

Statistical bulletin

GDP quarterly national accounts, UK: July to September 2014

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.



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1 . Key findings

- UK gross domestic product (GDP) in volume terms was estimated to have increased by 0.7% between Q2 2014 and Q3 2014, unrevised from the previous estimate of GDP published 26 November 2014
- Between Q3 2013 and Q3 2014, GDP in volume terms increased by 2.6%, revised downwards by 0.4 percentage points from the previously published estimate
- GDP in current prices was estimated to have increased by 1.3% between Q2 2014 and Q3 2014
- The household saving ratio was estimated to be 7.0% in Q3 2014

2 . What is GDP?

GDP is an estimate of total economic activity in the UK. It is constructed by balancing the estimates from the output, income and expenditure approaches to measuring GDP, which in theory are all equal. For more information on how GDP is balanced see 'Balancing GDP' in the background notes section of this release.

Data in this release, unless otherwise stated, will have been seasonally adjusted (SA) with seasonal effects removed to allow comparisons over time. Estimates are given in chained volume measures (CVM), sometimes known as real terms, with the effects of inflation removed, or current prices (CP), sometimes known as nominal terms, without any adjustment for inflation.

Growth for GDP and its components is given between different periods. Latest year on previous year gives the annual growth between one calendar year and the previous. Latest quarter on previous quarter growth gives growth between one quarter and the quarter immediately before it. Latest quarter on corresponding quarter of previous year shows the growth between one quarter and the same quarter a year ago.

This third estimate of GDP for Q3 2014 includes revisions to and more detail on the output, expenditure and income approaches to GDP. Also included are data on the institutional sector accounts, including the households' saving ratio and real household disposable income. In line with national accounts revisions policy, the earliest period open for revision in this release is Q1 2013.

3 . Headline Sector Accounts, GDP and selected components

Table 1: Q3 2014

	Gross Domestic Product				
	Household saving ratio %	Real household disposable income % (1)	Current market prices 2011=100	Chained volume measure 2011=100	Chained volume measure % (1)
Seasonally adjusted					
Q3 2012	9.1	0.1	103	101.1	0.8
Q4 2012	6.4	-1.1	103	100.8	-0.3
Q1 2013	5.7	-1.2	103.7	101.4	0.6
Q2 2013	6.8	1.7	105.8	102	0.6
Q3 2013	7	0.8	106.5	102.8	0.7
Q4 2013	6.2	-1.3	107.6	103.2	0.4
Q1 2014	5.5	-0.9	108.7	103.8	0.6
Q2 2014	7.5	3.3	110.1	104.7	0.8
Q3 2014	7	-0.1	111.5	105.4	0.7

Source: Office for National Statistics

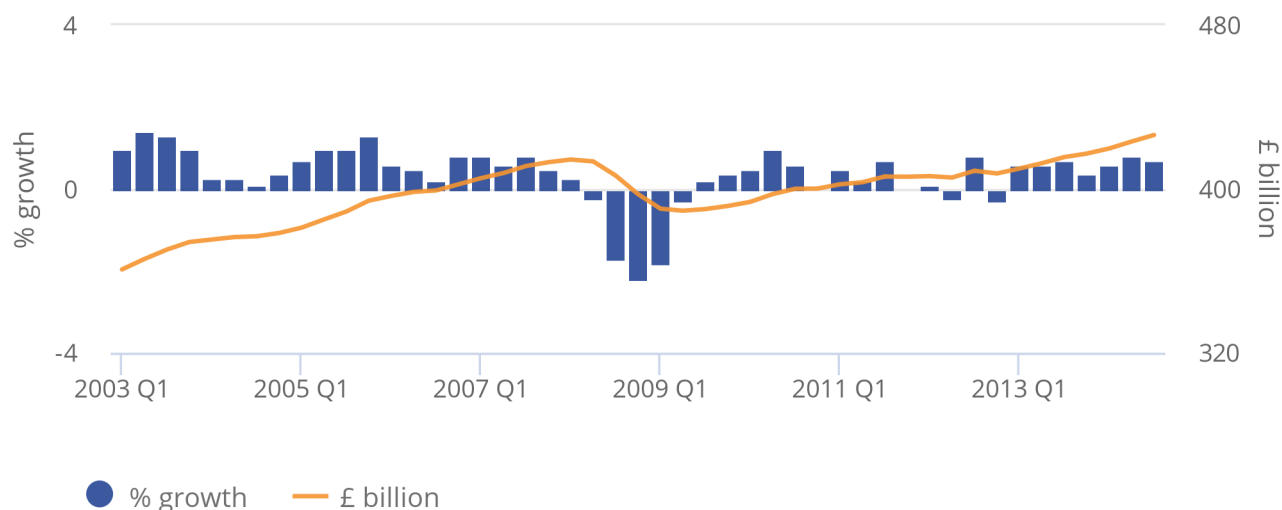
Notes:

1. Percentage change on previous quarter.

4 . Historical context

Figure 1: Quarterly growth and levels of GDP, table A2

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Source: Office for National Statistics

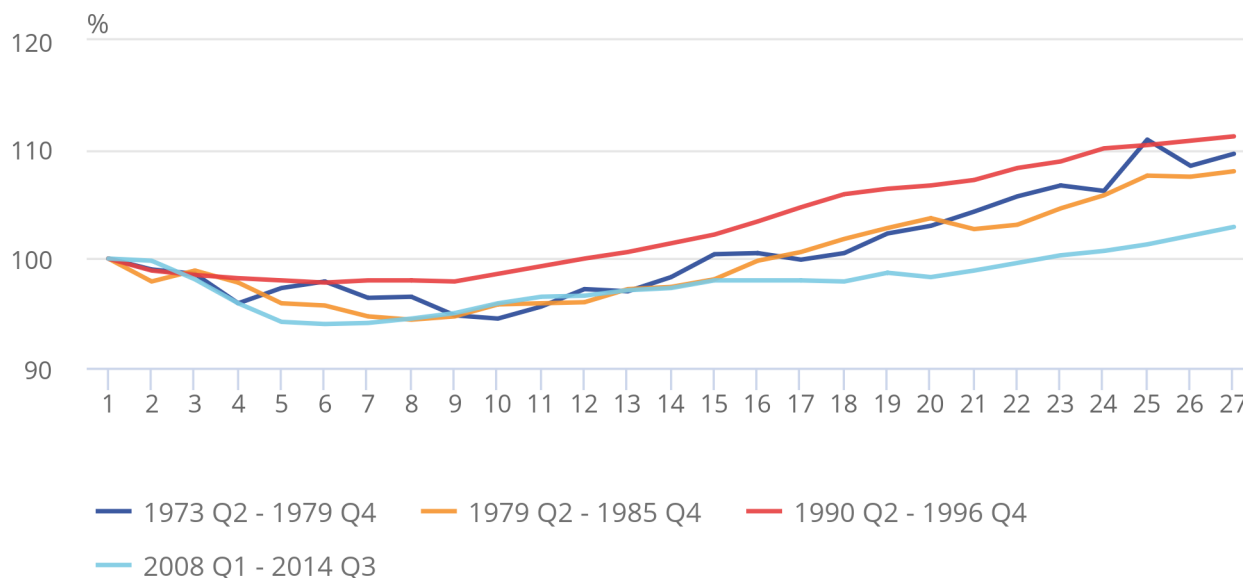
Figure 1 shows GDP in the UK grew steadily during the 2000s until a financial market shock affected UK and global economic growth in 2008 and 2009. Economic growth resumed towards the end of 2009, but typically at a slower rate than the period prior to 2008. Quarterly growth in this period was also erratic, with several quarters between 2010 and 2012 recording flat or declining GDP. This two-year period coincided with special events (for example, severe winter weather in Q4 2010 and the Diamond Jubilee in Q2 2012) that are likely to have affected growth. Since 2013, GDP has grown steadily, exceeding its pre-downturn peak in Q3 2013 and is now 2.9% above its pre-downturn peak.

