NIESR
Monthly GDP Tracker

## UK Economy Now In Recession

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"It now looks like the UK economy entered a recession in the second quarter of this year as GDP fell by 0.1 per cent, and we expect output to continue falling over the next three quarters. On the expenditure side, the fall in Q2 was driven by a 0.2 per cent fall in consumption; on the output side, by a 0.4 per cent fall in services, particularly, health and social work. GDP fell by 0.6 per cent in June after a revised rise of 0.4 per cent in May as the Platinum Jubilee celebrations affected the monthly profiles."

Stephen Millard
Deputy Director for Macroeconomic Modelling and Forecasting, NIESR
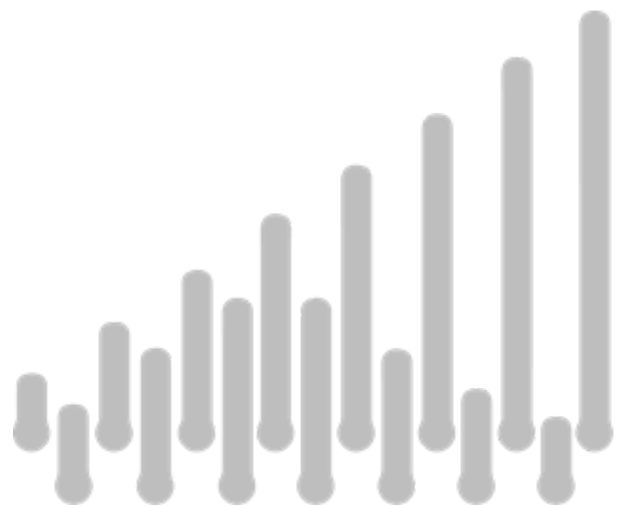
Main points

- GDP fell by 0.1 per cent in Q2, contrary to our forecast last month of a slight increase, with only the Electricity and Gas, Water Supply and Management, and Distribution, Hotels and Restaurants sectors displaying stronger performance than expected.
- In July, PMI surveys recorded falls for the services, manufacturing and construction sectors, with the latter displaying the most worrying decline, falling below the neutral 50 for the first time since January 2021.
- Despite the economic downturn, the search for qualified staff continues in both the services and the manufacturing sectors, with staffing levels rising in July for a seventeenth consecutive month.
- Our second nowcast for the UK economy for the third quarter is for a contraction of 0.1 per cent, with growth likely to slow further as inflation drags on consumer demand.

Figure 1 - UK GDP
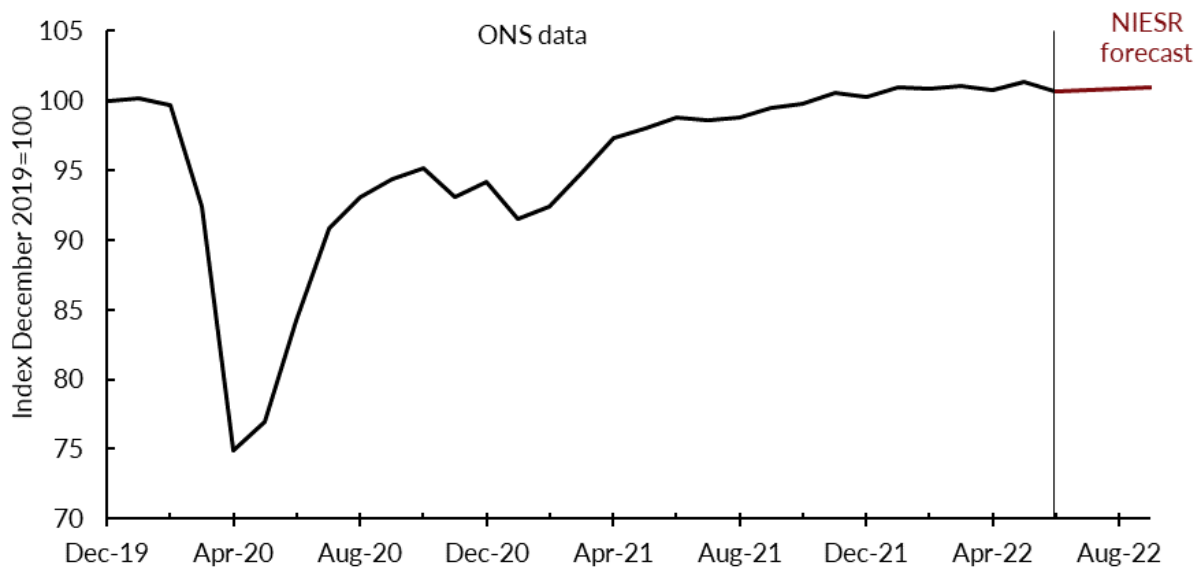
Economic setting

In the NIESR Summer UK Economic Outlook[1] published on 2nd August, 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. It now appears that the UK economy entered a recession in the second quarter of 2022. We expect CPI inflation to peak close to 11 per cent in the fourth quarter of 2022, returning to around 3 per cent a year later. This fall in inflation results from a slowing in energy price inflation, a tightening in monetary policy and falls in real incomes leading to falling demand. 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. This falling consumer confidence translated into a fall in household consumption of 0.2 per cent in the second quarter of 2022.

Although the United Kingdom has still been affected by Covid-19 over the course of 2022 (Figure 2.1), the worst effects on aggregate economic activity appear to have passed. That said, Covid-19 does continue to affect particular sectors, an example being job creation in hospitality, transport, and arts and recreation.

