

NIESR

Monthly GDP Tracker

Growth in Monthly GDP in October Masks Risks to Q4 Outlook

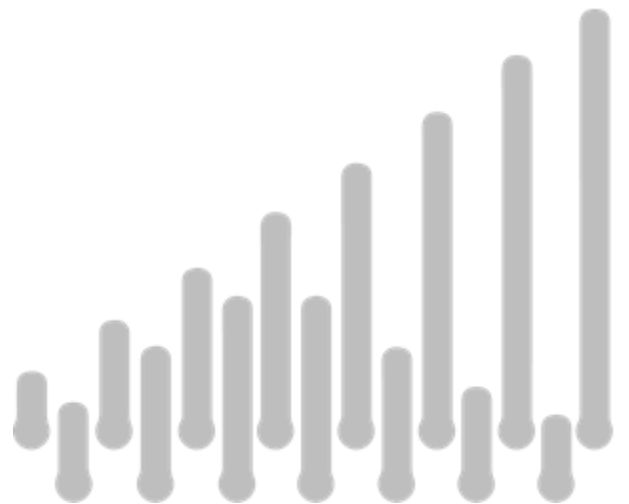
Paula Bejarano Carbo and Joanna Nowinska

12 December 2022

“Monthly GDP grew by 0.5 per cent in October, in line with our forecast last month, driven by a strong pick-up in wholesale and retail trade, and repair of motor vehicles and motorcycles, which seem to have been strongly affected by the additional September bank holiday. Despite this positive outlook from the monthly growth figure, there are still strong downside risks to GDP in the fourth quarter of this year due to high inflation and interest rates – which continue to suppress demand – and supply chain disruptions, as well as work backlogs due to industrial action and a tight labour market – which continue to weigh on business growth. We still expect GDP to remain flat in the fourth quarter of this year.”

