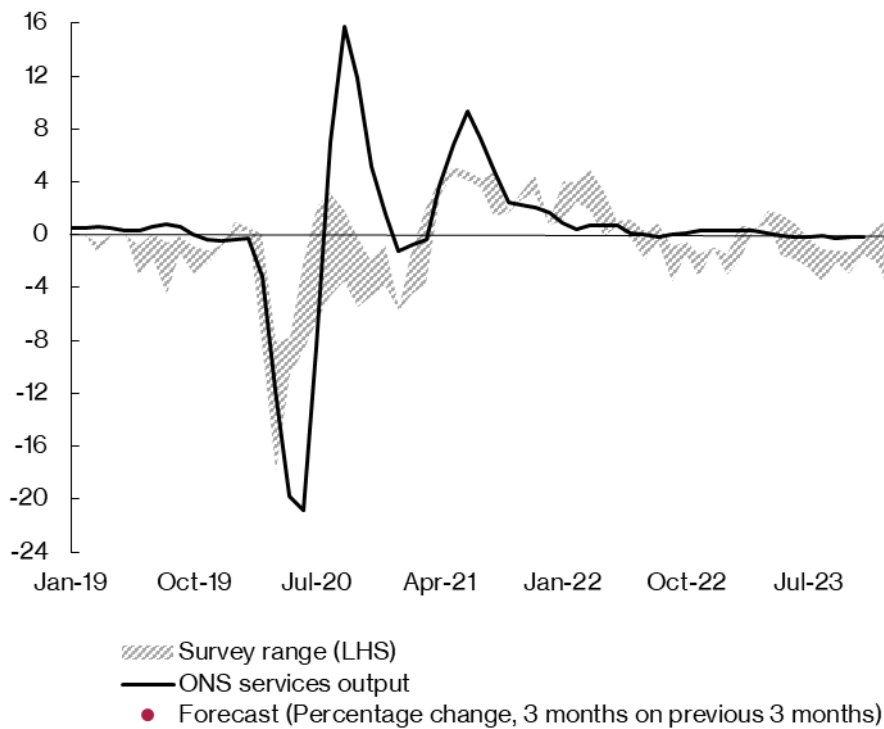


### Services (80 per cent of GDP)

The survey balances point to improved activity in the services sector at the start of 2024, as shown by the survey indicators in figures 4 and 8. The S&P Global/CIPS UK Services PMI reported a balance of 54.3 in January, rising from 53.4 in December. Survey respondents cited increased demand in this sector, partially resulting from rising business and consumer confidence.

Altogether, we forecast growth of 0.3 per cent in the services sector in the first quarter of 2024.

**Figure 8 - 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 an increase from 46.8 in December to 48.8 in January, marking the fifth consecutive month this balance registers below the neutral 50 (indicating contracting output). While commercial building declined only at a soft pace (index at 49.1), decreasing activity in residential house building (index at 44.2), generated by the effect of high interest rates continuing to weigh down on this sector.

We forecast growth in this sector to flatline in the first quarter of 2024.

**Production (14 per cent of GDP)**

We forecast production sector output to grow by 0.1 per cent in first quarter of 2024, 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

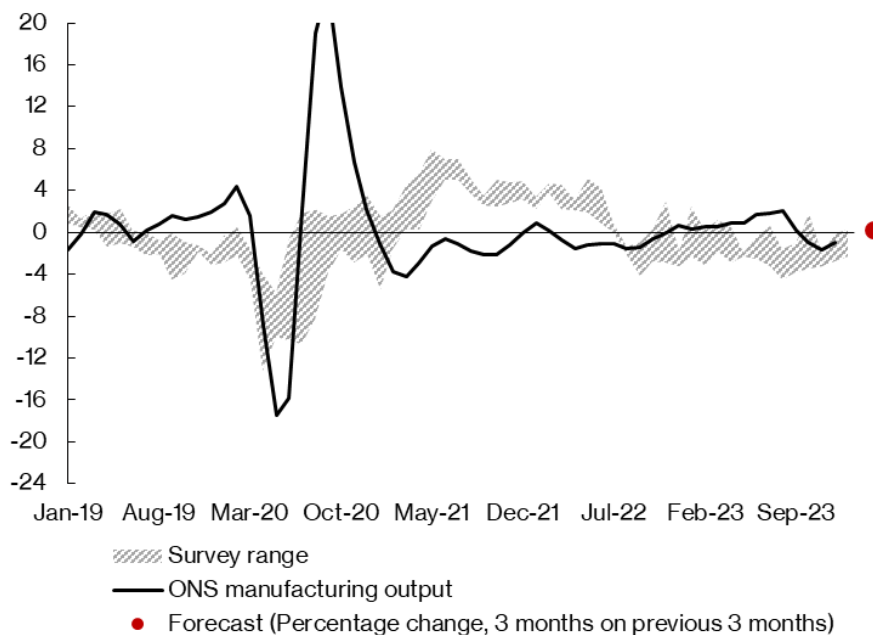
The S&P Global/CIPS UK manufacturing PMI rose slightly from 46.2 in December to 47 in January, representing the 18<sup>th</sup> consecutive month this sector has contracted. This sustained decline has been driven by a continuing combination of weak domestic and export demand, tight financial conditions, eroding consumer confidence, and a preference for reduced inventory holdings (as a cashflow-improving measure).