Figure 2.1 – England daily Covid-19 statistics
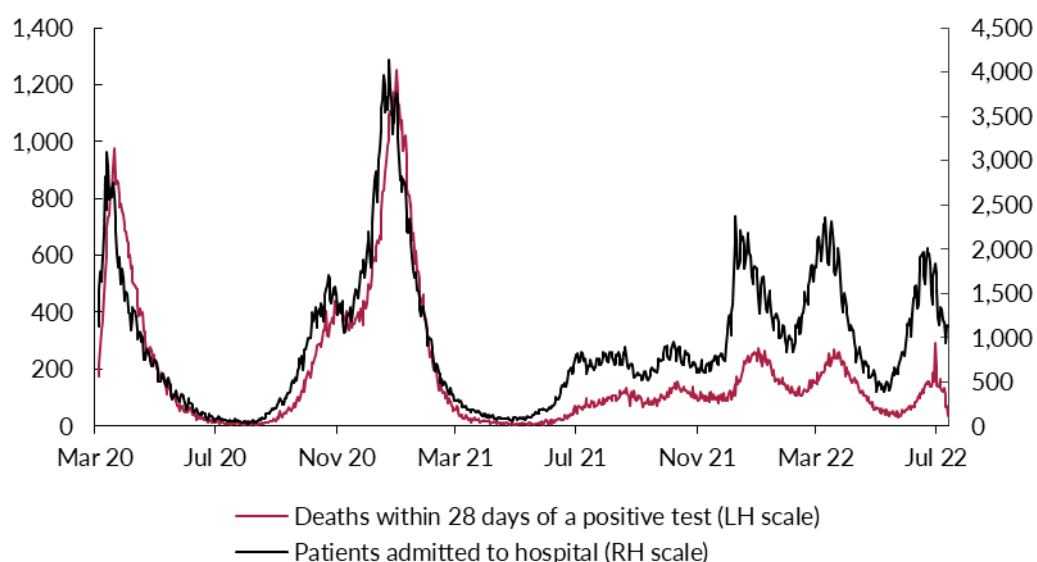
Source: Data.gov.uk. See coronavirus.data.gov.uk for further information.

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[1] Available for download from the NIESR publications website through the following link:
https://www.niesr.ac.uk/publications/risky-present?type=uk-economic-outlook

High frequency indicators suggest that vacancies remain close to record levels, with July figures 25% 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 2.2.)