Figure 2 makes a comparison of the most recent economic downturn and recovery, with the other two most recent downturns. The profile of each subsequent recovery indicates the rate of time for GDP to return to pre-downturn levels.

From the peak in Q1 2008 to the trough in Q2 2009, GDP decreased by 6.0%. Previous economic downturns in the early 1980s and early 1990s saw lower levels of impact on GDP. In the early 1990s downturn, GDP decreased by 2.2% from the peak in Q2 1990 to the trough in Q3 1991. In the early 1980s downturn, GDP decreased by 5.6% from the peak in Q2 1979 to the trough in Q1 1981.

Figure 2: GDP quarter-on-quarter growth from peak for previous and latest economic downturns

Figure 2: GDP quarter-on-quarter growth from peak for previous and latest economic downturns



Source: Office for National Statistics

The latest figures for Q3 2014 show the UK recovery continuing, with GDP in real terms growing by 0.7% compared with the previous quarter, and by 2.6% between Q3 2013 and Q3 2014.

From the output approach to measuring GDP, growth in services continues to strengthen with output now 7.2% above pre-downturn peak levels, while production and construction output continue to grow. The expenditure approach shows robust growth in household final consumption and a small rise in fixed investment (with a fall in business investment on the quarter). The income approach shows a broad-based increase in GDP in current prices across compensation of employees, gross operating surplus of corporations, and other income.

5 . GDP analysed by output categories, chained volume measures, Tables B1 and B2

[Annex A \(37.5 Kb Excel sheet\)](#) contains growth rates back to Q1 2013.

In accordance with [National Accounts revisions policy \(43.3 Kb Pdf\)](#) the earliest period open for revision in this release is Q1 2013. More information on the revisions to the output components can be found in the Quarterly Revisions section of this bulletin.

The output components of GDP show across-the-board increases in Q3 2014, with agriculture, forestry and fishing, production, construction and services all expanding in Q3 2014.

Production output increased by 0.2% in Q3 2014 compared with Q2 2014. However, there was a mixed performance within sub-industries. Output from mining and quarrying including oil & gas extraction fell by 1.6%, the largest fall within production, while water supply & sewerage fell by 0.3% on the quarter. Manufacturing (the largest component of production) and electric, gas, steam & air industries both rose on the quarter, increasing by 0.3% and 2.8% respectively. Electric, gas, steam & air industries made the largest positive contribution of 0.03 percentage points to GDP growth.

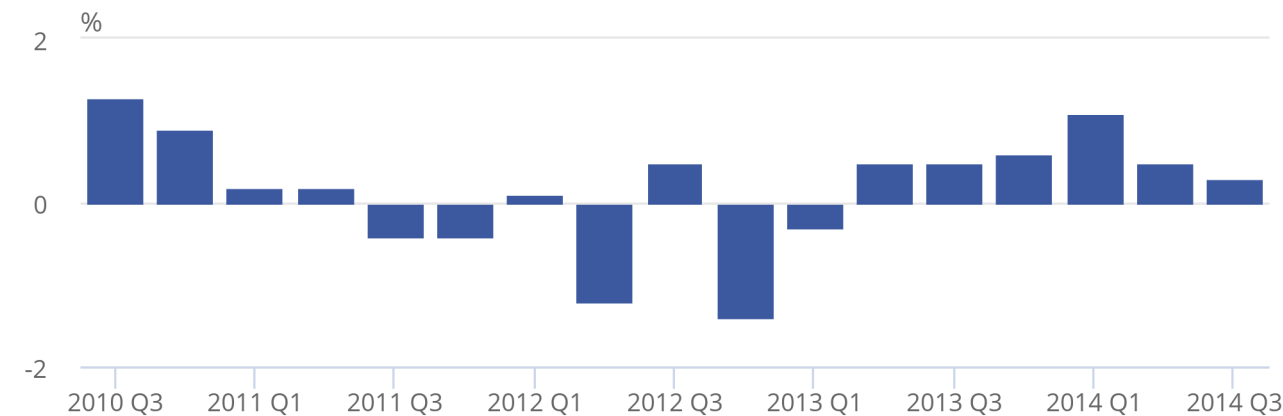
When comparing Q3 2014 with Q3 2013, production output rose by 1.2%. Manufacturing and electric, gas, steam & air contributed positively to this growth, increasing by 2.5% and 1.2% respectively (see Figure 3), while mining & quarrying and water supply & sewerage contracted by 2.9% and 3.1% respectively.

Figure 3: Manufacturing growth, quarter-on-quarter

chained volume measure, seasonally adjusted

Figure 3: Manufacturing growth, quarter-on-quarter

chained volume measure, seasonally adjusted



Source: Office for National Statistics

Construction output increased by 1.6% in Q3 2014 and has risen by 5.7% since Q3 2013.

