

Statistical bulletin

GDP monthly estimate, UK: July 2023

Gross domestic product (GDP) measures the value of goods and services produced in the UK. It estimates the size of and growth in the economy.

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Notice

13 September 2023

There are no revisions to previously published data in this monthly release because of the regular <u>National</u> <u>Accounts revision policy</u>. We will see the data revisions from our pre-announced changes highlighted in our <u>Impact of Blue Book 2023 article</u> in the Quarterly National Accounts release (to be published on 29 September), and also in the next monthly GDP release (published on 12 October).

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1. Main points

- There are no revisions to previously published data in this monthly release because of the regular <u>National</u> <u>Accounts revision policy</u>; we will see the data revisions from our pre-announced changes highlighted in our <u>Impact of Blue Book 2023 article</u> in the Quarterly National Accounts release (to be published on 29 September), and also in the next monthly GDP release (published on 12 October).
- For July 2023, monthly real gross domestic product (GDP) is estimated to have fallen by 0.5%, with falls in all three main sectors, following growth of 0.5% in June 2023.
- Looking at the broader picture, GDP increased by 0.2% in the three months to July 2023, with growth in all three main sectors.
- Services output was down 0.5% in July 2023, after growth of 0.2% in June 2023, and was the main contributor to the fall in GDP in July.
- Output in consumer-facing services showed no growth in July 2023, following growth of 0.5% in June 2023.
- Production output fell by 0.7% in July 2023, after growth of 1.8% in June 2023.
- The construction sector fell by 0.5% in July 2023, after growth of 1.6% in June 2023.

2. Monthly GDP

Monthly real gross domestic product (GDP) is estimated to have fallen by 0.5% in July 2023 (Figure 1) following growth of 0.5% in June 2023. There are no revisions to previously published data in this monthly release because of the regular <u>National Accounts revision policy</u>. We will see the data revisions from our pre-announced changes highlighted in our <u>Impact of Blue Book 2023 article</u> in the Quarterly National Accounts release (to be published on 29 September), and also in the next monthly GDP release (published on 12 October).

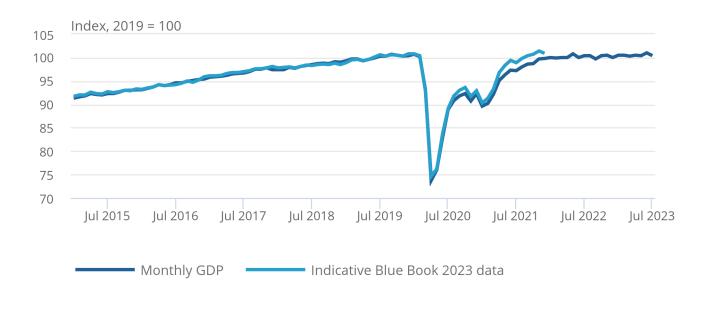
Looking over a broader picture, GDP showed 0.2% growth in the three months to July 2023 when compared with the three months to April 2023. Production grew by 0.6% and was the main contributing sector to the three-month growth. Services and construction output also increased in the three months to July, both by 0.1%.

Figure 1: UK GDP is estimated to have fallen by 0.5% in July 2023, following 0.5% growth in June 2023

Monthly index, January 2015 to July 2023, UK

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Monthly index, January 2015 to July 2023, UK



Source: GDP monthly estimate from the Office for National Statistics

Notes:

- The indicative Blue Book 2023 data provides an estimate from our <u>Impact of Blue Book 2023 article</u> for context. These will be incorporated in the Quarterly National Accounts release on 29 September and the next monthly GDP release on 12 October.
- 2. Indicative Blue Book 2023 data are only available up to December 2021.

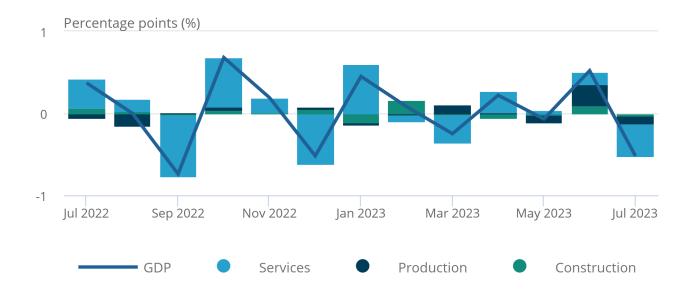
All of the main sectors fell in July 2023. Output in services sector fell by 0.5% and was the largest contributor to the fall in monthly GDP; production output fell by 0.7% and construction output fell by 0.5%. This is the first month since June 2022 that all three sectors contributed negatively to GDP on the month.

Figure 2: All of the main sectors contributed to the fall in GDP in July 2023

Contributions to monthly GDP growth, July 2022 to July 2023, UK

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Contributions to monthly GDP growth, July 2022 to July 2023, UK



Source: GDP monthly estimate from the Office for National Statistics

Notes:

1. Sum of component contributions may not sum to total growth because of rounding.

Monthly GDP showed no growth in July 2023 compared with the same month last year. For comparison, monthly GDP grew by 0.9% between June 2022 and June 2023. The Platinum Jubilee in 2022, and the move of the May bank holiday, led to an additional working day in May 2022 and two fewer working days in June 2022. It should also be noted that May 2023, saw one fewer working day as there was an additional bank holiday for the coronation of King Charles III. This should be considered when interpreting seasonally adjusted movements involving these months.

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- View <u>all economic data</u>.

3. The services sector

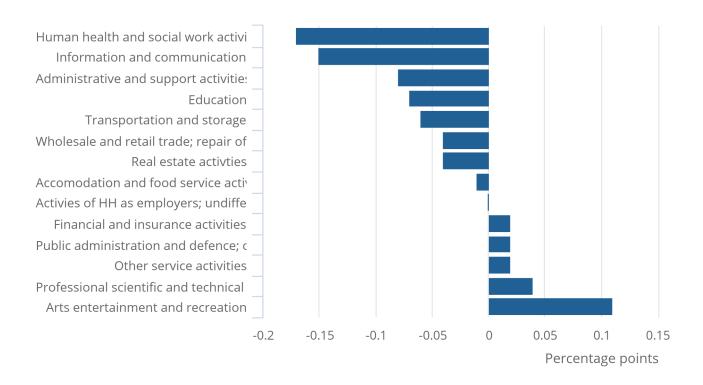
Services output fell by 0.5% in July 2023, following growth of 0.2% in June 2023. Overall, the services sector grew by 0.1% in the three months to July 2023 compared with the three months to April 2023. Figure 3 shows the monthly contributions from the services sector to gross domestic product (GDP) in July 2023.

Figure 3: Human health and social work activities was the largest contributor to the 0.5% fall in services output in July 2023

Monthly services contributions to GDP, July 2023

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Monthly services contributions to GDP, July 2023



Source: GDP monthly estimate from the Office for National Statistics

Notes:

1. Sum of component contributions may not sum to total services growth because of rounding.

The main contributor to the fall in monthly services output was the human health and social work activities subsector, which fell by 2.1% in July 2023. This was attributed entirely to a 3.4% fall in the human health activities industry. Industrial action was held in July by NHS senior doctors (two days) and radiographers (two days) for the first time while industrial action by junior doctors increased (five days in July, compared with three in June). <u>NHS England</u> reported that 65,557 appointments and procedures were cancelled because of the senior doctors strike and 101,977 acute inpatient and outpatient appointments were cancelled because of the industrial action by junior doctors. The next largest contributor to the fall in services output in July 2023 was the 2.1% fall in information and communication, following on from three consecutive monthly growths in this sub-sector. Computer programming, consultancy and related activities was the largest contributing industry, falling by 3.4% in July after three consecutive monthly growths in April, May, and June 2023.

Administrative and support service activities also fell in July 2023, by 1.4%. The largest industry within this subsector was employment activities, which fell by 2.3% in July after a growth of 2.1% in June. This industry has had a decrease in monthly output in 9 of the last 12 months. Education also fell in July 2023, by 1.1%, where the sector saw two days of industrial action in England at the start of the month. Please note that education attendance is considered to be constant over the school year, so summer holidays and school leavers did not reduce the estimate of education output in July 2023.

The main offsetting positive contribution was from the arts, entertainment and recreation sub-sector, which grew by 6.6% in July 2023; this was its largest growth since May 2021. Sports activities and amusement and recreation activities grew by 12.4% and creative, arts and entertainment grew by 4.9%.

Consumer-facing services

Output in consumer-facing services showed no growth in July 2023, while all other services fell by 0.6%. The largest positive contributions to consumer-facing services in July 2023 came from the sports activities and amusement and recreation activities industry (up 12.4%) and wholesale and retail trade and repair of motor vehicles and motorcycles (up 2.2%).

The largest negative contributions came from retail trade, except of motor vehicles and motorcycles (down 1.2%) and travel agency, tour operator and other reservation service and related activities (down 3.2%).

On the three months to July, consumer-facing services have growth by 0.7%

More detailed breakdowns on services are available in our Index of Services, UK: July 2023.

4. The production sector

Production output fell by 0.7% in July 2023, following growth of 1.8% in June 2023 (Figure 4). The largest falling sub-sector was manufacturing, which fell by 0.8% in July 2023.

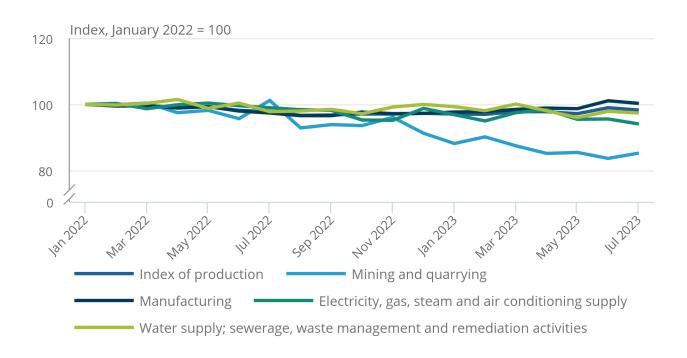
Overall, production output grew by 0.6% in the three months to July 2023, compared with the three months to April 2023. Manufacturing was also the main contributor to the three-month growth, where manufacturing output grew by 1.7% in the three months to July 2023.

Figure 4: Production output fell by 0.7% in July 2023, following growth of 1.8% in June 2023

Monthly index, January 2022 to July 2023

Figure 4: Production output fell by 0.7% in July 2023, following growth of 1.8% in June 2023

Monthly index, January 2022 to July 2023



Source: GDP monthly estimate from the Office for National Statistics

Notes:

- 1. Indexes are rounded to one decimal place.
- 2. Weights of these subsectors are available in our <u>GDP(O) data sources catalogue</u>.

Manufacturing's 0.8% fall was the main contributor to the monthly fall in production, with 9 of its 13 subsectors down on the month (Figure 5). This follows growth of 2.4% in June 2023, the strongest monthly growth since November 2020, where a number of businesses told us that output increased in June 2023 compared with May 2023 because of the additional bank holiday in May.

Manufacture of rubber and plastics products and other non-metallic mineral products was the largest contributor to the fall, down by 5.5%. This is followed by the manufacturing of computer, electronic and optical products, which was down 3.2% in July. The largest offsetting positive contribution within manufacturing came from manufacture of machinery and equipment not elsewhere classified (NEC), which grew by 2.8%.

Mining and quarrying was the only production sub-sector to see increased output in July 2023, growing by 1.9%, caused by growth of 2.9% in the extraction of crude petroleum and natural gas.

Electricity, gas, steam and air conditioning supply fell by 1.5% in July 2023, caused by a 2.5% fall in electric power generation, transmission and distribution.

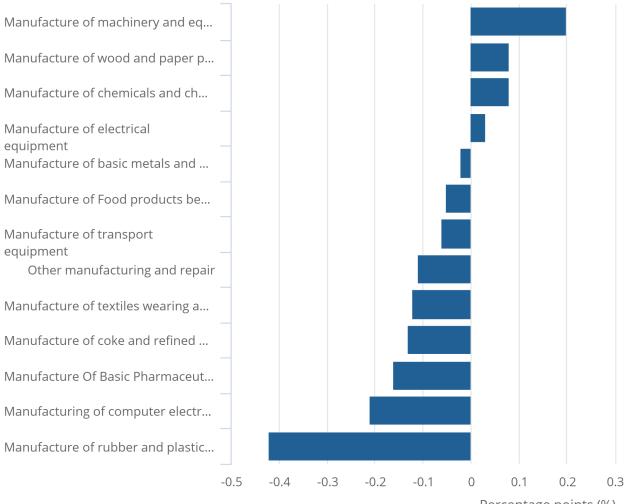
Water supply and sewerage fell by 0.5%, mainly attributed to a 1.6% fall in water collection, treatment and supply.

Figure 5: 9 out of 13 manufacturing sub-sectors contributed negatively to the 0.8% fall in manufacturing output in July 2023

Monthly manufacturing sub-sectors contributions to manufacturing output, July 2023, UK

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Monthly manufacturing sub-sectors contributions to manufacturing output, July 2023, UK



Percentage points (%)

Source: GDP monthly estimate from the Office for National Statistics

Notes:

1. Sum of component contributions may not sum to total manufacturing growth because of rounding.

More detailed breakdowns on production are available in our Index of Production, UK: July 2023.

5. The construction sector

Monthly construction output is estimated to have decreased 0.5% in volume terms in July 2023. This follows a 1.6% increase in June 2023, where businesses told us that extremely good weather and an additional working day, compared with May, because of the additional bank holiday for King Charles III coronation, had boosted output.

The decrease in monthly output came solely from a decrease in repair and maintenance (1.3% fall), with new work increasing (0.1%) on the month. Five out of the nine sectors saw a decrease on the month.

At the sector level, the main contributors to the monthly decrease were private housing repair and maintenance and private housing new work, which decreased by 3.9% and 2.2%, respectively.

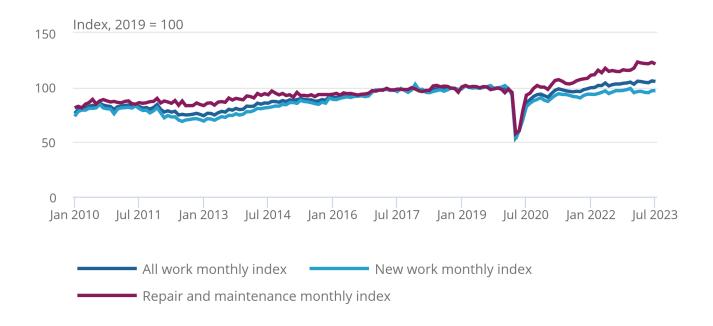
Anecdotal evidence received from returns for the <u>Monthly Business Survey (MBS) for construction and allied</u> <u>trades</u> suggested an effect from heavy rainfall and lower-than-average temperatures. The Met Office confirmed in their <u>Monthly climate summary (PDF, 5.7MB)</u> that July 2023 was the wettest July since 2009. Additional evidence also indicated a slow-down in the housing sector.

Figure 6: The monthly all work construction output index in July 2023 saw a decrease on the month

Monthly all work index, chained volume measure, seasonally adjusted, Great Britain, July 2011 to July 2023

Figure 6: The monthly all work construction output index in July 2023 saw a decrease on the month

Monthly all work index, chained volume measure, seasonally adjusted, Great Britain, July 2011 to July 2023



Source: Construction output and employment from the Office for National Statistics

Further detail on construction output growth rates, along with new orders in the construction industry and construction output prices, can be found in our <u>Construction output in Great Britain: July 2023 bulletin</u>.

6. Cross-industry themes

There were some common themes that were anecdotally reported (as part of the Monthly Business Survey (MBS) for production and services) to have played a part in performance across different industries. However, it is difficult to quantify the exact impact of each theme.

The industrial action in July 2023 had an impact on different industries to varying degrees. The health sector (junior doctors, senior doctors and radiographers), education sector (teachers in England) and rail network all undertook notable industrial action and this was an important factor as to the monthly decline in these industries. To a lesser degree, anecdotal comments were received to suggest demand for employment agencies from the health sector were also negatively affected by the industrial action in the NHS.

July 2023 also had wetter weather than normal, as detailed in the Met Office's July 2023 climate summary (PDF, <u>4.8MB</u>), following a particularly warm June, calling it "the warmest June in a series since 1884". The July report mentioned "the UK overall rainfall total was 170% of average overall, making this provisionally the wettest July since 2009 and sixth wettest July in the series". The wet weather was cited as a reason for lower output in retail, as described in our <u>Retail sales bulletin</u>, and also in construction and outdoor accommodation venues.

7. Monthly GDP data

Monthly gross domestic product by gross value added

Dataset | Released 13 September 2023

The gross value added (GVA) tables showing the monthly and annual growths and indices as published within the monthly gross domestic product (GDP) statistical bulletin.

Contributions to monthly GDP

Dataset | Released 13 September 2023 Contributions to growth within monthly gross domestic product (GDP), UK.

Monthly gross domestic product: time series

Dataset MGDP | Released 13 September 2023 Monthly estimate of gross domestic product (GDP) containing constant price gross value added (GVA) data for the UK.

Monthly GDP and main sectors to four decimal places

Dataset | Released 13 September 2023 Monthly index values for monthly gross domestic product (GDP) and the main sectors in the UK to four decimal places.

Revisions triangles for monthly GDP

Dataset | Released 13 September 2023 Comparison of gross domestic product (GDP) first estimates against estimates published later.

Health volume adjustments and contribution to GDP growth

Dataset | Released 13 September 2023

Volume estimates for the NHS Test and Trace services and vaccine programmes and their impact on real GDP.

8. Glossary

9. Measuring the data

Further information on measuring the data across our main data sources is available in the following releases:

- <u>Construction output in Great Britain: July 2023</u>
- Index of Production, UK: July 2023
- Index of Services, UK: July 2023

In the UK, we produce estimates of monthly and quarterly gross domestic product (GDP). However, there are reasons as to why these would not provide the same estimate as to where the economy is, relative to its precoronavirus (COVID-19) pandemic levels. This primarily reflects that monthly estimate of GDP are based on only the output measure of GDP, while quarterly estimates of GDP reflect the average of the three approaches (output, income and expenditure).

The coronavirus pandemic has brought many measurement challenges that have created more uncertainty around our three approaches, as set out in our <u>Coronavirus and the effects on UK GDP article</u>. This has led to an initial divergence between the output and average estimate, which is then reflected in how we compare monthly and quarterly estimates of GDP. Further information is available in our <u>Measuring monthly and quarterly UK gross</u> domestic product during the coronavirus (COVID-19) pandemic article.

Estimates for the construction industry within monthly GDP will differ to those published in the construction output release, as they account for both the outputs produced and inputs consumed by the industry. There are also some coverage differences given the use of the Annual Business Survey in their compilation.

Our <u>GDP(O) data sources catalogue</u> provides a full breakdown of the data used in this publication.

Additional bank holiday in May 2023 for the Coronation of King Charles III

There was an additional bank holiday for the coronation of King Charles III on Monday 8 May 2023. While adjustments are made for regular calendar effects, there was no explicit adjustment for this ad hoc event. However, the timing of the bank holiday indirectly affects the number of trading days, which could affect GDP estimates positively or negatively, depending on the sector.

Office for Statistics Regulation (OSR) review of GDP

The OSR will shortly be completing a <u>review of the practices around the preparation and release of information</u> <u>about revisions to estimates of GDP</u> in our <u>Impact of Blue Book 2023 article</u> released on 1 September. This will cover the following:

- processes and quality assurance in making revisions to GDP
- potential improvements to early estimates of GDP enabled through enhanced access to data
- communication of revisions to GDP, the story behind the most recent set of revisions in particular, and uncertainty in early estimates of GDP

10. Strengths and limitations

Quality and methodology information on strengths, limitations, appropriate uses, and how the data were created is available in our <u>Gross domestic product (GDP) Quality and Methodology Information (QMI)</u>.

Monthly growth rates can be volatile. Therefore, this indicator should be used with caution and alongside other measures, such as the three-month growth rate, when looking for an indicator of the medium-term trend of the economy. However, it is useful in highlighting one-off changes that can be masked by three-month growth rates.

The latest comparisons of month on same month a year ago should be treated with caution, given the impact of base effects on growth rates because of the economic impact of the coronavirus (COVID-19) pandemic throughout 2020 and 2021 (see our blog post, <u>Beware Base Effects</u>, for more information). Such comparisons and growth rates can be found in our <u>accompanying dataset</u>.

