Office for National Statistics

Statistical bulletin

Gross domestic product, preliminary estimate: Apr to June 2016

Preliminary estimate for gross domestic product (GDP) containing constant price gross value added (GVA) data for the UK. Data are available by industrial sector.

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Notice

29 November 2016

Following a quality review, a processing error has been identified in the compilation of the estimates for the rail transport industry (49.1-2), which affects the period Quarter 1 1997 to Quarter 2 2016. In line with the National Accounts revision policy, this error will be corrected in the Index of Services and Quarterly National Accounts due for publication on 23rd December 2016 for data from Quarter 1 2015 and in the Blue Book 2017 consistent releases for data prior to this period. The average impact over this period on quarter-on-quarter Index of Services and GDP growth is 0.00%. This processing error does not impact quarter on quarter growth into Quarter 3 2016.

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1 . Main points

Change in gross domestic product (GDP) is the main indicator of economic growth. GDP was estimated to have increased by 0.6% in Quarter 2 (Apr to June) 2016 compared with growth of 0.4% in Quarter 1 (Jan to Mar) 2016.

Output increased in 2 of the main industrial groupings within the economy in Quarter 2 2016. Services increased by 0.5% and production increased by 2.1%. In contrast, construction decreased by 0.4% and agriculture decreased by 1.0%.

GDP was 2.2% higher in Quarter 2 2016 compared with the same quarter a year ago.

In Quarter 2 2016, GDP was estimated to have been 7.7% higher than the pre-economic downturn peak of Quarter 1 2008. From the peak in Quarter 1 2008 to the trough in Quarter 2 2009, the economy shrank by 6.3%.

The preliminary estimate of GDP is produced using the output approach to measuring GDP. At this stage, data content is less than half of the total required for the final output estimate. The estimate is subject to revision as more data becomes available, but these revisions are typically small between the preliminary and third estimates of GDP, with no upward or downward bias to these revisions.

All figures in this release are seasonally adjusted. In line with the national accounts revision policy, no earlier periods have been revised.

2 . Understanding the preliminary estimate of GDP

About the preliminary estimate of GDP

Change in GDP is the main indicator of economic growth. The preliminary estimate of GDP is based solely on the output approach to measuring GDP and uses the same data that feeds into the Index of Services, Index of Production and Output in the Construction Industry datasets. The growth estimates within this release are created from short-term measures of output and should be considered alongside medium and long-term patterns in the series to give a more comprehensive picture of the main movements (further information on longer-term patterns of GDP, including a comparison with other countries, can be found in the Economic context section).

The output approach measures gross value added (GVA) at a detailed industry level before aggregating to produce an estimate for the whole economy. GDP (as measured by the output approach) can then be calculated by adding taxes and subtracting subsidies (both only available at whole economy level) to this estimate of total GVA. However, as there is no information available on taxes and subsidies at this stage, the quarterly growth for output GVA is taken as a proxy for GDP growth (more information on creating the preliminary estimate of GDP is available on the methods and sources page of our website).

In the second estimate of GDP and the quarterly national accounts, the output GVA and GDP estimates are balanced with the equivalent income and expenditure approaches to produce headline estimates of GVA and GDP. Further information on all 3 approaches to measuring GDP can be found in the national accounts.

All data in this bulletin are seasonally adjusted estimates and have had the effect of price changes removed (in other words, the data are deflated). Further information on some of the main concepts (including seasonal adjustment and deflation) underlying the estimates can be found in background note 6.

The quality of the estimate of GDP

The national accounts are drawn together using data from many different sources. This ensures that the national accounts are comprehensive and provide different perspectives on the economy, for example, sales by retailers and purchases by households. One source of information is from business surveys which use information provided directly from UK businesses. These data are subject to many layers of vigorous quality assurance by highly trained personnel, from clarity and confirmation of individual unit data direct from the business contact to scrutiny of data at the macro level. By comparing and contrasting these different sources, the national accounts produce a single picture of the economy which is consistent, coherent and fully integrated.

The production and publication of each GDP release is managed by a highly skilled team with a strong emphasis on statistical, analytical and economic debate throughout the production process to publish the headline GDP estimate and components. Although a limited audience have access to GDP data ahead of publication, those involved in the process are selected to ensure each GDP estimate receives a rigorous statistical and economic challenge. A "balancing meeting" is held during each production round where presentations assess GDP and components against a swathe of external indicators and a focus on GDP headline components. This is attended by senior managers within the Office for National Statistics (ONS) who challenge the data to ensure consistency and plausibility of the GDP estimate.

The preliminary estimate of GDP is produced around 25 days after the end of the quarter based on data from the output measure only, to provide a timely estimate of GDP, at this stage the data content of this estimate is around 44% of the total required for the final output-based estimate. The methods for producing the preliminary GDP estimate use monthly data for the first 2 months in the quarter (April and May) and forecasts for estimating the third month (June), which incorporate early survey responses where available. More information about the data content for this release can be found in the Assumptions made for June 2016 section and the background notes.

Unlike many short-term indicators published by ONS, there is no simple way of measuring the accuracy of GDP. All estimates, by definition, are subject to statistical uncertainty and for many well-established statistics we measure and publish the sampling error and non-sampling error associated with the estimate, using this as an indicator of accuracy. Since sampling is typically done to determine the characteristics of a whole population, the difference between the sample and population values is considered a sampling error.

Non-sampling errors are a result of deviations from the true value that are not a function of the sample chosen, including various systematic errors and any other errors that are not due to sampling. The estimate of GDP, however, is currently constructed from a wide variety of data sources, some of which are not based on random samples or do not have published sampling and non-sampling errors available and as such it is very difficult to measure both error aspects and their impact on GDP. While development work continues in this area, like all other G7 national statistical institutes, we don't publish a measure of the sampling error/non-sampling error associated with GDP (more information on the quality of the output approach to measuring GDP can be found on the Methods and sources page on our website). It should be noted that we are continually working on methodological changes to improve accuracy of the output approach to measuring GDP. As part of the GDP Continuous Improvement Programme, articles are regularly published on the statistical continuous improvement page, which provide detailed updates of the work carried out so far.

One dimension of measuring accuracy is reliability, which is measured using evidence from analyses of revision to assess the closeness of early estimates to subsequently estimated values. Many users try to minimise the impact of uncertainty through using the historical experience of revisions as a basis for estimating how confident they are in early releases and predicting how far and in what direction the early release might be revised. Revisions are an inevitable consequence of the trade-off between timeliness and accuracy. The estimate is subject to revisions as more data becomes available, but between the preliminary and third estimates of GDP, revisions are typically small (around 0.1 to 0.2 percentage points), with the frequency of upward and downward revisions broadly equal. Many different approaches can be used to summarise revisions; the Validation and Quality Assurance section in the Quality and Methodology Information paper analyse the mean average revision and the mean absolute revision for GDP estimates over data publication iterations - in addition to this analysis, Section 14 of the Revisions to GDP and components in Blue Books 2014 and 2015 article updates the metrics used to test revisions performance in order to answer the question "Is GDP biased?"

On 11 December 2014, the UK Statistics Authority announced its decision to suspend the designation of Construction price and cost Indices (CPCIs) due to concerns about the quality of these deflators. As a result, the UK Statistics Authority also suspended the designation of Output and New orders as National Statistics in respect of the Code of Practice for Official Statistics.

We took over responsibility for the publication and development of the CPCIs from the Department for Business Innovation and Skills on 1 April 2015. On 8 May 2015, we published an article describing the proposed interim solution for construction price and cost indices (CPCIs) to replace the statistical models that had been used in the production of chained volume measures (CVMs) for output in the construction industry since Quarter 3 (July to Sept) 2014 and to provide an ongoing source of data. Since the publication of the Quarterly National Accounts, Quarter 2 (Apr to June) 2015, this interim solution has been used for data periods from Quarter 1 (Jan to Mar) 2014 onwards. This interim solution is used within this release.

3 . Main information

Table 1: GDP preliminary estimate main figures, Quarter 2 (Apr to June) 2016

UK, 2014 to 2016

|	GDP Index (2013=100)		Percentage change on previous quarter			
		GDP	Agriculture	Production	Construction	Services
		Weights 1000	7	146	59	788
Q1 2014 [1]	101.7	0.8	8.2	0.5	2.3	1.0
Q2 2014	102.7	0.9	1.8	0.3	1.9	1.2
Q3 2014	103.5	0.8	2.0	0.2	2.5	1.0
Q4 2014	104.4	0.8	2.6	0.3	0.3	1.0
Q1 2015	104.6	0.3	-3.0	0.4	1.9	0.2
Q2 2015	105.1	0.4	0.7	0.7	1.0	0.4
Q3 2015	105.5	0.4	0.2	0.1	-1.1	0.6
Q4 2015	106.3	0.7	0.5	-0.3	0.7	0.9
Q1 2016	106.7	0.4	0.0	-0.2	-0.3	0.6
Q2 2016	107.4	0.6	-1.0	2.1	-0.4	0.5

Source: Office for National Statistics

Notes:

1. Q1 refers to Quarter 1 (Jan to Mar), Q2 refers to Quarter 2 (Apr to June), Q3 refers to Quarter 3 (July to Sept), Q4 refers to Quarter 4 (Oct to Dec).

