National Institute of Economic and Social Research

NIESR Monthly GDP Tracker

Unexpected Drop In Manufacturing Worsens Q3 Outlook

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"GDP contracted by 0.3% in August, possibly signalling the beginning of an economic recession. The significant drop in private sector output was led by an unexpected contraction of 1.6 per cent in the manufacturing sector – a percentage point worse than we had forecasted last month. Given that September PMIs point to further decreases in this sector due to rising uncertainty, weakened economic conditions and increases in borrowing rates, it is likely that UK manufacturing will continue to drag on the real economy in the third quarter. But, despite this negative outlook, we expect the fiscal expansion announced in the recent mini-budget will cut the recession short and UK GDP will see positive growth in the fourth quarter of this year."

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Main points

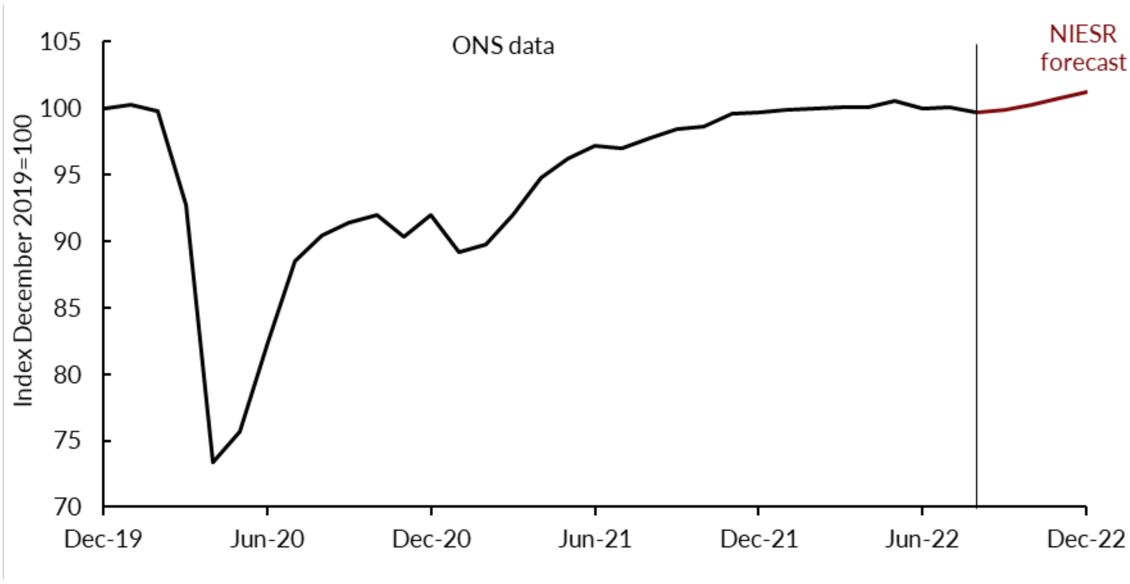
- GDP contracted by 0.3 per cent in August, worse than our forecast last month of no change between July and August. This unexpected dampening was driven by a significant drop of 1.6 per cent in manufacturing, though a sharp decrease of 8.2 per cent in mining and quarrying may have also contributed to overall reduced output in production.

- Seeing as the S&P Global/CIPS UK Manufacturing PMI for September registered a figure below the neutral 50 for the second consecutive month, and its global counterpart recorded a 28-month low in the new-orders-to-inventory ratio, there are signs that sluggish demand in the production sector will continue to drive recessionary risks in the third quarter of 2022. It is notable that these surveys attribute Brexit-related difficulties as having disrupted the possibility of boosting UK production demand via trade despite the recent depreciation of sterling.

- As the UK economic outlook worsens, heightened uncertainty continues to weigh on business and consumer confidence. September PMIs recorded two-year lows in business expectations and confidence for the year ahead for services and construction sectors, respectively.

- Despite the negative outlook for the third quarter of this year, we expect the energy price guarantees for households and firms announced in September's fiscal event to drive GDP growth higher in the fourth quarter. The extent to which the measures in the mini-budget will counter the dampening effects of plummeting confidence and increased interest rates will become clearer over the coming months.