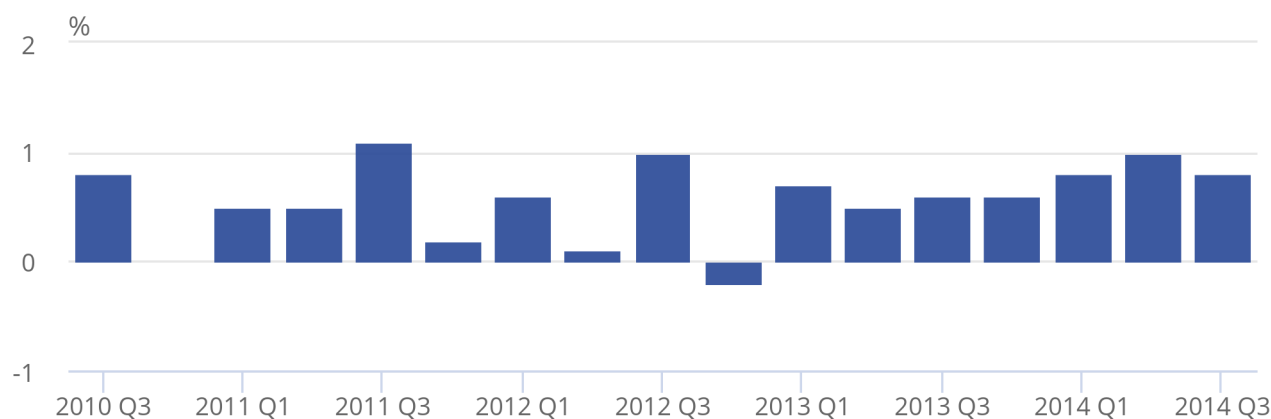
The service industries grew by 0.8% in Q3 2014 (see Figure 4), unrevised from the previous estimate, marking the seventh consecutive quarter of positive growth. This follows a 1.0% increase in Q2 2014. The increase in the latest quarter was broad-based; the largest contributions coming from the business services & finance and transport, storage & communications industries, which grew by 1.0% and 1.2% respectively.

Figure 4: Services growth, quarter-on-quarter

chained volume measure, seasonally adjusted

Figure 4: Services growth, quarter-on-quarter

chained volume measure, seasonally adjusted



Source: Office for National Statistics

Output of the distribution, hotels & restaurants industries rose by 0.7% in Q3 2014, unrevised from the previous estimate. The 0.7% increase in the latest quarter was largely due to increases in wholesale trade, except of motor vehicles and motorcycles. In Q2 2014, distribution, hotels & restaurants industries output increased by 1.0%.

Output of the transport, storage & communication industries rose by 1.2% in Q3 2014 following a 1.5% increase in Q2 2014. The largest contributors to the growth were computer programming, consultancy and related activities; warehousing and support activities for transportation and land transport services.

Business services & finance industries output rose by 1.0% in Q3 2014, following an increase of 1.3% in Q2 2014. The largest upward contribution to growth in Q3 2014 came from architectural and engineering activities; technical testing and analysis.

Output of government & other services rose by 0.2% in Q3 2014, following a 0.4% increase in Q2 2014. The increase in Q3 2014 was mainly due to other personal service activities, including activities such as washing, dry-cleaning and hairdressing and human health activities.

Further detail on the service industries lower level components can be found in the [Index of Services](#) statistical bulletin published on the same day as this release.

Gross value added excluding oil & gas extraction rose by 0.8% in Q3 2014, and by 0.8% in Q2 2014.

Figure 5 shows the path of GDP and its components (excluding agriculture), relative to their level of output achieved in Q1 2008. The construction, manufacturing and production industries were more acutely affected by the deterioration in economic conditions, falling from peak-to-trough by 17.1%, 12.6% and 11.6% respectively. In contrast, the service industry only fell by 4.0% in the same period.

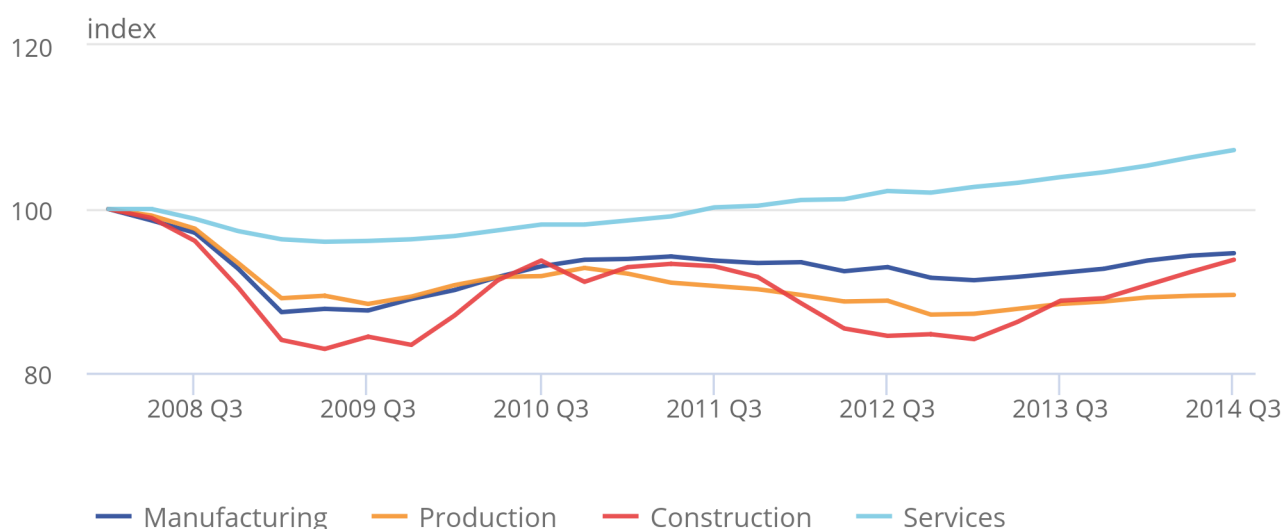
Production activity began to grow again in 2010, with the manufacturing and construction industries showing particular strength, but neither industry sustained this growth. Production output fell in both 2011 and 2012, falling below levels seen at the height of the downturn in 2009. Construction output also decreased sharply in 2012, with output only 1.2% above its 2009 trough after further contraction in Q1 2013. However, clear improvement in this industry can be observed throughout 2014, with output surpassing the level observed in Q2 2010. Although there has been widespread growth across all major output components of GDP since the start of 2013, services output has now surpassed its pre-downturn peak by 7.2 percentage points, having increased by 3.2% between Q3 2013 and Q3 2014. However, it is the only headline industry to achieve this milestone, with the production, construction and agriculture industries remaining below their respective peaks. Within production, manufacturing output was 5.4 percentage points below pre-downturn levels.