The preliminary estimate of GDP focuses on the growth in output between 2 consecutive quarters (in this release Quarter 1 (Jan to Mar) 2016 and Quarter 2 (Apr to June) 2016). GDP increased by 0.6% in the second quarter of 2016.

Figure 1: GDP contributions[1] to the quarter-on-quarter percentage change, Quarter 2 (Apr to June) 2016

UK
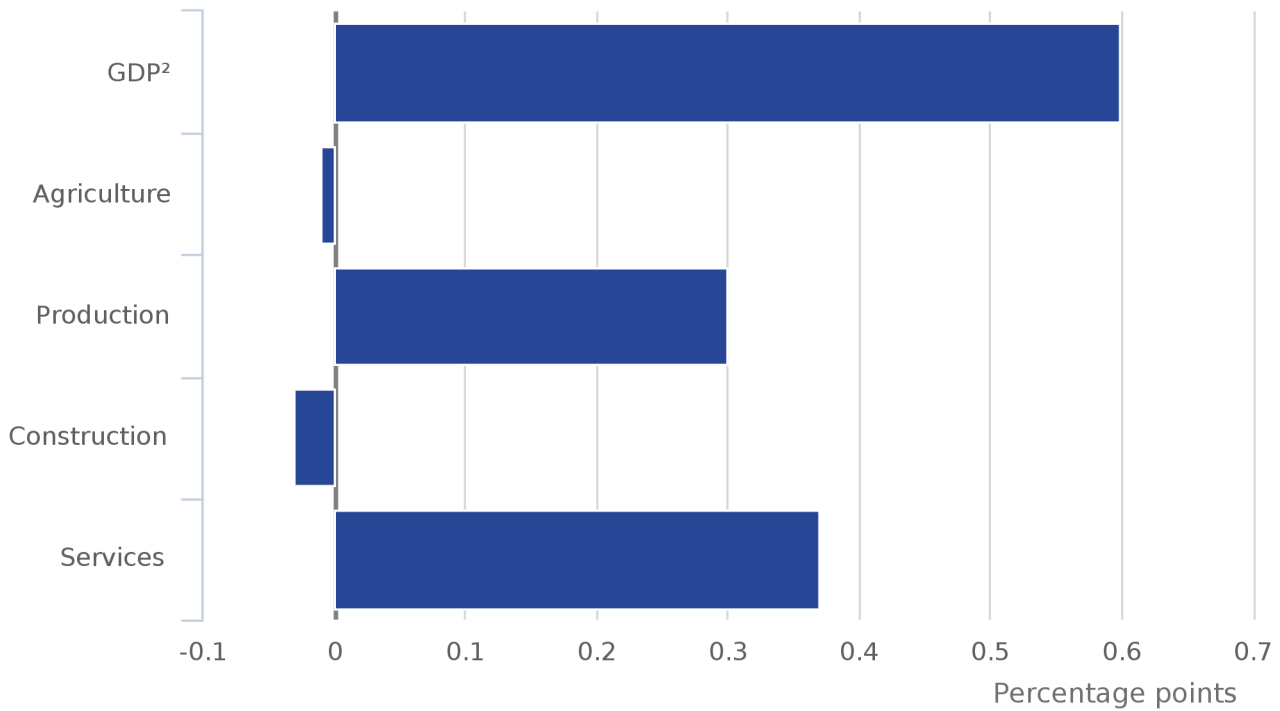
Source: Office for National Statistics

Notes:

1. Components may not sum due to rounding.

2. Percentage change.

The contribution an industry grouping makes to GDP quarterly growth is dependent on the change in that industry grouping and its weight within the output approach to measuring GDP. The current 2013 - based weights are: services 78.8%; production 14.6%; construction 5.9%; and agriculture 0.7%.

Growth in the services industries in Quarter 2 (Apr to June) 2016 increased by 0.5%, contributing 0.37 percentage points to quarterly GDP growth (as seen in Figure 1), slowing from an increase of 0.6% in Quarter 1 (Jan to Mar) 2016. In the latest period all 4 of the main services aggregates (distribution, hotels and restaurants; transport, storage and communication; business services and finance; and government and other services) increased. Growth in the business services and finance industries in Quarter 2 2016 increased by 0.5% slowing from 0.7% in Quarter 1 2016 and was the main reason behind the reduction in services growth between the 2 quarters.

Growth in the production industries in Quarter 2 2016 increased by 2.1%, contributing 0.30 percentage points to quarterly GDP growth (as seen in Figure 1), this follows a decrease of 0.2% in Quarter 1 2016. In the latest period all 4 of the main production aggregates increased with: manufacturing increasing by 1.8% in Quarter 2 2016 following a decrease of 0.2% in Quarter 1 2016; energy supply increasing by 4.7% in Quarter 2 2016 following an increase of 0.7% in Quarter 1 2016; water and waste management increasing by 2.6% in Quarter 2 2016 following an increase of 2.4% in Quarter 1 2016; and mining and quarrying increasing by 1.4% in Quarter 2 2016 following a decrease of 2.2% in Quarter 1 2016.

Growth in the construction industries in Quarter 2 2016 decreased by 0.4% with a downward contribution of 0.03 percentage points, this follows a decrease of 0.3% in Quarter 1 2016.

4 . Economic context

Figure 2: GDP (£ billions) and quarter-on-quarter growth [1], Quarter 2 (Apr to June) 2016