Figure 1 - UK GDP



Economic setting

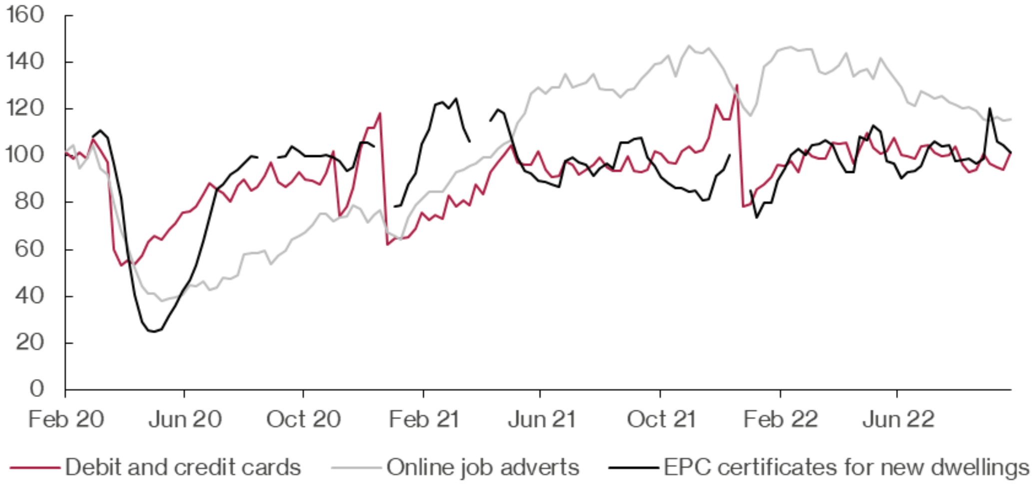
In our Summer UK Economic Outlook published on August 2, we outlined that the UK economy is likely to enter recession in the third quarter of 2022 and remain there until the first quarter of 2023, with our forecast for year-on-year GDP growth at 3.5 per cent in 2022 and 0.5 per cent in 2023.

Last month's expansionary fiscal event shocked our forecasted path of UK GDP. While we still forecast that the UK economy will contract in the third quarter of 2022, we now expect that increased government spending in the form of the announced energy price guarantee and tax cuts will lead to significant GDP growth of 0.9 per cent in the fourth quarter of 2022. We thus believe the 'mini-budget' will moderate the current economic downturn, though it is likely that its inflationary consequences will drag on medium-term growth. We will take these considerations into account when we produce our updated forecast of the UK economy for our Autumn UK Economic Outlook, to be released on November 8.

Over the past few months, the defining features for UK households and businesses have been the high and continuously rising inflation, caused first by supply chain disruptions in the recovery from Covid-19 in 2021 and by higher energy and food prices which have followed Russia's invasion of Ukraine in February 2022. The rapid rise in inflation, especially in energy prices, has led to a cost-of-living crisis felt across the country, with consumer confidence falling sharply. Yesterday's wage tracker indicates that real regular pay continues to fall by record levels. As the crisis maintains its squeeze on consumer disposable incomes and living standards, the private sector will keep facing a difficult environment. It will be interesting to see what impact, if any, the mini-budget will have in this respect.

High frequency indicators suggest that vacancies are gradually decreasing, consistent with yesterday's ONS estimates, though August figures remain 13% higher than that recorded in February 2020. At the same time, average weekly card spending in July was close to the average recorded in February 2020. (See Figure 2.)

Figure 2 – Spending and hiring indicators (weekly indices)



Notes: (a) England and Wales. Debit and credit cards (CHAPS-based): 100 = February 2020, percentage change on a backward looking seven-day rolling average, non-seasonally adjusted, nominal prices. Job adverts: change from the same week in 2019. EPC certificates: change from the same week in 2019/2020, four–week rolling average, adjusted for timing of holidays.

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

News in latest ONS data

The monthly GDP data for August were worse than we had forecast in September, falling by 0.3 per cent month-on-month, rather than staying flat. GDP also contracted by 0.3 per cent on a rolling three-month basis (see Figure 3).

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

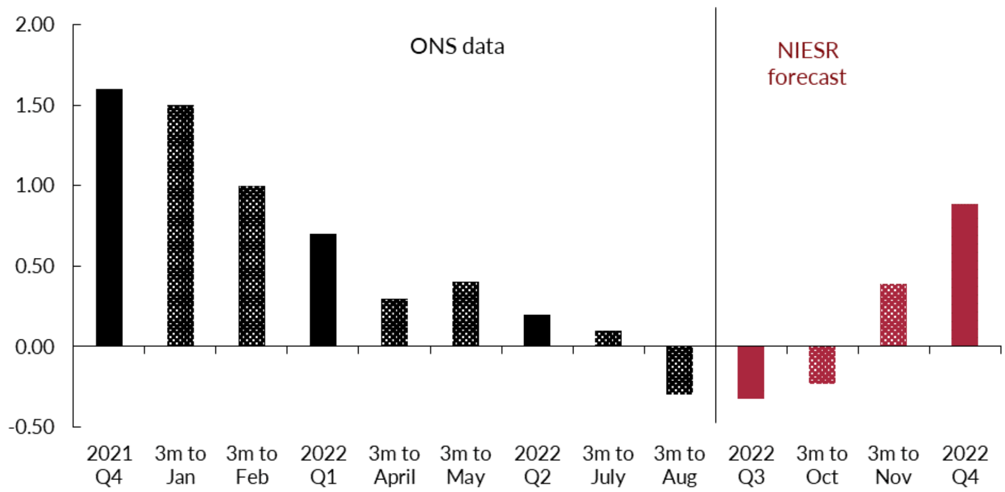


Figure 4 shows how our short-term forecasts for recent quarters have changed as new information has become available.