11. Related links

Construction output in Great Britain: July 2023

Bulletin | Released 13 September 2023

Short-term measures of output by the construction industry, contracts awarded for new construction work in Great Britain.

Index of Production, UK: July 2023

Bulletin | Released 13 September 2023 Movements in the volume of production for the UK production industries: manufacturing, mining and quarrying, energy supply, and water and waste management.

Index of Services, UK: July 2023

Bulletin | Released 13 September 2023 Monthly movements in output for the services industries.

GDP first quarterly estimate, UK: April to June 2023

Bulletin | Released 11 August 2023 Revised quarterly estimate of gross domestic product (GDP) for the UK. Uses additional data to provide a more precise indication of economic growth than the first estimate

Impact of Blue Book 2023 changes on gross domestic product

Article | Released 1 September 2023 Impact of methodological and data improvements on current price and chain volume measure of quarterly gross domestic product (GDP), 1997 to 2021.

Coronavirus and the effects on UK GDP

Article | Released 6 May 2020

How the global coronavirus (COVID-19) pandemic and the wider containment efforts are expected to impact on UK gross domestic product (GDP) as well as some of the challenges that national statistical institutes are likely to face.

Measuring monthly and quarterly UK gross domestic product during the coronavirus (COVID-19) pandemic Article | Released 11 November 2021

How we produce monthly and quarterly estimates of UK gross domestic product and why this affects estimating where the economy is relative to its pre-coronavirus (COVID-19) pandemic level.

12. Cite this bulletin

Office for National Statistics (ONS), released 13 September 2023, ONS website, statistical bulletin, <u>GDP</u> monthly estimate, UK: July 2023

GVA1 Monthly GDP based on GVA (Gross Value Added) ¹ Chained volume indices of gross value added at basic prices ^{2,3,4,5}

	Chained volume ir		ss Value Addeo value added at		2,3,4,5								easonally adjuste	d 2019=100									
										Wholesale		Industry section	ns (SIC2007)										Activities of
	Total GVA at basic	Agriculture, forestry and	Total production	Mining &		Electricity gas, steam	Water supply, sewerage		Total service	and retail: repair of motor vehicles	Transport	Accommodation and food service	Information and	Financial and insurance	Real estate	Professional, scientific and technical	Administrative and support a service	Public dministration and		Human health and social	Arts, entertainment	Other service	households as employers, undifferentiated
Oration	prices	fishing	industries	quarrying	Manufacturing	and air	etc	Construction 6	industries	and motorcycles	and storage		Communication	activities	activities	activities	activities	defence	Education	work activities	and recreation	activities	goods and services
Section 2019 weights	A-T 1000	A 7	B-E 135	B 11	C 97	D 15	E 12	F 62	G-T 796	G 104	H 40	30	J 63	K 82	132	M 73	N 51	0 49	P 60	Q 77	R 15	S 17	2
	YBFR	L2KL	L2KQ	L2KR	L2KX	L2MW	L2N2	L2N8	L2NC	L2NE	L2NI	L2NQ	L2NT	L2O6	L2OC	L201	L2OX	L2P8	L2PA	L2PC	L2PJ	L2PP	L2PT
2018 2019	98.3 100.0	85.6 100.0	97.7 100.0	97.9 100.0	98.9 100.0	87.7 100.0	100.3 100.0	98.6 100.0	98.5 100.0	100.4 100.0	98.2 100.0	96.6 100.0	91.6 100.0	102.6 100.0	98.4 100.0	100.9 100.0	99.6 100.0	95.0 100.0	94.0 100.0	101.6 100.0	98.3 100.0	101.8 100.0	94.1 100.0
2020	89.4	96.5	101.3	96.8	100.1	109.1	104.8	86.5	87.6	81.6	70.3	59.9	98.6	100.3	100.0	92.5	89.0	95.2 97.4	82.5	69.1	71.9	86.3	78.0
2021 2022	96.1 100.2	102.1 105.7	108.6 105.6	85.5 87.2	109.8 105.7	114.6 110.5	112.9 115.2	97.8 104.0	93.7 98.9	84.6 82.4	77.9 87.3	78.4 106.2	104.4 114.1	105.5 105.1	99.9 99.6	101.7 107.8	99.1 112.6	101.2	92.3 98.6	82.2 89.7	83.7 103.5	78.7 81.1	73.9 65.6
	ECY2	ECY3	ECY4	ECY5	ECY6	ECY7	ECY8	ECY9	ECYC	ECYD	ECYG	ECYH	ECYI	ECYJ	ECYK	ECYL	ECYP	ECYQ	ECYR	ECYS	ECYT	ECYU	ECYV
2021 Jul	97.2	103.7	108.8	81.9	110.2	114.7	114.4	97.7	95.1	86.8	78.0	92.3	105.2	104.4	99.5	102.1	99.5	98.4	99.0	83.0	83.8	74.9	77.2
Aug Sep	98.0 98.6	104.9 104.7	109.4 108.3	97.1 93.7	110.1 109.6	110.3 108.3	113.2 111.3	97.3 97.8	96.1 96.9	86.5 86.3	79.3 81.5	103.3 104.2	105.9 103.5	104.4 105.5	99.6 99.5	102.5 105.2	100.0 102.6	98.6 99.1	97.7 96.4	86.7 90.6	88.3 90.0	77.3 82.0	67.4 68.6
Oct Nov	98.7 99.7	104.8 104.6	107.2 107.5	90.0 87.7	108.8 108.5	102.9 108.9	115.0 115.0	97.5 99.3	97.3 98.4	86.7 85.8	81.6 84.9	98.8 98.4	107.2 107.2	106.1 106.6	99.4 99.5	103.1 105.5	105.8 107.9	98.5 99.7	95.2 98.0	93.5 95.1	92.5 97.1	81.2 83.1	70.8 74.4
Dec 2022 Jan	99.8 100.0	104.6 104.7	107.5 107.5	85.6 90.2	108.5 107.7	109.7 112.0	115.7 116.0	100.2 101.2	98.4 98.6	83.7 84.7	85.2 85.4	92.2 97.7	108.2 112.6	106.7 105.5	99.6 99.6	106.0 105.5	108.7 109.0	100.1 100.4	98.4 97.8	98.2 93.7	97.6 97.4	83.0 85.3	77.2 74.8
Feb	99.9	105.4	107.2	90.1	107.2	112.3	115.8	101.2	98.5	83.5	85.8	104.9	114.2	104.9	99.2	106.2	110.9	100.4	97.3	90.8	99.0	83.0	68.9
Mar Apr	100.0 100.0	105.8 105.8	107.1 106.6	90.5 87.9	107.3 106.5	110.5 111.9	116.3 117.8	103.2 103.1	98.5 98.5	81.8 83.2	87.2 86.8	105.5 107.0	112.6 113.2	104.8 105.0	99.3 99.6	107.1 106.6	111.2 112.3	100.4 100.3	97.1 98.2	91.2 87.0	103.7 106.3	82.4 81.1	64.6 66.8
May Jun	100.8 100.0	106.0 106.1	106.7 105.6	88.5 86.2	106.9 105.5	112.5 111.5	114.6 116.4	105.5 102.8	99.4 98.8	82.3 81.7	87.6 86.3	107.9 110.2	114.4 114.0	105.4 105.7	99.8 99.7	109.4 108.2	113.7 110.9	100.5 100.9	98.4 98.7	90.5 88.3	104.5 104.8	81.7 81.2	68.0 70.8
Jul	100.4 100.4	106.2	105.2	91.3 83.8	104.9 104.0	110.9	113.4 113.7	104.0	99.3 99.4	82.1 82.3	88.8 90.0	109.0	114.1	105.9 105.5	99.7	108.3	112.3	101.3	100.0 100.3	88.4 89.1	107.7 103.8	80.9 79.0	66.8 63.4
Aug Sep	99.7	106.0 105.4	103.9 104.0	84.6	104.0	110.2 110.0	114.2	104.6 104.5	98.5	80.6	89.5	106.2 105.3	115.4 112.2	104.5	99.7 99.6	108.9 107.5	113.2 111.6	101.8 102.0	99.6	89.6	102.1	79.6	61.6
Oct Nov	100.4 100.5	105.5 105.3	104.4 104.4	84.4 86.7	105.2 104.6	106.7 106.7	112.8 115.1	105.2 105.5	99.2 99.5	82.3 82.2	89.0 87.2	105.9 107.4	112.9 116.5	104.4 104.3	99.9 99.5	108.6 108.1	113.9 116.1	102.0 102.0	99.5 99.2	90.2 90.4	108.0 105.6	79.6 79.8	61.3 61.3
Dec 2023 Jan	100.0 100.5	105.3 105.3	104.6 104.4	82.3 79.5	104.7 105.2	110.7 108.6	115.9 115.2	106.3 104.4	98.7 99.5	81.8 82.6	84.3 86.6	106.8 106.5	116.5 117.4	104.6 104.9	99.4 99.5	109.0 108.7	116.1 117.2	101.9 102.0	96.6 98.8	87.5 88.5	99.3 103.9	79.3 80.4	59.4 60.4
Feb	100.5	105.4	104.3	81.3	105.3	106.4	113.8	107.1	99.4	82.4	86.2	106.9	117.1	105.1	99.5	108.4	117.7	100.9	97.2	89.0	105.7	82.0	61.0
Mar Apr	100.3 100.5	105.4 105.5	105.1 105.2	78.9 76.8	106.1 106.5	109.2 110.2	116.1 113.8	106.9 106.1	98.9 99.3	81.1 82.2	84.8 85.2	106.4 108.8	116.0 117.5	104.9 104.8	99.6 99.5	108.4 107.5	116.6 117.2	101.0 101.2	97.4 97.9	88.5 88.3	107.1 106.5	81.0 81.5	62.2 62.2
May Jun	100.4 101.0	105.5 105.6	104.5 106.4	77.1 75.5	106.3 108.8	107.0 107.0	111.3 113.5	105.8 107.5	99.3 99.5	81.9 82.6	85.0 85.0	107.2 108.8	117.6 119.1	104.6 104.4	99.3 99.2	107.6 107.1	116.3 117.0	101.3 101.6	98.4 98.7	90.1 89.4	109.1 108.5	80.7 81.5	62.2 61.6
Jul	100.4	105.7	105.7	76.9	108.0	105.4	112.9	107.0	99.0	82.2	83.6	108.3	116.6	104.6	98.9	107.6	115.4	102.0	97.6	87.5	115.7	82.5	61.0
Percentage change,	GDPQ	L3BB	L3BG	L3BH	L3BN	L3DM	L3DQ	L3DW	L3E2	L3E4	L3E8	L3EG	L3EJ	L3EU	L3F2	L3F8	L3FN	L3FW	L3FY	L3G2	L3G9	L3GF	L3GJ
2018 2019	1.6 1.7	-12.5 16.9	3.3 2.3	6.3 2.2	4.3 1.2	-3.2 14.0	1.1 -0.3	-1.7 1.5	1.7 1.5	-0.7 -0.4	3.2 1.9	-1.7 3.5	13.2 9.2	-0.9 -2.5	1.4 1.7	0.5 -0.9	0.1 0.5	0.9 5.3	4.6 6.4	-0.9 -1.6	1.1 1.8	5.0 -1.7	8.5 6.3
2020	-10.6	-3.5	1.2	-3.2	0.1	9.1	4.8	-13.5	-12.4	-18.4	-29.7	-40.1	-1.4	0.3	0.0	-7.5	-11.0	-4.9	-17.5	-30.9	-28.2	-13.7	-22.1
2021 2022	7.4 4.3	5.8 3.5	7.3 -2.8	-11.7 2.1	9.7 -3.7	5.1 -3.6	7.8 2.0	13.1 6.2	7.0 5.5	3.7 -2.6	10.8 12.2	30.9 35.3	5.9 9.3	5.2 -0.4	-0.1 -0.4	9.9 6.0	11.4 13.6	2.4 3.8	11.9 6.8	19.0 9.2	16.5 23.7	-8.8 3.0	-5.2 -11.1
Percentage change, la	atest 3 months on	previous 3 mon	ths																				
	ED3H	ED3I	ED3J	ED3K	ED3L	ED3M	ED3N	ED3O	ED3P	ED3Q	ED3R	ED3S	ED3T	ED3U	ED3V	ED3W	ED3X	ED3Y	ED3Z	ED42	ED43	ED44	ED9R
2021 Jul Aug	4.8 3.1	3.2 3.9	0.2 -0.6	-8.9 3.6	0.4 -0.6	2.2 -5.2	1.2 2.1	0.3 -1.5	6.2 4.3	5.9 1.7	3.3 5.0	86.8 58.7	2.6 1.6	-0.4 -0.9	-0.3 -0.4	2.3 2.5	4.9 4.2	3.1 2.2	17.6 8.0	17.6 13.5	12.5 11.6	-5.3 -6.0	22.5 9.0
Sep Oct	1.7 1.5	3.7 2.6	-0.4 -0.9	24.4 23.4	-0.9 -1.2	-9.5 -11.4	0.9 0.1	-1.6 -0.9	2.4 2.2	-1.6 -1.1	5.7 5.9	29.8 16.1	0.4 1.0	-0.6 0.3	-0.5 -0.4	2.4 2.0	4.5 5.0	1.4 0.8	0.8 -2.0	9.5 9.7	10.1 9.9	-2.5 6.8	-12.6 -16.9
Nov	1.5	1.0	-1.2	9.6	-1.3	-7.3	0.0	0.4	2.2	-1.0	5.8	5.2	0.9	1.3	-0.3	1.9	6.3	0.8	-2.2	10.0	10.3	9.2	-8.6
Dec 2022 Jan	1.5 1.4	0.2 -0.2	-1.4 -0.8	-3.4 -6.2	-1.3 -1.2	-3.5 2.8	2.0 2.1	1.4 2.7	2.1 1.7	-1.3 -2.0	5.4 5.4	-3.5 -5.9	2.5 3.6	1.6 0.9	-0.1 0.0	1.5 2.0	6.7 5.6	0.7 1.3	-0.5 1.7	10.2 6.0	9.6 7.9	5.7 4.5	4.3 9.5
Feb Mar	0.9 0.6	0.2 0.6	-0.3 -0.1	-2.1 2.8	-1.1 -1.1	4.4 4.1	1.8 0.7	2.7 2.9	1.0 0.5	-2.7 -2.4	3.4 2.7	-2.2 6.5	5.4 5.2	-0.3 -1.3	0.0 -0.1	1.2 1.3	3.9 2.7	1.2 0.9	1.4 0.2	1.3 -3.9	5.2 4.5	2.0 1.4	3.3 -6.3
Apr May	0.1 0.3	1.0 0.9	-0.5 -0.5	1.9 0.4	-1.1 -0.8	1.3 0.3	0.9 0.3	2.3 3.0	0.1 0.3	-2.2 -1.8	1.7 2.0	10.1 8.7	3.7 1.6	-1.3 -0.6	-0.2 0.1	0.9 1.7	2.7 2.6	0.3 0.1	-0.6 0.1	-6.3 -5.0	5.7 6.9	-1.9 -2.4	-11.5 -9.7
Jun	0.3	0.6	-0.9	-3.0	-1.0	0.3	0.2	1.9	0.4	-1.1	0.9	5.5	0.6	0.3	0.3	1.7	1.8	0.2	1.0	-3.6	5.2	-2.7	-1.3
Jul Aug	0.5 0.0	0.4 0.2	-1.0 -1.8	-0.9 -2.1	-1.1 -2.0	0.0 -0.7	-1.6 -1.5	1.5 -0.1	0.6 0.4	-0.9 -0.4	1.1 1.4	3.0 1.5	0.8 1.0	0.7 0.6	0.3 0.1	1.9 0.7	0.8 -0.2	0.5 0.9	1.5 1.8	-0.7 -1.1	2.6 0.6	-1.2 -1.7	2.6 0.8
Sep Oct	-0.1 -0.3	-0.1 -0.4	-1.8 -1.6	-1.1 -5.0	-1.9 -1.3	-1.5 -2.4	-2.1 -1.1	0.6 0.7	0.2 -0.1	-0.9 -0.4	2.9 2.2	-1.4 -3.0	0.0 -0.6	-0.1 -0.8	0.0 0.0	0.2 -0.2	0.0 0.5	1.1 1.1	1.6 0.8	0.5 0.7	-0.6 -1.0	-1.8 -2.2	-6.7 -9.4
Nov	-0.1	-0.6	-0.6	-2.1	-0.2	-2.8	-0.4	1.2	-0.1	-0.5	0.2	-2.1	-0.5	-1.2	0.0	-0.4	1.5	0.7	-0.2	1.7	-0.2	-0.9	-8.4
Dec 2023 Jan	0.1 0.2	-0.5 -0.4	0.0 0.3	-2.4 -1.7	0.5 0.4	-2.1 -0.3	0.7 1.6	1.3 0.6	0.1 0.1	0.5 0.6	-2.9 -3.9	-0.1 1.0	1.2 2.9	-0.8 -0.2	-0.1 -0.3	0.3 0.2	2.6 3.1	0.3 0.0	-1.5 -1.6	0.4 -0.9	-0.3 -1.6	-0.3 0.5	-5.1 -2.8
Feb Mar	0.2 0.1	-0.1 0.0	0.2 0.1	-4.9 -5.4	0.4 0.6	0.7 0.0	0.8 0.3	0.8 0.4	0.1 0.1	0.7 -0.1	-3.3 -1.1	0.5 -0.1	2.7 1.3	0.4 0.5	-0.2 -0.1	0.6 -0.1	2.7 1.6	-0.4 -0.7	-1.9 -0.6	-1.9 -0.8	-2.1 1.2	1.1 2.0	-1.8 0.8
Apr	0.1 0.1	0.2	0.4 0.5	-4.6 -4.2	1.0 1.2	0.0 0.2	-0.7 -1.1	1.2 0.3	0.0	-0.4 -0.6	-0.7 -0.8	0.4 0.7	0.1	0.3 -0.1	0.1 0.0	-0.4 -0.8	0.6	-0.9 -0.4	-0.7 0.4	-0.2 0.7	3.4 4.5	2.1 0.6	2.4
May Jun	0.2	0.2	0.7	-4.3	1.6	0.0	-1.8	0.3	0.1	0.2	-1.0	1.6	1.0	-0.3	-0.2	-1.0	-0.3	0.1	0.5	0.7	2.3	0.1	3.2 1.3
Jul	0.2	0.1	0.6	-3.2	1.7	-2.0	-1.7	0.1	0.1	0.4	-1.0	0.7	0.8	-0.4	-0.4	-0.6	-0.8	0.6	0.7	0.4	4.4	0.1	-0.3

 1 The GVA output is designated as a National Statistic.
 Sources: For further information on these data please telephone

 2 Indices reflect values measured at basic prices, which exclude "taxes less subsidies on products".
 01633 582428 or E-mail gdp@ons.gov.uk

 3 Estimates cannot be regarded as accurate to the last digit shown.
 Any apparent inconsistencies between the index numbers and the percentage changes shown in these tables are due to rounding.

 5 A complete run of data is available on the ONS website.
 Construction Output in Great Britain releases, due to rounding differences. For the most accurate figure, please refer to the Construction Output release.