Figure 5: GDP output components growth, quarter-on-quarter

chained volume of measure, seasonally adjusted, Q1 2008=100

Figure 5: GDP output components growth, quarter-on-quarter

chained volume of measure, seasonally adjusted, Q1 2008=100



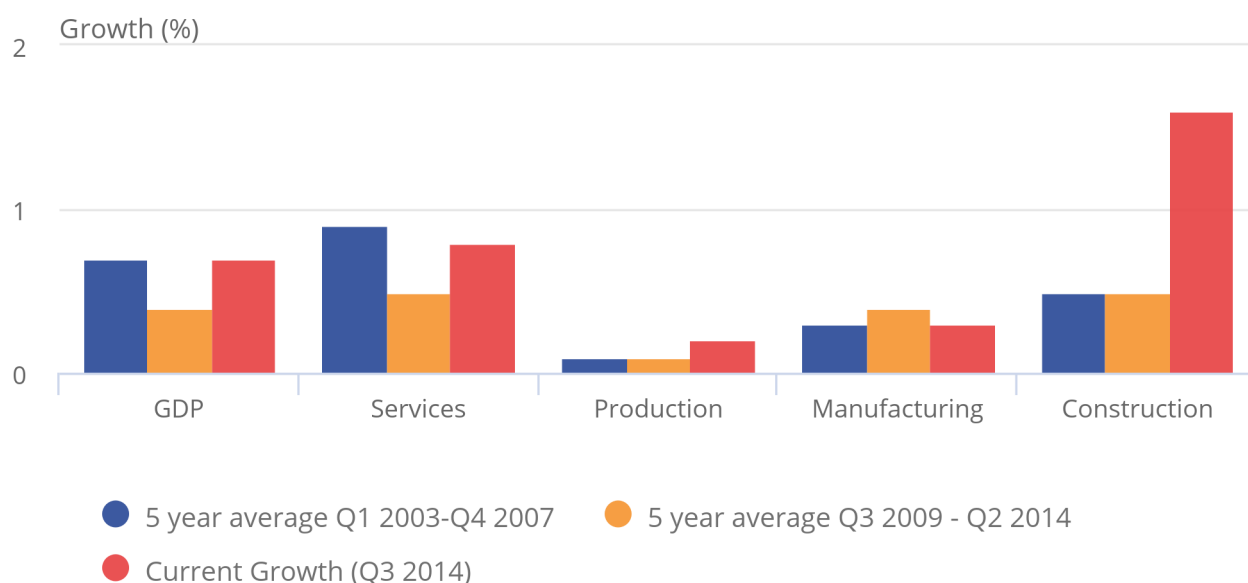
Source: Office for National Statistics

Figure 6 shows the average compound quarterly growth rates for the five years before the economic downturn beginning in Q1 2008; the average between Q3 2009 and Q2 2014 (five years following the downturn), and the current quarterly growth rate observed in Q3 2014. Compound average growth is the rate at which a series would have increased/decreased if it had grown/fallen at a steady rate over a number of periods. This allows the composition of growth in the recent economic recovery to be compared to the long run average.

The five years following the economic downturn have experienced slower average compound GDP growth compared with the period before the downturn; this pattern is also reflected in the services industry. In the most recent period (Q3 2014) the production and construction industry have both outperformed the pre-downturn long run average. It should be noted that the third column, current quarterly growth rate, is based on only one data point and users should use caution when making direct comparisons with the long run averages.

Figure 6: GDP quarterly average compound growth by industry grouping before and after the 2008-2009 economic downturn

Figure 6: GDP quarterly average compound growth by industry grouping before and after the 2008-2009 economic downturn



Source: Office for National Statistics

6 . GDP analysed by expenditure categories, chained volume measures, Table C2

[Annex B \(35 Kb Excel sheet\)](#) contains growth back to Q1 2013.

In accordance with [National Accounts revision policy \(43.3 Kb Pdf\)](#) the earliest period open for revision in this release is Q1 2013. More information on the revisions to the expenditure components can be found in the Quarterly Revisions section of this bulletin.

Gross domestic expenditure (the sum of all expenditure by UK residents on goods and services which is not used up or transformed in a productive process) rose by 1.0% in Q3 2014, following a 0.5% increase in Q2 2014.

Household final consumption expenditure rose by 0.9% in Q3 2014 and has increased for thirteen consecutive quarters (see Figure 7). The largest increases in household final consumption expenditure in Q3 2014 came from transport.

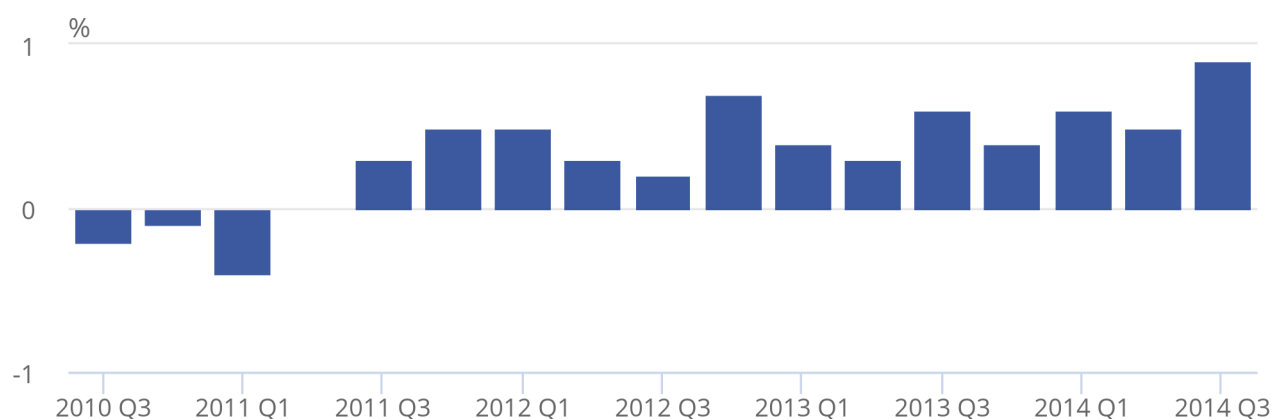
Household final consumption expenditure, when compared with the same quarter a year ago, has been rising each quarter since Q4 2011 and was 2.5% higher in Q3 2014 than in the same period a year ago.