UK, 2003 to 2016
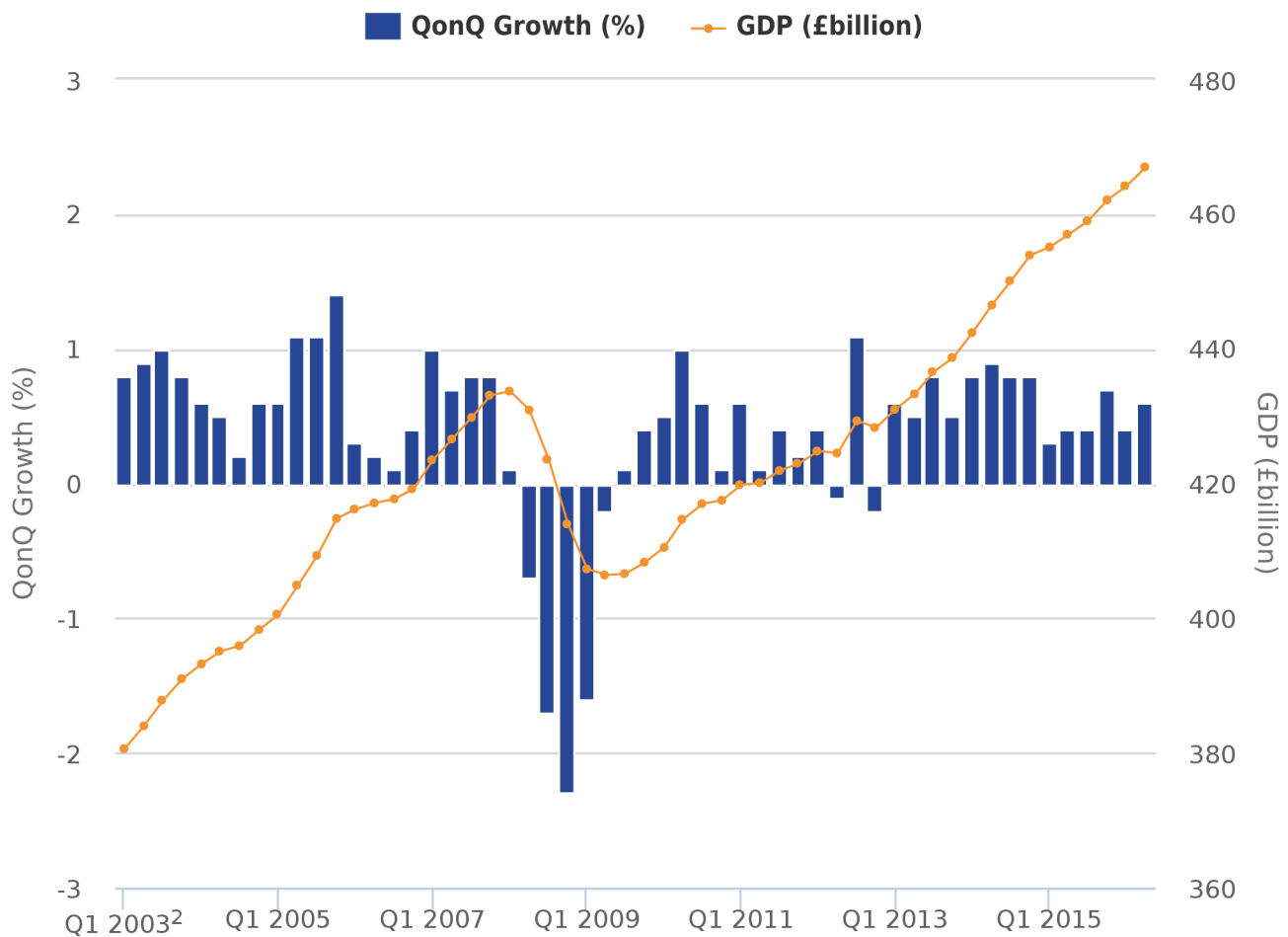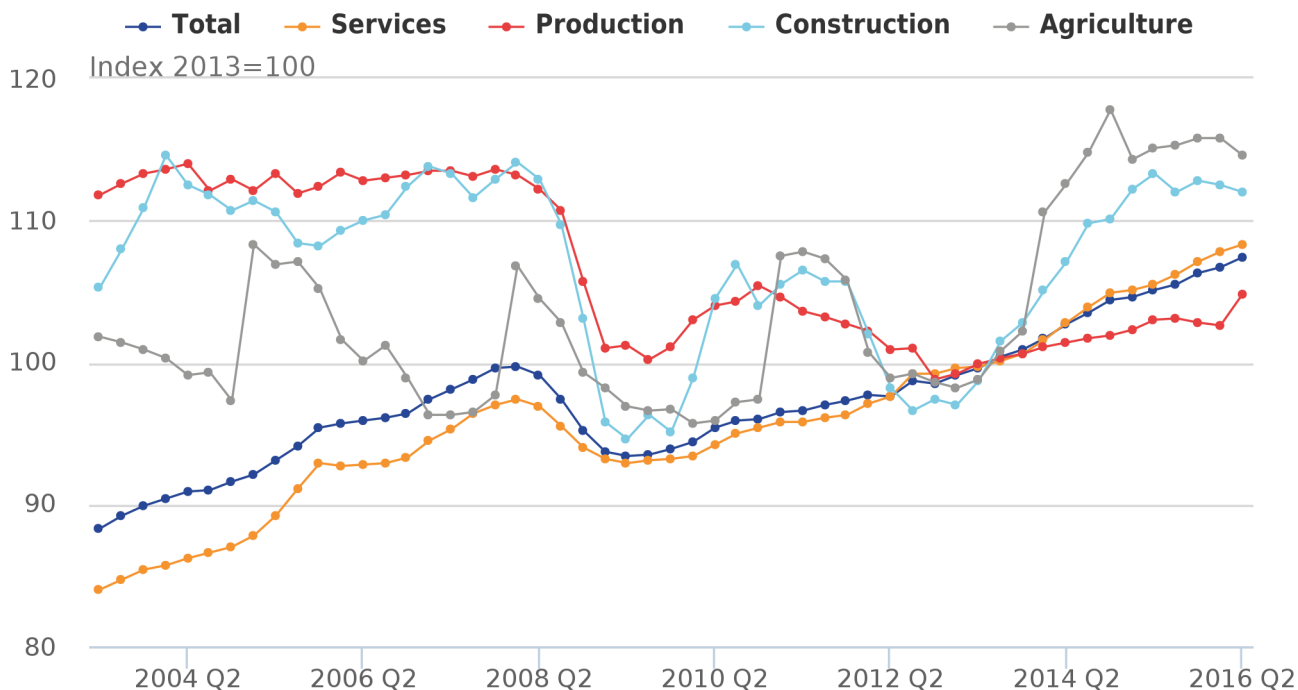

Source: Office for National Statistics

Notes:

1. Growth rates are calculated using unrounded data.

2. Q1 refers to Quarter 1(Jan to Mar), Q2 refers to Quarter 2 (Apr to June), Q3 refers to Quarter 3 (July to Sept), Q4 refers to Quarter 4 (Oct to Dec).

As seen in Figure 2, GDP in the UK grew consistently during the 2000s until a financial market shock affected UK and global economic growth in 2008 and 2009. Economic growth resumed towards the end of 2009, but generally at a slower rate than the period prior to 2008 (Figure 2). This growth was also erratic, with several quarters between 2010 and 2012 recording low or declining GDP growth. This 2-year period coincided with special events (for example, severe winter weather in Quarter 4 (Oct to Dec) 2010 and the Diamond Jubilee in Quarter 2 (Apr to June) 2012) that are likely to have affected growth. Since 2013, GDP has grown steadily, passing its pre-downturn peak in Quarter 3 (July to Sept) 2013.

Figure 3: GDP and main components, Quarter 2 (Apr to June) 2016

UK, 2003 to 2016

Source: Office for National Statistics

Notes:

1. Q1 refers to Quarter 1(Jan to Mar), Q2 refers to Quarter 2 (Apr to June), Q3 refers to Quarter 3 (July to Sept), Q4 refers to Quarter 4 (Oct to Dec).

GDP and all of its components are referenced to 2013, making the average index in 2013 equal to 100. It is for this reason that Figure 3 shows all components converging in 2013.

Figure 3 shows the industry breakdown of GDP from 2003. Up until the downturn, services in the UK grew steadily, while production output was broadly flat over the same period. Construction activity grew strongly between 2003 and 2004 and although there was a temporary decline in the mid-2000s, this was reversed in 2006 when construction started growing again.

This GDP preliminary estimate shows that the UK economy grew by 0.6% in Quarter 2 (Apr to June) 2016, slightly faster than the 0.4% estimate for Quarter 1 (Jan to Mar) 2016. This growth is consistent with the average quarter-on-quarter growth (0.6%) seen since Quarter 1 2013, when the economy started growing steadily. It also marks the 14th consecutive quarter of positive growth since the beginning of 2013 with GDP being 7.7% above its pre-downturn peak (Quarter 1 2008). In addition, GDP grew by 2.2% between Quarter 2 2016 and Quarter 2 2015, which was slightly above the 2.0% growth between Quarter 1 2016 and Quarter 1 2015 but slightly slower than the average quarter-on-quarter a year ago growth (2.4%) since Quarter 1 2013.