GVA2 Monthly GDP based on GVA (Gross Value Added) ¹ Chained volume indices of gross value added at basic prices ^{2,3,4,5}

												Industry section	ns (SIC2007)										
	Total GVA at basic	Agriculture, forestry and	Total production	Mining &		Electricity gas, steam	Water supply, sewerage		Total service	Wholesale and retail: repair of motor vehicles	Transport	Accommodation and food service	Information	Financial and insurance	Real estate	Professional, scientific and technical	Administrative and support ad service	Public ministration and		Human health and social	Arts, entertainment	Other service	Activities househo as employe undifferentiat
Question:	prices	fishing	industries	quarrying	Manufacturing	and air	etc	Construction 6	industries	and motorcycles	and storage	activities	Communication	activities	activities	activities	activities		Education		and recreation	activities	goods and service
Section 2019 weights	A-T 1000	A 7	B-E 135	<u> </u>	C 97	D 15	12	F 62	G-T 796	G 104	H 40	30	J 63	K 82	L 132	M 73	N 51	0 49	P 60	Q 77	R 15	S 17	
2015 Weights		/	135		37	15	12	62	790	104	40	30	03	82	132	73	51	49	80		15	1/	
Percentage change, la																							
	ED9T	ED9U	ED9V	ED9W	EDGQ	EDGR	EDGS	EDGT	EDGU	EDGV	EDGW	EDGX	EDGY	EDGZ	EDHA	EDHB	EDHC	EDHD	EDHE	EDHF	EDHG	EDHH	EDI
2021 Jul Aug	17.4 11.4	9.8 9.4	14.0 7.1	-25.1 -17.2	19.6 10.4	12.3 3.1	10.1 7.5	32.9 17.0	17.1 11.9	12.2 3.2	31.9 18.0	166.8 61.1	8.5 7.2	5.2 4.8	0.2 0.1	16.4 14.9	21.9 16.5	2.6 3.9	52.8 27.9	51.9 46.8	46.5 33.4	-5.5 -12.3	50.4 11.1
Sep	8.2	8.9	3.9	-5.7	5.6	-2.3	6.4	8.5	9.1	1.5	11.8	27.1	6.6	4.9	-0.1	14.0	16.6	5.3	9.2	43.5	28.3	-15.3	-15.6
Oct	7.4	8.9	1.9	-0.5	2.7	-5.3	6.1	5.5	8.7	2.0	10.9	24.5	6.4	5.6	-0.3	12.9	18.5	5.8	0.4	45.4	28.5	-9.8	-24.1
Nov	8.1	8.8	-0.1	-2.9	0.0	-4.7	6.6	4.2	10.1	3.9	12.0	53.1	6.4	5.9	-0.4	12.5	20.4	6.5	-0.8	47.4	32.8	-4.5	-20.1
Dec	8.3	8.6	-1.5	-7.2	-1.5	-4.1	6.2	4.7	10.7	3.8	12.7	76.1	7.8	4.9	-0.5	10.7	19.4	6.7	1.5	50.9	31.9	-6.1	-12.
2022 Jan	9.9	8.1	-1.7 -1.6	-6.8	-1.8	-3.2	5.4 4.4	6.9	12.6	6.7	15.4	120.5	9.6	3.0	-0.8	11.1	19.6	7.1	11.7	49.7	34.4	1.3	-5.3
Feb Mar	10.2 10.3	7.5 7.0	-1.6	-4.4 0.3	-1.7 -2.0	-4.5 -5.0	4.4 4.1	7.4 6.6	12.9 13.1	6.4 5.9	17.1 18.7	125.8 154.6	11.7 12.3	1.0 -0.1	-1.1 -1.2	9.8 8.8	19.7 19.9	6.9 6.6	21.5 26.2	45.3 37.1	32.0 38.2	3.0 12.6	-2.2
Apr	8.1	6.7	-1.6	0.3 7.6	-2.0	-5.0 -5.7	4.1	4.5	10.5	0.3	10.7	124.8	12.3	-0.1	-1.2	0.0 7.3	19.9	6.6 5.5	26.2 16.5	28.1	30.2 41.1	3.7	-1.4
May	6.0	6.1	-2.6	11.6	-3.7	-8.0	4.3	4.7	7.9	-3.8	17.2	77.4	9.7	-0.5	-0.6	7.5	18.0	4.3	7.1	20.1	38.4	2.2	-7.1
Jun	4.1	5.2	-2.7	19.8	-4.2	-8.7	3.8	4.6	5.5	-6.3	15.3	40.7	9.0	-0.1	-0.4	7.2	16.6	3.3	1.6	11.7	32.6	1.6	-15.
Jul	3.6	3.8	-3.1	16.9	-4.5	-7.7	1.5	5.8	4.7	-6.2	14.7	24.0	9.3	0.6	-0.2	6.9	14.7	2.9	0.6	8.2	28.6	8.2	-17.4
Aug	2.9	2.4	-3.7	5.4	-5.0	-3.7	0.6	6.1	3.9	-5.7	13.2	13.5	9.0	1.0	-0.1	5.7	13.0	3.1	1.0	4.7	24.8	6.9	-14.
Sep	2.3	1.4	-4.1	-4.8	-5.2	-0.7	0.7	6.9	3.2	-5.6	12.3	6.9	8.6	0.5	0.1	4.8	11.6	3.0	2.3	2.6	19.7	2.3	-10.
Oct	1.7	0.8	-3.9	-10.0	-4.7	1.7	0.3	7.4	2.4	-5.5	10.8	3.6	7.6	-0.5	0.2	4.6	9.8	3.2	3.5	-0.7	15.9	-0.9	-9.
Nov	1.2	0.7	-3.2	-5.8	-4.0	1.0	0.3	7.0	1.6	-5.3	7.2	5.7	7.5	-1.5	0.2	3.3	8.0	2.9	3.0	-3.2	12.9	-2.9	-13.9
Dec	0.9	0.6 0.6	-2.7	-3.8	-3.5	0.8	-0.5	6.8	1.1	-3.8	3.5	10.6	7.2	-1.9	0.1	3.5	7.3	2.6	1.2	-6.5	8.9 5.7	-3.5	-18.2
2023 Jan Feb	0.5 0.4	0.6	-2.8 -2.8	-5.7 -8.6	-3.1 -2.5	-1.4 -2.5	-0.1 -0.8	5.2 5.0	0.8 0.7	-3.0 -2.0	1.0 0.3	11.2 8.6	6.8 4.8	-1.6 -0.8	-0.1 0.0	2.8 2.7	7.3 6.8	1.9 1.3	0.1 -0.3	-7.2 -6.2	5.7	-4.7 -3.8	-20.0 -18.2
Mar	0.4	0.4	-2.5	-0.0	-2.5	-3.2	-0.9	4.2	0.7	-2.0	-0.3	3.7	3.3	-0.0	0.0	2.1	6.2	0.9	-0.3	-0.2	5.6	-3.0	-10.2
Apr	0.5	-0.2	-2.0	-11.7	-1.0	-2.7	-1.8	4.0	0.7	-1.1	-1.4	1.4	3.1	0.0	0.2	1.4	5.1	0.7	0.0	-1.2	3.4	-0.9	-7.
May	0.2	-0.3	-1.8	-12.8	-0.6	-2.5	-2.1	2.2	0.4	-0.8	-2.5	0.6	3.2	-0.3	-0.1	0.1	3.8	0.8	0.0	-0.6	2.7	-0.8	-6.
Jun	0.4	-0.4	-0.9	-12.7	0.8	-3.5	-2.9	2.6	0.5	-0.2	-2.1	-0.1	3.7	-0.7	-0.3	-0.6	4.0	0.8	-0.1	0.8	2.7	-0.2	-9.
Jul	0.2	-0.4	-0.3	-13.7	1.8	-4.6	-1.9	2.6	0.1	0.2	-3.5	-0.9	3.1	-1.0	-0.6	-1.1	3.5	0.8	-0.8	-0.1	5.2	0.4	-10.1
Percentage change, la	atest month on pre	evious month																					
	ECYX	ECYY	ECYZ	ECZ2	ECZA	ECZC	ECZD	ECZE	ECZG	ECZK	ECZN	ECZT	ECZU	ED2G	ED2H	ED2I	ED2J	ED2K	ED2L	ED2M	ED2N	ED2O	ED2
2021 Jul	-0.2	1.3																					
Aug			0.2	19.1	-0.4	-4.7	0.6	-0.7	-0.2	-1.3	1.4	1.4	1.3	-0.7	-0.6	-1.3	1.4	0.5	-0.3	-1.2	2.9	1.9	-13.
	0.9	1.2	0.5	18.6	-0.1	-3.9	-1.0	-0.4	1.0	-0.3	1.6	12.0	0.6	0.0	0.1	0.5	0.5	0.2	-1.4	4.4	5.4	3.2	-12.7
Sep	0.6	1.2 -0.2	0.5 -1.0	18.6 -3.5	-0.1 -0.5	-3.9 -1.8	-1.0 -1.7	-0.4 0.5	1.0 0.9	-0.3 -0.3	1.6 2.7	12.0 0.9	0.6 -2.3	0.0 1.0	0.1 -0.1	0.5 2.6	0.5 2.6	0.2 0.5	-1.4 -1.3	4.4 4.5	5.4 1.9	3.2 6.1	-12. 1.8
Sep Oct	0.6 0.1	1.2 -0.2 0.1	0.5 -1.0 -1.0	18.6 -3.5 -3.9	-0.1 -0.5 -0.7	-3.9 -1.8 -5.0	-1.0 -1.7 3.3	-0.4 0.5 -0.3	1.0 0.9 0.4	-0.3 -0.3 0.4	1.6 2.7 0.1	12.0 0.9 -5.2	0.6 -2.3 3.6	0.0 1.0 0.6	0.1 -0.1 -0.1	0.5 2.6 -2.0	0.5 2.6 3.1	0.2 0.5 -0.7	-1.4 -1.3 -1.2	4.4 4.5 3.2	5.4 1.9 2.8	3.2 6.1 -1.0	-12.7 1.8 3.7
Sep Oct Nov	0.6 0.1 1.0	1.2 -0.2 0.1 -0.3	0.5 -1.0 -1.0 0.2	18.6 -3.5 -3.9 -2.6	-0.1 -0.5 -0.7 -0.3	-3.9 -1.8 -5.0 5.8	-1.0 -1.7 3.3 0.0	-0.4 0.5 -0.3 1.8	1.0 0.9 0.4 1.1	-0.3 -0.3 0.4 -1.0	1.6 2.7 0.1 4.1	12.0 0.9 -5.2 -0.3	0.6 -2.3 3.6 0.0	0.0 1.0 0.6 0.5	0.1 -0.1 -0.1 0.1	0.5 2.6 -2.0 2.3	0.5 2.6 3.1 2.0	0.2 0.5 -0.7 1.2	-1.4 -1.3 -1.2 2.9	4.4 4.5 3.2 1.7	5.4 1.9 2.8 5.0	3.2 6.1 -1.0 2.3	-12. 1. 3. 5.
Sep Oct Nov Dec	0.6 0.1 1.0 0.1	1.2 -0.2 0.1 -0.3 0.1	0.5 -1.0 -1.0 0.2 0.0	18.6 -3.5 -3.9 -2.6 -2.4	-0.1 -0.5 -0.7 -0.3 0.0	-3.9 -1.8 -5.0 5.8 0.7	-1.0 -1.7 3.3 0.0 0.7	-0.4 0.5 -0.3 1.8 0.9	1.0 0.9 0.4 1.1 0.1	-0.3 -0.3 0.4 -1.0 -2.5	1.6 2.7 0.1 4.1 0.4	12.0 0.9 -5.2 -0.3 -6.3	0.6 -2.3 3.6	0.0 1.0 0.6 0.5 0.1	0.1 -0.1 -0.1 0.1 0.1	0.5 2.6 -2.0 2.3 0.5	0.5 2.6 3.1 2.0 0.8	0.2 0.5 -0.7 1.2 0.5	-1.4 -1.3 -1.2 2.9 0.5	4.4 4.5 3.2 1.7 3.2	5.4 1.9 2.8 5.0 0.5	3.2 6.1 -1.0 2.3 -0.1	-12. 1. 3. 5.: 3.
Sep Oct Nov	0.6 0.1 1.0	1.2 -0.2 0.1 -0.3	0.5 -1.0 -1.0 0.2	18.6 -3.5 -3.9 -2.6	-0.1 -0.5 -0.7 -0.3	-3.9 -1.8 -5.0 5.8	-1.0 -1.7 3.3 0.0	-0.4 0.5 -0.3 1.8	1.0 0.9 0.4 1.1	-0.3 -0.3 0.4 -1.0	1.6 2.7 0.1 4.1	12.0 0.9 -5.2 -0.3	0.6 -2.3 3.6 0.0 0.9	0.0 1.0 0.6 0.5	0.1 -0.1 -0.1 0.1	0.5 2.6 -2.0 2.3	0.5 2.6 3.1 2.0	0.2 0.5 -0.7 1.2	-1.4 -1.3 -1.2 2.9	4.4 4.5 3.2 1.7	5.4 1.9 2.8 5.0	3.2 6.1 -1.0 2.3	-12. 1. 3. 5. 3. -3.
Sep Oct Nov Dec 2022 Jan	0.6 0.1 1.0 0.1 0.2	1.2 -0.2 0.1 -0.3 0.1 0.1	0.5 -1.0 -1.0 0.2 0.0 0.0	18.6 -3.5 -3.9 -2.6 -2.4 5.3	-0.1 -0.5 -0.7 -0.3 0.0 -0.8	-3.9 -1.8 -5.0 5.8 0.7 2.1	-1.0 -1.7 3.3 0.0 0.7 0.2	-0.4 0.5 -0.3 1.8 0.9 1.0	1.0 0.9 0.4 1.1 0.1 0.1	-0.3 -0.3 0.4 -1.0 -2.5 1.2	1.6 2.7 0.1 4.1 0.4 0.2	12.0 0.9 -5.2 -0.3 -6.3 6.0	0.6 -2.3 3.6 0.0 0.9 4.1	0.0 1.0 0.6 0.5 0.1 -1.2	0.1 -0.1 0.1 0.1 0.1 0.0	0.5 2.6 -2.0 2.3 0.5 -0.4	0.5 2.6 3.1 2.0 0.8 0.2	0.2 0.5 -0.7 1.2 0.5 0.2	-1.4 -1.3 -1.2 2.9 0.5 -0.6	4.4 4.5 3.2 1.7 3.2 -4.6	5.4 1.9 2.8 5.0 0.5 -0.2	3.2 6.1 -1.0 2.3 -0.1 2.7	-12. 1. 3. 5. 3. -3. -7.
Sep Oct Nov Dec 2022 Jan Feb	0.6 0.1 1.0 0.1 0.2 -0.1 0.1 0.0	1.2 -0.2 0.1 -0.3 0.1 0.1 0.7 0.3 0.0	0.5 -1.0 -1.0 0.2 0.0 0.0 -0.3	18.6 -3.5 -3.9 -2.6 -2.4 5.3 -0.1 0.5 -2.9	-0.1 -0.5 -0.7 -0.3 0.0 -0.8 -0.5	-3.9 -1.8 -5.0 5.8 0.7 2.1 0.3 -1.6 1.3	-1.0 -1.7 3.3 0.0 0.7 0.2 -0.2 0.4 1.3	-0.4 0.5 -0.3 1.8 0.9 1.0 0.1 2.0 -0.1	1.0 0.9 0.4 1.1 0.1 0.1 0.0 0.0 0.0	-0.3 -0.3 0.4 -1.0 -2.5 1.2 -1.4	1.6 2.7 0.1 4.1 0.4 0.2 0.5 1.7 -0.5	12.0 0.9 -5.2 -0.3 -6.3 6.0 7.4 0.6 1.4	0.6 -2.3 3.6 0.0 9.9 4.1 1.4 -1.4 0.5	0.0 1.0 0.6 0.5 0.1 -1.2 -0.5 -0.1 0.2	0.1 -0.1 -0.1 0.1 0.0 -0.4 0.1 0.3	0.5 2.6 -2.0 2.3 0.5 -0.4 0.6 0.9 -0.4	0.5 2.6 3.1 2.0 0.8 0.2 1.7 0.3 1.0	0.2 0.5 -0.7 1.2 0.5 0.2 0.0 0.0 0.0	-1.4 -1.3 -1.2 2.9 0.5 -0.6 -0.6 -0.1 1.1	4.4 4.5 3.2 1.7 3.2 -4.6 -3.0	5.4 1.9 2.8 5.0 0.5 -0.2 1.6 4.7 2.5	3.2 6.1 -1.0 2.3 -0.1 2.7 -2.6 -0.7 -1.5	-12. 1. 3. 5. 3. -3. -7. -6. 3.
Sep Oct Nov Dec 2022 Jan Feb Mar Apr May	0.6 0.1 1.0 0.1 0.2 -0.1 0.1 0.0 0.8	1.2 -0.2 0.1 -0.3 0.1 0.1 0.7 0.3 0.0 0.2	0.5 -1.0 -1.0 0.2 0.0 -0.3 -0.1 -0.4 0.1	18.6 -3.5 -3.9 -2.6 -2.4 5.3 -0.1 0.5 -2.9 0.7	-0.1 -0.5 -0.7 -0.3 0.0 -0.8 -0.5 0.1 -0.7 0.4	-3.9 -1.8 -5.0 5.8 0.7 2.1 0.3 -1.6 1.3 0.5	-1.0 -1.7 3.3 0.0 0.7 0.2 -0.2 0.4 1.3 -2.7	-0.4 0.5 -0.3 1.8 0.9 1.0 0.1 2.0 -0.1 2.3	1.0 0.9 0.4 1.1 0.1 0.0 0.0 0.0 0.0 0.0	-0.3 -0.3 0.4 -1.0 -2.5 1.2 -1.4 -2.0 1.7 -1.1	1.6 2.7 0.1 4.1 0.4 0.2 0.5 1.7 -0.5 0.9	12.0 0.9 -5.2 -0.3 -6.3 6.0 7.4 0.6 1.4 0.9	0.6 -2.3 3.6 0.0 0.9 4.1 1.4 -1.4 0.5 1.1	0.0 1.0 0.6 0.5 0.1 -1.2 -0.5 -0.1 0.2 0.4	0.1 -0.1 -0.1 0.1 0.0 -0.4 0.1 0.3 0.2	0.5 2.6 -2.0 2.3 0.5 -0.4 0.6 0.9 -0.4 2.6	0.5 2.6 3.1 2.0 0.8 0.2 1.7 0.3 1.0 1.3	0.2 0.5 -0.7 1.2 0.5 0.2 0.0 0.0 0.0 0.0 0.2	-1.4 -1.3 -1.2 2.9 0.5 -0.6 -0.6 -0.1 1.1 0.3	4.4 4.5 3.2 1.7 3.2 -4.6 -3.0 0.4 -4.6 4.1	5.4 1.9 2.8 5.0 0.5 -0.2 1.6 4.7 2.5 -1.7	3.2 6.1 -1.0 2.3 -0.1 2.7 -2.6 -0.7 -1.5 0.6	-12 1 3 3 3 -3 -7 -6 3 1
Sep Oct Nov Dec 2022 Jan Feb Mar Apr May Jun	0.6 0.1 1.0 0.1 0.2 -0.1 0.1 0.0 0.0 0.8 -0.7	1.2 -0.2 0.1 -0.3 0.1 0.1 0.7 0.3 0.0 0.2 0.1	0.5 -1.0 -1.0 0.2 0.0 -0.3 -0.1 -0.4 0.1 -1.1	18.6 -3.5 -3.9 -2.6 -2.4 5.3 -0.1 0.5 -2.9 0.7 -2.6	-0.1 -0.5 -0.7 -0.3 0.0 -0.8 -0.5 0.1 -0.7 0.4 -1.3	-3.9 -1.8 -5.0 5.8 0.7 2.1 0.3 -1.6 1.3 0.5 -0.8	-1.0 -1.7 3.3 0.0 0.7 0.2 -0.2 0.4 1.3 -2.7 1.6	-0.4 0.5 -0.3 1.8 0.9 1.0 0.1 2.0 -0.1 2.3 -2.6	1.0 0.9 0.4 1.1 0.1 0.1 0.0 0.0 0.0 0.8 -0.5	-0.3 -0.3 0.4 -1.0 -2.5 1.2 -1.4 -2.0 1.7 -1.1 -0.7	1.6 2.7 0.1 4.1 0.4 0.2 0.5 1.7 -0.5 0.9 -1.4	12.0 0.9 -5.2 -0.3 -6.3 6.0 7.4 0.6 1.4 0.9 2.1	0.6 -2.3 3.6 0.0 0.9 4.1 1.4 -1.4 0.5 1.1 -0.4	0.0 1.0 0.6 0.5 0.1 -1.2 -0.5 -0.1 0.2 0.4 0.3	0.1 -0.1 -0.1 0.1 0.0 -0.4 0.1 0.3 0.2 -0.1	0.5 2.6 -2.0 2.3 0.5 -0.4 0.6 0.9 -0.4 2.6 -1.1	0.5 2.6 3.1 2.0 0.8 0.2 1.7 0.3 1.0 1.3 -2.5	0.2 0.5 -0.7 1.2 0.5 0.2 0.0 0.0 0.0 0.0 0.0 0.2 0.4	-1.4 -1.3 -1.2 2.9 0.5 -0.6 -0.6 -0.1 1.1 0.3 0.2	4.4 4.5 3.2 1.7 3.2 -4.6 -3.0 0.4 -4.6 4.1 -2.5	5.4 1.9 2.8 5.0 0.5 -0.2 1.6 4.7 2.5 -1.7 0.3	3.2 6.1 -1.0 2.3 -0.1 2.7 -2.6 -0.7 -1.5 0.6 -0.5	-12. 1. 3 5. 3 -3. -7 -6. 3 1. 4
Sep Oct Nov Dec 2022 Jan Feb Mar Apr May Jun Jul	0.6 0.1 1.0 0.1 0.2 -0.1 0.1 0.0 0.8 -0.7 0.4	1.2 -0.2 0.1 -0.3 0.1 0.1 0.7 0.3 0.0 0.2 0.1 0.2	0.5 -1.0 -1.0 0.2 0.0 -0.3 -0.1 -0.4 0.1 -1.1 -0.4	18.6 -3.5 -3.9 -2.6 -2.4 5.3 -0.1 0.5 -2.9 0.7 -2.6 5.8	-0.1 -0.5 -0.7 -0.3 0.0 -0.8 -0.5 0.1 -0.7 0.4 -1.3 -0.6	-3.9 -1.8 -5.0 5.8 0.7 2.1 0.3 -1.6 1.3 0.5 -0.8 -0.6	-1.0 -1.7 3.3 0.0 0.7 0.2 -0.2 0.4 1.3 -2.7 1.6 -2.6	-0.4 0.5 -0.3 1.8 0.9 1.0 0.1 2.0 -0.1 2.3 -2.6 1.2	1.0 0.9 0.4 1.1 0.1 0.1 0.0 0.0 0.0 0.0 0.8 -0.5 0.4	-0.3 -0.3 0.4 -1.0 -2.5 1.2 -1.4 -2.0 1.7 -1.1 -0.7 0.5	1.6 2.7 0.1 4.1 0.4 0.5 1.7 -0.5 0.9 -1.4 2.9	12.0 0.9 -5.2 -0.3 -6.3 6.0 7.4 0.6 1.4 0.9 2.1 -1.1	0.6 -2.3 3.6 0.0 0.9 4.1 1.4 -1.4 0.5 1.1 -0.4 0.2	0.0 1.0 0.6 0.5 0.1 -1.2 -0.5 -0.1 0.2 0.4 0.3 0.2	0.1 -0.1 -0.1 0.1 0.0 -0.4 0.1 0.3 0.2 -0.1 0.0	0.5 2.6 -2.0 2.3 0.5 -0.4 0.6 0.9 -0.4 2.6 -1.1 0.1	0.5 2.6 3.1 2.0 0.8 0.2 1.7 0.3 1.0 1.3 -2.5 1.2	0.2 0.5 -0.7 1.2 0.5 0.2 0.0 0.0 0.0 0.0 0.2 0.4 0.4	-1.4 -1.3 -1.2 2.9 0.5 -0.6 -0.6 -0.1 1.1 0.3 0.2 1.3	4.4 4.5 3.2 1.7 3.2 4.6 -3.0 0.4 -4.6 4.1 -2.5 0.1	5.4 1.9 2.8 5.0 0.5 -0.2 1.6 4.7 2.5 -1.7 0.3 2.8	3.2 6.1 -1.0 2.3 -0.1 2.7 -2.6 -0.7 -1.5 0.6 -0.5 -0.4	-12. 1. 3 5 3 -7. -6 3 1. 4 -5.