Figure 4 - Evolution of the NIESR quarterly GDP forecast (3 months on previous 3 months, per cent)

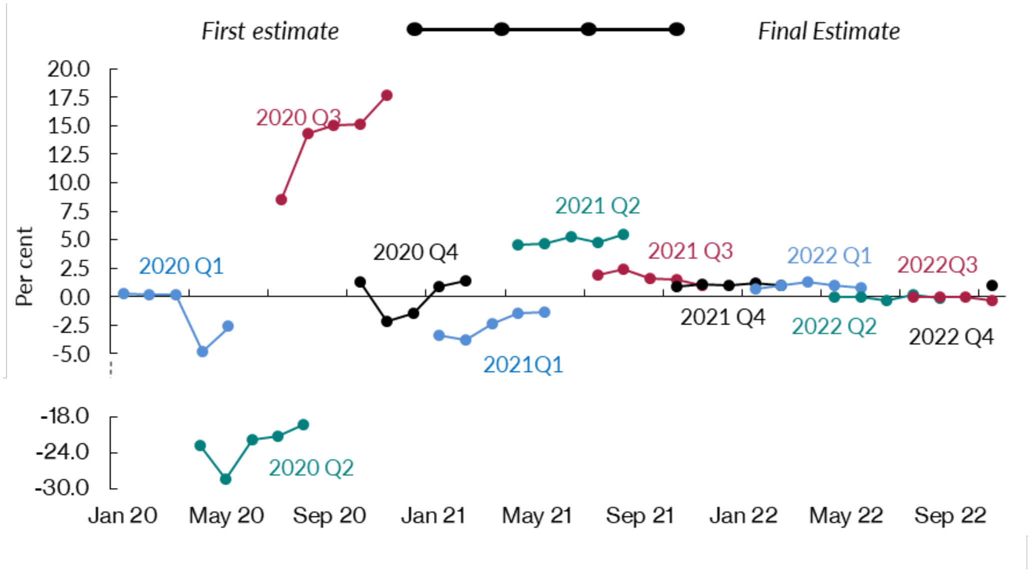


Figure 5 shows a heat map of the data surprises across sectors in the monthly data, relative to last month's GDP Tracker, highlighting the sectors where the surprises are large relative to the volatility of the output data. This month, there were positive surprises in the distribution, hotels and restaurants, and construction sectors, with negative surprises in all other sectors except for transport, storage and communication.

Figure 5 – Surprises in monthly data

	03/21	04/21	05/21	06/21	07/21	08/21	09/21	10/21	11/21	12/21	01/22	02/22	03/22	04/22	05/22	06/22	07/22	08/22
Business services and finance	1.0	-0.2	0.0	0.4	-0.8	-0.4	0.7	-0.2	0.4	0.1	-0.1	0.2	-0.1	0.0	0.4	-0.4	0.0	-0.1
Government	0.5	2.0	1.1	0.4	-0.4	0.5	0.9	0.3	0.9	0.1	-0.4	-0.5	0.1	-0.1	0.1	0.0	0.3	-0.5
Distribution , Hotels and Restaurants	-0.1	1.0	-0.6	0.0	-0.6	0.3	-0.2	-0.2	-0.1	0.1	0.1	0.0	0.0	-0.1	-0.1	0.2	0.0	0.1
Transport, Storage and Communication	0.0	0.6	-0.2	0.1	0.2	0.1	-0.5	0.5	0.2	0.4	0.4	0.2	-0.2	0.1	0.2	-0.4	0.0	0.0
Manufacturing	-0.2	-0.5	0.1	-0.6	-0.4	-0.2	-0.3	-0.1	-0.2	0.0	-0.7	-0.4	0.0	-0.4	0.1	-0.4	-0.7	-0.6
Electricity	-0.2	1.1	2.8	-2.0	-0.7	-1.3	-0.3	-1.3	0.1	-0.1	0.6	0.3	-0.5	0.4	1.1	1.0	-0.1	-0.5
Extraction	0.3	-3.2	0.1	-2.5	2.6	1.6	-1.9	-0.2	-0.5	-0.8	0.6	0.1	0.1	-0.2	0.4	-0.4	0.4	-1.2
Water Supply, Sewerage, Waste Management	0.2	-0.9	-0.1	1.3	0.5	-0.8	-1.0	1.6	0.1	0.6	0.7	-0.3	0.3	1.3	-0.4	0.6	-1.8	-0.4
Construction	0.1	-0.1	-0.4	-0.3	0.0	-0.2	0.3	-0.3	0.3	0.2	0.4	-0.1	0.1	0.0	0.2	-0.2	0.0	0.1
Agriculture	0.5	-0.7	-0.1	0.2	0.5	0.6	0.2	0.0	-0.3	-0.1	-0.1	0.1	0.1	0.0	0.0	-0.1	-0.1	-0.1

← 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.

Table 1 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 September GDP Tracker.