Figure 4: GDP and main components relative to Quarter 1 (Jan to Mar) 2008 level

UK, Quarter 1 (Jan to Mar) 2008 to Quarter 2 (Apr to June) 2016
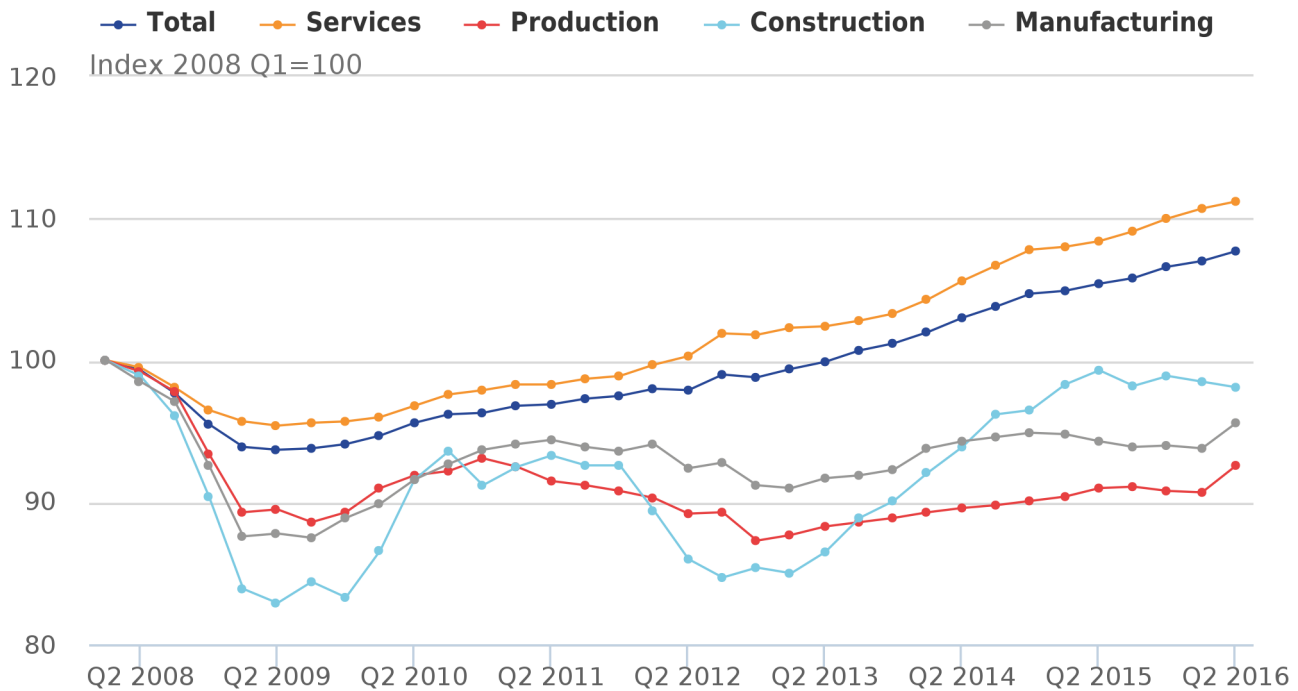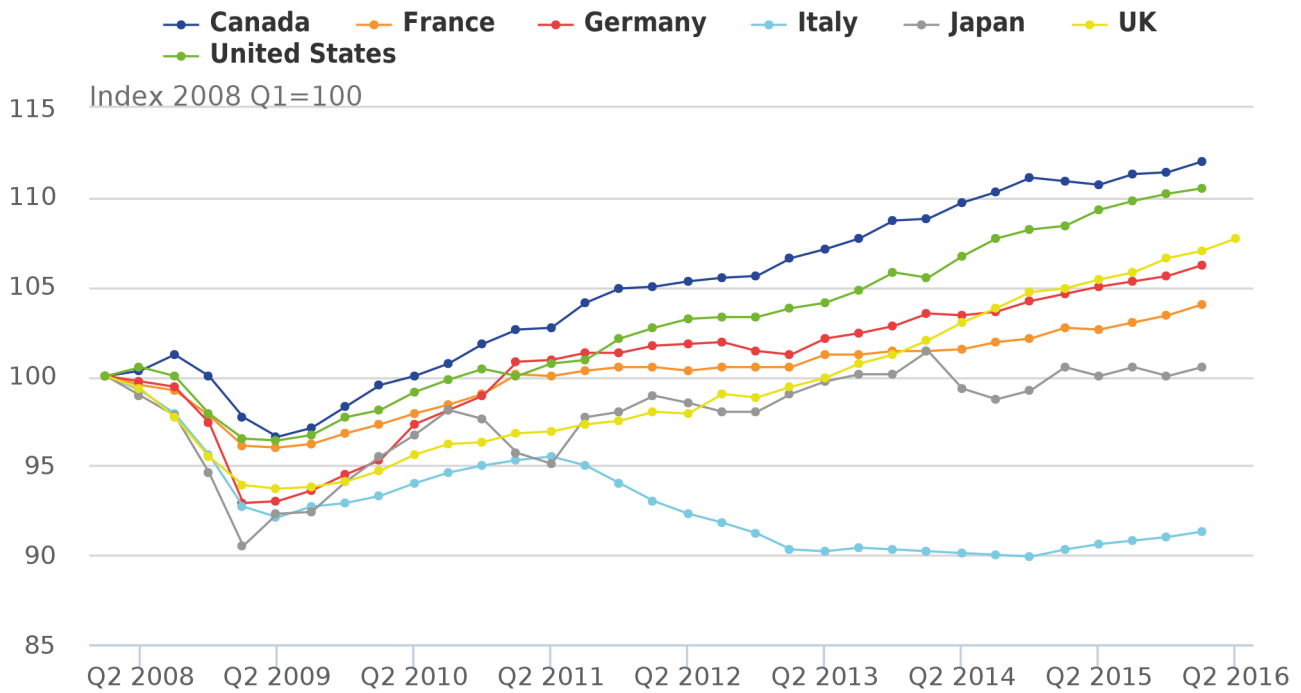

Source: Office for National Statistics

Notes:

1. Q1 refers to Quarter 1(Jan to Mar), Q2 refers to Quarter 2 (Apr to June), Q3 refers to Quarter 3 (July to Sept), Q4 refers to Quarter 4 (Oct to Dec).

Looking at the headline industries in more detail, Figure 4 indexes the level of output in the headline industries to 100 at Quarter 1 (Jan to Mar) 2008. This shows that the services industries have experienced the strongest and steadiest growth in the recovery, which continued in Quarter 2 (Apr to June) 2016. Output in the services industries is now 11.2% above its pre-downturn peak, which was surpassed in Quarter 2 2012, whilst the other headline industries have yet to surpass their respective pre-downturn peak. However, the rise in GDP growth in Quarter 2 2016 is not solely attributable to services, with production increasing by 2.1% on the quarter. In contrast, construction output remains weak, contracting by 0.4% in Quarter 2 2016 and by 1.2% since Quarter 2 2015.

The ONS GDP preliminary estimate is one of the earliest GDP releases to be published internationally. As a result, comprehensive cross-country GDP comparisons cannot yet be made for Quarter 2 2016. However, GDP data are widely available for most major economies up to Quarter 1 2016, and a comparison of this information is shown in Figure 5.

Figure 5: Quarterly growth in GDP[1] across the G7 nations[2]

Source: Office for National Statistics, Organisation for Economic Co-operation and Development (OECD)

Notes:

1. At the time of publication, data for Quarter 2 (Apr to June) was only available for the UK.

2. OECD data correct at 21 July 2016.

3. Q1 refers to Quarter 1(Jan to Mar), Q2 refers to Quarter 2 (Apr to June), Q3 refers to Quarter 3 (July to Sept), Q4 refers to Quarter 4 (Oct to Dec).

Table 2: Quarterly growth in GDP[1] across the G7 nations

Quarter 1 (Jan to Mar) 2016 to Quarter 2 (Apr to June) 2016

	Growth, quarter-on-quarter percentage (%)		Growth, quarter-on-year percentage (%)	
	2016 Q1	2016 Q2	2016 Q1	2016 Q2
United Kingdom	0.4	0.6	2.0	2.2
Canada	0.6	..	1.1	..
France	0.6	..	1.3	..
Germany	0.7	..	1.6	..
Italy	0.3	..	1.0	..
Japan	0.5	..	0.0	..
United States of America	0.3	..	2.1	..

Source: Office for National Statistics and OECD

Notes:

1. Where a country has not yet published an estimate of GDP for 2016 Q2, this is represented by ..

2. Q1 is Quarter 1 (Jan to Mar), Q2 is Quarter 2 (Apr to June) 2016.

3. Data from OECD correct as of 21 July 2016

In Quarter 1 (Jan to Mar) 2016, economic growth in France was 0.6% following from a growth of 0.4% in Quarter 4 (Oct to Dec) 2015. GDP in Germany and Italy increased by 0.7% and 0.3% during Quarter 1 2016 respectively. GDP in Italy still remains 8.5% below the level observed in Quarter 1 2008.

In Figure 5 the level of GDP in each country has been indexed to Quarter 1 2008 so that a comparison of recoveries since the global downturn can be made. Italy is the only G7 nation still below its pre-downturn peak as shown in Figure 5. The level of GDP in the UK surpassed its pre-downturn peak in Quarter 3 (July to Sept) 2013. Figure 5 indicates that the UK recovery took longer than some other countries in the G7 (Germany, Canada, France and the US). This is in part due to the nature of the downturn in the UK; GDP fell to a greater extent than most of the 4 economies listed above and as a result has taken longer to recover. Since 2013, the UK has had the fastest growth relative to the rest of the G7 economies.

5 . Industry analysis

Agriculture

Agriculture output decreased by 1.0% in Quarter 2 (Apr to June) 2016, following flat growth of 0.0% in the previous quarter. Between Quarter 2 2015 and Quarter 2 2016, agriculture output decreased by 0.4%.

Production

The index of production increased by 2.1% in Quarter 2 2016, following a decrease of 0.2% in the previous quarter. Manufacturing contributed the most to the increase, growing by 1.8%. Between Quarter 2 2015 and Quarter 2 2016, production output increased by 1.8%.

Construction

Construction output decreased by 0.4% in Quarter 2 2016, following a decrease of 0.3% in the previous quarter. Between Quarter 2 2015 and Quarter 2 2016, construction output decreased by 1.2%.

Distribution, hotels and restaurants

The index for distribution, hotels and restaurants increased by 1.1% in Quarter 2 2016, following an increase of 1.4% in the previous quarter. Retail trade except of motor vehicles and motorcycles made the largest positive contribution to the increase. Between Quarter 2 2015 and Quarter 2 2016, distribution, hotels and restaurants output increased by 5.0%.

Transport, storage and communication

The index for transport, storage and communication increased by 0.3% in Quarter 2 2016, following flat growth of 0.0% in the previous quarter. Computer programming, consultancy and related activities made the largest contribution to the increase. Between Quarter 2 2015 and Quarter 2 2016, transport, storage and communication output increased by 2.4%.

Business services and finance

The index for business services and finance increased by 0.5% in Quarter 2 2016, following an increase of 0.7% in the previous quarter. Activities of head offices, management consultancy activities made the largest positive contribution to the increase. Between Quarter 2 2015 and Quarter 2 2016, business services and finance output increased by 2.7%.