Sep Oct Nov Dec 2022 Jan Feb Mar Apr May Jun Jul Aug	0.6 0.1 1.0 0.1 0.2 -0.1 0.1 0.0 0.8 -0.7 0.4 0.0	1.2 -0.2 0.1 -0.3 0.1 0.1 0.7 0.3 0.0 0.2 0.1 0.2 -0.3	0.5 -1.0 -1.0 0.2 0.0 -0.3 -0.1 -0.4 0.1 -1.1 -0.4 -1.2	18.6 -3.5 -3.9 -2.6 -2.4 5.3 -0.1 0.5 -2.9 0.7 -2.6 5.8 -8.2	-0.1 -0.5 -0.7 -0.3 0.0 -0.8 -0.5 0.1 -0.7 0.4 -1.3 -0.6 -0.8	-3.9 -1.8 -5.0 5.8 0.7 2.1 0.3 -1.6 1.3 0.5 -0.8 -0.6 -0.7	-1.0 -1.7 3.3 0.0 0.7 0.2 -0.2 0.4 1.3 -2.7 1.6 -2.6 0.3	-0.4 0.5 -0.3 1.8 0.9 1.0 0.1 2.0 -0.1 2.3 -2.6 1.2 0.6	$\begin{array}{c} 1.0\\ 0.9\\ 0.4\\ 1.1\\ 0.1\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.8\\ -0.5\\ 0.4\\ 0.2\end{array}$	-0.3 -0.3 0.4 -1.0 -2.5 1.2 -1.4 -2.0 1.7 -1.1 -0.7 0.5 0.3	1.6 2.7 0.1 4.1 0.4 0.2 0.5 1.7 -0.5 0.9 -1.4 2.9 1.3	12.0 0.9 -5.2 -0.3 -6.3 6.0 7.4 0.6 1.4 0.9 2.1 -1.1 -2.6	0.6 -2.3 3.6 0.0 4.1 1.4 -1.4 0.5 1.1 -0.4 0.2 1.1	0.0 1.0 0.6 0.5 0.1 -1.2 -0.5 -0.1 0.2 0.4 0.3 0.2 -0.4	$\begin{array}{c} 0.1\\ -0.1\\ 0.1\\ 0.1\\ 0.1\\ 0.4\\ 0.1\\ 0.3\\ 0.2\\ -0.1\\ 0.0\\ 0.0\\ \end{array}$	0.5 2.6 -2.0 2.3 0.5 -0.4 0.9 -0.4 2.6 -1.1 0.1 0.1	0.5 2.6 3.1 2.0 0.8 0.2 1.7 0.3 1.0 1.3 -2.5 1.2 0.9	0.2 0.5 -0.7 1.2 0.5 0.2 0.0 0.0 0.0 0.0 0.2 0.4 0.4 0.5	-1.4 -1.3 -1.2 2.9 0.5 -0.6 -0.6 -0.1 1.1 0.3 0.2 1.3 0.3	4.4 4.5 3.2 1.7 3.2 4.6 -3.0 0.4 -4.6 4.1 -2.5 0.1 0.9	5.4 1.9 2.8 5.0 0.5 -0.2 1.6 4.7 2.5 -1.7 0.3 2.8 -3.6	3.2 6.1 -1.0 2.3 -0.1 2.7 -2.6 -0.7 -1.5 0.6 -0.5 -0.4 -2.3	-12. 1. 3. 5. 3. -3. -7. -3. 3. 1. 4. -5. -5.
Sep Oct Nov Dec 2022 Jan Feb Mar Apr May Jun Jul Aug Sep	0.6 0.1 1.0 0.2 -0.1 0.1 0.0 0.8 -0.7 0.4 0.0 -0.7	1.2 -0.2 0.1 -0.3 0.1 0.7 0.3 0.0 0.2 0.1 0.2 -0.3 -0.5	0.5 -1.0 -1.0 0.2 0.0 -0.3 -0.1 -0.4 0.1 -1.1 -0.4 -1.2 -0.1	18.6 -3.5 -3.9 -2.6 -2.4 5.3 -0.1 0.5 -2.9 0.7 -2.6 5.8 -8.2 -1.1	-0.1 -0.5 -0.7 -0.3 0.0 -0.8 -0.5 0.1 -0.7 0.4 -1.3 -0.6 -0.8 0.0	-3.9 -1.8 -5.0 5.8 0.7 2.1 0.3 -1.6 1.3 0.5 -0.8 -0.6 -0.7 -0.2	-1.0 -1.7 3.3 0.0 0.7 0.2 -0.2 -0.2 0.4 1.3 -2.7 1.6 -2.6 0.3 0.5	-0.4 0.5 -0.3 1.8 0.9 1.0 0.1 2.0 -0.1 2.3 -2.6 1.2 0.6 -0.1	1.0 0.9 0.4 1.1 0.1 0.0 0.0 0.0 0.0 0.0 0.8 -0.5 0.4 0.2 -0.9	-0.3 -0.3 0.4 -1.0 -2.5 1.2 -1.4 -2.0 1.7 -1.1 -0.7 0.5 0.3 -2.2	1.6 2.7 0.1 4.1 0.4 0.2 0.5 1.7 -0.5 0.9 -1.4 2.9 1.3 -0.6	12.0 0.9 -5.2 -0.3 -6.3 6.0 7.4 0.6 1.4 0.9 2.1 -1.1 -2.6 -0.9	0.6 -2.3 3.6 0.0 0.9 4.1 1.4 -1.4 0.5 1.1 -0.4 0.2 1.1 -2.8	0.0 1.0 0.6 0.5 -0.1 -1.2 -0.5 -0.1 0.2 0.4 0.3 0.2 -0.4 -1.0	0.1 -0.1 0.1 0.1 0.0 -0.4 0.1 0.3 0.2 -0.1 0.0 0.0 -0.1	0.5 2.6 -2.0 2.3 0.5 -0.4 0.6 0.9 -0.4 2.6 -1.1 0.1 0.6 -1.3	0.5 2.6 3.1 2.0 0.8 0.2 1.7 0.3 1.0 1.3 -2.5 1.2 0.9 -1.5	0.2 0.5 -0.7 1.2 0.5 0.2 0.0 0.0 0.0 0.0 0.2 0.4 0.4 0.5 0.2	-1.4 -1.3 -1.2 2.9 0.5 -0.6 -0.6 -0.1 1.1 0.3 0.2 1.3 0.3 -0.7	4.4 4.5 3.2 1.7 3.2 -4.6 -3.0 0.4 -4.6 4.1 -2.5 0.1 0.9 0.5	5.4 1.9 2.8 5.0 0.5 -0.2 1.6 4.7 2.5 -1.7 0.3 2.8 -3.6 -1.6	3.2 6.1 -1.0 2.3 -0.1 2.7 -2.6 -0.7 -1.5 0.6 -0.5 -0.4 -2.3 0.7	-12: 1.: 3. 5.: 3.: -7.: -6.: 3.: 1.: 4. -5: -5: -2.:
Sep Oct Nov Dec 2022 Jan Feb Mar Apr Jun Jun Jul Aug Sep Oct	0.6 0.1 1.0 0.1 0.2 -0.1 0.1 0.0 0.8 -0.7 0.4 0.0 -0.7 0.7	1.2 -0.2 0.1 -0.3 0.1 0.1 0.7 0.3 0.0 0.2 0.1 0.2 -0.3 -0.5 0.1	0.5 -1.0 -1.0 0.2 0.0 -0.3 -0.1 -0.4 0.1 -1.1 -0.4 -1.2 0.1 0.3	18.6 -3.5 -3.9 -2.6 -2.4 5.3 -0.1 0.5 -2.9 0.7 -2.6 5.8 -8.2 1.1 -0.3	-0.1 -0.5 -0.7 -0.3 0.0 -0.8 -0.5 0.1 -0.7 0.4 -1.3 -0.6 -0.8 0.0 1.1	-3.9 -1.8 -5.0 5.8 0.7 2.1 0.3 -1.6 1.3 0.5 -0.8 -0.6 -0.7 -0.2 -2.9	-1.0 -1.7 3.3 0.0 0.7 0.2 0.4 1.3 -2.7 1.6 -2.6 0.3 0.5 -1.2	-0.4 0.5 -0.3 1.8 0.9 1.0 0.1 2.0 -0.1 2.3 -2.6 1.2 0.6 -0.1 0.7	$\begin{array}{c} 1.0\\ 0.9\\ 0.4\\ 1.1\\ 0.1\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.8\\ -0.5\\ 0.4\\ 0.2\\ -0.9\\ 0.7\end{array}$	-0.3 -0.3 0.4 -1.0 -2.5 1.2 -1.4 -2.0 1.7 -1.1 -0.7 0.5 0.3 -2.2 2.1	1.6 2.7 0.1 4.1 0.4 0.5 1.7 -0.5 0.9 -1.4 2.9 1.3 -0.6 -0.5	12.0 0.9 -5.2 -0.3 -6.3 6.0 7.4 0.6 1.4 0.9 2.1 -1.1 -2.6 -0.9 0.6	0.6 -2.3 3.6 0.0 0.9 4.1 1.4 -1.4 0.5 1.1 -0.4 0.2 1.1 -2.8 0.7	0.0 1.0 0.6 0.5 -0.1 -1.2 -0.5 -0.1 0.2 0.4 0.3 0.2 -0.4 -1.0 0.0	0.1 -0.1 0.1 0.1 0.0 -0.4 0.1 0.2 -0.1 0.0 0.0 0.0 -0.1 0.3	0.5 2.6 -2.0 2.3 0.5 -0.4 0.6 0.9 -0.4 2.6 -1.1 0.1 0.6 -1.3 1.0	0.5 2.6 3.1 2.0 0.8 0.2 1.7 0.3 1.0 1.3 -2.5 1.2 0.9 -1.5 2.1	0.2 0.5 -0.7 1.2 0.5 0.2 0.0 0.0 0.0 0.2 0.4 0.4 0.4 0.5 0.2 0.0	-1.4 -1.3 -1.2 2.9 0.5 -0.6 -0.6 -0.1 1.1 0.3 0.2 1.3 0.3 -0.7 -0.2	4.4 4.5 3.2 1.7 3.2 4.6 -3.0 0.4 4.6 4.1 -2.5 0.1 0.9 0.5 0.7	5.4 1.9 2.8 5.0 0.5 -0.2 1.6 4.7 2.5 -1.7 0.3 2.8 -3.6 -1.6 5.7	3.2 6.1 -1.0 2.3 -0.1 2.7 -2.6 -0.7 -1.5 0.6 -0.5 -0.4 -2.3 0.7 0.0	-12. 1. 3. 5. 3. -7. -6. 3. 1. 4. -5. -5. -2. -0.
Sep Oct Nov Dec 2022 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov	0.6 0.1 1.0 0.2 -0.1 0.1 0.0 0.8 -0.7 0.4 0.0 -0.7 0.7 0.2	1.2 -0.2 0.1 -0.3 0.1 0.1 0.7 0.3 0.0 0.2 0.1 0.2 -0.3 -0.5 0.1 -0.3	0.5 -1.0 -1.0 0.2 0.0 -0.3 -0.1 -0.4 0.1 -1.1 -0.4 -1.2 0.1 0.3 0.0	18.6 -3.5 -3.9 -2.6 -2.4 5.3 -0.1 0.5 -2.9 0.7 -2.6 5.8 -8.2 1.1 -0.3 2.7	-0.1 -0.5 -0.7 -0.3 -0.8 -0.5 -0.1 -0.7 -0.4 -1.3 -0.6 -0.8 0.0 1.1 -0.5	-3.9 -1.8 -5.0 5.8 0.7 2.1 0.3 -1.6 1.3 0.5 -0.8 -0.6 -0.7 -0.2 -2.9 -0.1	-1.0 -1.7 3.3 0.0 0.7 0.2 -0.2 0.4 1.3 -2.7 1.6 -2.6 0.3 0.5 -1.2 2.0	-0.4 0.5 -0.3 1.8 0.9 1.0 0.1 2.0 -0.1 2.3 -2.6 1.2 0.6 -0.1 0.7 0.2	$\begin{array}{c} 1.0\\ 0.9\\ 0.4\\ 1.1\\ 0.1\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.8\\ -0.5\\ 0.4\\ 0.2\\ -0.9\\ 0.7\\ 0.2\end{array}$	-0.3 -0.3 0.4 -1.0 -2.5 1.2 -1.4 -2.0 1.7 -1.1 -0.7 0.5 0.3 -2.2 2.1 0.0	$\begin{array}{c} 1.6\\ 2.7\\ 0.1\\ 4.1\\ 0.4\\ 0.2\\ 0.5\\ 1.7\\ -0.5\\ 0.9\\ -1.4\\ 2.9\\ 1.3\\ -0.6\\ -0.5\\ -2.0\\ \end{array}$	12.0 0.9 -5.2 -0.3 -6.3 6.0 7.4 0.6 1.4 0.9 2.1 -1.1 -2.6 -0.9 0.6 1.5	0.6 -2.3 3.6 0.0 0.9 4.1 1.4 -1.4 0.5 1.1 -0.4 0.2 1.1 -2.8 0.7 3.1	0.0 1.0 0.6 0.5 -0.1 -1.2 -0.5 -0.1 0.2 0.4 0.3 0.2 -0.4 -1.0 0.0	0.1 -0.1 0.1 0.1 0.4 0.4 0.1 0.3 0.2 -0.1 0.0 0.0 -0.1 0.3 -0.4	0.5 2.6 -2.0 2.3 0.5 -0.4 2.6 -1.1 0.1 0.1 0.6 -1.3 1.0 -0.5	0.5 2.6 3.1 2.0 0.8 0.2 1.7 0.3 1.0 1.3 -2.5 1.2 0.9 -1.5 2.1 1.9	0.2 0.5 -0.7 1.2 0.5 0.2 0.0 0.0 0.0 0.2 0.4 0.4 0.4 0.5 0.2 0.0 0.0	-1.4 -1.3 2.9 0.5 -0.6 -0.1 1.1 0.3 0.2 1.3 0.3 -0.7 -0.2 -0.3	4.4 4.5 3.2 1.7 3.2 4.6 -3.0 0.4 -4.6 4.1 -2.5 0.1 0.9 0.5 0.7 0.3	5.4 1.9 2.8 5.0 0.5 -0.2 1.6 4.7 2.5 -1.7 0.3 2.8 -3.6 -1.6 5.7	3.2 6.1 -1.0 2.3 -0.1 2.7 -2.6 -0.7 -1.5 0.6 -0.5 -0.4 -2.3 0.7 0.0 0.2	-12. 1. 3. 5. 3. -7. -6. 3. 1. 4. -5. -5. -2. -0.
Sep Oct Nov Dec 2022 Jan Feb Mar Apr May Jun Jun Aug Sep Oct Nov Dec	0.6 0.1 1.0 0.2 -0.1 0.1 0.0 0.8 -0.7 0.4 0.0 -0.7 0.7 0.7 0.2 -0.5	1.2 -0.2 0.1 -0.3 0.1 0.7 0.3 0.0 0.2 0.1 0.2 -0.3 -0.5 0.1 -0.3 0.0	0.5 -1.0 -1.0 0.2 0.0 -0.3 -0.1 -0.4 0.1 -1.1 -0.4 -1.2 0.1 0.3 0.0 0.2	18.6 -3.5 -3.9 -2.6 -2.4 5.3 -0.1 0.5 -2.9 0.7 -2.6 5.8 -8.2 1.1 -0.3 2.7 -5.1	-0.1 -0.5 -0.7 -0.3 0.0 -0.8 -0.5 0.1 -0.7 0.4 -1.3 -0.6 -0.8 0.0 1.1 -0.5 0.1	-3.9 -1.8 -5.0 5.8 0.7 2.1 0.3 -1.6 1.3 0.5 -0.8 -0.6 -0.7 -0.2 -2.9 -0.1 3.8	-1.0 -1.7 3.3 0.0 0.7 0.2 -0.2 0.4 1.3 -2.7 1.6 -2.6 0.3 0.5 -1.2 2.0 0.7	-0.4 0.5 -0.3 1.8 0.9 1.0 0.1 2.0 -0.1 2.3 -2.6 1.2 0.6 -0.1 0.7 0.2 0.8	1.0 0.9 0.4 1.1 0.1 0.0 0.0 0.0 0.0 0.8 -0.5 0.4 0.2 -0.9 0.7 0.2 -0.8	-0.3 -0.3 0.4 -1.0 -2.5 1.2 -1.4 -2.0 1.7 -1.1 -0.7 0.5 0.3 -2.2 2.1 0.0 -0.5	1.6 2.7 0.1 4.1 0.2 0.5 1.7 -0.5 0.9 -1.4 2.9 1.3 -0.6 -0.5 -2.0 -3.4	12.0 0.9 -5.2 -0.3 -6.3 -6.3 6.0 7.4 0.6 1.4 0.9 2.1 -1.1 -2.6 -0.9 0.6 1.5 -0.6	0.6 -2.3 3.6 0.0 0.9 4.1 1.4 -1.4 0.5 1.1 -0.4 0.2 1.1 -2.8 0.7 3.1 0.0	0.0 1.0 0.6 0.5 -1.2 -0.5 -0.1 0.2 0.4 0.3 0.2 -0.4 -1.0 0.0 0.0 0.0 1.0 3.3	$\begin{array}{c} 0.1\\ -0.1\\ 0.1\\ 0.1\\ 0.0\\ -0.4\\ 0.1\\ 0.3\\ 0.2\\ -0.1\\ 0.0\\ 0.0\\ -0.1\\ 0.3\\ -0.4\\ -0.1\\ \end{array}$	0.5 2.6 -2.0 2.3 0.5 -0.4 0.6 0.9 -0.4 2.6 -1.1 0.1 0.6 -1.3 1.0 -0.5 0.8	0.5 2.6 3.1 2.0 0.8 0.2 1.7 0.3 1.0 1.3 -2.5 1.2 0.9 -1.5 2.1 1.9 0.0	0.2 0.5 -0.7 1.2 0.5 0.2 0.0 0.0 0.0 0.2 0.4 0.4 0.5 0.2 0.0 0.0 0.0 0.0 -0.1	-1.4 -1.3 -1.2 2.9 0.5 -0.6 -0.6 -0.1 1.1 0.3 0.2 1.3 0.3 -0.7 -0.2 -0.3 -2.7	4.4 4.5 3.2 1.7 3.2 -4.6 -3.0 0.4 -4.6 4.1 -2.5 0.1 0.9 0.5 0.7 0.3 -3.2	5.4 1.9 2.8 5.0 0.5 -0.2 1.6 4.7 2.5 -1.7 0.3 2.8 -3.6 -1.6 5.7 -2.2 -5.9	3.2 6.1 -1.0 2.3 -0.1 2.7 -2.6 -0.7 -1.5 -0.6 -0.5 -0.4 -2.3 0.7 0.0 0.2 -0.6	-12. 1. 3. 5. 3. -7. -6. 3. 1. 4. 4. -5. -5. -2. -0. 0. 3.
Sep Oct Nov Dec 2022 Jan Feb Mar Apr Jun Jul Aug Sep Oct Nov Dec 2023 Jan	0.6 0.1 1.0 0.1 0.2 -0.1 0.1 0.0 0.8 -0.7 0.4 0.0 -0.7 0.7 0.2 -0.5 0.4	$\begin{array}{c} 1.2\\ -0.2\\ 0.1\\ -0.3\\ 0.1\\ 0.7\\ 0.3\\ 0.0\\ 0.2\\ 0.1\\ 0.2\\ -0.3\\ -0.5\\ 0.1\\ -0.3\\ 0.0\\ 0.0\\ 0.0\\ \end{array}$	0.5 -1.0 -1.0 0.2 0.0 -0.3 -0.1 -0.4 -0.1 -1.1 -0.4 -1.2 0.1 0.3 0.0 0.2 -0.2	18.6 -3.5 -3.9 -2.6 -2.4 5.3 -0.1 0.5 -2.9 0.7 -2.6 5.8 -8.2 1.1 -0.3 2.7 -5.1 -3.3	-0.1 -0.5 -0.7 -0.3 0.0 -0.8 -0.5 0.1 -0.7 0.4 -1.3 -0.6 -0.8 0.0 1.1 -0.5 0.1 0.4	-3.9 -1.8 -5.0 5.8 0.7 2.1 0.3 -1.6 1.3 0.5 -0.8 -0.6 -0.7 -0.2 -2.9 -0.1 3.8 -1.9	-1.0 -1.7 3.3 0.0 0.7 0.2 -0.2 0.4 1.3 -2.7 1.6 -2.6 0.3 0.5 -1.2 2.0 0.7 -0.7	-0.4 0.5 -0.3 1.8 0.9 1.0 0.1 2.0 -0.1 2.3 -2.6 1.2 0.6 -0.1 0.7 0.2 0.8 -1.8	$\begin{array}{c} 1.0\\ 0.9\\ 0.4\\ 1.1\\ 0.1\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.8\\ -0.5\\ 0.4\\ 0.2\\ -0.9\\ 0.7\\ 0.2\\ -0.8\\ 0.8\\ 0.8\end{array}$	-0.3 -0.3 0.4 -1.0 -2.5 1.2 -1.4 -2.0 1.7 -1.1 -0.7 0.5 0.3 -2.2 2.1 0.0 -0.5 0.9	$\begin{array}{c} 1.6\\ 2.7\\ 0.1\\ 4.1\\ 0.4\\ 0.2\\ 0.5\\ 1.7\\ -0.5\\ 1.7\\ -0.5\\ -1.4\\ 2.9\\ 1.3\\ -0.6\\ -0.5\\ -2.0\\ -3.4\\ 2.7\end{array}$	12.0 0.9 -5.2 -0.3 -6.3 -6.3 7.4 0.6 1.4 0.9 2.1 -1.1 -2.6 -0.9 0.6 1.5 -0.6 -0.3	0.6 -2.3 3.6 0.0 0.9 4.1 1.4 -1.4 0.5 1.1 -0.4 0.2 1.1 -2.8 0.7 3.1 0.0 0.8	0.0 1.0 0.6 0.5 -0.1 -1.2 -0.5 -0.1 0.2 0.4 -0.4 -0.4 -0.4 -0.4 -0.4 -0.0 0.0 -0.1 0.0 -0.1 0.0 -0.5 -0.1 0.3 0.3	$\begin{array}{c} 0.1\\ -0.1\\ 0.1\\ 0.1\\ 0.1\\ 0.0\\ -0.4\\ 0.1\\ 0.3\\ 0.2\\ -0.1\\ 0.0\\ 0.0\\ -0.1\\ 0.3\\ -0.4\\ -0.1\\ 0.1\\ \end{array}$	0.5 2.6 -2.0 2.3 0.5 -0.4 0.6 0.9 -0.4 2.6 -1.1 0.1 0.6 -1.3 1.0 -0.5 0.8 -0.3	0.5 2.6 3.1 2.0 0.8 0.2 1.7 0.3 1.0 1.3 -2.5 1.2 0.9 -1.5 2.1 1.9 0.0 1.0	0.2 0.5 -0.7 1.2 0.5 0.2 0.0 0.0 0.0 0.2 0.4 0.4 0.5 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-1.4 -1.3 -1.2 2.9 0.5 -0.6 -0.1 1.1 0.2 1.3 0.2 1.3 0.2 -0.7 -0.2 -0.3 -2.7 2.4	4.4 4.5 3.2 1.7 3.2 4.6 -3.0 0.4 -4.6 4.1 -2.5 0.1 0.9 0.5 0.7 0.3 -3.2 1.1	5.4 1.9 2.8 5.0 0.5 -0.2 1.6 4.7 2.5 -1.7 0.3 2.8 -3.6 -1.6 5.7 -2.2 -5.9 4.7	3.2 6.1 -1.0 2.3 -0.1 2.7 -2.6 -0.7 -1.5 0.6 -0.5 -0.4 -2.3 0.7 0.0 0.2 -0.6 1.4	-12. 1. 3 5. 3 3. -7. -6. 3. 1. 4 4 -5. -2. -0. 0. 0. -3. 1.