Paula Bejarano Carbo

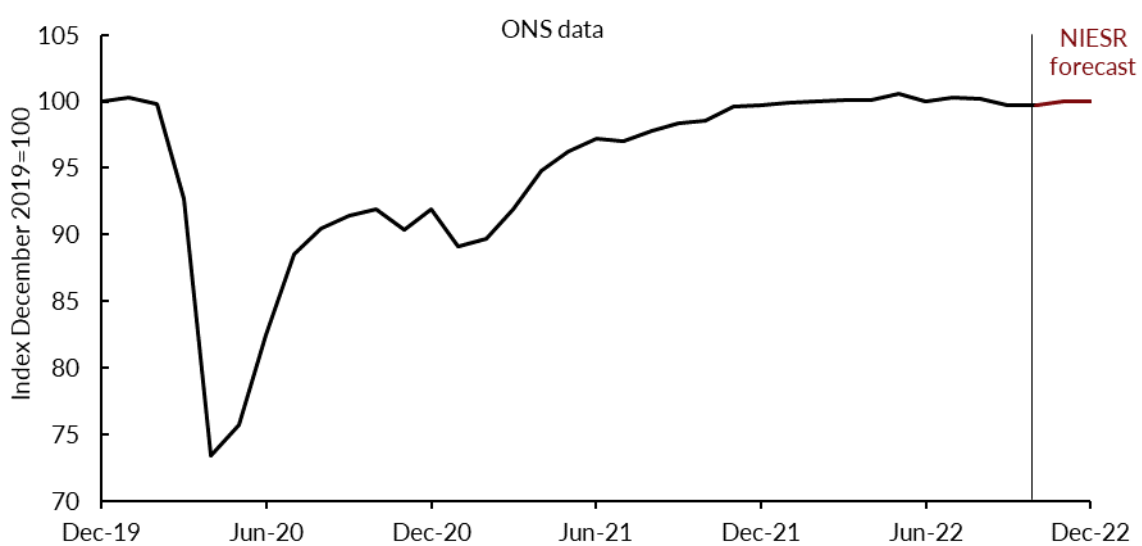
Associate Economist, NIESR



Main points

- Though GDP in October grew by 0.5 per cent relative to September, this figure largely reflects the weakness in September resulting from the additional Bank Holiday for the State Funeral of HM Queen Elizabeth II. So, despite the seemingly positive outlook given by the monthly figure, our forecast suggests that the risk of a contraction in GDP in the last quarter of this year remains elevated.
- GDP contracted by 0.3 per cent in the three months to October, consistent with our forecast last month. This was driven by a 1.7 per cent decrease in production.
- The S&P Global/CIPS UK PMIs for November recorded headline business activity balances below the neutral 50 for both the manufacturing and services sectors and a balance of 50.4 for the construction sector. These figures point to a strong risk that anaemic business activity will drag on GDP growth in the fourth quarter of 2022.
- Despite survey data indicating that business confidence improved in November relative to the slump caused by the Truss government and its 'mini-budget', firms in all three sectors continue to have an overwhelmingly pessimistic outlook. Elevated prices, interest rates and uncertainty, which continue to limit household and businesses spending, alongside supply-side issues like labour shortages and strike action, all bode poorly for UK economic performance in the fourth quarter of this year. That said, we expect growth in the construction sector alongside the seasonal increase in consumption to result in GDP remaining flat in Q4.

Figure 1 - UK GDP



Economic setting

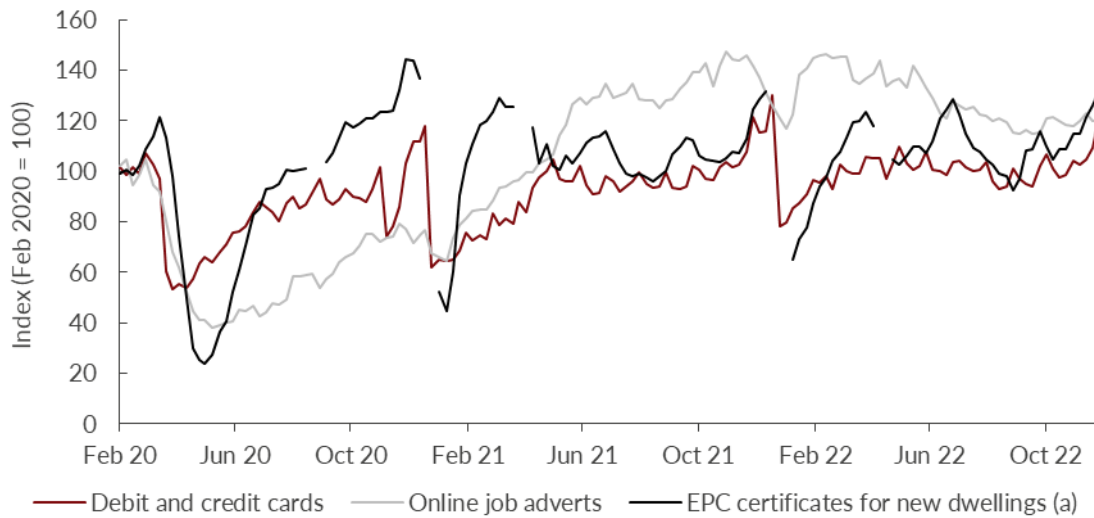
In our [previous GDP tracker](#), published 11 November, we described how sluggish domestic demand and a steep decline in manufacturing and services output led to an overall contraction in GDP in the third quarter of 2022. Despite this contraction, we forecasted GDP to remain flat in the fourth quarter of this year, expecting the energy price guarantees for households and firms and growth in the construction sector to offset the recessionary risks posed by a high-inflation, low-growth environment.

On 17 November, the U.K witnessed yet another fiscal event. In [our response to the Chancellor's Autumn Statement](#), we noted first and foremost that the Chancellor should have provided more support to households given that they are facing the largest fall in their real incomes since records began in 1956. There were many policy announcements that represented steps in the right direction to reducing recessionary risks – including maintaining spending commitments for public infrastructure projects. However, in failing to provide sufficient support to lower and middle-income households, not only will many households be worse off, but the downside risks to output caused by decreased spending have been amplified. Effective tax rises for all working people and further increases in energy bills for those not on Universal Credit are two prominent consequences of the Autumn Statement that will lower consumption.

Today's data suggests that GDP grew in October relative to September. This positive outlook for the monthly figure, however, largely reflects the weakness in September resulting from the additional Bank Holiday for the State Funeral of HM Queen Elizabeth II. In our recent [Autumn Economic Outlook](#), we outlined that fragile consumer and business confidence, a widespread fall in real incomes, low investment growth, and Brexit-related trade difficulties all bode poorly for output growth in the short and medium-term. As a result, we believe that the risk of a contraction in GDP in the last quarter of this year remains elevated and we still expect a contraction in GDP in the first quarter of 2023.