However, we expect to see this sector grow by 0.3 per cent in the first quarter of 2024.

## 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 contracted by 3 per cent in the fourth quarter of 2023. We forecast this contraction to soften of 0.8 per cent in the first quarter of 2024.

**Figure 9 - 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
Dec-22	102.0	103.1	104.9	100.2	99.9	107.7	94.1	100.0	63.8	68.8	105.6	106.3	85.5
Jan-23	102.5	104.0	104.9	101.6	100.4	110.8	94.0	100.3	63.4	64.7	105.8	104.4	85.5
Feb-23	102.6	104.0	105.2	101.7	100.1	109.5	93.9	100.3	62.4	67.7	104.2	107.1	85.6
Mar-23	102.2	103.5	105.0	102.0	98.5	108.0	94.6	100.9	64.5	65.6	106.6	106.9	85.6
Apr-23	102.4	103.7	104.9	101.9	99.7	108.4	94.8	101.5	63.3	65.6	104.6	106.1	85.5
May-23	102.1	103.6	104.5	102.5	99.1	108.4	93.9	101.0	60.2	65.8	102.7	105.8	85.5
Jun-23	102.9	103.8	104.5	103.0	99.8	108.9	96.4	104.2	61.5	64.9	104.1	107.5	85.5
Jul-23	102.3	103.4	104.4	102.6	99.4	106.7	95.4	102.9	61.8	64.8	102.9	107.0	85.6
Aug-23	102.3	103.5	104.6	102.8	99.4	106.9	95.1	102.4	62.2	66.7	101.3	104.5	85.7
Sep-23	102.3	103.5	104.3	103.4	99.0	106.9	95.0	102.0	64.0	64.7	102.6	104.5	85.8
Oct-23	101.8	103.2	104.3	102.6	99.0	106.0	93.7	100.7	60.9	63.6	103.6	104.5	85.8
Nov-23	102.1	103.4	104.4	102.8	99.3	106.8	94.2	101.5	60.8	63.9	102.5	104.5	85.8
Dec-23	102.0	103.3	104.8	102.3	98.0	107.1	94.7	102.3	61.5	62.7	102.1	104.5	85.8
Jan-24	102.0	103.4	105.4	102.1	98.6	107.3	94.2	101.7	61.9	62.8	102.6	104.5	85.8
Feb-24	102.2	103.6	105.6	102.1	98.6	107.8	94.2	101.8	61.6	63.0	102.8	104.5	85.9
Mar-24	102.3	103.7	105.8	102.0	98.6	108.1	94.3	101.8	61.6	62.9	102.9	104.5	85.9

**Percentage change, 3 months on previous 3 months**

Dec-22	0.4	0.4	0.5	0.4	0.1	0.1	0.0	0.7	-1.0	-5.7	-0.8	1.3	-0.5
Jan-23	0.3	0.3	0.4	0.0	0.1	0.9	0.0	0.4	0.5	-5.6	0.3	0.6	-0.4
Feb-23	0.3	0.3	0.5	-0.4	-0.1	1.1	0.0	0.6	1.3	-9.3	0.0	0.8	-0.1
Mar-23	0.2	0.3	0.3	0.5	-0.8	1.1	0.1	0.6	1.5	-8.3	0.3	0.4	0.0
Apr-23	0.1	0.1	0.2	0.6	-0.9	-0.3	0.4	0.9	0.6	-4.4	-0.6	1.2	0.1
May-23	-0.1	-0.1	-0.2	0.9	-1.0	-1.0	0.5	0.9	-0.9	-2.1	-0.6	0.3	0.0
Jun-23	0.0	-0.1	-0.4	0.7	-0.1	-0.8	0.9	1.7	-2.8	-0.9	-1.6	0.3	0.0
Jul-23	0.0	-0.1	-0.6	0.8	0.0	-0.6	0.9	1.8	-3.5	-1.7	-1.8	0.1	-0.1
Aug-23	0.2	0.0	-0.3	0.7	0.5	-0.7	1.3	2.0	-1.3	-0.3	-1.8	0.1	0.1
Sep-23	-0.1	-0.2	-0.2	0.5	-0.2	-1.6	0.1	0.2	1.7	-0.1	-1.5	-1.1	0.2
Oct-23	-0.3	-0.2	-0.1	0.2	-0.2	-1.3	-0.7	-1.0	2.0	-0.3	-0.7	-2.1	0.3
Nov-23	-0.4	-0.2	-0.1	0.1	-0.4	-0.9	-1.4	-1.7	0.1	-2.1	0.2	-1.7	0.2
Dec-23	-0.3	-0.2	0.1	-0.4	-0.5	-0.2	-1.0	-0.9	-2.6	-3.0	0.5	-0.8	0.2
Jan-24	-0.1	0.0	0.5	-0.5	-0.5	0.4	-0.2	0.1	-1.6	-2.8	-0.1	0.0	0.1
Feb-24	0.0	0.1	0.9	-0.7	-0.7	0.7	0.1	0.5	-0.4	-1.9	-0.4	0.0	0.1
Mar-24	0.2	0.3	1.0	-0.5	-0.2	1.0	0.1	0.3	1.0	-0.8	0.0	0.0	0.0