Sep Oct Nov Dec 2022 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec 2023 Jan Feb	0.6 0.1 1.0 0.1 0.2 -0.1 0.1 0.0 0.8 -0.7 0.4 0.0 -0.7 0.7 0.7 0.7 0.2 -0.5 0.4 0.1	1.2 -0.2 0.1 -0.3 0.1 0.7 0.3 0.0 0.2 0.1 0.2 -0.3 -0.5 0.1 -0.3 0.0	0.5 -1.0 -1.0 0.2 0.0 -0.3 -0.1 -0.4 -1.1 -0.4 -1.2 0.1 0.3 0.0 0.2 -0.2 -0.1	18.6 -3.5 -3.9 -2.6 -2.4 5.3 -0.1 0.5 -2.9 0.7 -2.6 5.8 -8.2 1.1 -0.3 2.7 -5.1 -3.3 2.3	-0.1 -0.5 -0.7 -0.3 0.0 -0.8 -0.5 0.1 -0.7 0.4 -1.3 -0.6 -0.8 0.0 1.1 -0.5 0.1 0.4 0.4 0.1	-3.9 -1.8 -5.0 5.8 0.7 2.1 0.3 -1.6 1.3 0.5 -0.8 -0.6 -0.7 -0.2 -2.9 -0.1 3.8 -1.9 -2.0	-1.0 -1.7 3.3 0.0 0.7 0.2 0.4 1.3 -2.7 1.6 -2.6 0.3 0.5 -1.2 2.0 0.7 -0.7 -1.2	-0.4 0.5 -0.3 1.8 0.9 1.0 0.1 2.0 -0.1 2.3 -2.6 1.2 0.6 -0.1 0.7 0.2 0.8 -1.8 2.6	$\begin{array}{c} 1.0\\ 0.9\\ 0.4\\ 1.1\\ 0.1\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.0$	-0.3 -0.3 0.4 -1.0 -2.5 1.2 -1.4 -2.0 1.7 -1.1 -0.7 0.5 0.3 -2.2 2.1 0.0 -0.5 0.9 -0.3	1.6 2.7 0.1 4.1 0.4 0.5 1.7 -0.5 0.9 -1.4 2.9 1.3 -0.6 -0.5 -2.0 -3.4 2.7 -0.5	$\begin{array}{c} 12.0\\ 0.9\\ -5.2\\ -0.3\\ -6.3\\ 6.0\\ 7.4\\ 0.6\\ 1.4\\ 0.9\\ 2.1\\ -1.1\\ -2.6\\ -0.9\\ 0.6\\ 1.5\\ -0.6\\ 1.5\\ -0.6\\ 0.3\\ 0.4\end{array}$	0.6 -2.3 3.6 0.0 0.9 4.1 1.4 -1.4 0.5 1.1 -0.4 0.2 1.1 -2.8 0.7 3.1 0.0 0.8 -0.2	0.0 1.0 0.6 0.5 0.1 -1.2 -0.5 -0.1 0.2 0.4 0.3 0.2 -0.4 -1.0 0.0 -0.1 0.3 0.3 0.3 0.3 0.3 0.3 0.3	$\begin{array}{c} 0.1\\ -0.1\\ 0.1\\ 0.1\\ 0.1\\ 0.0\\ -0.4\\ 0.1\\ 0.3\\ 0.2\\ -0.1\\ 0.0\\ 0.0\\ -0.1\\ 0.3\\ -0.4\\ -0.1\\ 0.1\\ 0.0\\ \end{array}$	$\begin{array}{c} 0.5\\ 2.6\\ -2.0\\ 2.3\\ 0.5\\ -0.4\\ 0.6\\ 0.9\\ -0.4\\ 2.6\\ -1.1\\ 0.1\\ 0.6\\ -1.3\\ 1.0\\ -0.5\\ 0.8\\ -0.3\\ -0.2\end{array}$	0.5 2.6 3.1 2.0 0.8 0.2 1.7 0.3 1.0 1.3 -2.5 1.2 0.9 -1.5 2.1 1.9 0.0 1.0 0.4	0.2 0.5 -0.7 1.2 0.5 0.2 0.0 0.0 0.0 0.2 0.4 0.4 0.4 0.5 0.2 0.0 0.0 0.0 0.0 0.0 1.0	-1.4 -1.3 -1.2 2.9 0.5 -0.6 -0.1 1.1 0.3 0.2 1.3 0.3 -0.7 -0.2 -0.3 -2.7 2.4 -1.6	4.4 4.5 3.2 1.7 3.2 4.6 -3.0 0.4 -4.6 4.1 -2.5 0.1 0.9 0.5 0.7 0.3 -3.2 1.1 0.6	5.4 1.9 2.8 5.0 0.5 -0.2 1.6 4.7 2.5 -1.7 0.3 2.8 -3.6 -1.6 5.7 -2.2 -5.9 4.7 1.7	3.2 6.1 -1.0 2.3 -0.1 2.7 -2.6 -0.7 -1.5 -0.6 -0.5 -0.4 -2.3 0.7 0.0 0.2 -0.6	-12. 1. 3. 5. 3. -7. -6. 3. 1. 4. -5. -5. -2. -0. 0. 0. -3. 1. 1.
Sep Oct Nov Dec 2022 Jan Feb Mar Apr Jun Jul Aug Sep Oct Nov Dec 2023 Jan	0.6 0.1 1.0 0.1 0.2 -0.1 0.1 0.0 0.8 -0.7 0.4 0.0 -0.7 0.7 0.2 -0.5 0.4	$\begin{array}{c} 1.2\\ -0.2\\ 0.1\\ -0.3\\ 0.1\\ 0.7\\ 0.3\\ 0.0\\ 0.2\\ 0.1\\ 0.2\\ -0.3\\ -0.5\\ 0.1\\ -0.3\\ 0.0\\ 0.0\\ 0.0\\ 0.2\\ \end{array}$	0.5 -1.0 -1.0 0.2 0.0 -0.3 -0.1 -0.4 -0.1 -1.1 -0.4 -1.2 0.1 0.3 0.0 0.2 -0.2	18.6 -3.5 -3.9 -2.6 -2.4 5.3 -0.1 0.5 -2.9 0.7 -2.6 5.8 -8.2 1.1 -0.3 2.7 -5.1 -3.3	-0.1 -0.5 -0.7 -0.3 0.0 -0.8 -0.5 0.1 -0.7 0.4 -1.3 -0.6 -0.8 0.0 1.1 -0.5 0.1 0.4	-3.9 -1.8 -5.0 5.8 0.7 2.1 0.3 -1.6 1.3 0.5 -0.8 -0.6 -0.7 -0.2 -2.9 -0.1 3.8 -1.9	-1.0 -1.7 3.3 0.0 0.7 0.2 -0.2 0.4 1.3 -2.7 1.6 -2.6 0.3 0.5 -1.2 2.0 0.7 -0.7	-0.4 0.5 -0.3 1.8 0.9 1.0 0.1 2.0 -0.1 2.3 -2.6 1.2 0.6 -0.1 0.7 0.2 0.8 -1.8	$\begin{array}{c} 1.0\\ 0.9\\ 0.4\\ 1.1\\ 0.1\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.8\\ -0.5\\ 0.4\\ 0.2\\ -0.9\\ 0.7\\ 0.2\\ -0.8\\ 0.8\\ 0.8\end{array}$	-0.3 -0.3 0.4 -1.0 -2.5 1.2 -1.4 -2.0 1.7 -1.1 -0.7 0.5 0.3 -2.2 2.1 0.0 -0.5 0.9	$\begin{array}{c} 1.6\\ 2.7\\ 0.1\\ 4.1\\ 0.4\\ 0.2\\ 0.5\\ 1.7\\ -0.5\\ 1.7\\ -0.5\\ -1.4\\ 2.9\\ 1.3\\ -0.6\\ -0.5\\ -2.0\\ -3.4\\ 2.7\end{array}$	12.0 0.9 -5.2 -0.3 -6.3 -6.3 7.4 0.6 1.4 0.9 2.1 -1.1 -2.6 -0.9 0.6 1.5 -0.6 -0.3	0.6 -2.3 3.6 0.0 0.9 4.1 1.4 -1.4 0.5 1.1 -0.4 0.2 1.1 -2.8 0.7 3.1 0.0 0.8	0.0 1.0 0.6 0.5 -0.1 -1.2 -0.5 -0.1 0.2 0.4 -0.4 -0.4 -0.4 -0.4 -0.4 -0.0 0.0 -0.1 0.0 -0.1 0.0 -0.5 -0.1 0.3 0.3	$\begin{array}{c} 0.1\\ -0.1\\ 0.1\\ 0.1\\ 0.1\\ 0.0\\ -0.4\\ 0.1\\ 0.3\\ 0.2\\ -0.1\\ 0.0\\ 0.0\\ -0.1\\ 0.3\\ -0.4\\ -0.1\\ 0.1\\ \end{array}$	0.5 2.6 -2.0 2.3 0.5 -0.4 0.6 0.9 -0.4 2.6 -1.1 0.1 0.6 -1.3 1.0 -0.5 0.8 -0.3	0.5 2.6 3.1 2.0 0.8 0.2 1.7 0.3 1.0 1.3 -2.5 1.2 0.9 -1.5 2.1 1.9 0.0 1.0	0.2 0.5 -0.7 1.2 0.5 0.2 0.0 0.0 0.0 0.2 0.4 0.4 0.5 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-1.4 -1.3 -1.2 2.9 0.5 -0.6 -0.1 1.1 0.2 1.3 0.2 1.3 0.2 -0.7 -0.2 -0.3 -2.7 2.4	4.4 4.5 3.2 1.7 3.2 4.6 -3.0 0.4 -4.6 4.1 -2.5 0.1 0.9 0.5 0.7 0.3 -3.2 1.1	5.4 1.9 2.8 5.0 0.5 -0.2 1.6 4.7 2.5 -1.7 0.3 2.8 -3.6 -1.6 5.7 -2.2 -5.9 4.7	3.2 6.1 -1.0 2.3 -0.1 2.7 -2.6 -0.7 -1.5 0.6 -0.5 -0.4 -2.3 0.7 0.0 0.2 -0.6 -0.6 -0.7 -1.4 -1.9	-12. 1. 3. 5. 3. -7. -6. 3. 1. 4. -5. -5. -2. -0. 0. 3. 1. 2. -1. 2. -1. -2. -3. 1. 2. -3. -5. -5. -5. -5. -5. -5. -5. -5
Sep Oct Nov Dec 2022 Jan Feb Mar Apr Jul Aug Sep Oct Nov Dec 2023 Jan Feb Mar Apr May	0.6 0.1 1.0 0.1 0.2 -0.1 0.1 0.0 0.8 -0.7 0.4 0.0 -0.7 0.2 -0.5 0.4 0.1 -0.2 0.2 -0.1	$\begin{array}{c} 1.2\\ -0.2\\ 0.1\\ -0.3\\ 0.1\\ 0.7\\ 0.3\\ 0.0\\ 0.2\\ -0.3\\ -0.5\\ 0.1\\ -0.3\\ -0.5\\ 0.1\\ -0.3\\ 0.0\\ 0.2\\ 0.0\\ 0.2\\ 0.0\\ 0.1\\ 0.0\\ 0.1\\ 0.0\\ \end{array}$	0.5 -1.0 -1.0 0.2 0.0 -0.3 -0.1 -0.4 -0.1 -1.1 -0.4 -1.2 0.1 0.3 0.0 0.2 -0.2 -0.1 0.8 0.0 -0.6	18.6 -3.5 -3.9 -2.6 -2.4 5.3 -0.1 0.5 -2.9 0.7 -2.6 5.8 -8.2 1.1 -0.3 2.7 -5.1 -3.3 2.3 -3.0 -2.7 0.4	-0.1 -0.5 -0.7 -0.3 -0.8 -0.5 -0.1 -0.7 -0.4 -1.3 -0.6 -0.8 -0.8 -0.6 -0.8 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.7 -0.7 -0.7 -0.7 -0.7 -0.7 -0.7 -0.7	-3.9 -1.8 -5.0 5.8 0.7 2.1 0.3 -1.6 1.3 0.5 -0.8 -0.6 -0.7 -0.2 -2.9 -0.1 3.8 -1.9 -2.0 2.6	-1.0 -1.7 3.3 0.0 0.7 0.2 -0.2 0.4 1.3 -2.7 1.6 -2.6 0.3 0.5 -1.2 2.0 0.7 -1.2 2.0 0.7 -1.2 2.0 0.7 -1.2 2.0 0.7 -1.2 2.0 0.7	-0.4 0.5 -0.3 1.8 0.9 1.0 0.1 2.0 -0.1 2.3 -2.6 1.2 0.6 -0.1 0.7 0.2 0.8 -1.8 2.6 -0.2	$\begin{array}{c} 1.0\\ 0.9\\ 0.4\\ 1.1\\ 0.1\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.8\\ -0.5\\ 0.4\\ 0.2\\ -0.9\\ 0.7\\ 0.2\\ -0.8\\ 0.8\\ -0.1\\ -0.4\\ 0.3\\ 0.0\\ \end{array}$	-0.3 -0.3 0.4 -1.0 -2.5 1.2 -1.4 -2.0 1.7 -1.1 -0.7 0.5 0.3 -2.2 2.1 0.0 -0.5 0.9 -0.3 -1.5 1.3 -0.4	$\begin{array}{c} 1.6\\ 2.7\\ 0.1\\ 4.1\\ 0.4\\ 0.2\\ 0.5\\ 1.7\\ -0.5\\ 0.9\\ -1.4\\ 2.9\\ 1.3\\ -0.6\\ -0.5\\ -2.0\\ -3.4\\ 2.7\\ -0.5\\ -1.6\\ 0.4\\ -0.3\end{array}$	$\begin{array}{c} 12.0\\ 0.9\\ -5.2\\ -0.3\\ -6.3\\ 6.0\\ 7.4\\ 0.6\\ 1.4\\ 0.9\\ 2.1\\ -1.1\\ -2.6\\ -0.9\\ 0.6\\ 1.5\\ -0.6\\ -0.6\\ -0.3\\ 0.4\\ -0.5\\ 2.3\\ -1.5\end{array}$	0.6 -2.3 3.6 0.0 0.9 4.1 1.4 -1.4 0.5 1.1 -0.4 0.2 1.1 -2.8 0.7 3.1 0.0 0.8 -0.2 -1.0 1.3 0.1	0.0 1.0 0.6 0.5 0.1 -1.2 -0.5 -0.1 0.2 0.4 -0.4 -0.4 -0.4 -0.0 0.0 -0.1 0.3 0.2 -0.4 -0.5 -0.1 0.2 -0.5 -0.1 0.2 -0.5 -0.1 -0.5 -0.1 0.2 -0.5 -0.1 -0.5 -0.1 0.2 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.2 -0.4 -0.4 -0.4 -0.4 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.5 -0.1 -0.4 -0.4 -0.4 -0.4 -0.4 -0.4 -0.4 -0.4 -0.4 -0.1 -0.2	$\begin{array}{c} 0.1\\ -0.1\\ 0.1\\ 0.1\\ 0.1\\ 0.0\\ -0.4\\ 0.1\\ 0.3\\ 0.2\\ -0.1\\ 0.0\\ 0.0\\ -0.1\\ 0.3\\ -0.4\\ -0.1\\ 0.1\\ 0.0\\ 0.1\\ -0.1\\ -0.1\\ -0.1\\ -0.1\\ \end{array}$	$\begin{array}{c} 0.5\\ 2.6\\ -2.0\\ 2.3\\ 0.5\\ -0.4\\ 0.6\\ 0.9\\ -0.4\\ 2.6\\ -1.1\\ 0.1\\ 0.6\\ -1.3\\ 1.0\\ -0.5\\ 0.8\\ -0.3\\ -0.2\\ 0.0\\ 0.8\\ 0.1\\ \end{array}$	$\begin{array}{c} 0.5\\ 2.6\\ 3.1\\ 2.0\\ 0.8\\ 0.2\\ 1.7\\ 0.3\\ 1.0\\ 1.3\\ -2.5\\ 1.2\\ 0.9\\ -1.5\\ 2.1\\ 1.9\\ 0.0\\ 1.0\\ 0.4\\ -0.9\\ 0.5\\ -0.8\end{array}$	0.2 0.5 -0.7 1.2 0.5 0.2 0.0 0.0 0.2 0.4 0.4 0.4 0.4 0.4 0.5 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.1 0.0 0.0	-1.4 -1.3 -1.2 2.9 0.5 -0.6 -0.1 1.1 0.3 0.2 1.3 0.2 -0.3 -0.2 -0.3 -0.2 -0.3 -2.4 -1.6 0.1 0.5	$\begin{array}{c} 4.4\\ 4.5\\ 3.2\\ 1.7\\ 3.2\\ -4.6\\ -3.0\\ 0.4\\ -4.6\\ 4.1\\ -2.5\\ 0.1\\ 0.9\\ 0.5\\ 0.7\\ 0.3\\ -3.2\\ 1.1\\ 0.6\\ -0.6\end{array}$	$\begin{array}{c} 5.4\\ 1.9\\ 2.8\\ 5.0\\ 0.5\\ -0.2\\ 1.6\\ 4.7\\ 2.5\\ -1.7\\ 0.3\\ 2.8\\ -3.6\\ -1.6\\ 5.7\\ -2.2\\ -5.9\\ 4.7\\ 1.7\\ 1.4\end{array}$	3.2 6.1 -1.0 2.3 -0.1 2.7 -2.6 -0.7 -1.5 0.6 -0.5 -0.4 -2.3 0.7 0.0 0.2 -0.6 1.4 1.9 -1.1	-12. 1. 3. 5. 3. -7. -6. 3. 1. 4. -5. -5. -2. -0. 0. -0. 1. 1. 2. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0
Sep Oct Nov Dec 2022 Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec 2023 Jan Feb Mar Apr	0.6 0.1 1.0 0.2 -0.1 0.1 0.0 0.8 -0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7 0.7	$\begin{array}{c} 1.2\\ -0.2\\ 0.1\\ -0.3\\ 0.1\\ 0.7\\ 0.3\\ 0.0\\ 0.2\\ 0.3\\ -0.5\\ 0.1\\ -0.3\\ -0.5\\ 0.1\\ -0.3\\ 0.0\\ 0.2\\ 0.0\\ 0.2\\ 0.0\\ 0.2\\ 0.0\\ 0.1\\ \end{array}$	0.5 -1.0 -1.0 0.2 0.0 -0.3 -0.1 -0.4 -1.1 -0.4 -1.1 -0.4 -1.2 0.1 0.3 0.0 0.2 -0.2 -0.2 -0.2 -0.8 0.0	18.6 -3.5 -3.9 -2.6 -2.4 5.3 -0.1 0.5 -2.9 0.7 -2.6 5.8 -8.2 1.1 -0.3 2.7 -5.1 -3.3 2.3 -3.0 -2.7	-0.1 -0.5 -0.7 -0.3 0.0 -0.8 -0.5 0.1 -0.7 0.4 -1.3 -0.6 -0.8 0.0 1.1 -0.5 0.1 0.4 0.1 0.4 0.1 0.7 0.4	-3.9 -1.8 -5.0 5.8 0.7 2.1 0.3 -1.6 1.3 0.5 -0.8 -0.6 -0.7 -0.2 -2.9 -0.1 3.8 -1.9 -2.0 2.6 1.0	-1.0 -1.7 3.3 0.0 0.7 0.2 -0.2 0.4 1.3 -2.7 1.6 -2.6 0.3 0.5 -1.2 2.0 0.7 -0.7 -1.2 2.0 -1.9	-0.4 0.5 -0.3 1.8 0.9 1.0 0.1 2.0 -0.1 2.3 -2.6 1.2 0.6 -0.1 0.7 0.2 0.8 -1.8 2.6 -0.2 -0.7	$\begin{array}{c} 1.0\\ 0.9\\ 0.4\\ 1.1\\ 0.1\\ 0.0\\ 0.0\\ 0.0\\ 0.0\\ 0.8\\ -0.5\\ 0.4\\ 0.2\\ -0.9\\ 0.7\\ 0.2\\ -0.9\\ 0.7\\ 0.2\\ -0.8\\ 0.8\\ -0.1\\ -0.4\\ 0.3\end{array}$	-0.3 -0.3 0.4 -1.0 -2.5 1.2 -1.4 -2.0 1.7 -1.1 -0.7 0.5 0.3 -2.2 2.1 0.0 -0.5 0.9 -0.3 -1.5 1.3	$\begin{array}{c} 1.6\\ 2.7\\ 0.1\\ 4.1\\ 0.4\\ 0.2\\ 0.5\\ 1.7\\ -0.5\\ 0.9\\ -1.4\\ 2.9\\ 1.3\\ -0.6\\ -0.5\\ -2.0\\ 0.6\\ -3.4\\ 2.7\\ -0.5\\ -1.6\\ 0.4\\ \end{array}$	$\begin{array}{c} 12.0\\ 0.9\\ -5.2\\ -0.3\\ -6.3\\ 6.0\\ 7.4\\ 0.6\\ 1.4\\ 0.9\\ 2.1\\ -1.1\\ -2.6\\ -0.9\\ 0.6\\ 1.5\\ -0.6\\ 1.5\\ -0.6\\ -0.3\\ 0.4\\ -0.5\\ 2.3\end{array}$	0.6 -2.3 3.6 0.0 0.9 4.1 1.4 -1.4 0.5 1.1 -0.4 0.2 1.1 -2.8 0.7 3.1 0.0 0.8 -0.2 -1.0 1.3	0.0 1.0 0.6 0.5 0.1 -1.2 -0.5 -0.1 0.2 0.4 0.3 0.2 -0.4 -1.0 0.0 -0.4 -0.4 -0.4 -0.4 -0.5 -0.1 0.3 0.3 0.3 0.2 -0.1 -0.1 -0.5 -0.1 -0.4 -0.5 -0.4 -0.5 -0.4 -0.4 -0.5 -0.4 -0.4 -0.5 -0.4 -0.4 -0.4 -0.4 -0.5 -0.4 -0.1 -0.5 -0.1 -0	$\begin{array}{c} 0.1\\ -0.1\\ 0.1\\ 0.1\\ 0.0\\ -0.4\\ 0.1\\ 0.3\\ 0.2\\ -0.1\\ 0.0\\ 0.0\\ -0.1\\ 0.3\\ -0.4\\ -0.1\\ 0.1\\ 0.1\\ 0.1\\ -0.1\\ \end{array}$	0.5 2.6 -2.0 2.3 0.5 -0.4 0.6 0.9 -0.4 2.6 -1.1 0.1 0.6 -1.3 1.0 -0.5 0.8 -0.3 -0.2 0.0 -0.8	$\begin{array}{c} 0.5\\ 2.6\\ 3.1\\ 2.0\\ 0.8\\ 0.2\\ 1.7\\ 0.3\\ 1.0\\ 1.3\\ -2.5\\ 1.2\\ 0.9\\ -1.5\\ 2.1\\ 1.9\\ 0.0\\ 1.0\\ 0.4\\ -0.9\\ 0.5\\ \end{array}$	0.2 0.5 -0.7 1.2 0.5 0.2 0.0 0.0 0.2 0.4 0.4 0.5 0.2 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0	-1.4 -1.3 -1.2 2.9 0.5 -0.6 -0.6 -0.1 1.1 1.3 0.2 1.3 0.3 -0.7 -0.2 -0.3 -2.7 2.4 -1.6 0.5	4.4 4.5 3.2 1.7 3.2 4.6 -3.0 0.4 -4.6 4.1 -2.5 0.1 0.9 0.5 0.7 0.3 -3.2 1.1 0.6 -0.6 -0.2	5.4 1.9 2.8 5.0 0.5 -0.2 1.6 4.7 2.5 -1.7 0.3 2.8 -3.6 -1.6 5.7 -2.2 -5.9 4.7 1.7 1.4 -0.6	3.2 6.1 -1.0 2.3 -0.1 2.7 -2.6 -0.7 -1.5 0.6 -0.5 -0.4 -2.3 0.7 0.0 0.2 -0.6 1.4 1.9 -1.1 0.6	-12. 1. 3. 5. 3. -7. -6. 3. 1. 4. -5. -2. -0. 0. 3. 1. 1. 1. 2. 0. 0. 0. 0. 0. 0. 0. 0. 0. 0