Figure 7: Household final consumption expenditure growth, quarter-on-quarter

chained volume measure, seasonally adjusted

Figure 7: Household final consumption expenditure growth, quarter-on-quarter

chained volume measure, seasonally adjusted



Source: Office for National Statistics

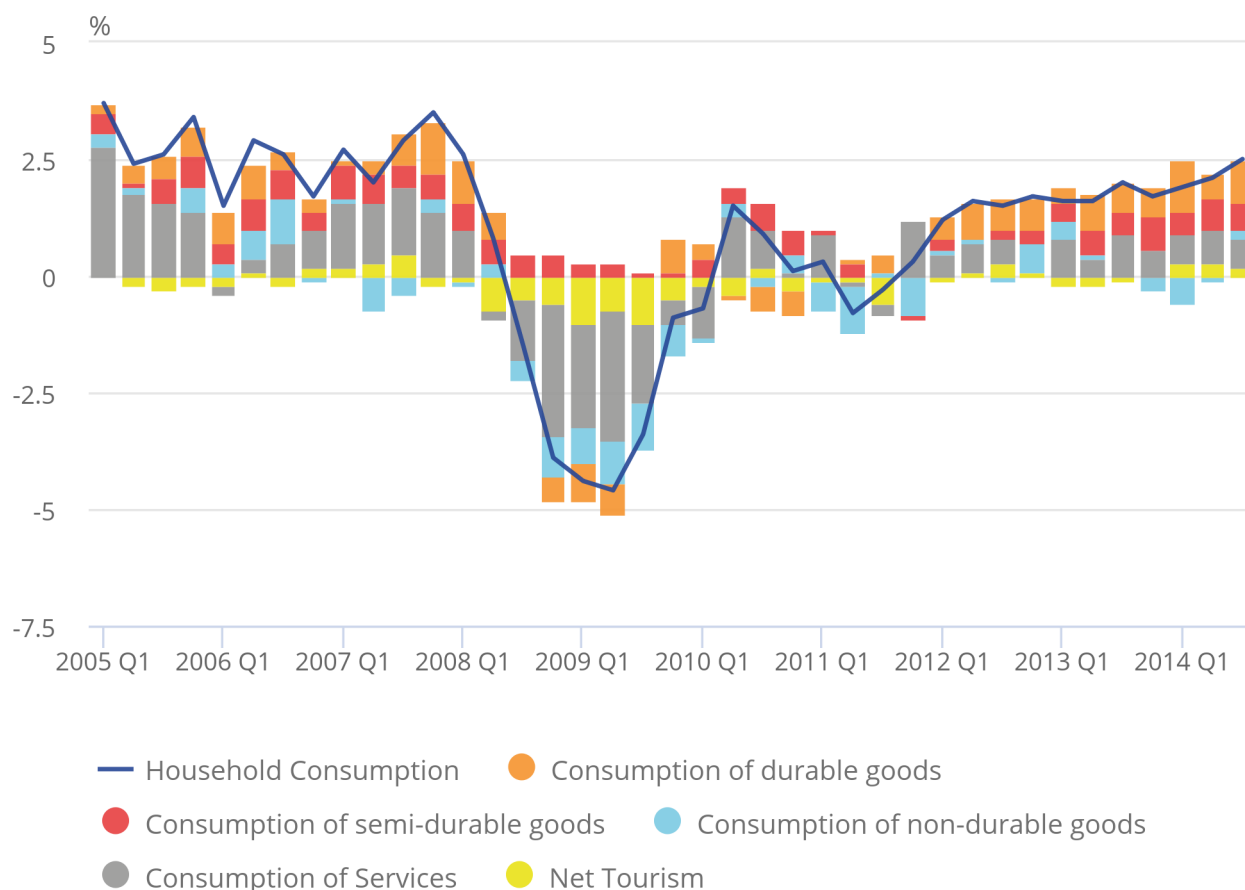
Figure 8 shows the contribution of different categories of goods and services to UK household domestic expenditure growth. The positive consumption growth since Q4 2011 is shown to have been broad based across both goods and services. The most notable change over recent periods is the return to a positive contribution from consumption of non durable goods. Between Q3 2013 and Q3 2014 consumption of non-durable goods has grown by 1.1% following four consecutive periods of negative growth. Non-durable goods include items which can only be consumed or used once, a good example of these is food products.

Figure 8: Contribution to household expenditure growth, quarter on same quarter previous year

chain volume measure, seasonally adjusted

Figure 8: Contribution to household expenditure growth, quarter on same quarter previous year

chain volume measure, seasonally adjusted



Source: Office for National Statistics

Government final consumption expenditure increased by 0.3% in Q3 2014, following a 1.4% increase in Q2 2014. Between Q3 2013 and Q3 2014, government final consumption expenditure increased by 1.9%.

Non-profit institutions serving households (NPISH) final consumption expenditure increased by 1.1% in Q3 2014, following a 1.6% increase in Q2 2014. Between Q3 2013 and Q3 2014, NPISH final consumption expenditure increased by 2.0%.

In Q3 2014, gross fixed capital formation was estimated to have increased by £0.1 billion (0.1%) since the previous quarter, to £72.9 billion (see Figure 9). This is its highest level since Q2 2008. Business investment is estimated to have fallen by an estimated £0.6 billion (-1.4%) since Q2 2014. However, it increased by 5.2% compared with the same quarter a year ago.

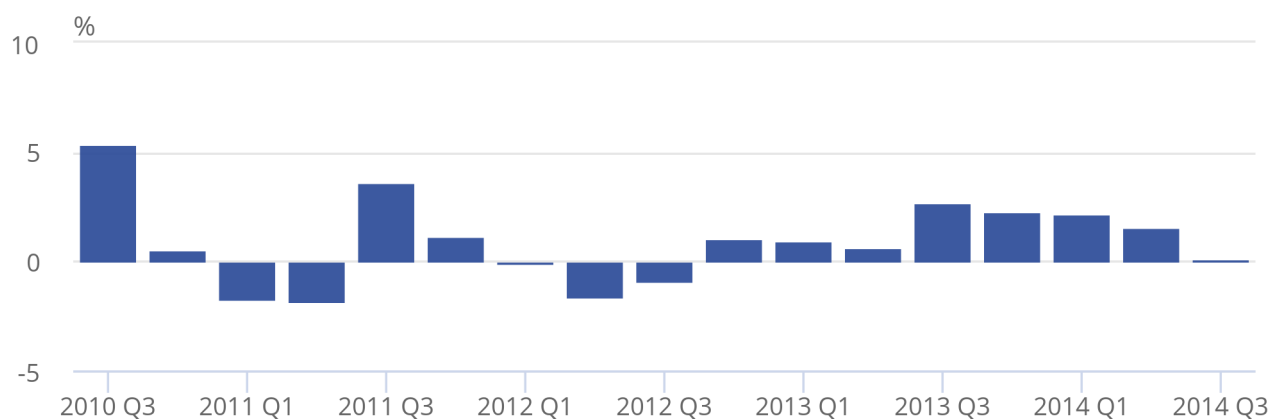
More detail on gross fixed capital formation is available in the [Business Investment](#) statistical bulletin published on the same day as this release.

Figure 9: Gross fixed capital formation growth, quarter-on-quarter

chained volume measure, seasonally adjusted

Figure 9: Gross fixed capital formation growth, quarter-on-quarter

chained volume measure, seasonally adjusted



Source: Office for National Statistics

Excluding the alignment adjustment, the level of inventories rose by £3.5 billion in Q3 2014, following an increase of £4.3 billion in Q2 2014. Including the alignment adjustment, the level of inventories increased by £3.9 billion in Q3 2014, following an increase of £2.5 billion in Q2 2014.

The trade balance deficit widened from £10.9 billion in Q2 2014 to £11.8 billion in Q3 2014 (see Figure 10). The trade position reflects exports minus imports. Following a 0.8% decrease in Q2 2014, exports rose by 0.6% in the latest quarter, while imports increased by 1.3% following a 1.7% fall in Q2 2014.