Figure 2.2 – Spending and hiring indicators (weekly indices)
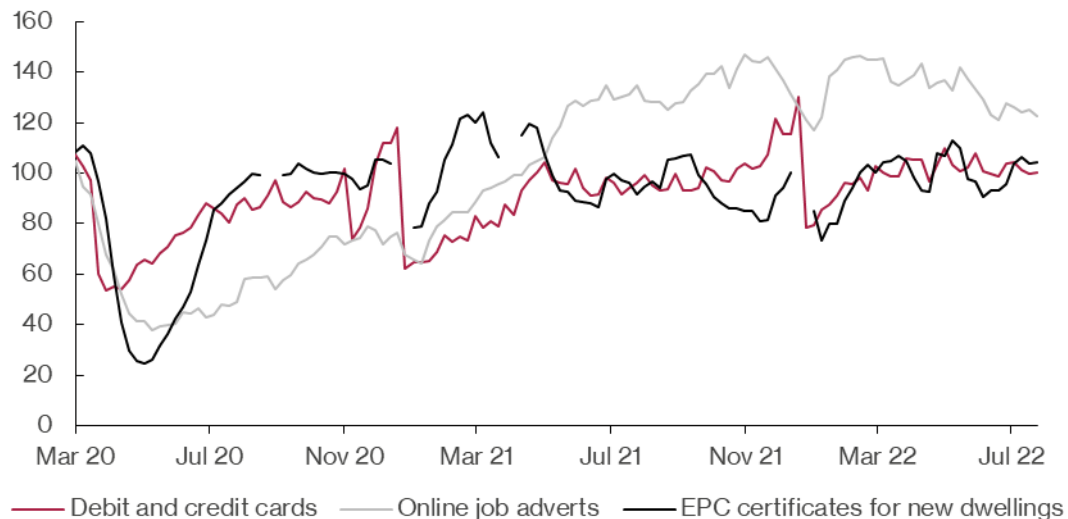
Notes: (a) England and Wales. Debit and credit cards (CHAPS-based): 100 = February 2020, percentage change on a backward looking seven-day rolling average, non-seasonally adjusted, nominal prices. Job adverts: change from the same week in 2019. EPC certificates: change from the same week in 2019/2020, 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 June were significantly weaker than we had forecast in July, GDP contracting by 0.6 per cent month-on-month, rather than by 0.2 per cent, and contracting by 0.1 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 surpri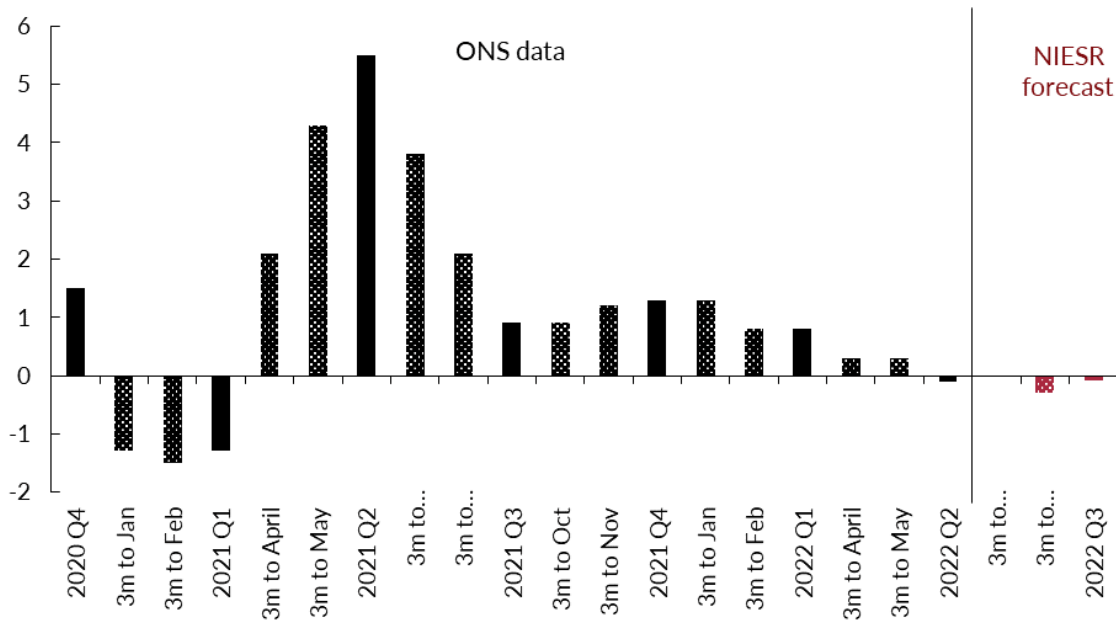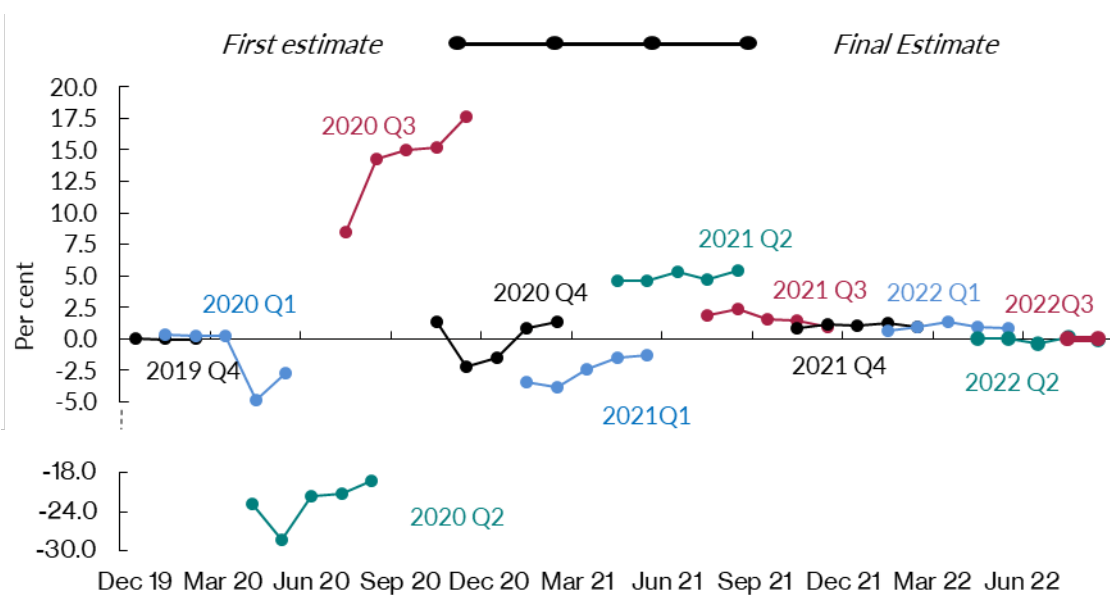ses are large relative to the volatility of the output data. This month, there were positive surprises in the electricity, water, and distribution and hotel sectors, with negative surprises in the manufacturing, extraction, business services and construction sectors.

Figure 5 – Surprises in monthly data

	02/21	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
Business services and finance	0.2	0.9	-0.6	-0.2	0.7	-1.0	-0.2	0.7	-0.2	0.3	0.2	0.1	0.0	-0.2	-0.3	0.0	-0.3
Government	-0.2	0.8	0.7	0.0	-0.3	-0.3	-0.7	0.7	0.3	0.2	0.0	0.0	-0.3	0.4	-0.5	0.2	0.0
Distribution , Hotels and Restaurants	0.4	-0.2	1.2	-0.7	-0.2	-0.6	0.2	-0.2	0.0	0.0	-0.3	0.3	-0.1	-0.4	0.3	0.0	0.1
Transport, Storage and Communication	-0.2	0.1	0.3	-0.1	0.1	0.2	0.1	-0.3	0.4	0.4	0.3	0.8	0.0	-0.2	0.2	0.3	-0.2
Manufacturing	0.7	-0.1	-0.5	0.0	-0.4	-0.1	-0.3	-0.2	0.0	0.2	0.2	0.1	-0.3	-0.1	-0.5	0.6	-0.7
Electricity	0.3	-0.3	1.0	1.9	-1.6	-0.9	-1.5	0.0	-0.9	-0.4	-0.1	0.1	0.0	-0.8	0.0	0.6	1.2
Extraction	-0.9	0.6	-3.0	0.0	-2.5	3.1	1.8	-1.3	-0.9	-0.6	-0.7	0.1	-0.5	0.4	0.0	-0.3	-0.4
Water Supply, Sewerage, Waste Management	1.3	0.5	-0.8	-0.3	1.1	0.3	-0.4	-0.6	0.9	1.5	0.5	-0.4	-0.6	-0.3	1.0	-0.1	0.4
Construction	0.8	0.3	-0.3	-0.2	-0.2	-0.2	-0.2	0.3	-0.3	0.3	0.1	0.4	-0.1	0.2	0.0	0.3	-0.3
Agriculture	1.3	0.5	-0.6	-0.2	0.3	0.6	0.7	0.3	0.0	-0.2	-0.2	0.0	0.0	0.0	0.1	0.0	0.0

← below expectation   above expectation →

-3   -   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 June, compared with the previous three months, against the forecast for each in our July GDP Tracker.