To further contextualise our Q4 outlook, figure 2 compares spending and hiring indicators to pre-pandemic levels, while figure 3 records recent trends in PMIs. High frequency indicators suggest that economic activity may pick up slightly in the fourth quarter of 2022: debit and credit card spending has seen a steep increase since October, as is expected in the run in to Christmas, matched by housing growth. Figure 3 illustrates a slowing in the services and manufacturing sectors' contractions, though worryingly points to reduced construction growth in November. Taken together, figures 2 and 3 suggest that a short-term boost to consumption spending might offset the risk of sluggish supply-side growth in the fourth quarter of this year. These indicators are thus consistent with our forecast of flat GDP in Q4 but a contraction in GDP in the first 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

News in latest ONS data

The monthly GDP data for October were consistent with our November forecast, growing by 0.5 per cent month-on-month. GDP contracted by 0.3 per cent on a rolling three-month basis.

Figure 4 – UK GDP growth (3 months on previous 3 months, per cent)

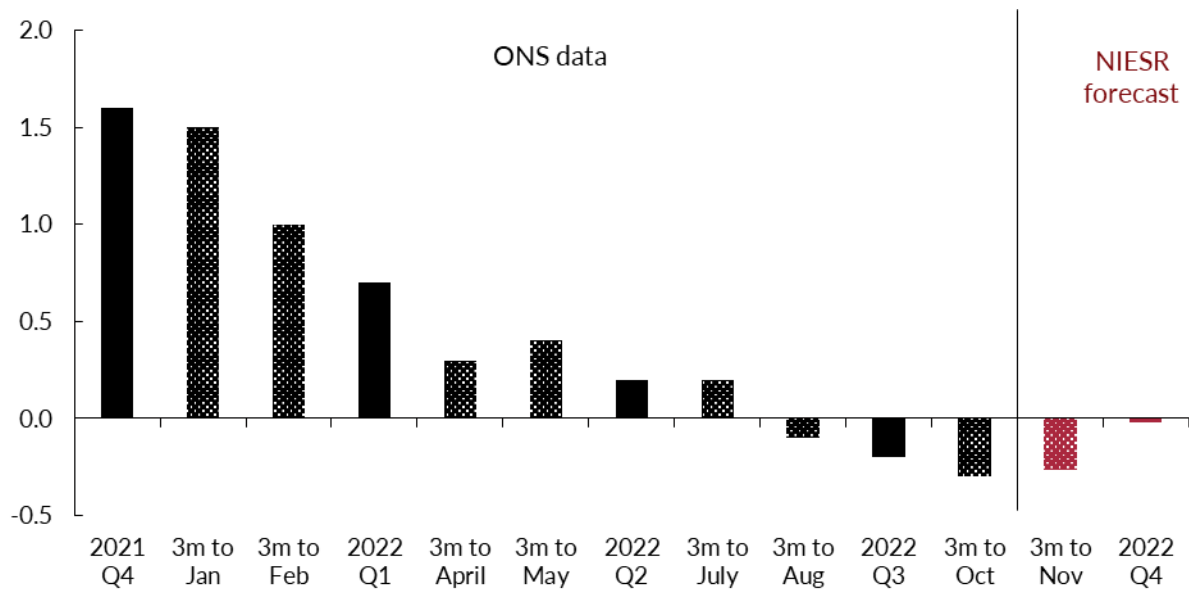
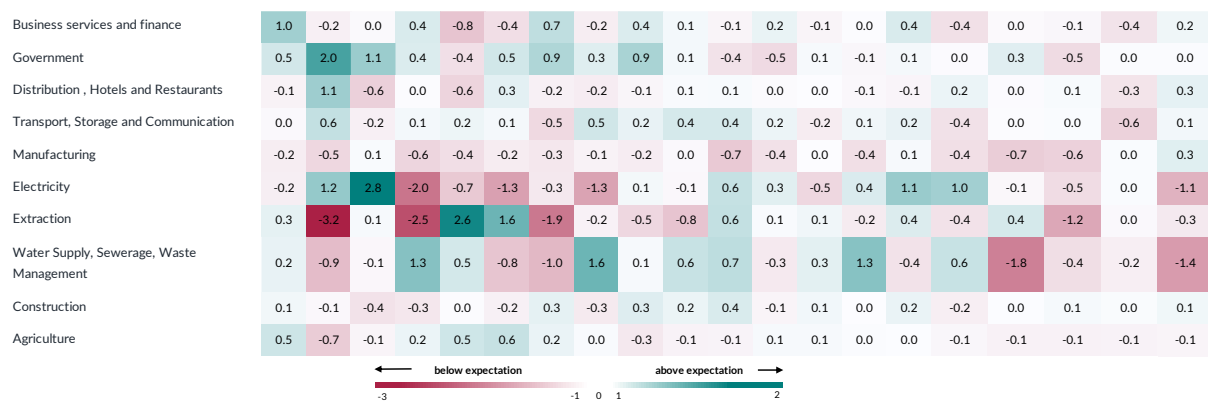