**Percentage change, month on same month in previous year**

Dec-22	1.1	1.1	2.1	-2.3	1.9	4.4	-2.8	-3.1	0.8	-6.1	-0.6	6.1	0.7
Jan-23	1.1	1.5	2.4	-0.4	-0.1	4.3	-2.5	-1.8	-1.6	-15.7	-0.9	3.2	0.5
Feb-23	0.6	0.7	2.3	-0.8	-2.1	2.0	-2.3	-1.4	-3.2	-12.1	-2.1	5.8	0.1
Mar-23	0.2	0.1	1.7	-1.0	-3.2	1.5	-1.2	-0.5	1.7	-15.4	0.1	3.5	-0.3
Apr-23	0.6	0.6	1.4	0.8	-2.9	2.2	-0.9	0.8	-1.4	-16.8	-3.3	2.9	-0.4
May-23	-0.3	-0.1	-0.1	0.8	-2.6	1.2	-2.0	-0.3	-4.7	-17.0	-3.4	0.3	-0.7
Jun-23	1.4	1.1	0.4	2.8	-1.3	2.7	1.5	4.1	-3.5	-16.1	-3.7	4.6	-0.8
Jul-23	0.4	0.2	0.2	2.0	-1.6	-1.5	1.0	3.7	-2.4	-20.1	-3.0	2.8	-0.8
Aug-23	0.3	0.1	0.0	2.0	-1.3	-1.5	1.2	2.9	-0.7	-8.6	-4.8	-0.1	-0.5
Sep-23	0.8	0.6	0.3	2.2	-0.2	-0.5	1.2	3.0	0.8	-13.4	-3.0	0.0	0.1
Oct-23	-0.5	-0.5	-0.4	0.9	-1.8	-2.1	-0.5	0.5	-1.5	-12.3	-0.5	-0.7	0.1
Nov-23	-0.3	-0.3	-0.3	0.9	-1.4	-1.6	0.1	1.9	-1.7	-14.2	-3.1	-1.0	0.4
Dec-23	0.0	0.1	0.0	2.1	-1.9	-0.6	0.6	2.3	-3.6	-8.8	-3.3	-1.7	0.4
Jan-24	-0.4	-0.6	0.4	0.5	-1.8	-3.2	0.2	1.4	-2.4	-2.8	-3.0	0.1	0.4
Feb-24	-0.4	-0.3	0.3	0.4	-1.5	-1.6	0.3	1.4	-1.3	-6.9	-1.3	-2.4	0.3
Mar-24	0.0	0.2	0.8	0.0	0.1	0.1	-0.4	0.9	-4.5	-4.1	-3.5	-2.2	0.4