Sources: For further information on these data please telephone 01633 582428 or E-mail gdp@ons.gov.uk

The GVA output is designated as a National Statistic.
 Indices reflect values measured at basic prices, which exclude "taxes less subsidies on products".
 Estimates cannot be regarded as accurate to the last digit shown.
 Any apparent inconsistencies between the index numbers and the percentage changes shown in these tables are due to rounding.
 A complete run of data is available on the ONS website.

6. The construction growth rates calculated from this release may have small differences to those in <u>Construction Output in Great Britain</u> releases, due to rounding differences. For the most accurate figure, please refer to the Construction Output release.

GVA3 Monthly GDP based on GVA (Gross Value Added) ¹ Chained volume indices of gross value added at basic prices ^{2,3,4,5}

GVA3	Chained volume in	naices of gross	value added at	basic price	S							S	easonally adjuste	d 2019=100									
												Industry sectio	ns (SIC2007)										
	-									Wholesale													Activitie
	Total						Water		-	and retail:		Accommodation				,	Administrative	Public					housel
	GVA at	Agriculture,	Total production	Minimum 0		Electricity	supply,		Total service	repair of motor vehicles	T	and food	Information	Financial	Dealestate	scientific	and support ad			Human health	Arts,	Other	as emplo undifferent
	basic	forestry and fishing	industries	Mining &	Manufacturing	gas, steam and air	sewerage	Construction 6	industries	and motorcycles	Transport	service activities	and Communication	and insurance activities	Real estate activities	and technical activities	service activities	and defence	Education	and social work activities	entertainment	service activities	
0	P			quarrying	Manufacturing	and air D	etc	Construction	G-T		and storage	activities	Communication	activities	activities		activities		Education	work activities	and recreation		goods and serv
Section 2019 weights	A-T	A	B-E	В	C	5	E	F		G	H		J	K	L	M	11	0	F	ď	R	S	
2019 weights	1000	7	135	11	97	15	12	62	796	104	40	30	63	82	132	73	51	49	60	77	15	17	
Percentage change,	, latest month on sa	ame month a ye	ear ago																				
	ED2R	ED2S	ED2T	ED2U	ED2V	ED2W	ED2X	ED2Y	ED2Z	ED32	ED33	ED34	ED35	ED36	ED37	ED38	ED39	ED3A	ED3B	ED3C	ED3D	ED3E	E
021 Jul	9.3	9.4	5.8	-19.7	9.0	2.0	8.3	12.2	9.7	1.0	14.5	47.1	6.1	4.3	-0.1	13.8	14.2	4.2	25.3	41.3	24.4	-25.2	
Aug	8.0	9.3	4.3	2.7	5.6	-3.3	5.3	8.4	8.7	1.2	10.2	14.4	8.0	5.3	-0.1	14.4	16.4	5.3	6.3	44.5	30.5	-11.7	-2
Sep	7.4	8.2	1.7	1.2	2.4	-5.5	5.7	5.3	8.8	2.3	10.8	26.0	5.8	5.2	-0.2	14.0	19.4	6.4	-1.2	44.6	29.9	-7.7	
Oct	6.9	9.1	-0.4	-5.3	0.2	-7.3	7.3	3.0	8.7	2.4	11.5	35.5	5.5	6.4	-0.5	10.5	19.7	5.8	-3.5	47.1	25.5	-9.8	-
Nov	10.0	9.1	-1.7	-4.6	-2.5	-1.5	6.7	4.3	13.0	7.1	13.7	138.2	7.9	6.1	-0.3	13.1	22.0	7.2	2.4	50.4	43.8	5.4	-
Dec	8.2	7.7	-2.4	-11.6	-2.2	-3.4	4.5	6.9	10.5	2.1	12.8	84.0	10.2	2.4	-0.6	8.4	16.5	7.2	6.0	55.2	27.6	-12.2	
)22 Jan	11.6	7.6	-0.9	-4.0	-0.8	-4.6	5.1	9.7	14.5	11.2	20.0	148.5	10.7	0.6	-1.6	11.7	20.3	7.0	30.6	43.7	32.8	14.2	
Feb	10.8	7.2	-1.5	3.3	-2.0	-5.3	3.6	5.8	13.9	6.3	18.6	155.0	14.3	0.0	-1.2	9.4	22.3	6.5	31.9	37.5	35.8	11.1	
Mar	8.4	6.2	-2.4	2.0	-3.1	-5.1	3.6	4.6	11.0	0.7	17.5	160.0	11.9	-0.9	-1.0	5.6	17.2	6.2	17.2	30.5	46.5	12.4	
Apr	5.1	6.6	-2.0	19.4	-3.9	-6.7	6.0	3.1	6.7	-5.5	15.5	79.8	7.8	-0.7	-0.5	7.1	18.6	4.0	3.9	17.5	41.1	-9.6	
May	4.6	5.4	-3.3	15.2	-4.0	-12.0	3.1	6.4	6.0	-6.1	18.5	33.9	9.6	0.0	-0.3	10.0	18.2	2.9	1.6	13.5	28.7	6.2	
Jun	2.8	3.6	-2.8	25.4	-4.7	-7.4	2.4	4.5	3.7	-7.1	12.2	21.1	9.7	0.5	-0.5	4.7	13.1	3.0	-0.7	5.0	28.6	10.5	-
Jul	3.3	2.5	-3.3	11.4	-4.9	-3.3	-0.9	6.4	4.4	-5.3	13.8	18.1	8.5	1.4	0.2	6.1	12.8	2.9	0.9	6.4	28.5	8.0	
Aug	2.5	1.0	-5.0	-13.7	-5.6	-0.1	0.4	7.5	3.5	-4.8	13.5	2.8	9.0	1.1	0.1	6.2	13.2	3.2	2.7	2.8	17.6	2.3	
Sep	1.1	0.7	-4.0	-9.6	-5.1	1.5	2.6	6.8	1.6	-6.6	9.8	1.0	8.4	-0.9	0.0	2.2	8.7	2.9	3.4	-1.1	13.5	-2.9	
Oct	1.7	0.7	-2.6	-6.3	-3.3	3.8	-1.9	7.9	2.0	-5.1	9.1	7.2	5.4	-1.6	0.5	5.3	7.7	3.6	4.5	-3.5	16.7	-1.9	
Nov	0.9	0.7	-2.9	-1.2	-3.6	-2.1	0.1	6.2	1.1	-4.2	2.7	9.1	8.7	-2.1	0.0	2.5	7.6	2.4	1.2	-4.9	8.7	-4.0	
Dec	0.2	0.6	-2.7	-3.9	-3.5	0.9	0.2	6.1	0.3	-2.2	-1.1	15.8	7.6	-2.0	-0.2	2.9	6.7	1.8	-1.9	-10.8	1.8	-4.5	
123 Jan	0.5	0.5	-2.9	-11.8	-2.3	-3.1	-0.7	3.2	0.9	-2.5	1.4	9.0	4.3	-0.6	-0.1	3.0	7.5	1.6	1.0	-5.5	6.7	-5.7	
Feb	0.6	0.0	-2.7	-9.7	-1.8	-5.2	-1.7	5.8	0.8	-1.3	0.5	1.9	2.6	0.1	0.3	2.1	6.1	0.6	0.0	-2.0	6.8	-1.3	
Mar	0.3	-0.3	-1.9	-12.8	-1.1	-1.2	-0.2	3.5	0.4	-0.8	-2.7	0.8	3.0	0.1	0.3	1.2	4.9	0.6	0.2	-2.9	3.3	-1.7	
Apr	0.6	-0.3	-1.4	-12.6	-0.1	-1.5	-3.3	2.9	0.7	-1.2	-1.8	1.7	3.8	-0.2	-0.1	0.9	4.4	0.9	-0.3	1.6	0.2	0.4	
May	-0.3	-0.4	-2.1	-12.9	-0.6	-4.9	-2.8	0.3	-0.1	-0.5	-3.0	-0.7	2.8	-0.7	-0.4	-1.6	2.2	0.8	0.0	-0.5	4.5	-1.2	
Jun	0.9	-0.4	0.7	-12.5	3.1	-4.0	-2.5	4.6	0.7	1.0	-1.6	-1.3	4.5	-1.2	-0.5	-1.0	5.5	0.7	0.0	1.3	3.5	0.3	
Jul	0.0	-0.5	0.4	-15.7	3.0	-5.0	-0.4	2.8	-0.3	0.1	-5.8	-0.6	2.2	-1.2	-0.9	-0.6	2.8	0.7	-2.4	-1.0	7.4	2.0	

 1
 The GVA output is designated as a National Statistic.
 Sources: For further information on these data please telephone

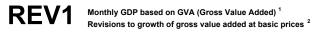
 2
 Indices reflect values measured at basic prices, which exclude "taxes less subsidies on products".
 01633 582428 or E-mail gdp@ons.gov.uk

 3
 Estimates cannot be regarded as accurate to the last digit shown.

 4
 Any apparent inconsistencies between the index numbers and the percentage changes shown in these tables are due to rounding.