Government and other services

The index for government and other services increased by 0.1% in Quarter 2 2016, following an increase of 0.3% in the previous quarter. Human health activities made the largest positive contribution to the increase. Between Quarter 2 2015 and Quarter 2 2016, government and other services output increased by 1.2%.

6 . Assumptions made for June 2016 in Quarter 2 (Apr to June) 2016 GDP preliminary estimate

Background

The methods for producing the preliminary GDP estimate use monthly data for the first 2 months in the quarter and forecasts for estimating the third month. The forecasts are reinforced by early responses to our Monthly Business Survey (MBS), but the monthly response rate is generally lower at this stage (with production and services approximately 60% and construction approximately 30% at this point in time).

Each of the first 2 months includes monthly data from MBS with the 44,000 businesses sampled, covering the production, manufacturing, services, and retail and construction industries.

In summary, the data content within the preliminary estimate of GDP for Quarter 2 (Apr to June) is shown in Figure 6.

Figure 6: Data content within this GDP estimate

UK, April 2016 to June 2016
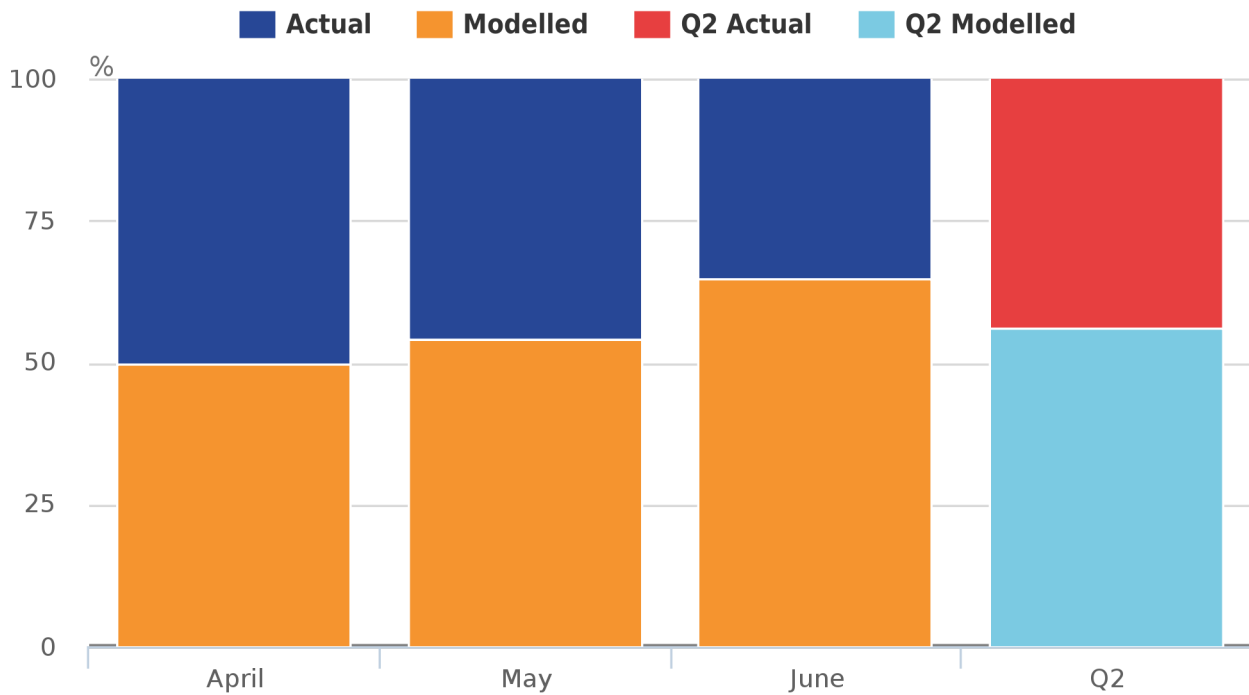
Source: Office for National Statistics

Notes:

1. Q1 refers to Quarter 1(Jan to Mar), Q2 refers to Quarter 2 (Apr to June), Q3 refers to Quarter 3 (July to Sept), Q4 refers to Quarter 4 (Oct to Dec).

The forecasts for June use our standard method of fitting an autoregressive integrated moving average (ARIMA) model with adjustments made for Easter, trading days and outliers. The forecasts are calculated for each individual industry level series (for example, food and beverage services). More information on creating the preliminary estimate of GDP is available on the methods and sources page.

Purpose of this section

This section provides details of the assumptions made for June 2016 for each of the main components of the output approach to measuring GDP: services, production and construction.

Table 3: Monthly Index of Services (chained volume measure, seasonally adjusted) month-on-month growth rates

UK, 2010 to 2016

Percent (%)

	2010	2011	2012	2013	2014	2015	2016
January	-0.7	0.3	0.3	0.4	0.4	-0.2	0.1
February	1.0	0.6	0.0	0.7	0.5	0.2	0.2
March	0.3	0.6	0.6	-0.1	0.6	0.2	-0.3
April	0.0	-1.1	-0.2	-0.2	0.4	-0.1	0.6
May	0.2	0.9	1.1	0.2	0.3	0.2	-0.1
June	0.6	-0.1	-1.3	0.0	0.1	0.5	*0.1
July	0.3	0.2	1.7	0.1	0.6	0.2	
August	-0.1	-0.3	0.8	0.3	0.1	-0.1	
September	0.4	0.3	-0.4	0.0	0.3	0.5	
October	0.3	-0.6	0.3	0.2	0.7	0.1	
November	0.1	1.0	-0.2	0.3	0.0	0.4	
December	-0.7	0.1	-0.4	-0.1	0.2	0.6	

Source: Office for National Statistics

Notes:

1. *based on forecasts and early responses to the June Monthly Business Survey.

It was estimated that there was a 0.1% rise in the output of the services industries between May and June 2016.

At the more detailed level, it was estimated that business services and finance and distribution, hotels and restaurants increased by 0.2%. Transport, storage and communication and government and other services both remained flat.

The services data for April and May 2016 used in the calculation of the Quarter 2 (Apr to June) 2016 GDP preliminary estimate are consistent with the data contained in the May 2016 Index of Services release published on 27 July 2016.

Table 4: Monthly Index of Production (chained volume measure, seasonally adjusted) month-on-month growth rates

UK, 2010 to 2016

Percent (%)

	2010	2011	2012	2013	2014	2015	2016
January	0.4	0.7	0.1	-0.6	-0.4	-0.1	0.8
February	0.9	-2.1	-0.2	0.1	0.6	0.4	-0.2
March	1.9	-0.2	-1.0	0.3	0.0	0.5	0.5
April	-0.1	-0.4	-0.2	0.0	0.3	0.0	2.1
May	-0.2	0.4	0.4	0.3	-0.3	0.3	-0.5
June	-0.9	-0.1	-1.7	0.8	0.0	-0.1	*0.2
July	0.3	-0.2	2.6	-0.3	0.3	-0.6	
August	1.0	-0.2	-0.3	-0.4	-0.2	1.1	
September	0.2	-0.4	-3.6	0.8	0.4	0.1	
October	0.3	0.1	-0.7	-0.3	-0.1	0.2	
November	0.4	-0.4	1.3	0.2	0.4	-0.8	
December	-0.1	0.0	0.6	0.5	-0.1	-1.1	

Source: Office for National Statistics

Notes:

1. *based on forecasts and early responses to the June Monthly Business Survey.

It was estimated that there was a 0.2% increase in the output of the production industries between May and June 2016. At the more detailed level, it was estimated that mining and quarrying increased by 1.9%, water and waste management increased by 0.9% and energy supply increased by 0.6%. In contrast, manufacturing decreased by 0.2%.

Revisions to the April and May 2016 estimates, published in the latest Index of Production (IoP) release on 7 July 2016, have been used in the calculation of the Quarter 2 (Apr to June) 2016 GDP preliminary estimate. These revisions will now be presented as part of this release (previously April and May would be constrained to previously published data and any revisions would be included within the June assumption). However, on this occasion there are no revisions to the previously published April and May estimates for production.

Table 5: Output in the construction industry (chained volume measure, seasonally adjusted) month-on-month growth rates

UK, 2010 to 2016

Percent (%)

	2010	2011	2012	2013	2014	2015	2016
January	..	3.3	-5.5	-1.5	2.7	1.6	-0.9
February	4.8	-0.1	-2.0	2.7	-1.2	-1.5	-0.5
March	0.8	1.5	1.4	-0.5	1.5	2.3	-2.6
April	1.7	-0.3	-3.0	0.2	1.3	0.6	2.8
May	2.3	-0.3	0.5	0.7	-0.3	-0.9	-1.5
June	0.9	1.3	-4.3	1.6	0.1	-0.3	*-1.0
July	-0.7	-0.1	1.5	-0.3	1.7	0.6	
August	3.3	-2.4	-0.5	3.0	1.2	-2.3	
September	-1.9	0.6	0.0	-0.7	0.2	0.9	
October	-1.2	-1.8	0.5	1.5	-1.4	0.3	
November	-0.3	1.6	1.6	-1.4	1.9	-0.6	
December	-3.2	3.8	-1.6	0.7	-0.2	2.9	

Source: Office for National Statistics

Notes:

1. No data represented by ..

2. *based on forecasts and early responses to the June Monthly Business Survey.