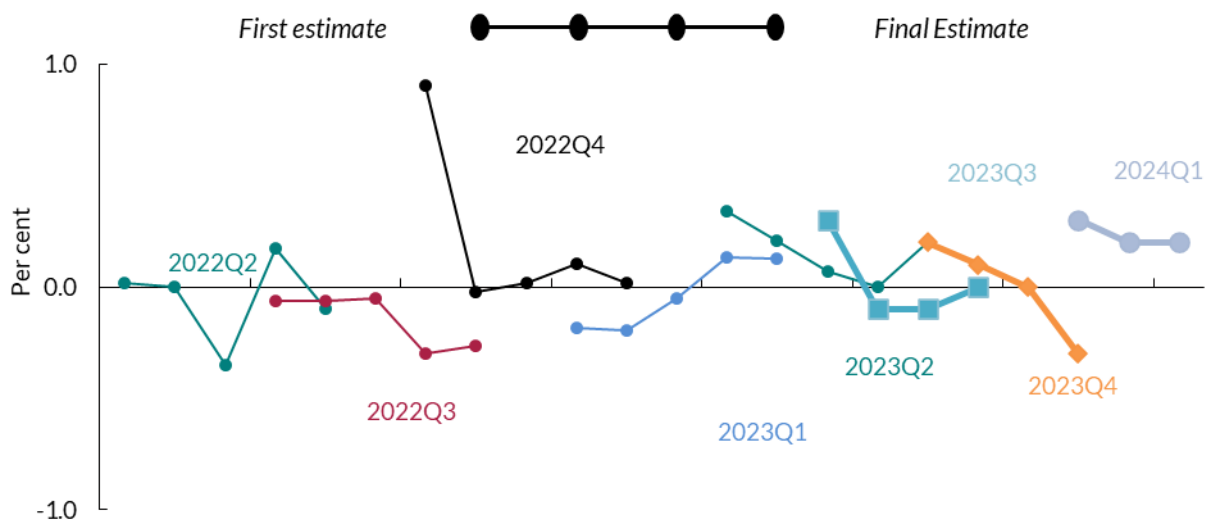
**Percentage change, month on previous month**

Dec-22	-0.3	-0.6	0.2	-1.6	-0.8	-0.7	0.1	0.4	3.1	-7.7	-0.2	0.8	0.0
Jan-23	0.5	0.9	0.1	1.4	0.5	2.8	-0.1	0.3	-0.6	-6.0	0.1	-1.8	-0.1
Feb-23	0.1	-0.1	0.3	0.1	-0.3	-1.2	0.0	0.0	-1.5	4.7	-1.5	2.6	0.2
Mar-23	-0.3	-0.5	-0.2	0.3	-1.6	-1.4	0.7	0.5	3.2	-3.1	2.3	-0.2	0.0
Apr-23	0.1	0.2	-0.1	-0.1	1.2	0.4	0.2	0.6	-1.8	0.0	-1.9	-0.7	0.0
May-23	-0.3	-0.1	-0.3	0.6	-0.6	0.0	-0.9	-0.5	-4.9	0.3	-1.8	-0.3	-0.1
Jun-23	0.7	0.3	-0.1	0.5	0.7	0.5	2.7	3.2	2.1	-1.3	1.3	1.6	0.0
Jul-23	-0.5	-0.4	0.0	-0.3	-0.4	-2.0	-1.0	-1.2	0.6	-0.2	-1.1	-0.5	0.1
Aug-23	0.0	0.1	0.1	0.2	0.1	0.2	-0.4	-0.5	0.7	2.9	-1.6	-2.3	0.1
Sep-23	0.0	0.0	-0.3	0.5	-0.4	0.0	-0.1	-0.3	2.9	-3.0	1.3	0.0	0.1
Oct-23	-0.5	-0.3	0.0	-0.7	0.0	-0.9	-1.4	-1.3	-4.8	-1.7	0.9	0.0	0.1
Nov-23	0.2	0.2	0.1	0.1	0.3	0.8	0.5	0.8	-0.2	0.5	-1.0	0.0	0.0
Dec-23	-0.1	-0.1	0.4	-0.5	-1.3	0.2	0.6	0.8	1.1	-1.8	-0.4	0.0	0.0
Jan-24	0.1	0.2	0.5	-0.1	0.6	0.2	-0.5	-0.5	0.6	0.1	0.5	0.0	0.0
Feb-24	0.1	0.2	0.2	0.0	0.0	0.5	0.0	0.1	-0.5	0.2	0.2	0.0	0.0
Mar-24	0.1	0.1	0.2	-0.1	0.0	0.3	0.0	0.1	0.0	-0.1	0.1	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 10 - 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 December, compared with the previous three months, against the forecast for each in our January GDP Tracker.

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

	GDP	Index of Services	Index of Production	Manufacturing	Mining and Quarrying	Index of Construction
Forecast	0.0	0.2	-1.3	-1.4	-2.0	-0.5
Outturn	-0.3	-0.2	-1.0	-0.9	-3.0	-0.8

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](mailto:press@niesr.ac.uk) or Luca Pieri on 020 7654 1954 / [l.pieri@niesr.ac.uk](mailto:l.pieri@niesr.ac.uk)

National Institute of Economic and Social Research  
2 Dean Trench Street  
Smith Square  
London, SW1P 3HE  
United Kingdom

Switchboard Telephone Number: 020 7222 7665

Website: <http://www.niesr.ac.uk>