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

	GDP	Index of Services	Index of Production	Manufacturing	Mining and Quarrying	Index of Construction
Forecast	0.2	-0.1	0.6	0.3	-1.0	2.8
Outturn	-0.1	-0.4	0.5	0.0	-0.2	2.3

Sectoral detail

We forecast GDP to contract by 0.1 per cent in the third quarter of 2022, in line with the 0.1 per cent contraction we observed in the second quarter.

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

Services (80 per cent of GDP)
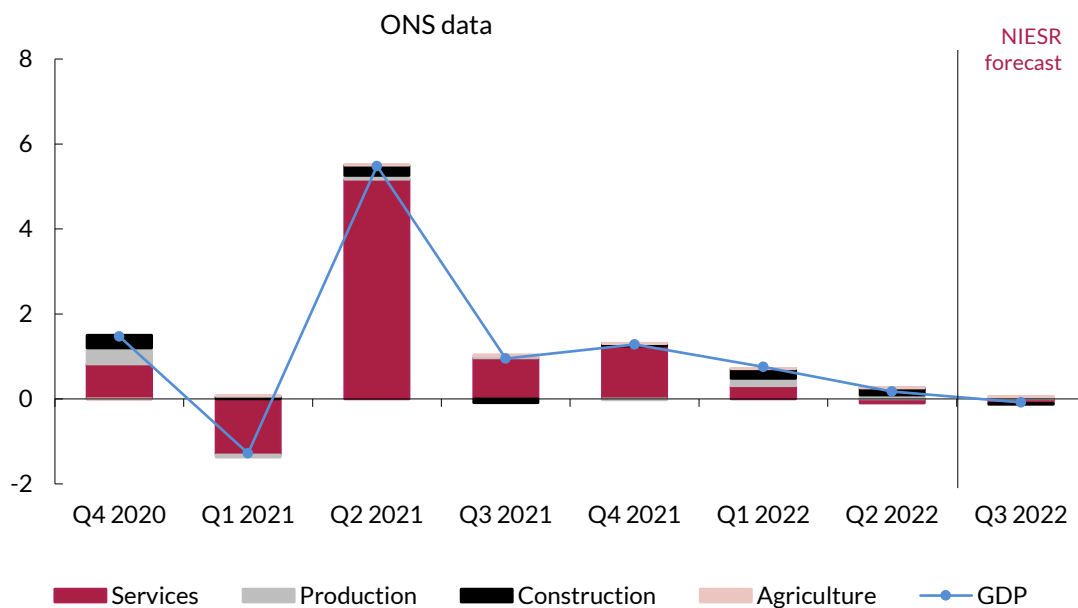
Services (80 per cent of GDP)

The survey balances point to a weakening in the growth rate of activity in July, as shown by the swathe of survey indicators in figure 7. The headline business activity balance in the S&P Global/CIPS UK services PMI registered 52.6 in July, down from 54.3 in June. Internationally, the JPMorgan Global Services Business Activity Index decreased to 56.3 in July, falling for the second consecutive month, from 57.5 in June and 59.5, which was a 15-year high, in May. Both input and output price inflation remain high in the services sector, with new export orders also continuing to rise.

Based on recent developments we expect service sector activity to fall by 0.1 per cent in the third quarter.

Figure 7 - ONS service sector growth (3 months on previous 3 months, per cent) compared with swathe of business survey balances (standardised)
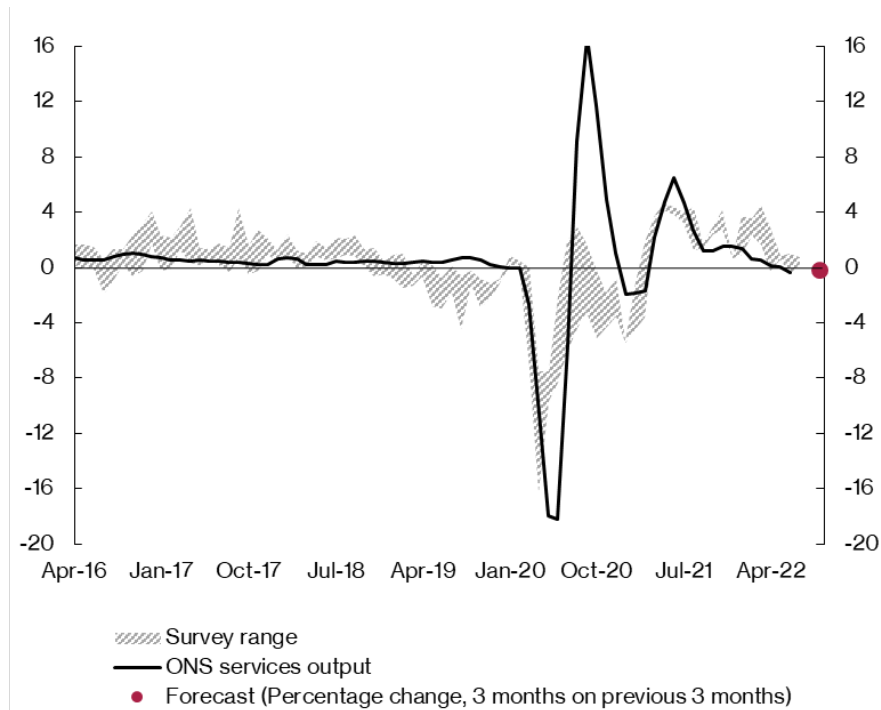
Note: The shaded swathe shows the highest and lowest values each month of a range of business survey balances that have been standardised so that they have the same mean and standard deviation as the quarterly growth of the ONS series.
Source: ONS, CBI, Markit, Bank of England Agents, EC, NIESR calculations.