 5
 A complete run of data is available on the ONS website.

 6. The construction growth rates calculated from this release may have small differences to those in <u>Construction Output in Great Britain</u> releases, due to rounding differences. For the most accurate figure, please refer to the Construction Output release.



	Revisions to grow	with of gross var		sie prices									seasonally aujuste	su 2019–100						Perious open	ioi revision. I	to open pen	Jus
												Industry secti	ons (SIC2007)										
	Total						14/-4			Wholesale		A				Desfersional	A	Dublis					Activities of
			Tatal			-	Water		T - 4 - 1	and retail:		Accommodation		_		Professional,	Administrative	Public				0.1	household
	GVA at	Agriculture,	Total production			Electricity	supply,		Total	repair of	T	and food	Information	Financial	Dealestate	scientific	and support			Human health	Arts,	Other	as employers
	basic prices	forestry and fishing	industries	Mining &	Manufacturing	gas, steam and air	sewerage	Construction 4	service	motor vehicles and motorcycles	Transport and storage		and Communication	and insurance activities			service activities	and	Education	and social	entertainment and recreation		undifferentiated goods and services
Section	A-T	A	B-E	B	C		F	F	G-T	G	H		.I	K	1	M		0	P	0		S	goods and services
2019 weights	1000	7	135	11	97	=	12	62	796	104	40		63	82	132			49	60	77	15		2
Deveentere chorne la	ataat 2 mantha an				-						-										-		
Percentage change, la	atest 3 months on	i previous 3 mo																					
2021 Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
Jul	0.0	0.0	0.0 0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0 0.0			0.0
Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 0.0	0.0	0.0 0.0			0.0				0.0 0.0	0.0	0.0			0.0
Sep Oct	0.0 0.0	0.0 0.0	0.0	0.0	0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0	0.0 0.0	0.0			0.0 0.0				0.0	0.0 0.0	0.0			0.0 0.0
Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0		0.0			
Dec 2022 Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0 0.0	0.0			0.0 0.0
	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
Feb			0.0				0.0													0.0			
Mar Apr	0.0 0.0	0.0 0.0	0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0		0.0	0.0 0.0				0.0 0.0	0.0 0.0	0.0			0.0
Apr May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0 0.0
			0.0			0.0		0.0		0.0	0.0			0.0				0.0		0.0			0.0
Jun Jul	0.0	0.0 0.0	0.0	0.0 0.0	0.0 0.0		0.0 0.0	0.0	0.0 0.0	0.0	0.0			0.0				0.0	0.0 0.0	0.0			0.0
	0.0 0.0	0.0	0.0	0.0	0.0	0.0 0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0				0.0	0.0	0.0			0.0
Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0				0.0	0.0	0.0			
Sep											0.0												0.0
Oct	0.0 0.0	0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0			0.0 0.0				0.0 0.0	0.0 0.0	0.0 0.0			0.0
Nov		0.0		0.0	0.0		0.0		0.0		0.0 0.0			0.0				0.0	0.0	0.0			0.0
Dec	0.0	0.0	0.0			0.0		0.0		0.0													0.0
2023 Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0 0.0	0.0			0.0				0.0	0.0	0.0 0.0			0.0 0.0
Apr May	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0 0.0	0.0	0.0 0.0			0.0 0.0				0.0 0.0	0.0 0.0	0.0			0.0
Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
Percentage change, la	atest 3 months on	i same 3 months	s a year ago																				
2021 Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0
Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0				0.0	0.0	0.0		0.0	0.0
Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0		0.0	0.0	0.0	0.0	0.0			0.0
Dec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
2022 Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
Jul	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0				0.0	0.0	0.0			0.0
Aug	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
Oct	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
Dec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0	0.0			0.0	0.0	0.0			0.0
2023 Jan	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Feb	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Mar	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
May	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0				0.0	0.0	0.0		0.0	0.0
Jun	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0			0.0				0.0	0.0	0.0			0.0
	2.0	5.0	0.0	2.0	0.0	5.0	2.0	2.0	2.0	5.0	5.0	0.0	0.0	0.0	0.0	0.0	5.0	5.0	2.0	0.0	0.0	2.0	0.0

seasonally adjusted 2019=100

Sources: For further information on these data please telephone 01633 582428 or E-mail gdp@ons.gov.uk

 1
 The GVA output is designated as a National Statistic.
 Sources: For further information on these data please telephone

 2
 Estimates cannot be regarded as accurate to the last digit shown.
 01633 582428 or E-mail gdp@ons.gov.uk

 3
 Any apparent inconsistencies between the index numbers and the percentage changes shown in these tables are due to rounding.
 •

 4
 Monthly data from the construction survey are only available from January 2010, therefore the data prior to this period are derived using statistical methods from the available quarterly data, and should therefore be treated with some caution.

Periods	open	for	revision:	No	open	periods
i chious	open	101	104131011.	110	open	perious

initial Lange of the line line of the line of the		evisions to grov	th of gross valu	ie added at bas	ic prices -,-									seasonally adjusted	1 2019=100						Periods open f	or revision: N	o open peri	ods
Optimize Parameter Tode Marce Tode Marce											Wholesale		Industry section	ons (SIC2007)										Activitie
late late <th< th=""><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>househ</th></th<>																								househ
			-		Mining &							Transport				Peal estate					Human health	Arts, entertainment	Other service	as employ undifferentia
979 weight 108 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 1 9 0 <t< th=""><th></th><th></th><th></th><th></th><th></th><th>Manufacturing</th><th></th><th></th><th>Construction 4</th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th></th><th>Education</th><th>work activities</th><th>and recreation</th><th>activities</th><th>goods and servi</th></t<>						Manufacturing			Construction 4											Education	work activities	and recreation	activities	goods and servi
Arrenting change, last month or previous month 2<					В			E			-		1	J	К	L		IN .	ž	!	Q	R	S	
xxx x	9 weights	1000	7	135	11	97	15	12	62	796	104	40	30	63	82	132	73	51	49	60	77	15	17	
M 0	entage change, late	st month on pre	evious month ³																					
Asg 0.0 0																					0.0	0.0	0.0	
So O																					0.0 0.0	0.0 0.0	0.0 0.0	
Nov 0	Sep	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Dec D O																					0.0 0.0	0.0 0.0	0.0 0.0	
mb 0.0																					0.0	0.0	0.0	
Mir O																					0.0	0.0	0.0	
Apr 0.0 0																					0.0 0.0	0.0 0.0	0.0 0.0	
Juni O.O O.O <td>Apr</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td></td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td></td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td></td>	Apr	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	0.0	0.0	0.0	
Jul 0.0 0																					0.0 0.0	0.0 0.0	0.0 0.0	
Sep 0.0 <td></td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td></td>																					0.0	0.0	0.0	
C 0.0																					0.0	0.0	0.0	
Nov 0.0 <td></td> <td>0.0 0.0</td> <td>0.0 0.0</td> <td>0.0 0.0</td> <td></td>																					0.0 0.0	0.0 0.0	0.0 0.0	
xi23 im 0.0 <	Nov	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Feb 0.0 <td></td> <td>0.0 0.0</td> <td>0.0 0.0</td> <td>0.0 0.0</td> <td></td>																					0.0 0.0	0.0 0.0	0.0 0.0	
Apr 0.0 <td></td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td></td>																					0.0	0.0	0.0	
basis 0.0 </td <td></td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td></td>																					0.0	0.0	0.0	
Jun 0.0 <td></td> <td>0.0 0.0</td> <td>0.0 0.0</td> <td>0.0 0.0</td> <td></td>																					0.0 0.0	0.0 0.0	0.0 0.0	
Carl Jun O.O O.																					0.0	0.0	0.0	
Jul 0.0 <td>centage change, late</td> <td>est month on s</td> <td>ame month a ye</td> <td>ar ago ³</td> <td></td>	centage change, late	est month on s	ame month a ye	ar ago ³																				
Aug 0.0 0																					0.0	0.0	0.0	
Sep 0.0 <td></td> <td>0.0 0.0</td> <td>0.0 0.0</td> <td>0.0 0.0</td> <td></td>																					0.0 0.0	0.0 0.0	0.0 0.0	
Nov 0.0 <td></td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td></td>																					0.0	0.0	0.0	
Dec 0.0 <td></td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td></td>																					0.0	0.0	0.0	
122 Jan 0.0 <																					0.0 0.0	0.0 0.0	0.0 0.0	
Mar 0.0 <td></td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td></td>																					0.0	0.0	0.0	
Apr 0.0 0	1.00																				0.0 0.0	0.0 0.0	0.0 0.0	
May 0.0 <td></td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td></td>																					0.0	0.0	0.0	
Jul 0.0 0	May																				0.0	0.0	0.0	
Aug 0.0 0																					0.0 0.0	0.0 0.0	0.0 0.0	
Oct 0.0 0																					0.0	0.0	0.0	
Nov 0.0 <td></td> <td>0.0</td> <td>0.0</td> <td>0.0</td> <td></td>																					0.0	0.0	0.0	
Dec 0.0 <td></td> <td>0.0 0.0</td> <td>0.0 0.0</td> <td>0.0 0.0</td> <td></td>																					0.0 0.0	0.0 0.0	0.0 0.0	
	Dec	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
																					0.0 0.0	0.0 0.0	0.0 0.0	
																					0.0	0.0	0.0	
Apr 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.	Apr	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
																					0.0 0.0	0.0 0.0	0.0 0.0	

Sources: For further information on these data please telephone 01633 582428 or E-mail gdp@ons.gov.uk

 1 The GVA output is designated as a National Statistic.
 Sources: For further information on these data please telephone

 2 Estimates cannot be regarded as accurate to the last digit shown.
 01633 582428 or E-mail gdp@ons.gov.uk

 3 Any apparent inconsistencies between the index numbers and the percentage changes shown in these tables are due to rounding.
 01633 582428 or E-mail gdp@ons.gov.uk

 4 Monthly data from the construction survey are only available from January 2010, therefore the data prior to this period are derived using statistical methods from the available quarterly data, and should therefore be treated with some caution.

riods op	en for	revision:	No	open	periods
					P0040

CONTRIB 1 Monthly GDP based on GVA (Gross Value Added) ¹ Contributions to growth of gross value added at basic prices ^{2,3,4,5}

				-							Industry	sections (SIC2007	7)										
	Tatal						10/-1			Wholesale		A	,			Desfersional	A duri ni starati ve	Dublic					Activities of
	Total GVA at	Agriculture,	Total			Electricity	Water supply,		Total	and retail: repair of		Accommodation and food	Information	Financial		Professional, scientific	Administrative and support ad	Public		Human health	Arts,	Other	households as employers,
	basic	forestry and	production	Mining &		gas, steam	sewerage		service	motor vehicles	Transport	service	and	and insurance	Real estate	and technical	service	and		and social	entertainment	service	undifferentiated
	prices	fishing	industries	quarrying	Manufacturing	and air	etc	Construction	industries	and motorcycles	and storage	activities	Communication	activities	activities	activities	activities	defence	Education	work activities	and recreation	activities	goods and services
Section	A-T	A	B-E	В	С	D	E	F	G-T	G	Н	I	J	К	L	М	N	0	Р	Q	R	S	Т
2019 weights	1000	7	137	11	99	15	12	64	792	105	40	29	62	82	131	74	51	48	59	76	16	17	2
Contribution to growth, latest	t 3 months on previo	ous 3 months																					
	EDMB	EDMC	EDMD	EDME	EDMF	EDMG	EDMH	EDMI	EDMJ	EDMK	EDML	EDMM	EDMN	EDMO	EDMP	EDMQ	EDMR	EDMS	EDMT	EDMU	EDMV	EDMW	EDMX
2021 Jul	4.81	0.02	0.02	-0.06	0.05	0.04	0.02	0.02	4.90	0.60	0.11	1.28	0.17	-0.04	-0.05	0.18	0.24	0.16	1.09	1.47	0.15	-0.08	0.03
Aug	3.11	0.03	-0.09	0.02	-0.06	-0.08	0.03	-0.09	3.39	0.17	0.16	1.08	0.11	-0.08	-0.05	0.20	0.20	0.11	0.53	1.17	0.14	-0.09	0.01
Sep	1.72 1.53	0.03 0.02	-0.05 -0.12	0.13 0.13	-0.09 -0.11	-0.15 -0.18	0.01 0.00	-0.09 -0.05	1.92 1.76	-0.16 -0.12	0.18 0.19	0.69 0.42	0.03 0.06	-0.05 0.03	-0.07 -0.05	0.19 0.15	0.22 0.25	0.07 0.04	0.06 -0.14	0.86 0.91	0.12 0.12	-0.03 0.09	-0.02 -0.03
Oct Nov	1.53	0.02	-0.12	0.13	-0.11	-0.18	0.00	-0.03	1.70	-0.12	0.19	0.42	0.06	0.03	-0.03	0.15	0.25	0.04	-0.14	0.91	0.12	0.09	-0.03
Dec	1.52	0.00	-0.18	-0.02	-0.12	-0.05	0.02	0.02	1.69	-0.13	0.18	-0.10	0.00	0.14	-0.03	0.13	0.34	0.04	-0.03	1.00	0.13	0.08	0.01
2022 Jan	1.41	0.00	-0.10	-0.06	-0.11	0.04	0.03	0.16	1.40	-0.21	0.18	-0.18	0.23	0.08	0.01	0.15	0.29	0.07	0.11	0.55	0.11	0.06	0.01
Feb	0.91	0.00	-0.03	-0.02	-0.10	0.06	0.02	0.15	0.80	-0.27	0.12	-0.06	0.35	-0.03	0.00	0.09	0.21	0.06	0.09	0.12	0.07	0.03	0.00
Mar	0.55	0.01	-0.01	0.02	-0.10	0.06	0.01	0.17	0.40	-0.25	0.09	0.18	0.34	-0.11	-0.02	0.10	0.14	0.05	0.01	-0.38	0.06	0.02	-0.01
Apr	0.13	0.01	-0.06	0.02	-0.11	0.02	0.01	0.13	0.05	-0.23	0.06	0.28	0.24	-0.11	-0.02	0.07	0.14	0.02	-0.04	-0.61	0.08	-0.03	-0.02
May	0.34	0.01	-0.07	0.00	-0.08	0.00	0.00	0.18	0.22	-0.18	0.07	0.25	0.10	-0.05	0.01	0.13	0.14	0.01	0.00	-0.47	0.10	-0.03	-0.01
Jun	0.30	0.00	-0.11	-0.03	-0.09	0.00	0.00 -0.02	0.11 0.09	0.31 0.52	-0.11	0.03 0.04	0.16 0.09	0.04	0.02	0.04	0.13	0.10	0.01	0.07	-0.33	0.08	-0.04 -0.02	0.00
Jul Aug	0.45 0.04	0.00 0.00	-0.13 -0.23	-0.01 -0.02	-0.10 -0.18	0.00 -0.01	-0.02	-0.01	0.32	-0.09 -0.04	0.04	0.09	0.05 0.07	0.06 0.05	0.04 0.02	0.15 0.06	0.04 -0.01	0.03 0.05	0.10 0.11	-0.06 -0.10	0.04 0.01	-0.02	0.00 0.00
Sep	-0.09	0.00	-0.23	-0.02	-0.17	-0.02	-0.02	0.03	0.14	-0.04	0.10	-0.04	0.00	0.00	0.02	0.00	0.00	0.06	0.10	0.04	-0.01	-0.02	-0.01
Oct	-0.26	0.00	-0.21	-0.04	-0.12	-0.04	-0.01	0.04	-0.07	-0.04	0.08	-0.09	-0.04	-0.07	0.00	-0.02	0.03	0.06	0.05	0.06	-0.02	-0.03	-0.01
Nov	-0.10	0.00	-0.08	-0.02	-0.02	-0.04	-0.01	0.07	-0.08	-0.05	0.01	-0.07	-0.04	-0.10	0.00	-0.03	0.08	0.04	-0.01	0.15	0.00	-0.01	-0.01
Dec	0.14	0.00	0.01	-0.02	0.05	-0.03	0.01	0.08	0.05	0.05	-0.11	0.00	0.08	-0.07	-0.01	0.02	0.15	0.01	-0.10	0.04	0.00	0.00	-0.01
2023 Jan	0.20	0.00	0.04	-0.02	0.04	-0.01	0.02	0.04	0.12	0.06	-0.16	0.03	0.19	-0.02	-0.03	0.02	0.17	0.00	-0.10	-0.07	-0.02	0.01	0.00
Feb	0.16	0.00	0.02	-0.05	0.04	0.01	0.01	0.05	0.08	0.07	-0.13	0.01	0.18	0.03	-0.02	0.05	0.15	-0.02	-0.12	-0.16	-0.03	0.01	0.00
Mar	0.13	0.00	0.02	-0.06	0.06	0.00	0.00	0.03	0.09	-0.01	-0.04	0.00	0.09	0.04	-0.01	0.00	0.09	-0.04	-0.04	-0.07	0.02	0.03	0.00
Apr Mav	0.11 0.08	0.00 0.00	0.05 0.07	-0.05 -0.04	0.10 0.11	0.00 0.00	-0.01 -0.01	0.07 0.02	-0.02 -0.01	-0.04 -0.06	-0.03 -0.03	0.01 0.02	0.00 0.00	0.02 -0.01	0.01 0.00	-0.03 -0.06	0.03 -0.01	-0.05 -0.02	-0.04 0.02	-0.02 0.06	0.05 0.07	0.03 0.01	0.00 0.00
Jun	0.00	0.00	0.10	-0.04	0.15	0.00	-0.02	0.02	0.09	0.02	-0.04	0.02	0.07	-0.03	-0.02	-0.08	-0.01	0.02	0.02	0.06	0.04	0.01	0.00
Jul	0.17	0.00	0.09	-0.03	0.16	-0.04	-0.02	0.00	0.07	0.04	-0.04	0.02	0.05	-0.03	-0.05	-0.05	-0.04	0.03	0.04	0.03	0.07	0.00	0.00
Contribution to growth, latest	t 3 months on same	3 months a yea	ır ago																				
	EDMY	EDMZ	EDNA	EDNB	EDNC	EDND	EDNE	EDNF	EDNG	EDNH	EDNI	EDNJ	EDNK	EDNL	EDNM	EDNN	EDNO	EDNP	EDNQ	EDNR	EDNS	EDNT	EDNU
2021 Jul	17.43	0.07	1.90	-0.22	1.90	0.20	0.14	1.71	13.75	1.32	0.93	1.93	0.61	0.49	0.03	1.27	1.04	0.15	2.83	3.76	0.47	-0.09	0.06
Aug	11.45	0.07	0.96	-0.14	1.03 0.56	0.05	0.10	0.94	9.55 7.24	0.35	0.56 0.38	1.20 0.68	0.49	0.43	0.01	1.11	0.79	0.21	1.69	3.41	0.36	-0.20	0.02
Sep Oct	8.22 7.44	0.06 0.06	0.53 0.25	-0.04 0.00	0.30	-0.04 -0.08	0.08 0.08	0.49 0.32	6.96	0.16 0.21	0.36	0.64	0.44 0.42	0.43 0.48	-0.02 -0.04	1.03 0.95	0.78 0.86	0.27 0.30	0.63 0.03	3.21 3.40	0.32 0.33	-0.26 -0.16	-0.03 -0.04
Nov	8.10	0.06	-0.02	-0.02	0.27	-0.00	0.08	0.32	8.04	0.21	0.40	1.10	0.42	0.40	-0.04	0.93	0.80	0.30	-0.06	3.61	0.33	-0.10	-0.04
Dec	8.34	0.06	-0.21	-0.05	-0.16	-0.06	0.08	0.28	8.48	0.39	0.43	1.32	0.52	0.43	-0.06	0.80	0.93	0.34	0.11	3.88	0.38	-0.10	-0.02
2022 Jan	9.90	0.06	-0.24	-0.07	-0.19	-0.05	0.07	0.41	9.95	0.70	0.51	1.69	0.63	0.27	-0.11	0.84	0.97	0.39	0.74	3.52	0.41	0.02	-0.01
Feb	10.18	0.06	-0.23	-0.04	-0.17	-0.08	0.06	0.44	10.20	0.66	0.56	1.76	0.77	0.09	-0.15	0.76	0.99	0.38	1.26	3.26	0.39	0.05	0.00
Mar	10.26	0.05	-0.23	0.00	-0.20	-0.09	0.06	0.40	10.33	0.61	0.61	2.01	0.82	-0.01	-0.17	0.69	1.00	0.36	1.47	2.76	0.46	0.17	0.00
Apr	8.05	0.05	-0.28	0.06	-0.30	-0.10	0.06	0.27	8.26	0.03	0.56	1.85	0.74	-0.05	-0.11	0.57	0.97	0.30	0.98	2.14	0.49	0.05	0.00
May	6.01	0.05	-0.35	0.09	-0.36	-0.14	0.05	0.28	6.24	-0.41	0.55	1.44	0.64	-0.05	-0.07	0.58	0.90	0.23	0.45	1.60	0.46	0.03	-0.01
Jun Jul	4.15 3.57	0.04 0.03	-0.37 -0.42	0.14 0.12	-0.41 -0.44	-0.15 -0.13	0.05 0.02	0.28 0.34	4.35 3.76	-0.68 -0.66	0.49 0.48	0.95 0.63	0.59 0.60	0.00 0.06	-0.05 -0.02	0.55 0.52	0.82 0.73	0.17 0.16	0.10 0.04	0.97 0.70	0.41 0.37	0.02 0.11	-0.02 -0.03
Aug	2.85	0.03	-0.42	0.12	-0.44	-0.13	0.02	0.34	3.70	-0.61	0.48	0.83	0.58	0.08	-0.02	0.32	0.66	0.16	0.04	0.70	0.37	0.09	-0.03
Sep	2.03	0.02	-0.49	-0.04	-0.49	-0.00	0.01	0.30	2.54	-0.59	0.43	0.39	0.55	0.09	0.02	0.43	0.59	0.10	0.00	0.41	0.32	0.03	-0.02
Oct	1.74	0.01	-0.51	-0.09	-0.44	0.02	0.00	0.42	1.90	-0.57	0.36	0.11	0.49	-0.04	0.03	0.35	0.51	0.17	0.23	-0.06	0.22	-0.01	-0.01
Nov	1.20	0.01	-0.41	-0.05	-0.37	0.02	0.00	0.40	1.26	-0.55	0.24	0.17	0.48	-0.13	0.02	0.26	0.42	0.16	0.19	-0.31	0.18	-0.04	-0.02
Dec	0.90	0.01	-0.35	-0.03	-0.32	0.01	-0.01	0.39	0.90	-0.39	0.12	0.30	0.47	-0.16	0.01	0.27	0.39	0.13	0.08	-0.63	0.13	-0.05	-0.02
2023 Jan	0.51	0.00	-0.40	-0.06	-0.30	-0.03	0.00	0.30	0.60	-0.31	0.04	0.32	0.44	-0.13	-0.01	0.22	0.39	0.10	0.01	-0.62	0.08	-0.06	-0.03
Feb	0.44	0.00	-0.39	-0.10	-0.25	-0.05	-0.01	0.30	0.53	-0.21	0.01	0.25	0.31	-0.07	0.00	0.21	0.37	0.07	-0.02	-0.54	0.07	-0.05	-0.02
Mar	0.48	0.00	-0.35	-0.13	-0.17	-0.07	-0.01	0.25	0.58	-0.16	-0.01	0.11	0.22	-0.01	0.02	0.17	0.33	0.05	0.02	-0.29	0.08	-0.04	-0.01
Apr May	0.50 0.18	0.00 0.00	-0.28	-0.13 -0.15	-0.09 -0.06	-0.06 -0.05	-0.02 -0.03	0.24 0.13	0.53 0.30	-0.11	-0.05 -0.10	0.04	0.21 0.21	0.00 -0.02	0.02 -0.01	0.11	0.28 0.21	0.04	0.00 0.00	-0.09	0.05 0.04	-0.01 -0.01	-0.01 -0.01
May Jun	0.18	0.00	-0.25 -0.13	-0.15 -0.14	-0.06 0.08	-0.05 -0.08	-0.03	0.13	0.30	-0.08 -0.02	-0.10	0.02 0.00	0.21	-0.02	-0.01	0.01 -0.05	0.21	0.04 0.04	-0.01	-0.05 0.06	0.04	0.01	-0.01
Jul	0.33	0.00	-0.04	-0.14	0.00	-0.10	-0.02	0.15	0.30	0.02	-0.14	-0.03	0.23	-0.09	-0.07	-0.09	0.19	0.04	-0.05	0.00	0.08	0.00	-0.01
Jui	0.21	0.00	-0.04	-0.10	0.17	-0.10	-0.02	0.15	0.10	0.02	-0.14	-0.03	0.21	-0.09	-0.07	-0.09	0.19	0.04	-0.03	0.00	0.08	0.01	