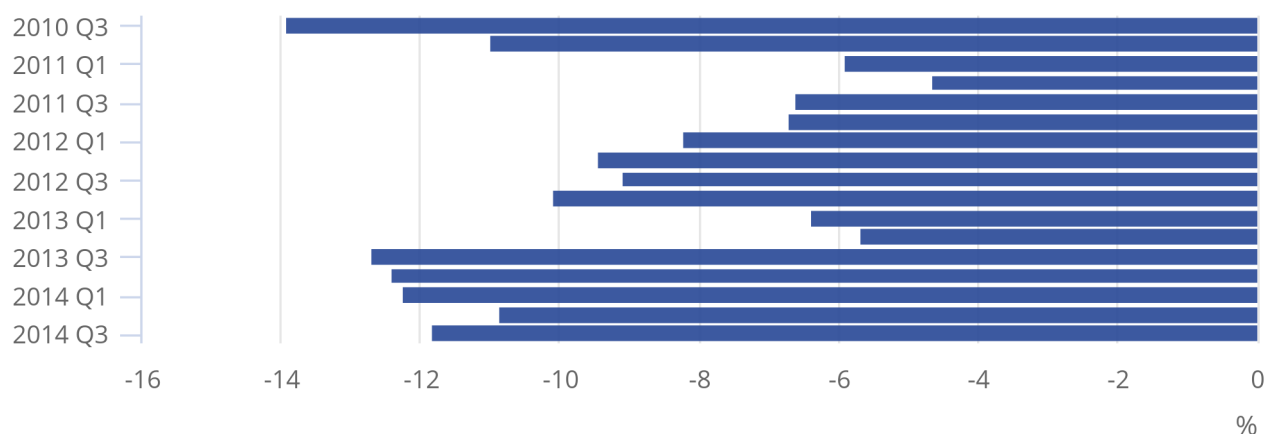
Exports of goods fell by 0.5% in Q3 2014, due to a fall in oil. Exports of services rose by 2.3% in Q3 2014 mainly due to an increase in insurance and financial services. In Q3 2014 imports of goods rose by 1.3%, due to an increase in oil imports in particular. Imports of services increased by 1.1% in Q3 2014 due to increases in travel and financial services.

Figure 10: Trade balance

£ billion, chained volume measure, seasonally adjusted

Figure 10: Trade balance

£ billion, chained volume measure, seasonally adjusted



Source: Office for National Statistics

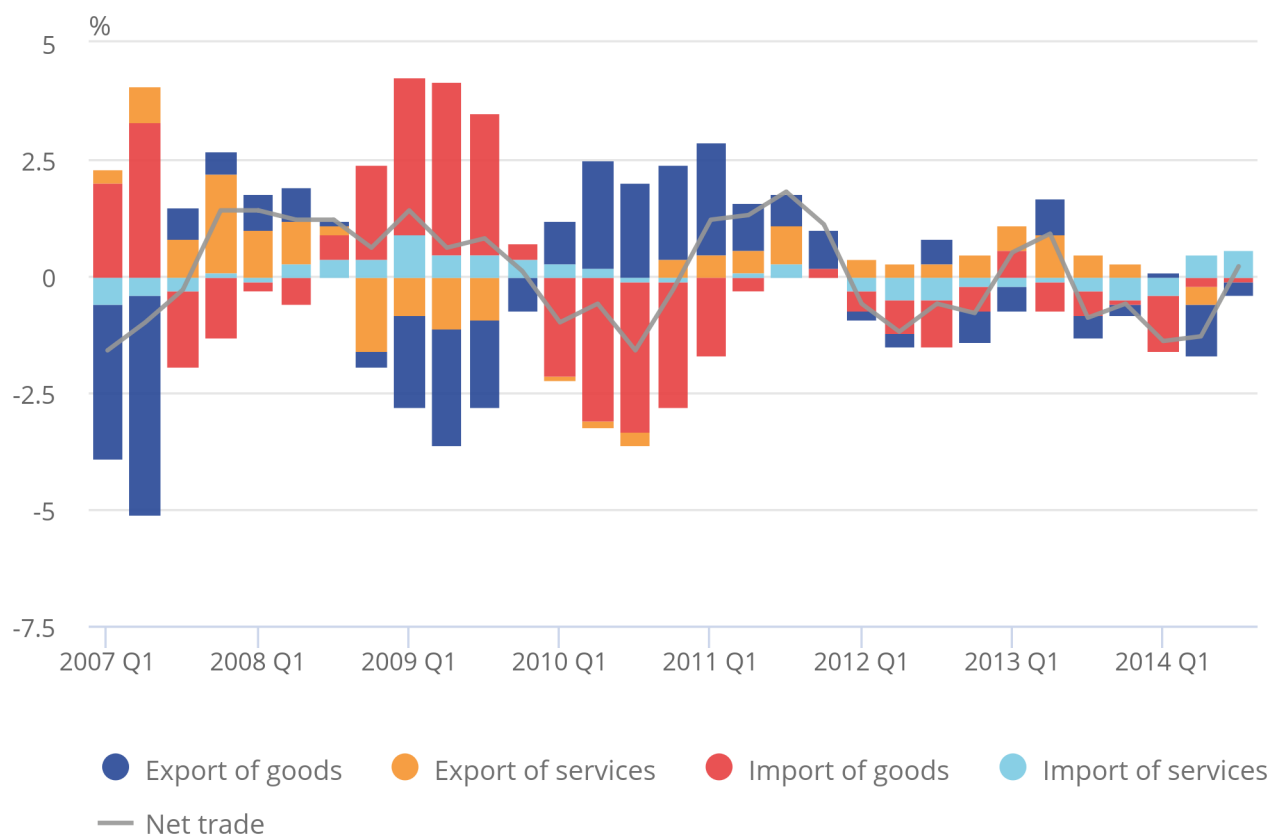
Figure 11 shows a breakdown of the trade components and their contribution to GDP growth. The series indicates that although the UK trade balance is still negative, its value has decreased since Q3 2013 and therefore has made a small but positive contribution to growth, quarter on quarter of previous year, in Q3 2014. Exports of goods made a small negative contribution of 0.3 percentage points, but this was offset by a 7.5% fall in imports of services, which made a larger positive contribution to the trade balance contribution of 0.6 percentage points. The contribution made from exports of services and imports of goods was far smaller, as these rose by just 0.2% and 0.4% respectively.