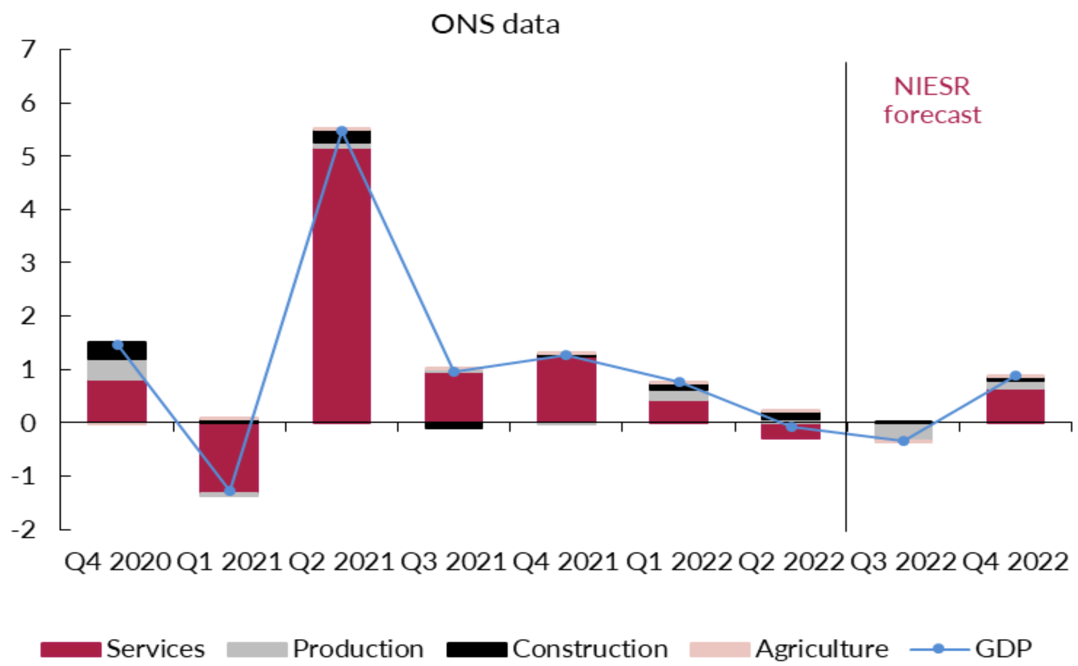
Table 1 – 3-month-on-3-month growth to August

	GDP	**Index of Services**	**Index of Production**	Manufacturing	Mining and Quarrying	Index of Construction
Forecast	-0.2	-0.3	-0.2	-0.7	0.3	-0.7
Outturn	-0.3	-0.1	-1.4	-2.3	-2.7	0.0

Sectoral detail

We forecast GDP to decrease by 0.3 per cent in the third quarter of 2022. Our early estimate for the fourth quarter of 2022 is for GDP to grow by 0.9 per cent, driven by the large government support given to households and firms to deal with higher energy bills (roughly 5 per cent of GDP) outlined in last month's 'mini-budget'.

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



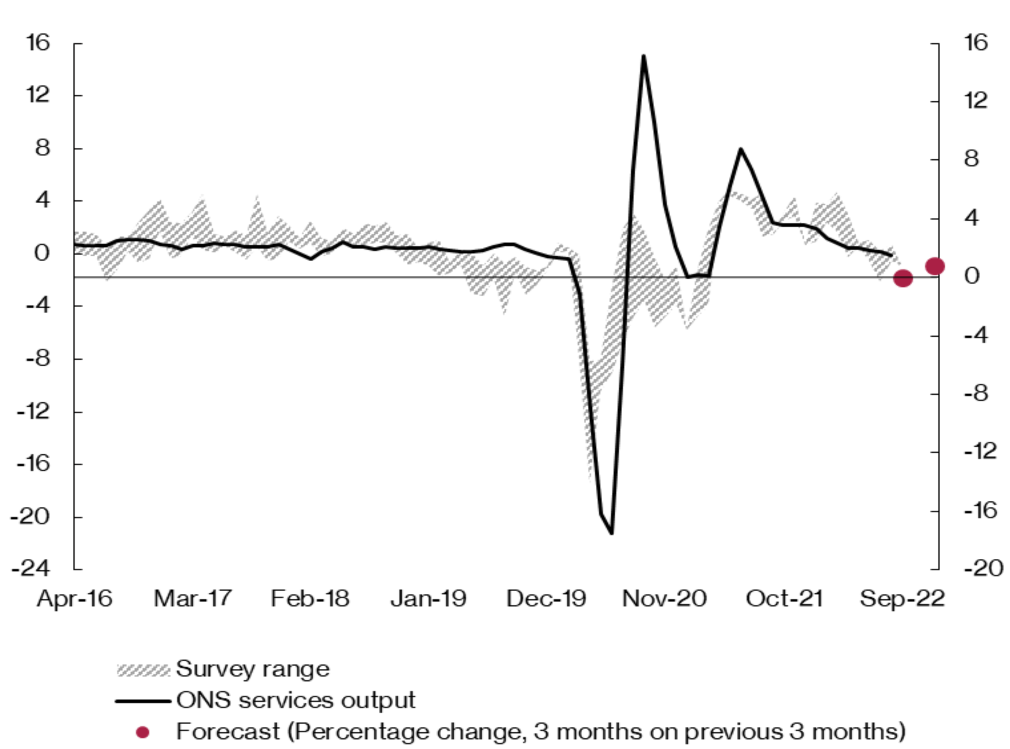
Services (80 per cent of GDP)