Monthly data for the construction industries are only available from January 2010.

The forecast for construction is calculated slightly differently to production and services due to the shorter time span of monthly turnover data. More weight is placed on early responses to the Monthly Business Survey for June 2016. Responses from businesses over the quarter were the starting point to inform the forecasts; this was then adjusted in recognition that early responses from businesses tend to be lower than later responses. This approach led to an estimated fall of 0.4% in the output of the construction industries between Quarter 1 (Jan to Mar) 2016 and Quarter 2 (Apr to June) 2016.

Some revisions (due to receipt of additional survey data and revised seasonal factors allowing for the addition of June 2016 data) to the April and May 2016 estimates, published in the latest Output in the Construction Industry – May 2016 release, on 15 July 2016, have been used in the calculation of the Quarter 2 (Apr to June) 2016 GDP preliminary estimate. These revisions will now be presented as part of this release (previously April and May would be constrained to previously published data and any revisions would be included within the June assumption). On this occasion, there is no revision to the previously published April estimate for construction. However, the previously published estimate for May has been revised up 0.6 percentage points from -2.1% to -1.5%.

7 . Quality and methodology

Some general information on the quality of the estimate of GDP can be found in the Understanding the preliminary estimate of GDP section in the main part of this statistical bulletin. Further information is available on the methods and sources page of our website.

The GDP Quality and Methodology Information document contains important information on:

- the strengths and limitations of the data

- the quality of the output: including the accuracy of the data and how it compares with related data

- uses and users

- how the output was created

The national accounts provide an integrated description of all economic activity within the economic territory of the UK, including activity involving both domestic units (that is, individuals and institutions resident in the UK) and external units (those resident in other countries). In addition to being comprehensive, the accounts are fully integrated and internally consistent. More information can be found in the UK National Accounts: A Short Guide.

8. Background notes

1. **What's new?**

   Leap year adjustments

   A methodological note on leap year adjustments was published on 29 February 2016, explaining how leap years might affect ONS time series and the methods used to adjust for them as part of seasonal adjustment. Economic Review March 2016 was published on 2 March 2016, providing further commentary on the economy, GDP and leap year effects.

   In this release a seasonal adjustment review has been undertaken of all series that show statistically significant leap year effects in light of new data for February 2016.

   VAT Project

   An article entitled HMRC VAT project update was published on 12 July 2016, the fifth in a series of articles. It outlines plans to aim to fully estimate the IoP and IoS components of quarterly GDP estimates using VAT turnover data by the end of 2017 and publish VAT turnover in regular research articles from September 2016

   Four previous articles have been published in this series:

   "HMRC VAT project update", 4 April 2016.

   Feasibility study into the use of HMRC turnover data within Short-term Output Indicators and National Accounts, 14 August 2015.

   Exploitation of HMRC VAT data, 7 October 2015.

   "HMRC VAT project update", 21 December 2015.

2. **What do you think?**

   As a user of our statistics we would welcome your feedback on this publication. If you would like to get in touch please contact us via email: ios.enquiries@ons.gsi.gov.uk

3. **Continuous improvement of GDP: sources, methods and communication**

The GDP Output Improvement Report, published on 1 July 2016, reports on improvements to the output measure of GDP for Blue Book 2016, outlining developments since September 2015, including progress on completed and current industry reviews and wider improvements including the VAT project.

Assessment reports by the UK Statistics Authority are available for the output approach to measuring GDP and the short-term indicators that feed into it. Furthermore, the priorities for national accounts production and development over a 5 year period (financial year ending 2014 to financial year ending 2018) are highlighted in the National Accounts and Related Statistics Work Plan and an independent review of the UK's national accounts and balance of payments has been produced as part of our programme of National Statistics Quality Reviews (NSQRs).

4. **Understanding the data**

Short guide to GDP

Gross domestic product (GDP) is an integral part of the UK national accounts and provides a measure of the total economic activity in the UK. GDP is often referred to as one of the main "summary indicators" of economic activity and references to "growth in the economy" invariably refer to the growth in GDP during the latest quarter.

In the UK 3 different, but equivalent, approaches are used in the estimation of GDP:

- the output or production approach — GDP(O) measures the sum of the value added created through the production of goods and services within the economy (our production or output as an economy); this approach provides the first estimate of GDP and can be used to show how much different industries (for example, services) contribute within the economy

- the income approach — GDP(I) measures the total income generated by the production of goods and services within the economy; the figures breakdown income into, for example, income earned by companies (corporations), employees and the self employed

- the expenditure approach — GDP(E) measures the total expenditures on all finished goods and services produced within the economy

How our statistics explain the economy

The Changing Shape of UK Manufacturing, an event coordinated jointly with the Department for Business, Innovation and Skills, took place on 22 October 2014. The event featured a range of talks from users, producers and suppliers of manufacturing statistics, not just from government, but also business representatives and academics. To view the content of the day, please visit Storify.

5. **Interpreting the data**

Figures for the most recent quarter are provisional and subject to revision in light of:

- late responses to surveys and administrative sources

- forecasts being replaced by actual data

- revisions to seasonal adjustment factors which are re-estimated every quarter and reviewed annually

Data for the retail industry are broadly comparable with the Retail Sales Index published on 21 July 2016. However, the 2 series operate under different revisions policies meaning there can be timing differences in the updating of the 2 series. Also, adjustments to the data within the Index of Services release are sometimes made at the time of the Blue Book release to improve the coherence of the 3 approaches to measuring GDP. Therefore, inconsistencies between the 2 series are not unusual but tend to be small. There are also conceptual and coverage differences between retail sales and retail output which can lead to apparent inconsistencies.

Sample sizes and data content

This is the first estimate of GDP, based on preliminary information for the quarter. Although based on a significant number of returns from businesses, there is still a lot of information to come in, particularly for March.

The amount of data available at this stage is about 44% of the total data that will be available in 1 year's time. The estimates in this release are, however, based on a large amount of information returned by businesses across the whole of the economy. Information on activity (more specifically, turnover or sales) is available from about 44,000 businesses for each of the first 2 months of the quarter and from about 20,000 businesses for the third month. In addition, we collect price information on nearly 200,000 individual products each month from around 30,000 businesses. This information is used to remove the effect of price changes from the estimates.

Response rates

Approximately 43% of the data used in the preliminary estimate of GDP are based on data collected via ONS's Monthly Business Survey (MBS) for production and services. In addition, approximately 6% of the data are collected via ONS's Retail Sales Inquiry (RSI) and approximately 6% are collected via ONS's Monthly Business Survey for Construction. The remainder is based on data received from other ONS sources and external data sources. At this stage the estimate of GDP includes actual data for April, May and June for the RSI element, but only April and May for the production, services and construction elements. Forecasts are generated to estimate June growth rates which are then compared with early responses to the MBS surveys to assess their credibility. Response rates (for the percentage of sampled turnover returned and also the percentage of questionnaire forms returned) for the most recent month and the 3 months prior are available in the background notes of the Index of Services, Index of Production and Retail Sales statistical bulletins. The response rates for the historical periods are updated to reflect the current level of response, incorporating data from late returns. In addition, response rates for the most recent month are available in the latest Output in the Construction Industry release.

6. Definitions and explanations

Definitions found within the main statistical bulletin are listed.

Index number

An index number is a number which indicates the change in magnitude relative to the magnitude at a specified point, the latter usually taken as 100.

Seasonal adjustment

The index numbers in this statistical bulletin are all seasonally adjusted. This aids interpretation by removing annually recurring fluctuations, for example, due to holidays or other regular seasonal patterns. Unadjusted data are also available.

Seasonal adjustment removes regular variation from a time series. Regular variation includes effects due to month lengths, different activity near particular events, such as shopping activity before Christmas, and regular holidays, such as the May bank holiday.

Some features of the calendar are not regular each year, but are predictable if we have enough data - for example the number of certain days of the week in a month may have an effect, or the impact of the timing of Easter. As Easter changes between March and April we can estimate its effect on time series and allocate it between March and April depending on where Easter falls. Estimates of the effect of the day of the week and Easter are used respectively to make trading day and Easter adjustments prior to seasonal adjustment.

X-13-ARIMA-SEATS is the current seasonal adjustment software used for the short-term indicators that feed into the preliminary estimate of GDP.