Figure 5 shows a heat map of the data surprises across sectors in the monthly data, relative to last month's GDP Tracker, highlighting the sectors where the surprises are large relative to the volatility of the output data. This month, there were large negative surprises in the electricity, gas, steam and air conditioning supply – resulting from the milder than usual temperatures in October – and water supply, sewerage and waste management sectors.

Figure 5 – Surprises in monthly data



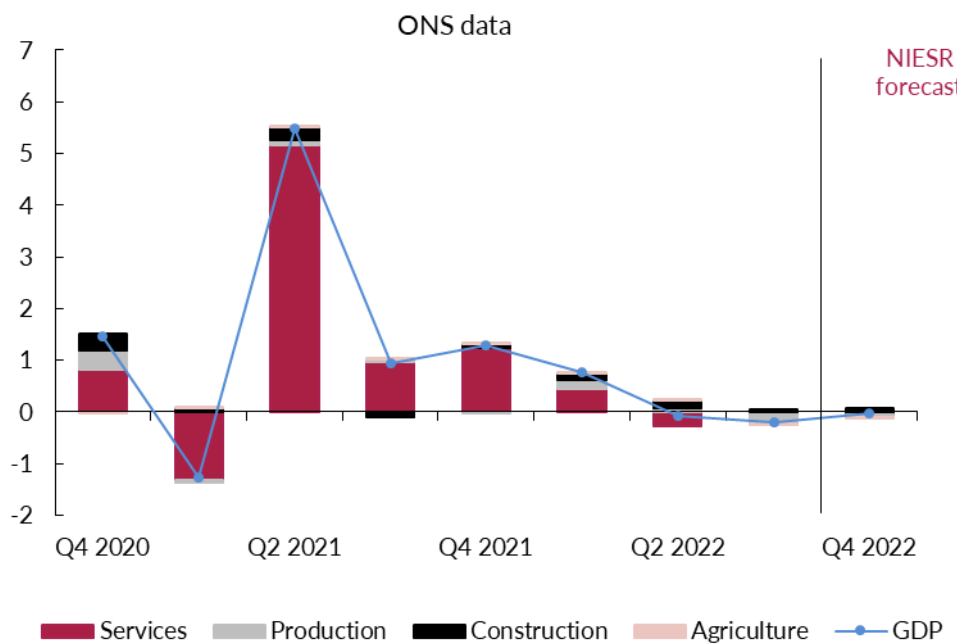
Note: Cells show forecast errors as a fraction of the standard deviation of errors for each series. Green cells are greater than expected, red cells are less than expected.

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

Sectoral detail

We forecast GDP to remain flat in the fourth quarter of 2022, as seasonal spending and growth in the construction sector will be largely offset by underwhelming business activity and the effects of high inflation and interest rates.