Production (14 per cent of GDP)

We forecast that production sector output will grow by 0.4 per cent in the third quarter, 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 was 52.1 in July, down from 52.8 in June and 54.6 in May. The JPMorgan Global Manufacturing Output PMI also fell further, from 52.2 in June to a two-year low of 51.1 in July, with output declines observed in the United States, the Eurozone and Japan among others.

Our forecast for the third quarter of 2022 is for manufacturing output to expand by 0.3 per cent (Figure 8).

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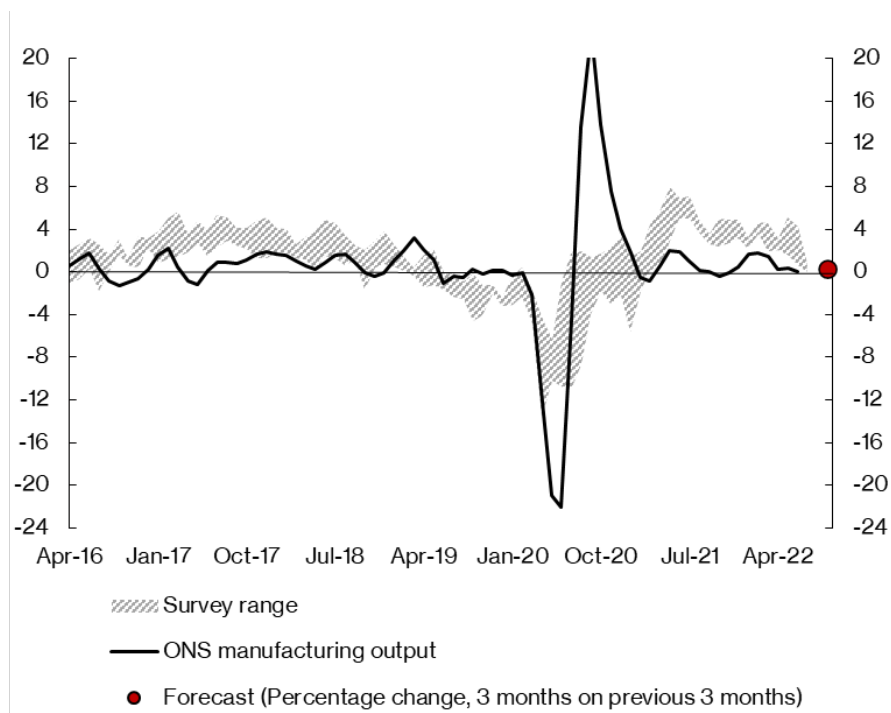
Note: The shaded swathe shows the highest and lowest values each month of a range of business survey balances that have been standardised so that they have the same mean and standard deviation as the quarterly growth of the ONS series.
Source: ONS, CBI, Markit, Bank of England Agents, EC, NIESR calculations.

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 decline of 1.7 per cent in the third quarter of 2022.

Construction (6 per cent of GDP)

The S&P Global/CIPS construction PMI survey registered a fall to 48.9 in July, significantly below the 52.6 in June. This also marks the first time since January 2021 that the index reading has been below the neutral 50, driven predominantly by the drop in housing and civil engineering activity. The increase in purchase prices, however, is decelerating, with the falling prices of metal and timber compensating for the high energy, fuel and transport costs.

We expect construction output to contract by 0.3 per cent in the third quarter of 2022.