The survey balances point to a slight fall in services in September, as shown by the swathe of survey indicators in figure 7. The S&P Global/CIPS UK Services PMI registered a headline business activity balance of 50.0 in September, down from 50.9 in August, representing the weakest service sector performance since February 2021, when the UK remained in a national lockdown. This flattening of output is driven by lower volumes of new work and increasing business costs, including those resulting from demand-side wage pressure. Survey data shows service providers attributing overall lower order levels to plummeting confidence and cost-cutting efforts by clients worried about the ongoing cost of living crisis. A fall in export sales also contributed to decreased demand in services, generated by Brexit-related trade difficulties that disrupted possible gains from the recent depreciation of sterling. It is no surprise that business expectations for the year ahead have fallen to their lowest level since May 2020.

Internationally, the JPMorgan Global Services Business Activity index rose to 50.0 in September, a welcome increase from the previously recorded decrease of 49.3 in August. The JPMorgan Global Composite Output Index increased to 49.7 from the previously recorded 26-month low of 49.3 in August. Overall, these figures indicate a moderation of the global economic downturn in services.

Based on recent developments we expect UK service sector activity to remain unchanged in the third quarter of 2022 relative to the second quarter. Our early estimate of the fourth quarter of this year sees service sector activity increasing by 0.8 per cent as a result of the mini-budget, alongside rising healthcare services driven by Covid and flu jabs.

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 forecast that production sector output will fall by 2.3 per cent but increase by 1.1 per cent in the third and fourth quarters respectively, 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 is manufacturing, accounting for 10 per cent of GDP.

Manufacturing (10 per cent of GDP)

The S&P Global/CIPS UK manufacturing PMI for September increased to 48.4 from the previously observed 27-month low of 47.3 in August. The S&P Global/CIPS UK Composite PMI – which combines comparable services and manufacturing indices – decreased from 49.6 in August to 49.1 in September, its lowest since January 2021. This measure, now below the neutral 50 for a second consecutive month, indicates reduced overall private sector output. Survey respondents linked decreased levels of new business to rising uncertainty, weakened economic conditions and increases in borrowing rates.

The JPMorgan Global Manufacturing Output PMI also fell to 49.8 in August, a 27-month low, from 50.3 in August. The global new-orders-to-inventory ratio has dropped to a 28-month low, stoking fears that sluggish demand in this sector will worsen global recessionary risks.

Our forecast for the third quarter of 2022 is for manufacturing output to fall by 2.7 per cent (Figure 8). Our forecast for the fourth quarter of 2022 is for an increase of 1.4 per cent, driven by the energy price support measures of the mini-budget.

Mining and quarrying (1 per cent of GDP)

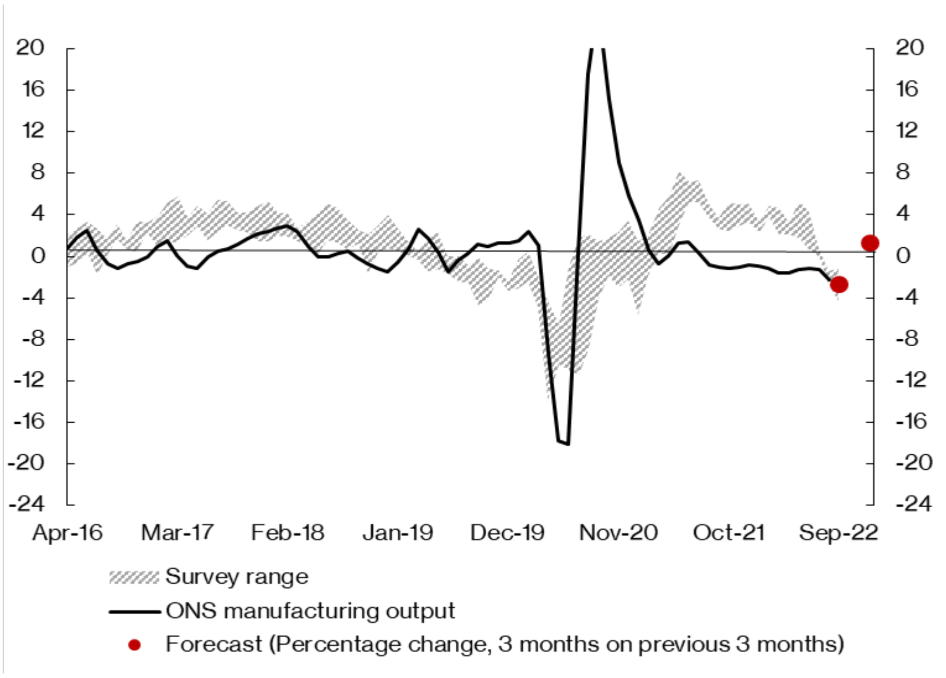
Mining and quarrying (extraction) is a small but erratic component of industrial production that can have an influence on overall GDP growth. We forecast a contraction of 3.7 per cent in the third quarter of 2022 and a further contraction of 2.2 per cent in the fourth quarter.