Figure 11: Net trade components contribution to GDP growth, quarter on same quarter previous year

chain volume measure, seasonally adjusted

Figure 11: Net trade components contribution to GDP growth, quarter on same quarter previous year

chain volume measure, seasonally adjusted



Source: Office for National Statistics

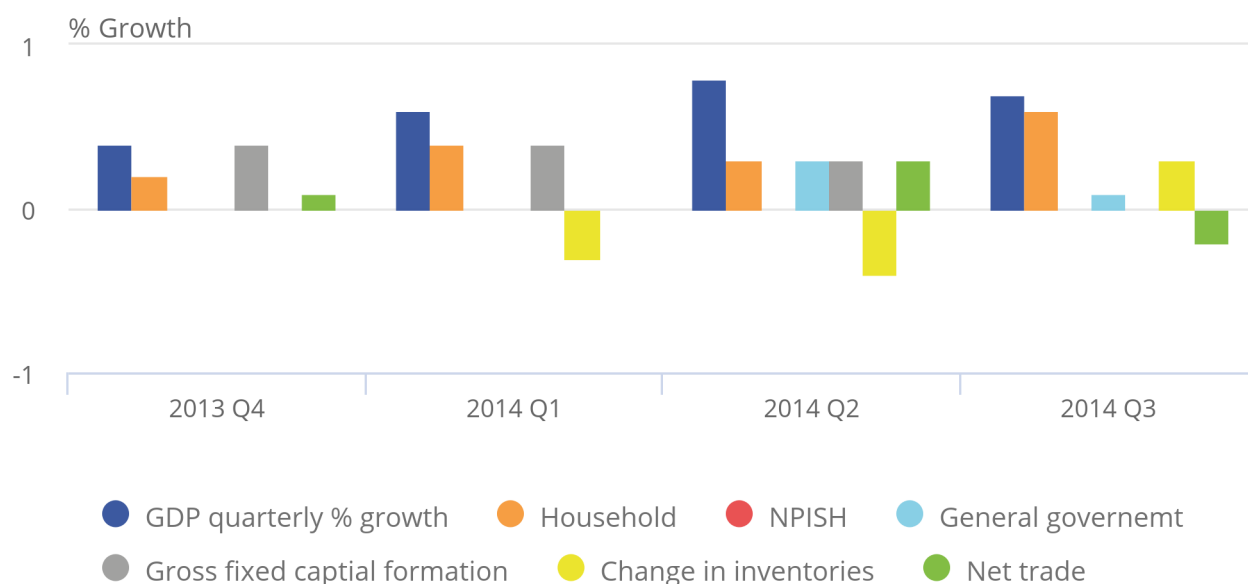
Figure 12 shows the quarterly contribution of the expenditure components to the growth of GDP in chained volume measures. The largest contribution to growth came from household final consumption expenditure, which contributed 0.6 percentage points to GDP, while gross fixed capital formation made a smaller contribution of 0.4 percentage points. With exports rising to a lesser extent compared to imports this quarter, the net trade contribution to GDP was -0.2 percentage points.

Figure 12: Expenditure components percentage contribution to GDP growth, quarter-on-quarter

chain volume measure, seasonally adjusted

Figure 12: Expenditure components percentage contribution to GDP growth, quarter-on-quarter

chain volume measure, seasonally adjusted



Source: Office for National Statistics

7 . GDP implied deflator

[Annex D \(33.5 Kb Excel sheet\)](#) contains growth rates back to Q1 2013.

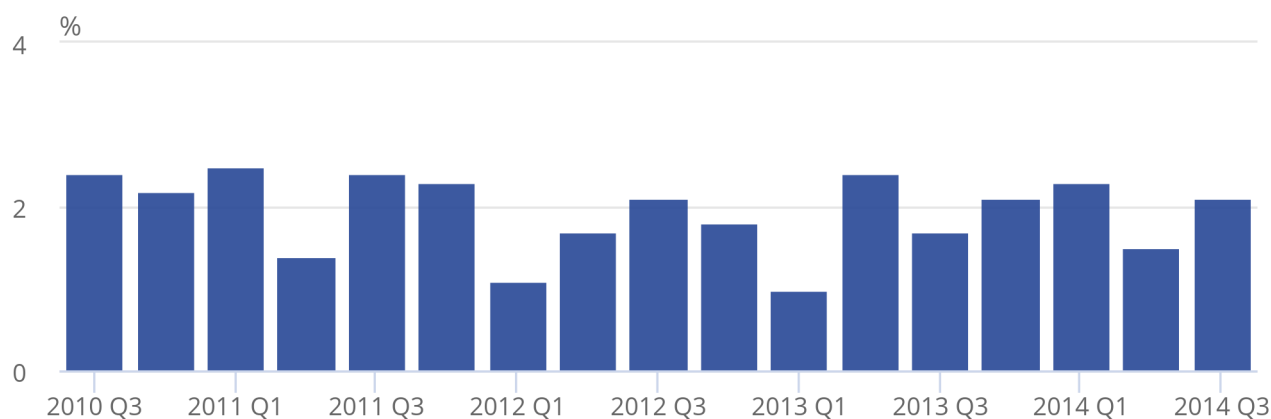
The gross domestic product implied deflator at market prices for Q3 2014 is 2.1% above the same quarter of 2013 (see Figure 13). The GDP implied deflator is calculated by dividing current price (nominal) GDP by chained volume (real) GDP and multiplying by one hundred to convert to an index. It is not used in the calculation of GDP; the deflators for expenditure components, which are the basis for the implied GDP deflator, are used to calculate nominal GDP not real GDP.

Figure 13: GDP at market prices implied deflator, quarter on same quarter of previous year

seasonally adjusted

Figure 13: GDP at market prices implied deflator, quarter on same quarter of previous year

seasonally adjusted



Source: Office for National Statistics

8 . GDP analysed by income categories at current prices, Table D

[Annex C \(30 Kb Excel sheet\)](#) contains growth rates back to Q1 2013.

In accordance with [National Accounts revision policy \(43.3 Kb Pdf\)](#) the earliest period open for revision in this release is Q1 2013. More information on the revisions to the income components can be found in the Quarterly Revisions section of this bulletin.

GDP at current market prices rose by 1.3% in Q3 2014, following a 1.3% increase in Q2 2014. GDP at current market prices rose by 4.7% when compared to Q3 2013.