Table 2 - 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	339	217	133	108	136	102	15	6	13	61	7
Jun-20	84.3	84.8	91.5	78.7	77.2	84.9	87.2	84.4	95.8	89.5	97.8	71.7	86.4
Jul-20	90.9	91.3	92.9	89.6	90.9	89.4	92.2	91.0	101.0	82.6	99.0	84.4	87.5
Aug-20	93.2	93.6	93.3	93.8	97.2	89.4	93.8	93.8	101.0	78.6	98.8	87.0	88.6
Sep-20	94.5	94.8	95.1	97.3	94.1	89.9	94.6	95.0	101.4	76.0	99.3	89.9	89.1
Oct-20	95.2	95.5	95.6	97.7	92.9	92.5	95.5	96.3	98.2	78.7	99.8	91.6	87.7
Nov-20	93.2	92.7	95.2	95.6	82.8	91.8	96.5	98.2	97.4	75.4	99.6	92.2	87.0
Dec-20	94.3	94.4	96.3	97.1	86.6	91.8	96.1	96.8	100.9	77.0	101.0	90.8	87.1
Jan-21	91.6	91.3	96.0	91.4	78.9	91.5	94.8	95.0	100.9	76.4	101.2	89.1	88.5
Feb-21	92.5	92.0	96.4	92.3	80.7	91.0	95.6	96.2	102.1	72.1	102.9	92.3	89.8
Mar-21	95.0	94.6	98.0	97.7	82.4	92.7	96.7	97.5	101.0	75.0	103.6	96.0	90.9
Apr-21	97.4	97.8	96.8	102.3	94.2	95.0	96.1	97.8	104.1	61.9	102.4	96.4	90.8
May-21	98.1	98.5	96.6	102.7	99.3	94.7	97.1	98.3	108.8	64.5	102.3	96.3	91.9
Jun-21	98.9	99.7	98.1	103.2	101.1	95.5	95.8	97.9	102.2	57.3	104.5	95.7	93.8
Jul-21	98.7	99.5	97.2	103.4	100.3	96.7	96.6	98.2	98.9	70.1	104.5	94.8	95.5
Aug-21	98.9	99.6	97.6	101.7	102.2	97.7	96.9	98.0	95.1	81.7	103.9	94.0	96.9
Sep-21	99.6	100.5	99.1	103.6	101.7	97.5	96.4	97.7	94.1	79.8	103.3	95.4	96.9
Oct-21	99.9	101.1	98.9	104.4	101.8	99.6	95.7	97.5	91.4	75.3	105.0	94.5	97.0
Nov-21	100.7	101.8	99.9	105.0	101.9	101.3	96.7	98.5	92.7	73.1	107.4	95.9	96.9
Dec-21	100.4	101.4	100.3	105.6	97.0	101.4	97.0	99.2	92.9	70.9	107.9	96.5	96.7
Jan-22	101.1	102.0	99.7	105.2	99.5	104.6	97.9	100.2	94.3	72.4	108.6	97.0	97.0
Feb-22	101.0	102.0	100.2	104.2	100.0	105.5	97.4	99.5	94.6	72.1	106.8	97.1	97.4
Mar-22	101.2	102.0	100.2	104.6	98.6	105.8	97.7	99.8	93.5	73.5	107.6	99.1	97.6
Apr-22	100.9	101.7	99.8	102.9	100.2	105.8	97.6	99.2	95.4	72.4	110.3	99.3	97.6
May-22	101.4	101.9	99.8	103.1	99.7	106.4	98.9	100.9	95.9	73.2	109.8	101.0	97.7
Jun-22	100.8	101.3	99.4	103.0	99.6	105.5	98.0	99.3	98.9	71.9	110.3	99.6	97.8
Jul-22	100.8	101.4	99.8	102.6	99.4	106.2	98.4	99.9	97.1	71.6	110.5	99.6	97.9
Aug-22	101.0	101.5	100.2	102.7	99.3	106.5	98.6	100.2	97.6	71.5	110.6	99.6	98.0
Sep-22	101.1	101.6	100.5	102.6	99.1	106.6	98.6	100.1	98.4	70.8	110.8	99.7	98.0

Percentage change, 3 months on previous 3 months

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
Jun-20	-19.2	-18.2	-9.9	-23.2	-34.3	-16.4	-17.6	-22.0	-8.0	-2.4	-5.8	-35.6	-15.1
Jul-20	-5.6	-5.6	-4.7	-7.9	-3.9	-6.9	-3.1	-4.4	-0.6	2.9	-0.6	-11.1	-7.7
Aug-20	9.8	9.1	1.1	12.1	36.5	4.3	11.2	13.6	7.0	5.6	4.2	18.7	-0.7
Sep-20	17.9	16.7	4.7	25.3	50.7	10.0	17.1	22.5	10.4	-3.6	3.1	41.6	4.0
Oct-20	12.2	11.7	4.1	19.7	25.5	7.1	10.1	13.8	5.0	-7.2	3.1	24.7	2.6
Nov-20	5.4	4.9	3.0	10.9	1.7	4.0	4.9	7.5	-0.3	-8.2	1.0	12.6	0.5
Dec-20	1.5	1.0	2.1	3.5	-7.1	2.8	2.7	4.1	-2.3	-2.6	1.1	5.1	-1.3
Jan-21	-1.3	-1.9	1.2	-1.6	-12.6	1.2	1.2	1.7	-0.1	-1.9	1.3	1.3	-1.1
Feb-21	-1.6	-1.9	1.0	-3.4	-8.7	0.0	0.0	-0.5	2.7	-2.0	2.1	-0.6	0.6
Mar-21	-1.3	-1.7	1.1	-3.1	-7.7	-0.3	-0.3	-0.9	2.9	-3.3	2.4	1.0	2.8
Apr-21	2.1	2.2	1.3	2.9	3.6	1.3	0.3	0.5	2.3	-8.7	2.4	4.6	3.4
May-21	4.3	4.8	0.9	7.8	12.1	3.0	1.2	1.9	3.0	-10.7	1.0	6.0	3.1
Jun-21	5.5	6.5	0.4	9.5	21.7	3.6	0.7	1.8	3.3	-17.8	0.4	4.0	2.7
Jul-21	3.8	4.7	0.2	5.8	16.9	2.9	0.4	1.0	0.9	-8.2	0.7	0.8	3.6
Aug-21	2.1	2.7	0.5	1.9	10.0	2.7	-0.2	0.2	-5.6	3.8	1.4	-1.4	4.6
Sep-21	1.0	1.2	0.8	0.2	3.3	2.3	0.3	0.0	-8.6	26.1	0.9	-1.5	4.6
Oct-21	0.9	1.2	1.3	0.1	1.7	2.8	-0.2	-0.4	-9.5	23.4	0.4	-1.0	3.4
Nov-21	1.2	1.5	1.7	1.5	0.6	2.9	-0.2	-0.1	-6.1	9.1	1.0	0.4	1.6
Dec-21	1.3	1.6	1.8	2.0	-1.2	3.6	-0.2	0.4	-3.9	-5.3	2.8	1.0	0.4
Jan-22	1.3	1.3	1.5	2.0	-2.4	4.2	0.9	1.6	-0.2	-8.6	3.2	1.9	-0.1
Feb-22	0.8	0.7	0.8	0.6	-2.9	4.4	1.2	1.8	1.3	-5.6	1.8	1.7	0.1
Mar-22	0.8	0.6	0.3	-0.3	-0.9	4.3	1.2	1.5	1.9	-0.6	0.3	2.2	0.5
Apr-22	0.3	0.2	0.1	-1.3	0.1	3.0	0.4	0.2	1.3	0.7	0.8	2.1	0.7
May-22	0.3	0.1	-0.1	-1.4	0.7	1.9	0.7	0.3	1.1	1.7	1.9	3.0	0.6
Jun-22	-0.1	-0.4	-0.4	-1.6	0.5	0.7	0.5	0.0	2.8	-0.2	2.9	2.3	0.4
Jul-22	0.0	-0.4	-0.4	-1.0	0.0	0.5	0.9	0.5	3.0	-0.6	1.8	1.6	0.3
Aug-22	-0.3	-0.5	-0.1	-0.7	-0.1	0.2	0.3	-0.2	3.1	-1.9	1.1	-0.2	0.3
Sep-22	-0.1	-0.1	0.5	-0.4	-0.6	0.5	0.4	0.3	1.0	-1.7	0.5	-0.3	0.3