Construction (6 per cent of GDP)

The S&P Global/CIPS UK Construction PMI survey registered a significant rise to 52.3 in August, from 49.2 in August, signalling a return to growth in this sector after two months of contraction. Despite this positive outlook, survey respondents recorded a two-year low in business confidence in this sector. Housing activity was the best-performing category in September, though whether the mini-budget's cut on stamp duty will be enough to counter the threat of increasing interest rates to this component will become clearer over the coming months.

We expect construction output to increase by 0.2 per cent in the third quarter of 2022. In quarter four, we expect an increase of 0.9 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 2 - Summary Table of GDP growth (2019=100)

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
			Index of Services - Components					Index of Production - Components					
Latest weights	1000	796	339	217	133	108	136	102	15	6	13	61	7
Apr-21	95.2	92.5	100.5	86.4	81.4	93.4	109.1	110.9	120.5	75.2	110.8	99.9	99.3
May-21	96.6	93.9	100.6	89.2	86.3	92.8	110.9	111.6	130.3	78.5	111.0	99.2	100.7
Jun-21	97.6	95.6	101.6	91.3	88.6	93.7	108.8	110.6	120.2	71.3	113.6	98.2	102.4
Jul-21	97.4	95.3	101.1	91.2	88.1	94.9	109.0	110.0	116.6	83.7	114.3	98.1	103.9
Aug-21	98.2	96.3	101.1	92.7	90.2	95.7	109.4	110.0	112.4	95.5	112.9	97.4	105.1
Sep-21	98.8	97.1	102.6	94.8	89.8	94.9	108.3	109.5	110.2	90.9	111.5	98.4	104.9
Oct-21	99.0	97.6	102.4	95.6	88.9	97.1	107.5	108.9	105.3	90.2	114.7	97.7	105.0
Nov-21	100.0	98.8	103.5	98.0	88.8	98.0	107.6	108.8	108.4	88.3	115.0	99.2	104.7
Dec-21	100.1	98.7	103.8	98.8	86.2	98.6	107.7	109.0	108.6	85.5	115.8	100.1	104.8
Jan-22	100.3	99.0	103.8	97.7	87.5	100.6	107.2	107.5	110.6	89.9	116.5	101.4	105.0
Feb-22	100.4	99.2	104.7	96.5	88.1	101.5	106.9	107.0	111.0	90.3	116.4	101.4	105.5
Mar-22	100.5	99.2	104.9	96.2	88.3	101.0	106.9	107.0	109.4	91.3	117.5	102.8	105.9
Apr-22	100.5	99.3	105.0	95.8	88.2	101.5	106.7	106.2	111.7	89.2	120.1	102.6	106.0
May-22	101.0	99.7	106.1	95.9	87.4	102.6	107.1	106.3	114.5	90.4	119.2	103.5	106.2
Jun-22	100.4	99.1	105.4	95.8	87.8	101.2	106.8	105.4	117.6	89.2	120.2	102.7	106.2
Jul-22	100.5	99.4	105.8	96.3	87.6	101.8	105.6	104.3	115.2	91.0	117.1	102.8	105.9
Aug-22	100.1	99.3	106.0	95.1	87.5	102.1	103.7	102.6	114.5	83.5	117.1	103.2	105.6
Sep-22	100.3	99.4	106.0	95.1	87.5	102.2	103.9	102.5	116.0	84.3	117.8	103.4	105.5
Oct-22	100.7	99.7	106.3	95.6	87.7	102.6	104.7	103.4	116.8	85.4	117.9	103.8	105.5
Nov-22	101.2	100.2	106.7	96.1	88.2	102.9	105.5	104.6	117.8	84.1	118.1	104.1	105.7
Dec-22	101.7	100.6	107.3	96.6	88.3	103.2	106.4	105.7	118.0	83.7	118.3	104.4	105.9
	Percentage change, 3 months on previous 3 months												
Apr-21	1.9	2.1	1.9	1.7	4.5	1.5	-0.1	0.1	4.0	-10.7	1.9	4.7	2.4
May-21	4.5	5.2	1.6	9.3	12.8	3.3	0.8	1.3	6.0	-13.1	0.3	5.7	2.3
Jun-21	6.5	8.0	1.3	15.3	22.5	4.3	0.6	1.4	6.6	-17.6	0.1	3.8	2.3
Jul-21	5.0	6.4	0.9	12.2	17.9	3.3	0.4	0.4	4.0	-7.8	1.1	0.4	3.2
Aug-21	3.2	4.4	0.6	7.8	11.4	2.9	-0.8	-0.8	-4.8	2.9	2.0	-1.4	3.9
Sep-21	1.7	2.4	0.7	4.4	4.6	2.0	-0.6	-1.1	-8.6	20.0	1.0	-1.1	3.8
Oct-21	1.5	2.2	0.9	4.2	2.2	2.2	-1.1	-1.1	-10.7	18.5	0.1	-0.7	2.6
Nov-21	1.6	2.2	1.5	4.8	0.2	2.0	-1.2	-1.0	-7.2	7.5	0.1	0.6	1.0
Dec-21	1.6	2.2	1.6	4.9	-1.6	2.9	-1.2	-0.8	-5.0	-2.3	2.0	1.0	0.2
Jan-22	1.5	1.9	1.6	4.0	-2.4	3.3	-0.8	-0.9	-0.1	-4.7	2.4	2.4	-0.2
Feb-22	1.0	1.2	1.2	1.6	-2.1	3.7	-0.5	-1.1	1.9	-1.4	2.2	2.5	0.2