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



Services (80 per cent of GDP)

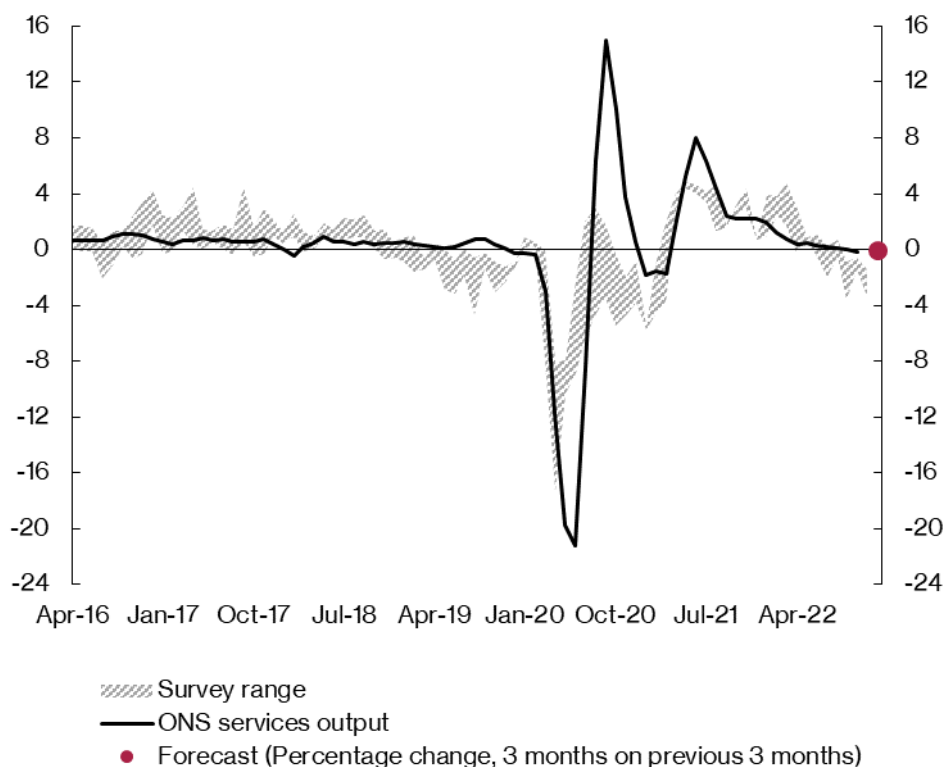
The survey balances point to the third consecutive month of contracting business activity in the services sector, as shown by the survey indicators in figures 3 and 7. The S&P Global/CIPS UK Services PMI registered a headline business activity balance of 48.8 in November, unchanged since the October low which represented the weakest service sector performance since January 2021, when the UK remained in a national lockdown. On the demand-side, this flattening of services output is driven by lower volumes of new work resulting from low confidence and cost-cutting efforts by clients worried about the ongoing cost of living crisis. On the supply-side, November saw an increase in work backlogs as labour shortages and industrial action slowed production.

Internationally, the JPMorgan Global Services Business Activity index fell to a 29-month low of 48.1 in November from 49.2 in October. The JPMorgan Global Composite Output Index

decreased to 48.0 in November from 49.0 in October. Overall, these figures indicate a worsening of the global economic downturn in services.

Based on recent developments we expect UK service sector activity to contract by 0.1 per cent in the fourth quarter of 2022.

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 contract by 0.4 per cent in the fourth quarter of 2022, though output in this sector is volatile and difficult to predict with accuracy on a quarterly basis. The production sector comprises manufacturing; mining and quarrying; electricity, gas, steam and air conditioning; water supply and sewerage; and oil and gas extraction. The largest of these sectors are manufacturing, accounting for 10 per cent of GDP, and mining and quarrying, accounting for 1 per cent of GDP.

Manufacturing

The S&P Global/CIPS UK manufacturing PMI for November rose marginally to 46.5 from the 29-month low of 46.2 recorded in October. This marks the fourth consecutive month this sector has contracted (as noted by recording figures below the neutral 50), driven by a combination of weakened domestic and export demand, eroding consumer confidence and Brexit-related trade difficulties. Worryingly, business optimism appears to have slumped to a new two-and-a-half year low.

The S&P Global/CIPS UK Composite PMI – which combines comparable services and manufacturing indices – was unchanged in November from 48.2 in October. This measure, now below the neutral 50 for a fourth consecutive month, indicates reduced overall private sector output.

The JPMorgan Global Manufacturing Output PMI also fell to 48.8 in November, a 29-month low, from 49.4 in October. This global manufacturing downturn was driven by reduced output in the intermediate goods sector for the second consecutive month.

Our forecast for the fourth quarter of 2022 is for manufacturing output to contract by 0.1 per cent (see: Figure 8).