Percentage change, month on same month in previous year

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
Jun-20	-15.8	-15.2	-8.2	-21.4	-23.0	-15.5	-12.4	-15.5	-6.3	-0.7	-3.6	-29.7	-11.1
Jul-20	-9.4	-9.0	-7.4	-10.4	-9.4	-11.5	-7.7	-9.3	0.5	-11.9	-1.5	-15.9	-14.0
Aug-20	-7.0	-6.8	-7.3	-6.7	-2.7	-10.6	-5.3	-5.6	2.6	-15.8	-1.8	-12.2	-16.5
Sep-20	-5.8	-5.7	-5.3	-3.3	-6.2	-10.8	-5.0	-4.7	0.4	-20.8	-0.5	-8.5	-18.9
Oct-20	-5.2	-5.2	-5.2	-3.0	-6.9	-8.2	-4.6	-4.4	-6.3	-11.8	0.6	-5.3	-20.9
Nov-20	-6.8	-7.5	-4.6	-5.7	-16.9	-7.8	-2.8	-1.3	-8.1	-14.2	0.4	-5.7	-20.5
Dec-20	-5.8	-6.1	-4.0	-4.5	-13.3	-7.9	-2.8	-2.7	-2.9	-9.2	1.9	-7.0	-16.5
Jan-21	-8.7	-9.3	-4.5	-10.7	-21.6	-7.8	-4.0	-4.8	1.6	-10.4	0.9	-8.7	-14.8
Feb-21	-7.3	-8.2	-3.7	-8.7	-19.1	-8.4	-3.4	-4.0	3.0	-16.0	3.8	-4.7	-11.0
Mar-21	2.7	2.5	0.4	10.4	-2.3	-1.0	3.8	5.0	1.8	-7.4	3.9	4.3	-4.9
Apr-21	29.9	27.3	9.1	41.3	82.6	19.0	30.0	41.7	16.2	-19.9	11.5	80.0	8.2
May-21	27.4	26.1	9.2	40.7	70.0	19.0	23.7	30.9	21.7	-18.6	11.1	62.5	8.4
Jun-21	17.3	17.6	7.2	31.1	31.0	12.5	9.9	16.0	6.7	-36.0	6.5	33.5	8.6
Jul-21	8.6	9.0	4.6	15.4	10.3	8.2	4.8	7.9	-2.1	-15.1	5.6	12.3	9.1
Aug-21	6.1	6.4	4.6	8.4	5.1	9.3	3.3	4.5	-5.8	3.9	5.2	8.1	9.4
Sep-21	5.4	6.0	4.2	6.5	8.1	8.5	1.9	2.8	-7.2	5.0	4.0	6.0	8.8
Oct-21	4.9	5.9	3.5	6.9	9.6	7.7	0.2	1.2	-6.9	-4.3	5.2	3.1	10.6
Nov-21	8.0	9.8	4.9	9.8	23.1	10.3	0.2	0.3	-4.8	-3.1	7.8	4.0	11.4
Dec-21	6.5	7.4	4.2	8.8	12.0	10.5	0.9	2.5	-7.9	-8.1	6.8	6.3	11.0
Jan-22	10.4	11.7	3.9	15.1	26.1	14.3	3.3	5.5	-7.5	-5.2	5.5	8.9	9.6
Feb-22	9.2	10.9	3.9	12.9	23.9	15.9	1.9	3.4	-7.3	0.0	3.8	5.1	8.5
Mar-22	6.5	7.8	2.2	7.1	19.7	13.6	1.0	2.4	-7.4	-2.0	3.9	3.3	7.4
Apr-22	3.6	4.0	3.1	0.6	6.4	11.4	1.6	1.4	-8.4	17.0	7.7	3.0	7.5
May-22	3.4	3.5	3.3	0.4	0.4	12.4	1.9	2.6	-11.9	13.5	7.3	4.9	6.3
Jun-22	1.9	1.6	1.3	-0.2	-1.5	10.5	2.3	1.4	-3.2	25.5	5.9	4.1	4.3
Jul-22	2.1	1.9	2.7	-0.7	-0.9	9.8	1.9	1.8	-1.8	2.1	5.7	5.1	2.5
Aug-22	2.1	1.9	2.6	1.0	-2.9	9.0	1.8	2.2	2.6	-12.5	6.5	6.0	1.1
Sep-22	1.5	1.1	1.4	-1.0	-2.5	9.4	2.3	2.4	4.6	-11.2	7.3	4.5	1.1