Mar-22	0.7	0.8	1.2	-0.7	0.0	3.2	-0.6	-1.6	2.7	2.8	1.4	2.9	0.6
Apr-22	0.3	0.4	1.1	-2.0	0.8	2.3	-0.6	-1.6	1.4	2.7	1.9	2.0	0.9
May-22	0.4	0.4	1.2	-1.7	0.8	1.5	-0.3	-1.2	1.6	2.0	2.3	2.0	0.9
Jun-22	0.2	0.2	1.0	-1.0	-0.2	0.7	-0.1	-1.1	3.9	-1.0	2.6	1.1	0.6
Jul-22	0.1	0.2	0.9	-0.2	-0.7	0.5	-0.3	-1.3	4.6	-0.1	0.7	0.8	0.3
Aug-22	-0.3	-0.1	0.4	-0.2	-0.4	0.0	-1.4	-2.3	3.5	-2.7	-0.7	0.0	-0.1
Sep-22	-0.3	0.0	0.4	-0.3	-0.3	0.2	-2.3	-2.7	0.6	-3.7	-2.1	0.2	-0.5
Oct-22	-0.2	0.1	0.3	-0.8	0.0	0.4	-2.3	-2.4	0.0	-6.4	-1.0	0.5	-0.5
Nov-22	0.4	0.5	0.6	-0.1	0.2	0.9	-0.6	-0.6	1.0	-3.8	-0.2	0.8	-0.3
Dec-22	0.9	0.8	0.8	0.6	0.6	0.9	1.1	1.4	2.0	-2.2	0.6	0.9	0.0
	Percentage change, month on same month in previous year												
Apr-21	29.3	25.5	10.0	39.1	70.6	26.4	34.4	48.5	20.5	-21.7	13.5	81.4	11.6
May-21	27.1	25.0	9.3	43.6	60.7	23.6	27.0	35.4	27.7	-20.8	13.1	62.5	10.8
Jun-21	17.9	18.2	7.3	37.5	28.2	15.0	11.6	17.3	10.8	-30.5	8.7	32.7	9.5
Jul-21	9.5	9.9	5.8	19.8	9.6	9.1	5.9	8.7	3.6	-17.9	8.2	12.7	9.6
Aug-21	8.2	8.9	6.0	16.9	4.0	8.8	4.3	5.5	-1.5	1.0	5.0	8.5	9.5
Sep-21	7.6	9.0	6.7	15.9	6.9	7.2	1.7	2.3	-3.8	-1.8	5.9	5.9	8.4
Oct-21	7.2	9.1	5.9	16.0	8.2	7.5	-0.1	0.4	-5.0	-5.2	7.0	3.2	9.4
Nov-21	10.3	13.4	7.0	21.7	24.9	9.3	-1.6	-2.2	-1.9	-4.0	6.8	4.2	9.2
Dec-21	8.4	10.8	4.1	20.6	15.2	10.3	-2.2	-1.8	-4.4	-11.7	4.6	6.8	7.8
Jan-22	12.1	15.1	5.3	29.1	29.4	12.7	-1.0	-0.9	-4.2	-5.2	5.4	10.1	7.8
Feb-22	11.4	14.8	5.7	27.0	26.0	14.2	-1.7	-2.2	-4.9	2.1	3.9	6.0	7.2
Mar-22	8.9	11.7	3.9	20.6	23.0	12.0	-2.6	-3.3	-5.6	1.8	4.5	4.3	6.2
Apr-22	5.5	7.4	4.5	10.9	8.4	8.7	-2.2	-4.2	-7.3	18.6	8.4	2.7	6.7
May-22	4.5	6.2	5.5	7.5	1.3	10.6	-3.4	-4.7	-12.1	15.2	7.4	4.3	5.5
Jun-22	2.9	3.7	3.7	4.9	-0.9	8.0	-1.8	-4.7	-2.2	25.1	5.8	4.7	3.7
Jul-22	3.1	4.3	4.6	5.6	-0.6	7.3	-3.1	-5.2	-1.2	8.7	2.4	4.8	1.9
Aug-22	2.0	3.1	4.8	2.6	-3.0	6.7	-5.2	-6.7	1.9	-12.6	3.7	6.0	0.5
Sep-22	1.6	2.4	3.3	0.3	-2.6	7.6	-4.1	-6.4	5.3	-7.3	5.7	5.1	0.5
Oct-22	1.7	2.2	3.8	0.0	-1.4	5.7	-2.6	-5.0	10.9	-5.4	2.8	6.2	0.5
Nov-22	1.2	1.4	3.1	-2.0	-0.7	5.0	-1.9	-3.9	8.7	-4.8	2.7	4.9	0.9
Dec-22	1.6	1.9	3.3	-2.3	2.5	4.7	-1.2	-3.0	8.6	-2.1	2.1	4.3	1.0
	Percentage change, month on previous month												
Apr-21	3.2	4.2	-0.5	8.3	13.4	3.5	-0.5	0.2	4.0	-16.2	-1.4	1.4	-0.4
May-21	1.4	1.5	0.1	3.2	6.0	-0.6	1.6	0.6	8.1	4.4	0.2	-0.7	1.4
Jun-21	1.0	1.8	1.0	2.4	2.7	1.0	-1.9	-0.9	-7.8	-9.2	2.3	-1.0	1.7
Jul-21	-0.2	-0.3	-0.5	-0.1	-0.6	1.3	0.2	-0.5	-3.0	17.4	0.6	-0.1	1.5
Aug-21	0.8	1.0	0.0	1.6	2.4	0.8	0.4	0.0	-3.6	14.1	-1.2	-0.7	1.2
Sep-21	0.6	0.8	1.5	2.3	-0.4	-0.8	-1.0	-0.5	-2.0	-4.8	-1.2	1.1	-0.2
Oct-21	0.3	0.5	-0.2	0.8	-1.0	2.3	-0.7	-0.5	-4.4	-0.8	2.9	-0.8	0.1
Nov-21	1.0	1.2	1.1	2.5	-0.1	0.9	0.1	-0.1	2.9	-2.1	0.3	1.5	-0.3
Dec-21	0.0	-0.1	0.3	0.8	-2.9	0.6	0.1	0.2	0.2	-3.2	0.7	0.9	0.1
Jan-22	0.2	0.3	0.0	-1.1	1.5	2.0	-0.5	-1.4	1.8	5.1	0.6	1.3	0.2
Feb-22	0.1	0.2	0.9	-1.2	0.7	0.9	-0.3	-0.5	0.4	0.4	-0.1	0.0	0.5
Mar-22	0.1	0.0	0.2	-0.3	0.2	-0.5	0.0	0.0	-1.4	1.1	0.9	1.4	0.4
Apr-22	0.0	0.1	0.1	-0.4	-0.1	0.5	-0.2	-0.7	2.1	-2.3	2.2	-0.2	0.1
May-22	0.4	0.4	1.0	0.1	-0.9	1.1	0.4	0.1	2.5	1.3	-0.7	0.9	0.2
Jun-22	-0.5	-0.6	-0.7	-0.1	0.5	-1.4	-0.3	-0.8	2.7	-1.3	0.8	-0.7	0.0
Jul-22	0.1	0.3	0.4	0.5	-0.2	0.6	-1.1	-1.0	-2.0	2.0	-2.6	0.1	-0.3
Aug-22	-0.3	-0.1	0.2	-1.2	-0.1	0.3	-1.8	-1.6	-0.6	-8.2	0.0	0.4	-0.3
Sep-22	0.2	0.1	0.0	0.0	0.0	0.1	0.2	-0.1	1.3	1.0	0.6	0.2	-0.1
Oct-22	0.4	0.4	0.3	0.5	0.2	0.5	0.8	0.9	0.7	1.2	0.1	0.3	0.0
Nov-22	0.5	0.4	0.4	0.5	0.6	0.3	0.8	1.1	0.9	-1.5	0.1	0.3	0.2
Dec-22	0.5	0.4	0.5	0.5	0.2	0.3	0.8	1.1	0.1	-0.5	0.2	0.3	0.2