Deflation

It is standard practice to present many economic statistics in terms of "constant prices". This means that changes or growth, are not affected by changes in price. The process of removing price changes is known as deflation and the resulting series is often described as volume (as opposed to value). The index numbers in this bulletin are volume measures.

Chained volume

The indices in this bulletin are "chained volume" measures. This means that successive volume estimates are linked (or chained) together. The process of annual chain-linking was introduced in 2003. More information on chain-linking can be found in the Tuke and Reed (2001) article, and an article on chain-linking weights in the output approach to measuring GDP can be found on the methods and sources page.

Gross value added industry weights dataset

An update to the annual weights used within the output approach of GDP has been included in our dataset. These weights have been used since the quarterly national accounts, published on 30 June 2016 and are consistent with the data to be published in the Blue Book 2016 dataset, due for publication on 29 July 2016. All weights are given in parts per thousand.

7. National accounts revisions policy

In accordance with the national accounts revision policy, there are no periods open for revision in this release. More information on revisions in the output approach to measuring GDP can be found on the Methods and sources page.

This release includes information available up to 19 July 2016.

8. **Revisions triangles**

Spreadsheets giving revisions triangles (real time databases) of estimates from 1992 to date are available to download. They can be found under the section Revisions triangles for gross value added at basic prices, chained volume measure.

The revisions triangles for the components of GDP have been temporarily removed following the move to the new Standard Industrial Classification (SIC2007) in October 2011. The revisions triangles for total GDP are still available and the services industry analysis is separately available on a monthly basis via the Index of Services dataset.

Revisions to data provide one indication of the reliability of main indicators. Tables 6 and 7 show summary information on the size and direction of the revisions which have been made to data covering a 5 year period. A statistical test has been applied to the average revision to find out if it is statistically significantly different from zero. An average revision close to zero is desirable as it suggests that revisions are not predictable in any one direction. The result of the test is that the average revision is not statistically different from zero.

Table 6: Revisions to early estimates of gross value added (GVA) growth

UK

Revisions to GVA growth	GVA Growth in the latest period %	Revisions between early estimates of GVA growth (quarterly, chained volume measure (CVM))	
		Average over the last 5 years	Average over the last 5 years without regard to sign (average absolute revision)
Between Month 1 and Month 2	0.6	0.02	0.04
Between Month 2 and Month 3	0.6	-0.01	0.07

Source: Office for National Statistics

Table 6 shows the revisions between the early estimates of gross value added (GVA). The analysis of revisions between month 1 and month 2 uses month 2 estimates published from August 2011 (Quarter 2 (Apr to June) 2011) to May 2016 (Quarter 1 (Jan to Mar) 2016). The analysis of revisions between month 2 and month 3 uses month 3 estimates published from September 2011 (Quarter 2 (Apr to June) 2011) to June 2016 (Quarter 1 (Jan to Mar) 2016).

Table 7: Revisions to gross value added (GVA) growth between the estimates published 3 months after the end of the quarter and the equivalent estimate 3 years later

UK

Revisions to GVA growth	GVA Growth in the latest period %	Revisions between early estimates of GVA growth (quarterly, chained volume measure (CVM))	
		Average over the last 5 years	Average over the last 5 years without regard to sign (average absolute revision)
GVA growth (quarterly CVM)	0.6	0.06	0.39

Source: Office for National Statistics

Table 7 shows the revisions to GVA growth between the estimates published 3 months after the end of the quarter and the equivalent estimate 3 years later. The analysis uses month 3 estimates first published from September 2008 (Quarter 2 (Apr to June) 2008) to June 2016 (Quarter 1 (Jan to Mar) 2016).

Understanding the quality of early estimates of Gross Domestic Product, which was first published in December 2009, is available on our website.

This article presents an analysis of revisions to the early estimates of GDP based on a long period

database of real time GDP back to 1955. This database is regularly updated and is available on our website.

We published Revisions to GDP and components on 28 January 2014 which updates analysis undertaken previously on GDP revisions, as well as launching a real time £ million database for all the components of both the expenditure and income approaches to measuring GDP.

The Revisions to GDP and components in Blue Books 2014 and 2015 article updates the metrics used to test revisions performance in order to answer the question 'Is GDP biased?

9. **Accessing data**

The data presented in the tables of this statistical bulletin are also available to download from the data section of this publication. A completed run of data is available as a time series dataset on our website.

10. **Code of Practice for Official Statistics**

National Statistics are produced to high professional standards set out in the Code of Practise for Official Statistics. They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from any political interference.

B1 Gross Domestic Product by Gross Value Added [1]
chained volume measures of industry output at basic prices

2013= 100

		Production							Services						Gross domestic product at market prices [4,5]	Gross value added exc oil & gas
		Agriculture, forestry and fishing	Mining and quarrying	Manu-facturing	Electricity gas, steam and air	Water supply, sewerage etc	Total IOP	Constru-ction	Distribution, hotels and restaurants	Transport, storage and commun-ication	Business services and finance	Govern-ment and other services	Total Services		
2013 Weights [2]		7	18	103	15	11	146	59	136	106	317	229	788	1000	986

Index numbers

		L2KL	L2KR	L2KX	L2MW	L2N2	L2KQ	L2N8	L2PZ	KI8M	KI80	KI8Q	L2NC	YBEZ	KLH7
2011		107.1	115.3	102.5	101.0	96.0	103.5	105.9	95.1	96.2	94.9	97.9	96.0	**96.9**	97.2
2012		99.3	102.8	101.0	100.2	95.9	100.7	98.6	96.6	98.3	97.9	99.7	98.3	**98.1**	98.5
2013		100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	**100.0**	100.0
2014		113.9	100.6	102.9	94.0	100.7	101.5	108.0	104.8	103.0	103.9	101.7	103.3	**103.1**	103.5
2015		115.1	109.4	102.7	94.8	103.9	102.8	112.6	109.6	107.0	106.9	102.1	106.0	**105.4**	105.7
2012	Q4	98.6	94.9	99.4	102.5	96.4	98.8	97.4	97.4	99.1	99.1	100.2	99.2	**98.5**	99.0
2013	Q1	98.2	97.8	99.2	103.7	96.2	99.2	97.0	98.4	100.7	99.2	100.3	99.6	**99.1**	99.4
	Q2	98.8	99.3	99.9	102.1	98.1	99.9	98.7	99.7	100.0	99.5	99.8	99.7	**99.6**	99.7
	Q3	100.8	101.8	100.2	96.3	102.6	100.3	101.5	100.8	99.5	100.3	99.8	100.1	**100.4**	100.2
	Q4	102.2	101.1	100.6	97.8	103.1	100.6	102.8	101.1	99.7	101.0	100.1	100.6	**100.9**	100.7
2014	Q1	110.6	100.9	102.2	92.5	103.0	101.1	105.1	102.6	100.5	101.9	101.0	101.6	**101.7**	101.8
	Q2	112.6	101.3	102.8	93.1	99.9	101.4	107.1	104.2	102.3	103.2	101.7	102.8	**102.7**	103.0
	Q3	114.8	99.4	103.1	96.1	99.2	101.7	109.8	105.4	103.9	104.5	102.1	103.9	**103.5**	104.1
	Q4	117.8	100.8	103.4	94.1	100.5	101.9	110.1	107.0	105.2	106.0	102.1	104.9	**104.4**	105.0
2015	Q1	114.3	102.4	103.3	96.4	100.8	102.3	112.2	108.0	105.7	106.2	101.6	105.1	**104.6**	105.2
	Q2	115.1	110.8	102.8	94.1	104.7	103.0	113.3	108.9	106.4	106.3	101.9	105.5	**105.1**	105.4
	Q3	115.3	113.5	102.4	95.2	104.7	103.1	112.0	110.0	107.4	107.1	102.1	106.2	**105.5**	105.8
	Q4	115.8	111.0	102.5	93.3	105.4	102.8	112.8	111.6	108.7	107.9	102.7	107.1	**106.3**	106.5
2016	Q1	115.8	108.6	102.3	94.0	108.0	102.6	112.5	113.2	108.6	108.6	103.0	107.8	**106.7**	107.0
	Q2	114.6	110.0	104.2	98.4	110.8	104.8	112.0	114.4	109.0	109.2	103.1	108.3	**107.4**	107.7