seasonally adjusted 2019=100

The GVA output is designated as a National Statistic.
 Estimates cannot be regarded as accurate to the last digit shown.
 A complete run of data is available on the ONS website.
 Contributions are based on output GVA growth
 Please use additional caution when aggregating individual contributions from April - September 2020, as the larger-than-usual growth rates mean that, when summed, the rounded contributions may not accurately represent the higher level contribution being calculated.

Sources: For further information on these data please telephone 01633 582428 or E-mail gdp@ons.gov.uk

CONTRIB 2 Monthly GDP based on GVA (Gross Value Added)¹ Contributions to growth of gross value added at basic prices ^{2,3,4,5}

		s to growth of gro		a at 24010 p.10								Industry section	s (SIC2007)	2010-100									
	Total GVA at	Agriculture,	Total			Electricity	Water supply,		Total	Wholesale and retail: repair of		Accommodation and food	Information	Financial		Professional, scientific	Administrative and support	Public		Human health	Arts,	Other	Activities of households as employers,
	basic	forestry and	production	Mining &		gas, steam	sewerage		service	motor vehicles	Transport	service	and	and insurance	Real estate	and technical	service	and		and social	entertainment	service	undifferentiated
Section	prices A-T	fishing A	industries B-E	quarrying	Manufacturing C	and air D	etc	Construction	industries G-T	and motorcycles	and storage H	activities	Communication	activities K	activities	activities M	activities N	defence O	Education P	work activities	and recreation R	activities S	goods and services
2019 weights	1000	7	137	11	99	15	12	64	792	105	40	29	62	82	131	74	51	48	59	76	16	17	2
Contributon to growth, lat	atest month on previ	ious month																					
	EDKH	EDKI	EDKJ	EDKK	EDKL	EDKM	EDKN	EDKO	EDKP	EDKQ	EDKR	EDKS	EDKT	EDKU	EDKV	EDKW	EDKX	EDKY	EDKZ	EDLA	EDLB	EDLC	EDLD
2021 Jul	-0.18	0.01	0.02	0.10	-0.04	-0.07	0.01	-0.04	-0.18	-0.14	0.05	0.04	0.08	-0.06	-0.08	-0.10	0.07	0.02	-0.02	-0.12	0.04	0.02	-0.02
Aug	0.86	0.01	0.07	0.11	-0.01	-0.06	-0.01	-0.02	0.82	-0.03	0.05	0.33	0.04	0.00	0.01	0.04	0.03	0.01	-0.10	0.42	0.07	0.04	-0.02
Sep	0.60	0.00	-0.13	-0.02	-0.05	-0.03	-0.02	0.03	0.74	-0.03	0.09	0.03	-0.15	0.08	-0.01	0.20	0.13	0.03	-0.09	0.44	0.03	0.08	0.00
Oct Nov	0.13 0.99	0.00 0.00	-0.13 0.03	-0.03 -0.02	-0.07 -0.02	-0.07 0.08	0.04 0.00	-0.02 0.10	0.31 0.87	0.04 -0.10	0.00 0.14	-0.16 -0.01	0.23 0.00	0.05 0.04	-0.02 0.01	-0.16 0.17	0.16 0.11	-0.03 0.06	-0.08 0.19	0.33 0.18	0.04 0.07	-0.01 0.03	0.00 0.01
Dec	0.13	0.00	0.00	-0.02	0.02	0.00	0.00	0.05	0.07	-0.24	0.14	-0.18	0.06	0.04	0.01	0.04	0.04	0.00	0.13	0.34	0.01	0.00	0.01
2022 Jan	0.16	0.00	0.00	0.04	-0.07	0.03	0.00	0.06	0.10	0.12	0.01	0.16	0.26	-0.10	0.00	-0.03	0.01	0.01	-0.04	-0.45	0.00	0.04	0.00
Feb	-0.07	0.01	-0.04	0.00	-0.04	0.00	0.00	0.00	-0.03	-0.14	0.02	0.21	0.10	-0.04	-0.05	0.05	0.09	0.00	-0.04	-0.29	0.02	-0.04	-0.01
Mar	0.08	0.00	-0.01	0.00	0.01	-0.02	0.01	0.12	-0.04	-0.20	0.06	0.02	-0.09	-0.01	0.02	0.07	0.02	0.00	-0.01	0.03	0.07	-0.01	-0.01
Apr	-0.03	0.00	-0.05	-0.02	-0.06	0.02	0.02	-0.01	0.04	0.17	-0.02	0.04	0.03	0.01	0.03	-0.03	0.06	0.00	0.07	-0.42	0.04	-0.02	0.00
May	0.82 -0.74	0.00	0.01 -0.13	0.01 -0.02	0.03 -0.12	0.01 -0.01	-0.03 0.02	0.14 -0.15	0.68 -0.43	-0.10 -0.07	0.03 -0.05	0.03 0.07	0.08 -0.03	0.03 0.03	0.02 -0.01	0.20 -0.08	0.07 -0.14	0.01 0.02	0.02 0.02	0.36 -0.22	-0.03 0.00	0.01 -0.01	0.00 0.00
Jun Jul	-0.74	0.00 0.00	-0.13	-0.02	-0.12	-0.01	-0.02	0.07	-0.43	0.05	0.10	-0.04	-0.03	0.03	0.01	0.00	-0.14	0.02	0.02	-0.22	0.00	-0.01	-0.01
Aug	0.00	0.00	-0.15	-0.07	-0.07	-0.01	0.00	0.03	0.00	0.02	0.05	-0.04	0.08	-0.03	0.00	0.05	0.05	0.02	0.02	0.08	-0.06	-0.03	-0.01
Sep	-0.74	0.00	0.01	0.01	0.00	0.00	0.01	-0.01	-0.76	-0.21	-0.02	-0.03	-0.19	-0.09	-0.01	-0.10	-0.08	0.01	-0.04	0.04	-0.03	0.01	0.00
Oct	0.68	0.00	0.04	0.00	0.10	-0.04	-0.02	0.04	0.60	0.20	-0.02	0.02	0.05	0.00	0.04	0.08	0.11	0.00	-0.01	0.06	0.09	0.00	0.00
Nov	0.19	0.00	0.00	0.02	-0.05	0.00	0.02	0.01	0.18	0.00	-0.07	0.04	0.21	-0.01	-0.05	-0.04	0.11	0.00	-0.02	0.02	-0.04	0.00	0.00
Dec	-0.52	0.00	0.03	-0.04	0.01	0.05	0.01	0.05	-0.62	-0.05	-0.12	-0.02	0.00	0.02	-0.02	0.07	0.00	0.00	-0.17	-0.29	-0.09	-0.01	0.00
2023 Jan	0.45	0.00	-0.03	-0.04	0.04	-0.04	-0.01	-0.11	0.60	0.09	0.10	-0.01	0.06	0.02	0.01	-0.02	0.06	0.00	0.14	0.09	0.07	0.02	0.00
Feb Mar	0.08 -0.25	0.00 0.00	-0.02 0.11	0.02 -0.03	0.01 0.07	-0.04 0.05	-0.01 0.02	0.16 -0.01	-0.08 -0.35	-0.03 -0.15	-0.02 -0.06	0.01 -0.01	-0.02 -0.07	0.01 -0.01	0.00 0.01	-0.02 0.00	0.02 -0.05	-0.05 0.00	-0.10 0.01	0.05 -0.05	0.03 0.02	0.03 -0.02	0.00 0.00
Apr	0.22	0.00	0.01	-0.03	0.04	0.03	-0.02	-0.05	0.27	0.13	0.02	0.07	0.09	-0.01	-0.01	-0.06	0.03	0.00	0.03	-0.01	-0.01	0.01	0.00
May	-0.07	0.00	-0.09	0.00	-0.01	-0.06	-0.03	-0.02	0.04	-0.04	-0.01	-0.05	0.01	-0.02	-0.02	0.00	-0.05	0.01	0.03	0.16	0.04	-0.01	0.00
Jun	0.52	0.00	0.25	-0.02	0.22	0.00	0.02	0.10	0.16	0.08	0.00	0.05	0.09	-0.01	-0.02	-0.03	0.04	0.02	0.02	-0.06	-0.01	0.01	0.00
Jul	-0.52	0.00	-0.09	0.02	-0.07	-0.03	-0.01	-0.03	-0.40	-0.04	-0.06	-0.01	-0.15	0.02	-0.04	0.04	-0.08	0.02	-0.07	-0.17	0.11	0.02	0.00
Contribution to growth, I	latest month on sar	ne month a year	ago																				
	EDLE	EDLF	EDLG	EDLH	EDLI	EDLJ	EDLK	EDLL	EDLM	EDLN	EDLO	EDLP	EDLQ	EDLR	EDLS	EDLT	EDLU	EDLV	EDLW	EDLX	EDLY	EDLZ	EDMA
2021 Jul	9.25	0.07	0.78	-0.16	0.88	0.03	0.11	0.69	7.78	0.11	0.46	0.96	0.41	0.38	-0.02	1.02	0.68	0.22	1.54	3.01	0.28	-0.48	0.01
Aug	7.99 7.45	0.07 0.06	0.58 0.23	0.02 0.01	0.56 0.24	-0.05 -0.09	0.07 0.07	0.48 0.31	6.95 7.01	0.13 0.25	0.34 0.36	0.41 0.68	0.53 0.38	0.45 0.45	-0.01 -0.03	1.04 1.03	0.76 0.89	0.27 0.32	0.44 -0.08	3.25 3.36	0.34 0.34	-0.19 -0.13	-0.04 -0.05
Sep Oct	6.90	0.06	-0.05	-0.04	0.24	-0.09	0.07	0.31	6.92	0.25	0.30	0.81	0.38	0.45	-0.03	0.78	0.89	0.32	-0.08	3.58	0.34	-0.13	-0.03
Nov	9.98	0.06	-0.24	-0.03	-0.26	-0.02	0.09	0.26	10.23	0.72	0.47	1.83	0.53	0.53	-0.04	0.99	1.05	0.37	0.17	3.88	0.49	0.08	-0.02
Dec	8.18	0.05	-0.33	-0.09	-0.23	-0.05	0.06	0.41	8.33	0.22	0.43	1.32	0.66	0.21	-0.08	0.65	0.82	0.36	0.41	4.18	0.34	-0.21	0.00
2022 Jan	11.61	0.06	-0.13	-0.04	-0.08	-0.08	0.07	0.58	11.40	1.13	0.65	1.90	0.73	0.06	-0.22	0.90	1.02	0.39	1.68	3.20	0.41	0.20	0.00
Feb	10.80	0.06	-0.22	0.03	-0.21	-0.10	0.05	0.36	10.93	0.65	0.61	2.06	0.95	0.00	-0.16	0.73	1.11	0.36	1.71	2.77	0.44	0.16	0.00
Mar	8.42	0.05	-0.33	0.02	-0.31	-0.09	0.05	0.29	8.69	0.08	0.58	2.05	0.77	-0.08	-0.13	0.45	0.88	0.33	1.02	2.33	0.54	0.17	0.01
Apr	5.10	0.05 0.04	-0.27 -0.45	0.14	-0.38 -0.40	-0.11	0.08 0.04	0.19 0.38	5.32	-0.61 -0.67	0.50	1.46 0.83	0.51 0.63	-0.06 0.00	-0.06	0.54 0.75	0.92	0.21 0.15	0.26	1.37	0.49 0.36	-0.15 0.08	-0.01
May Jun	4.60 2.77	0.04	-0.45 -0.37	0.11 0.17	-0.40	-0.22 -0.12	0.04	0.38	4.80 2.97	-0.87	0.58 0.39	0.83	0.63	0.00	-0.03 -0.06	0.75	0.90 0.65	0.15	0.11 -0.05	1.12 0.44	0.36	0.08	-0.03 -0.03
Jul	3.33	0.02	-0.44	0.09	-0.47	-0.05	-0.01	0.37	3.52	-0.57	0.45	0.50	0.55	0.12	0.03	0.47	0.65	0.16	0.06	0.55	0.37	0.10	-0.02
Aug	2.46	0.01	-0.66	-0.13	-0.53	0.00	0.00	0.43	2.82	-0.51	0.45	0.08	0.58	0.09	0.01	0.48	0.67	0.17	0.18	0.25	0.24	0.03	-0.01
Sep	1.10	0.01	-0.52	-0.09	-0.48	0.02	0.03	0.39	1.30	-0.69	0.33	0.03	0.53	-0.08	0.01	0.17	0.45	0.15	0.22	-0.11	0.19	-0.04	-0.01
Oct	1.65	0.01	-0.34	-0.05	-0.31	0.05	-0.02	0.45	1.59	-0.53	0.31	0.21	0.35	-0.14	0.06	0.40	0.41	0.19	0.28	-0.34	0.24	-0.03	-0.02
Nov	0.85	0.01	-0.37	-0.01	-0.33	-0.03	0.00	0.36	0.90	-0.43	0.10	0.26	0.56	-0.18	0.00	0.19	0.41	0.12	0.08	-0.47		-0.06	-0.02
Dec 2022 Ion	0.20	0.00	-0.34	-0.03	-0.32	0.01	0.00	0.36	0.21	-0.22	-0.04	0.43	0.49	-0.17	-0.03	0.22	0.36	0.10	-0.12	-1.07	0.03	-0.06	-0.03
2023 Jan Feb	0.49 0.63	0.00 0.00	-0.41 -0.38	-0.14 -0.11	-0.23 -0.17	-0.07 -0.11	-0.01 -0.02	0.19 0.34	0.71 0.67	-0.26 -0.14	0.05 0.02	0.26 0.06	0.28 0.17	-0.05 0.01	-0.01 0.04	0.23 0.17	0.40 0.33	0.08 0.03	0.06 0.00	-0.47 -0.17	0.10 0.10	-0.08 -0.02	-0.02 -0.01
Mar	0.30	0.00	-0.38	-0.15	-0.17	-0.03	0.02	0.34	0.07	-0.08	-0.11	0.00	0.17	0.01	0.04	0.17	0.33	0.03	0.00	-0.17	0.10	-0.02	0.00
Apr	0.56	0.00	-0.19	-0.13	-0.01	-0.03	-0.04	0.17	0.58	-0.12	-0.07	0.02	0.25	-0.02	-0.01	0.10	0.20	0.03	-0.02	0.13	0.00	0.02	-0.01
May	-0.33	0.00	-0.29	-0.15	-0.05	-0.11	-0.03	0.02	-0.04	-0.05	-0.12	-0.02	0.19	-0.06	-0.05	-0.13	0.12	0.04	0.00	-0.04	0.07	-0.02	-0.01
Jun	0.93	0.00	0.10	-0.14	0.30	-0.09	-0.03	0.27	0.54	0.10	-0.06	-0.04	0.30	-0.10	-0.06	-0.08	0.30	0.04	0.00	0.10	0.05	0.00	-0.02
Jul	0.04	0.00	0.06	-0.18	0.28	-0.11	0.00	0.17	-0.21	0.01	-0.23	-0.02	0.15	-0.10	-0.10	-0.05	0.15	0.04	-0.14	-0.08	0.12	0.03	-0.01

seasonally adjusted 2019=100

The GVA output is designated as a National Statistic.
 Estimates cannot be regarded as accurate to the last digit shown.
 A complete run of data is available on the ONS website.
 Contributions are based on output GVA growth
 Please use additional caution when aggregating individual contributions from April - September 2020, as the larger-than-usual growth rates mean that, when summed, the rounded contributions may not accurately represent the higher level contribution being calculated.

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