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.

NIESR's short-term predictions of monthly GDP growth are based on bottom-up analysis of recent trends in the monthly sub-components of GDP. These predictions are constructed by aggregating statistical model forecasts of ten sub-components of GDP. The statistical models that have been developed make use of past trends in the data as well as survey evidence to build short-term predictions of the sub-components of monthly GDP. These provide a statistically-based guide to current trends based on the latest available data. Each month these predictions are updated as new ONS data and new surveys become available.

It is important to stress that the timelier NIESR guide to quarterly GDP growth is less reliable than the subsequent ONS data releases as its data content is lower, particularly for estimates of the current quarter which in some months will be based only on forecasts rather than hard data. To mitigate this issue, NIESR provides a guide to average errors based on past performance. NIESR also provides clear guidance on how the latest news has caused its estimates of GDP growth in the current and preceding quarter to change and thereby quantify how the short-term outlook is being affected by recent data releases.

As the bottom-up methodology for producing estimates of GDP growth for the current and preceding quarters is still relatively new, we do not yet have a long track record of estimates produced by this approach. To check how our methodology would work in real time we went back to late 2016 to produce judgement-free forecasts of GDP growth in future months based on the monthly data series available for the components in November 2016 (this was the earliest vintage then available on the ONS website) and in each subsequent three months. These are shown in Table 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 (%)

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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