Mining and quarrying

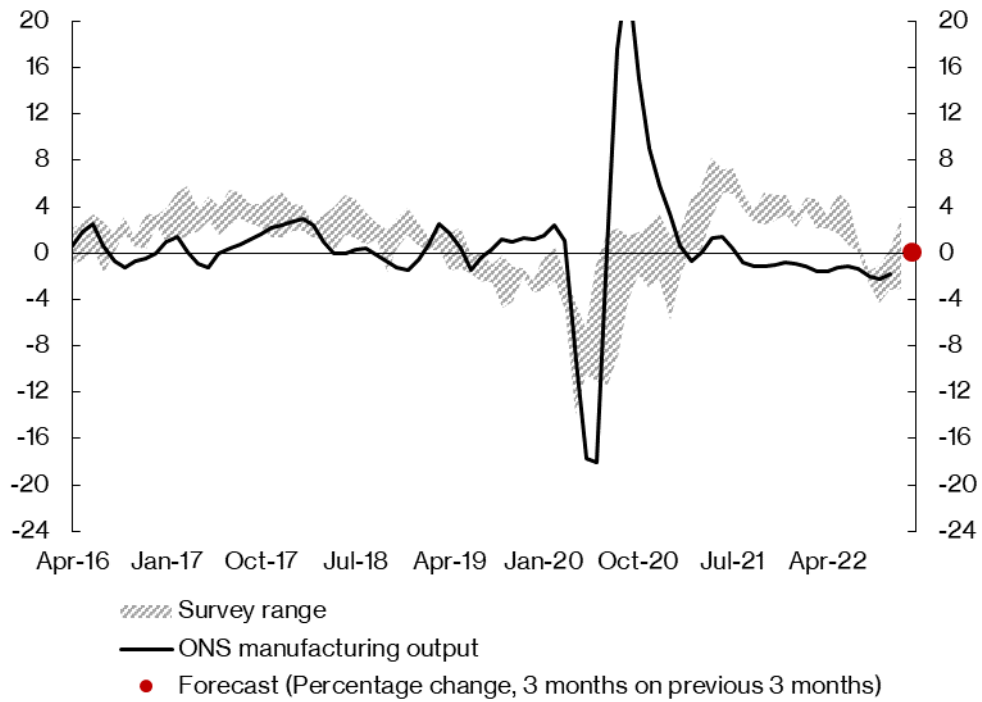
Mining and quarrying (extraction) is a small but erratic component of industrial production that can have an influence on overall GDP growth. We forecast a contraction of 3.6 per cent in the fourth quarter of 2022.

Construction (6 per cent of GDP)

The S&P Global/CIPS UK Construction PMI survey registered a decrease from 53.2 in October to 50.4 in November, as house building activity stalled due to higher mortgage rates and falling consumer confidence.

Nonetheless, we expect construction output to grow by 1.3 per cent in the fourth quarter of 2022.

Figure 8 - ONS manufacturing sector growth (3 months on previous 3 months, per cent) compared with swathe of business survey balances (standardised)



Note: The shaded swathe shows the highest and lowest values each month of a range of business survey balances that have been standardised so that they have the same mean and standard deviation as the quarterly growth of the ONS series.
Source: ONS, CBI, Markit, Bank of England Agents, EC, NIESR calculations.

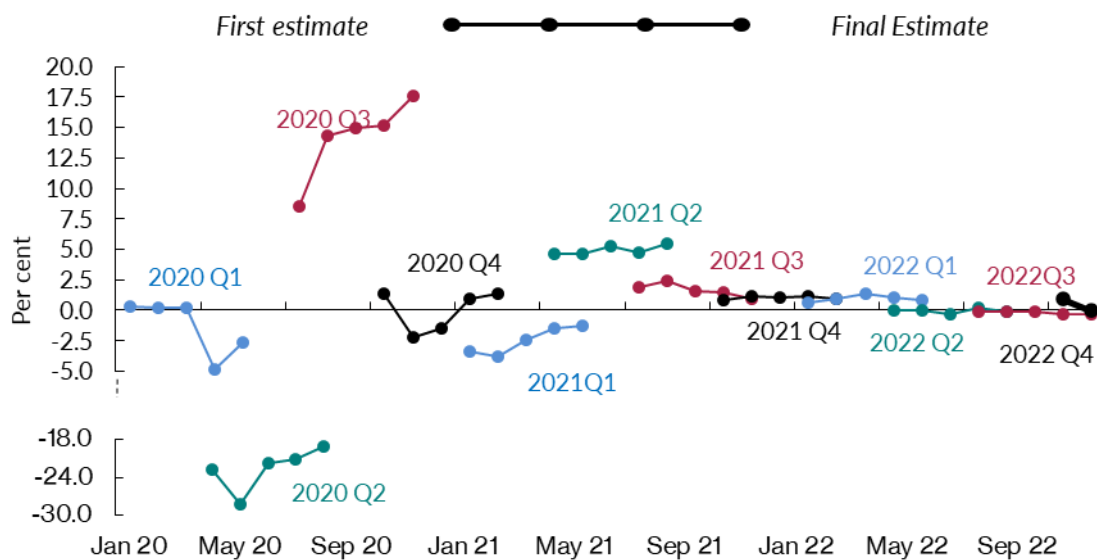
Table 1 - Summary Table of GDP growth (2019=100)