Percentage change, month on previous month

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
Jun-20	9.5	8.6	3.4	7.8	32.2	6.7	11.1	12.4	7.2	13.0	6.2	21.0	1.9
Jul-20	7.8	7.7	1.5	13.9	17.7	5.3	5.7	7.8	5.4	-7.7	1.2	17.7	1.3
Aug-20	2.5	2.5	0.4	4.7	6.9	0.0	1.7	3.1	0.0	-4.8	-0.2	3.0	1.3
Sep-20	1.4	1.3	1.9	3.7	-3.2	0.6	0.9	1.3	0.4	-3.3	0.5	3.4	0.6
Oct-20	0.7	0.7	0.5	0.4	-1.3	2.9	1.0	1.4	-3.2	3.6	0.5	1.9	-1.6
Nov-20	-2.1	-2.9	-0.4	-2.1	-10.9	-0.8	1.0	2.0	-0.8	-4.2	-0.2	0.6	-0.8
Dec-20	1.2	1.8	1.2	1.6	4.6	0.0	-0.4	-1.4	3.6	2.1	1.4	-1.5	0.1
Jan-21	-2.9	-3.3	-0.3	-5.9	-8.9	-0.3	-1.4	-1.9	1.0	-0.8	0.2	-1.9	1.6
Feb-21	1.0	0.8	0.4	1.0	2.3	-0.5	0.8	1.3	0.2	-5.6	1.7	3.6	1.5
Mar-21	2.7	2.8	1.7	5.9	2.1	1.9	1.2	1.4	-1.1	4.0	0.7	3.9	1.2
Apr-21	2.5	3.4	-1.2	4.7	14.3	2.5	-0.6	0.3	3.1	-17.5	-1.2	0.4	-0.1
May-21	0.7	0.7	-0.2	0.4	5.4	-0.3	1.0	0.5	4.5	4.2	-0.1	0.0	1.2
Jun-21	0.8	1.2	1.6	0.5	1.8	0.8	-1.3	-0.4	-6.1	-11.2	1.9	-0.6	2.1
Jul-21	-0.2	-0.2	-0.9	0.2	-0.8	1.3	0.8	0.3	-3.2	22.3	0.3	-1.0	1.8
Aug-21	0.2	0.1	0.4	-1.6	1.9	1.0	0.3	-0.2	-3.8	16.5	-0.6	-0.8	1.5
Sep-21	0.7	0.9	1.5	1.9	-0.5	-0.2	-0.5	-0.3	-1.1	-2.3	-0.6	1.5	0.0
Oct-21	0.3	0.6	-0.2	0.8	0.1	2.2	-0.7	-0.2	-2.9	-5.6	1.6	-0.9	0.1
Nov-21	0.8	0.7	1.0	0.6	0.1	1.7	1.0	1.0	1.4	-2.9	2.3	1.4	-0.1
Dec-21	-0.3	-0.4	0.4	0.6	-4.8	0.1	0.3	0.7	0.2	-3.0	0.5	0.7	-0.2
Jan-22	0.7	0.6	-0.6	-0.4	2.6	3.2	0.9	1.0	1.5	2.1	-1.0	0.5	0.3
Feb-22	-0.1	0.0	0.5	-1.0	0.5	0.9	-0.5	-0.7	0.3	-0.4	0.0	0.1	0.4
Mar-22	0.2	-0.3	0.0	0.4	-1.4	-0.2	0.3	0.3	-1.2	1.9	0.7	2.1	0.2
Apr-22	-0.3	-0.3	-0.4	-1.6	1.6	0.5	-0.1	-0.6	2.0	-1.5	2.5	0.2	0.0
May-22	0.5	0.2	0.0	0.2	-0.5	0.6	1.3	1.7	0.5	1.1	-0.5	1.8	0.1
Jun-22	-0.6	-0.6	-0.4	-0.1	-0.1	-0.8	-0.9	-1.6	3.1	-1.8	0.5	-1.4	0.1
Jul-22	0.0	0.1	0.4	-0.4	-0.2	0.6	0.4	0.6	-1.8	-0.5	0.2	0.0	0.1
Aug-22	0.2	0.2	0.3	0.0	-0.2	0.3	0.2	0.3	0.5	-0.1	0.1	0.0	0.1
Sep-22	0.1	0.1	0.3	-0.1	-0.1	0.1	0.0	-0.1	0.8	-0.9	0.2	0.0	0.1

Health warning

The NIESR GDP Tracker provides a rolling monthly forecast for GDP growth. Our first estimate of growth for any particular quarter starts in the first month of that quarter and is then updated each month until the first official release in the second month of the following quarter. So, for example, our first estimate of growth in the first quarter of 2020 was published in January and then updated four times (in February, March, April and May) before the ONS published its first estimate for the first quarter of 2020 in May 2020. In other words, we publish four estimates of GDP for any particular quarter before the official release and change them as new evidence becomes available.

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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