Preliminary Estimate

2016	Q2	114.6	110.0	104.2	98.4	110.8	104.8	112.0	114.4	109.0	109.2	103.1	108.3	**107.4**	107.7

Percentage changes: annual and latest quarter on previous quarter

		L3BB	L3BH	L3BN	L3DM	L3DQ	L3BG	L3DW	L3GP	KI8L	KI8N	KI8P	L3E2	IHYP	KLH8
2011		10.9	-14.3	2.2	-6.1	5.7	-0.6	2.2	1.6	2.3	2.2	0.3	1.5	**1.5**	1.8
2012		-7.3	-10.9	-1.4	-0.9	-0.1	-2.7	-6.9	1.6	2.1	3.2	1.9	2.4	**1.3**	1.3
2013		0.7	-2.7	-1.0	-0.2	4.3	-0.7	1.5	3.5	1.8	2.1	0.3	1.8	**1.9**	1.5
2014		13.9	0.6	2.9	-6.0	0.7	1.5	8.0	4.8	3.0	3.9	1.7	3.3	**3.1**	3.5
2015		1.0	8.8	-0.2	0.9	3.2	1.3	4.2	4.6	4.0	2.9	0.3	2.6	**2.2**	2.2
														IHYQ	
2012	Q4	-0.6	-9.2	-1.7	3.3	0.5	-2.2	0.8	-0.5	0.8	0.4	-0.7	-0.1	-0.2	-0.1
2013	Q1	-0.4	3.1	-0.2	1.2	-0.2	0.4	-0.4	1.0	1.6	0.1	0.1	0.4	0.6	0.4
	Q2	0.6	1.5	0.7	-1.6	2.0	0.7	1.7	1.4	-0.7	0.3	-0.5	0.1	0.5	0.3
	Q3	2.0	2.6	0.3	-5.6	4.6	0.4	2.8	1.0	-0.5	0.8	-	0.4	0.8	0.5
	Q4	1.3	-0.7	0.4	1.5	0.5	0.4	1.3	0.3	0.2	0.7	0.4	0.5	0.5	0.6
2014	Q1	8.2	-0.2	1.6	-5.4	-0.1	0.5	2.3	1.4	0.8	0.9	0.9	1.0	0.8	1.1
	Q2	1.8	0.4	0.6	0.6	-3.0	0.3	1.9	1.6	1.8	1.3	0.7	1.2	0.9	1.2
	Q3	2.0	-2.0	0.3	3.3	-0.7	0.2	2.5	1.1	1.6	1.2	0.4	1.0	0.8	1.0
	Q4	2.6	1.4	0.3	-2.1	1.3	0.3	0.3	1.6	1.2	1.5	-0.1	1.0	0.9	0.9
2015	Q1	-3.0	1.7	-0.1	2.5	0.3	0.4	1.9	0.8	0.5	0.2	-0.5	0.2	0.3	0.2
	Q2	0.7	8.2	-0.5	-2.5	3.9	0.7	1.0	0.9	0.6	0.1	0.3	0.4	0.4	0.2
	Q3	0.2	2.4	-0.4	1.2	-0.1	0.1	-1.1	1.0	1.0	0.7	0.1	0.6	0.4	0.4
	Q4	0.5	-2.2	0.2	-2.0	0.7	-0.3	0.7	1.5	1.2	0.7	0.6	0.9	0.5	0.7
2016	Q1	-	-2.2	-0.2	0.7	2.4	-0.2	-0.3	1.4	-	0.7	0.3	0.6	0.4	0.5
	Q2	-1.0	1.4	1.8	4.7	2.6	2.1	-0.4	1.1	0.3	0.5	0.1	0.5	0.6	0.6

Preliminary Estimate

2016	Q2	-1.0	1.4	1.8	4.7	2.6	2.1	-0.4	1.1	0.3	0.5	0.1	0.5	**0.6**	0.6

Percentage changes: quarter on corresponding quarter of previous year

		L3ZZ	L427	L42D	L44C	L44G	L426	L44M	L47F	KII2	KIH9	KIH8	L44Q	IHYR	KLH9
2014	Q2	13.9	2.1	2.9	-8.8	1.9	1.5	8.5	4.5	2.3	3.8	1.9	3.1	**3.1**	3.3
	Q3	13.9	-2.4	2.9	-0.2	-3.3	1.4	8.2	4.6	4.4	4.2	2.4	3.7	**3.1**	3.9
	Q4	15.3	-0.3	2.8	-3.8	-2.5	1.3	7.1	5.9	5.5	4.9	1.9	4.3	**3.5**	4.2
2015	Q1	3.3	1.5	1.1	4.2	-2.1	1.2	6.7	5.2	5.2	4.2	0.6	3.5	**2.9**	3.3
	Q2	2.2	9.4	-0.1	1.1	4.8	1.5	5.7	4.5	4.0	3.0	0.2	2.6	**2.3**	2.4
	Q3	0.4	14.2	-0.8	-0.9	5.5	1.4	2.1	4.4	3.3	2.6	-0.1	2.2	**2.0**	1.7
	Q4	-1.7	10.1	-0.9	-0.8	4.8	0.9	2.5	4.3	3.4	1.8	0.6	2.1	**1.8**	1.5
2016	Q1	1.4	6.0	-1.0	-2.5	7.1	0.3	0.2	4.8	2.8	2.3	1.4	2.5	**2.0**	1.8
	Q2	-0.4	-0.7	1.4	4.7	5.8	1.8	-1.2	5.0	2.4	2.7	1.2	2.6	**2.2**	2.1

1. Estimates are not accurate to the last digit shown
2. Weights may not sum to the totals due to rounding
3. Components of output are valued at basic prices which excludes subsidies on products, whereas GDP is valued at market prices
4. Includes an implicit discrepancy compared with the sum of the previous columns, because the GDP aggregate takes account of other information based on income and expenditure

5. In this, the preliminary estimate of GDP, series YBEZ (GDP chained volume indices) appears alongside GVA industry components as output is the sole contributor to GDP change for the latest quarter at this stage
6. A complete run of data is available on our website as a Time series dataset

NB: Q1 is Jan-Mar, Q2 is Apr-June, Q3 is July-Sept, Q4 is Oct-Dec

Annex A -contributions to growth - output components

Contributions to growth[1], quarter-on-quarter, for the output components of GDP[2], CVM SA

Component	2015Q2	2015Q3	2015Q4	2016Q1	2016Q2
Agriculture	0.0	0.0	0.0	0.0	0.0
Total Production	0.1	0.0	0.0	0.0	0.3
Mining & quarrying inc oil and gas extract	0.1	0.0	0.0	0.0	0.0
Manufacturing	-0.1	0.0	0.0	0.0	0.2
Electricity, gas and air	0.0	0.0	0.0	0.0	0.1
Water and Sewerage	0.0	0.0	0.0	0.0	0.0
Construction	0.1	-0.1	0.0	0.0	0.0
Total Services	0.3	0.5	0.7	0.5	0.4
Distn, hotels and catering	0.1	0.1	0.2	0.2	0.2
Transport, storage and comms	0.1	0.1	0.1	0.0	0.0
Business services and Finance	0.0	0.2	0.2	0.2	0.2
Government and other	0.1	0.0	0.1	0.1	0.0

1. Contributions are to output GVA and therefore may not
   sum to average GDP totals
2. Components may not sum to totals due to rounding.

Contributions to growth[1], quarter on same quarter of previous year, for the output components of GDP[2], CVM SA

Component	2015Q2	2015Q3	2015Q4	2016Q1	2016Q2
Agriculture	0.0	0.0	0.0	0.0	0.0
Total Production	0.2	0.2	0.1	0.0	0.3
Mining & quarrying inc oil and gas extract	0.2	0.2	0.2	0.1	0.0
Manufacturing	0.0	-0.1	-0.1	-0.1	0.1
Electricity, gas and air	0.0	0.0	0.0	0.0	0.1
Water and Sewerage	0.1	0.1	0.1	0.1	0.1
Construction	0.3	0.1	0.2	0.0	-0.1
Total Services	2.1	1.8	1.6	2.0	2.1
Distn, hotels and catering	0.6	0.6	0.6	0.7	0.7
Transport, storage and comms	0.4	0.4	0.4	0.3	0.3
Business services and Finance	1.0	0.8	0.6	0.7	0.9
Government and other	0.0	0.0	0.1	0.3	0.3

1. Contributions are to output GVA and therefore may not
   sum to average GDP totals
2. Components may not sum to totals due to rounding.

Contributions to growth[1],year on year, for the output components of GDP[2], CVM SA

Component	2013	2014	2015
Agriculture	0.0	0.1	0.0
Total Production	-0.1	0.2	0.1
Mining & quarrying inc oil and gas extract	-0.1	0.0	0.2
Manufacturing	-0.1	0.3	0.0
Electricity, gas and air	0.0	-0.1	0.0
Water and Sewerage	0.0	0.0	0.0
Construction	0.1	0.5	0.3
Total Services	1.4	2.6	2.0
Distn, hotels and catering	0.5	0.7	0.6
Transport, storage and comms	0.2	0.3	0.4
Business services and Finance	0.7	1.2	0.9
Government and other	0.1	0.4	0.1

1. Contributions are to output GVA and therefore may not
   sum to average GDP totals
2. Components may not sum to totals due to rounding.