2019=100	GDP index	Index of Services	Index of Services - Components					Index of Production	Index of Production - Components					Index of Construction	Agriculture
			Business services and finance	Government and other services	Distribution, Hotels and Restaurants	Transport, Storage and Communications	Manufacturing		Electricity, gas, steam and air conditioning	Mining and Quarrying	Water Supply, Sewerage and Waste Management				
Sep-21	98.8	97.1	102.8	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	88.2	98.8	107.7	109.0	108.8	85.5	115.8	100.1	104.8		
Jan-22	100.3	99.0	103.8	97.7	87.5	100.8	107.2	107.5	110.8	89.9	116.5	101.4	105.0		
Feb-22	100.4	99.2	104.7	98.5	88.1	101.5	108.9	107.0	111.0	90.3	116.4	101.4	105.5		
Mar-22	100.5	99.2	104.9	98.2	88.3	101.0	108.9	107.0	109.4	91.3	117.5	102.8	105.9		
Apr-22	100.5	99.3	105.0	98.8	88.2	101.5	108.7	108.2	111.7	89.2	120.1	102.8	106.0		
May-22	101.0	99.7	106.1	99.9	87.4	102.8	107.1	108.3	114.5	90.4	119.2	103.5	106.2		
Jun-22	100.4	99.1	105.4	98.8	87.8	101.2	108.8	105.4	117.8	89.2	120.2	102.7	106.2		
Jul-22	100.7	99.6	105.6	98.4	87.6	102.3	108.1	104.3	117.8	93.6	117.5	103.0	106.4		
Aug-22	100.8	99.7	106.1	98.9	87.6	102.8	108.6	103.2	118.6	88.0	118.3	103.8	106.2		
Sep-22	100.0	98.8	105.4	98.0	88.1	100.8	104.9	103.2	118.3	88.6	118.7	104.0	105.7		
Oct-22	100.8	99.4	105.7	98.1	87.2	101.1	104.9	103.9	115.5	88.1	118.9	104.9	105.2		
Nov-22	100.4	99.3	105.8	98.0	86.6	101.4	104.6	103.2	117.4	88.4	117.5	104.9	105.0		
Dec-22	100.4	99.2	105.7	98.0	86.4	101.3	104.8	103.3	118.5	85.1	117.9	104.8	105.1		
Percentage change, 3 months on previous 3 months															
Sep-21	1.7	2.4	0.7	4.4	4.6	2.0	-0.7	-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	16.5	0.1	-0.7	2.8		
Nov-21	1.8	2.2	1.5	4.8	0.2	2.0	-1.1	-1.0	-7.2	7.5	0.1	0.8	1.0		
Dec-21	1.8	2.2	1.8	4.9	-1.6	2.9	-1.1	-0.8	-5.0	-2.3	2.0	1.0	0.2		
Jan-22	1.5	1.9	1.8	4.0	-2.4	3.3	-0.8	-0.9	-0.1	-4.7	2.4	2.4	-0.2		
Feb-22	1.0	1.1	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	-0.8	-1.8	2.7	2.8	1.4	2.9	0.8		
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	-0.4	-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	-0.2	-1.1	3.9	-1.0	2.8	1.1	0.8		
Jul-22	0.2	0.3	0.8	-0.1	-0.6	0.7	-0.2	-1.3	5.4	0.9	0.8	0.8	0.4		
Aug-22	-0.1	0.1	0.3	0.1	-0.3	0.4	-1.0	-2.1	4.9	-0.6	-0.2	0.2	0.2		
Sep-22	-0.2	0.0	0.2	0.3	-0.7	0.1	-1.5	-2.3	2.8	-1.0	-1.4	0.8	0.0		
Oct-22	-0.3	-0.1	0.0	0.0	-0.8	-0.5	-1.7	-1.6	0.1	-5.3	-0.8	1.1	-0.5		
Nov-22	-0.3	-0.3	-0.1	0.0	-1.3	-1.0	-1.0	-0.8	-0.2	-4.0	-0.8	1.4	-0.9		
Dec-22	0.0	-0.1	0.0	-0.1	-0.5	-0.6	-0.4	-0.1	-0.3	-3.6	-0.6	1.3	-0.9		
Percentage change, month on same month in previous year															
Sep-21	7.6	9.0	6.7	15.9	6.9	7.2	1.6	2.3	-3.8	-1.6	5.9	5.9	8.4		
Oct-21	7.2	8.1	5.9	16.0	8.2	7.5	0.0	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	-1.5	-2.2	-1.9	-4.0	6.8	4.2	9.2		
Dec-21	8.4	10.8	4.1	20.8	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	14.7	5.7	27.0	26.0	14.2	-1.6	-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	-2.5	-3.3	-5.8	1.8	4.5	4.3	6.2		
Apr-22	5.5	7.3	4.5	10.9	8.4	8.7	-2.2	-4.2	-7.3	16.6	8.4	2.7	6.7		
May-22	4.5	6.1	5.5	7.5	1.3	10.6	-3.5	-4.7	-12.1	16.2	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	3.4	4.5	4.5	5.7	-0.3	7.8	-2.7	-5.2	1.0	11.8	2.8	5.0	2.4		
Aug-22	2.5	3.5	4.9	3.5	-2.9	7.4	-4.3	-8.2	3.7	-9.9	4.8	6.4	1.0		
Sep-22	1.3	1.8	2.7	1.3	-4.1	6.0	-3.1	-5.8	7.4	-4.7	6.5	5.8	0.8		
Oct-22	1.5	1.8	3.2	0.5	-1.9	4.1	-2.4	-4.6	9.7	-4.5	1.9	7.4	0.2		
Nov-22	0.4	0.5	2.2	-2.1	-2.5	3.5	-2.9	-5.1	8.3	-3.3	2.2	5.7	0.3		
Dec-22	0.3	0.5	1.8	-2.8	0.3	2.8	-2.7	-5.2	9.1	-0.5	1.6	4.6	0.3		
Percentage change, month on previous month															
Sep-21	0.8	0.9	1.5	2.3	-0.4	-0.3	-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	1.1	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	0.0	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	-0.4	-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	0.6	0.2		
Jun-22	-0.5	-0.6	-0.7	-0.1	0.5	-1.4	-0.3	-0.6	2.7	-1.3	0.8	-0.7	0.0		
Jul-22	0.3	0.5	0.2	0.8	0.0	1.1	-0.8	-1.0	0.2	4.9	-2.2	0.2	0.2		
Aug-22	-0.1	0.1	0.5	-0.5	-0.2	0.5	-1.4	-1.1	-1.0	-6.1	0.7	0.8	-0.2		
Sep-22	-0.8	-0.8	-0.7	0.1	-1.7	-2.1	0.2	0.0	1.5	0.7	0.3	0.4	-0.5		
Oct-22	0.5	0.6	0.3	0.1	1.3	0.5	0.0	0.7	-2.4	-0.6	-1.5	0.8	-0.4		
Nov-22	-0.2	-0.2	0.1	-0.1	-0.7	0.3	-0.3	-0.7	1.7	-0.9	0.5	0.0	-0.2		
Dec-22	0.0	-0.1	-0.1	0.0	-0.2	-0.1	0.2	0.1	0.9	-0.3	0.3	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 October, compared with the previous three months, against the forecast for each in our November GDP Tracker.

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

	GDP	Index of Services	Index of Production	Manufacturing	Mining and Quarrying	Index of Construction
Forecast	-0.3	-0.2	-1.8	-2.1	-4.7	0.9
Outturn	-0.3	-0.1	-1.7	-1.8	-5.3	1.1

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:

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