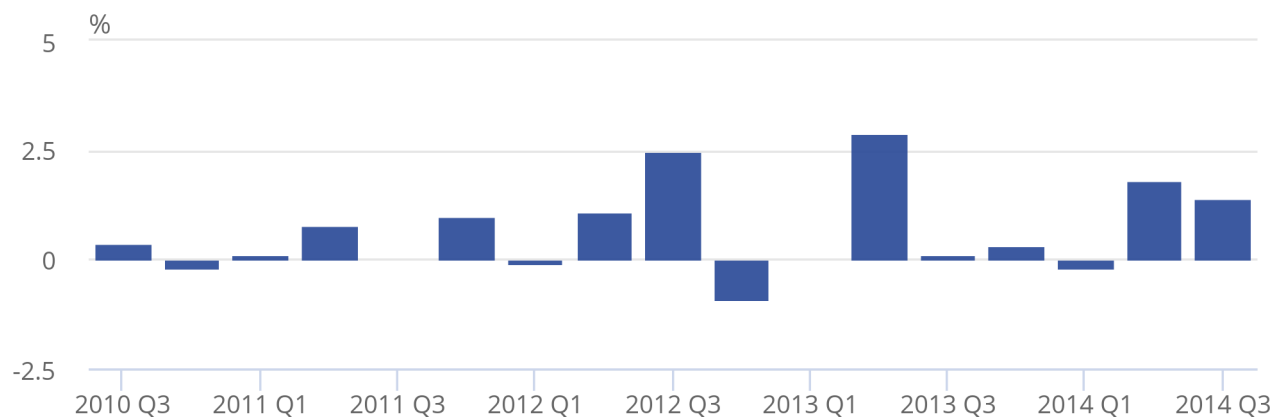
Compensation of employees – which includes both wages & salaries and pension contributions – increased by 1.4% in Q3 2014, following an increase of 1.8% in Q2 2014 (see Figure 14).

Figure 14: Compensation of employees growth, quarter-on-quarter

current prices, seasonally adjusted

Figure 14: Compensation of employees growth, quarter-on-quarter

current prices, seasonally adjusted



Source: Office for National Statistics

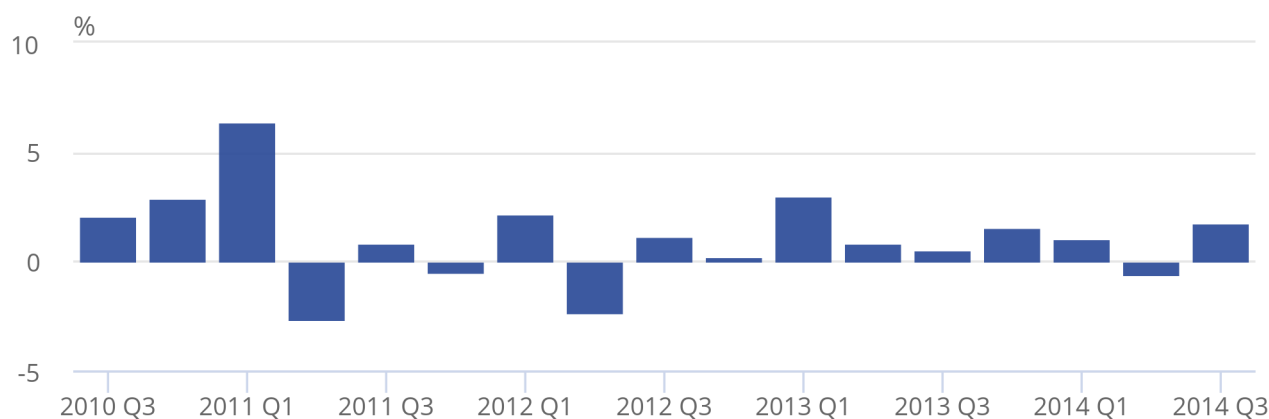
The gross operating surplus of corporations – effectively the profits of companies operating within the UK – including the alignment adjustment, rose by 1.8% in Q3 2014 compared with the previous quarter; this follows a decrease of 0.6% in Q2 2014 (see Figure 15).

Figure 15: Gross operating surplus of corporations' growth, quarter-on-quarter

current prices, seasonally adjusted

Figure 15: Gross operating surplus of corporations' growth, quarter-on-quarter

current prices, seasonally adjusted



Source: Office for National Statistics

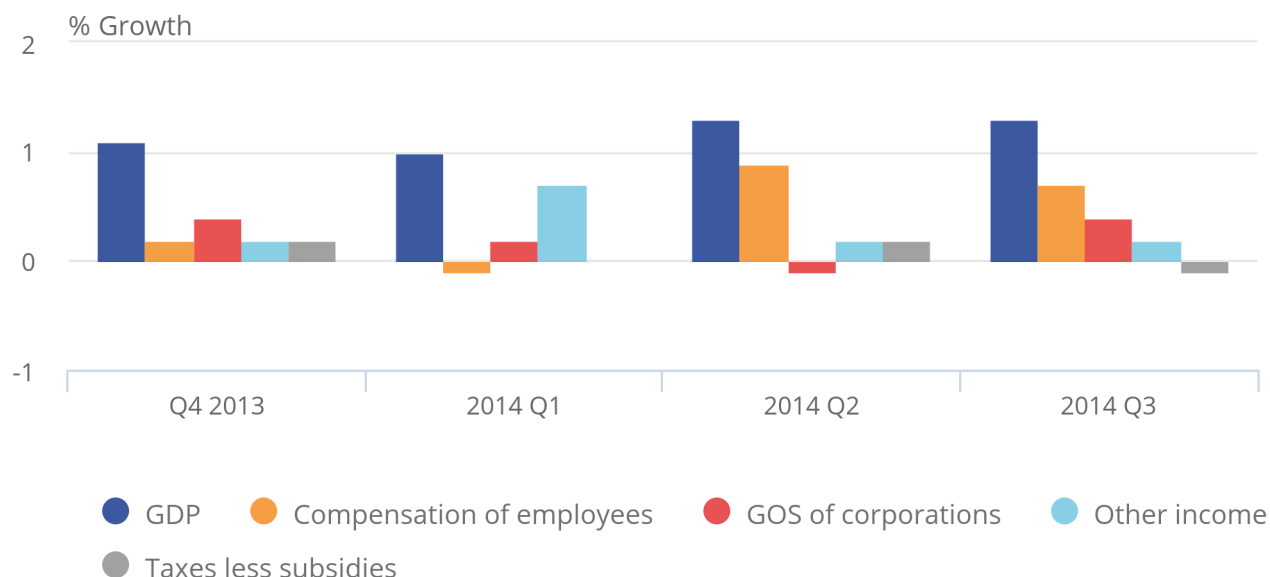
On an unaligned basis, private non-financial corporations' operating surplus rose by 3.2% in Q3 2014, following a 0.7% increase in Q2 2014. Private non-financial corporations' operating surplus on an aligned basis rose by 6.3% in Q3 2014 following a decrease of 2.9% in Q2 2014.

Taxes less subsidies on products and production fell by 0.8% in Q3 2014, following an increase of 1.7% in Q2 2014.

Figure 16 shows the contribution made by income components to current price GDP during Q3 2014. The positive contribution to growth came mainly from two of the components, with contributions from compensation of employees and gross operating surplus of 0.7 and 0.4 percentage points respectively. Net tax receipts made a small negative contribution to nominal GDP growth for the first time since Q1 2013.

Figure 16: Income components percentage contribution to GDP growth, quarter-on-quarter

Figure 16: Income components percentage contribution to GDP growth, quarter-on-quarter



Source: Office for National Statistics

9 . Sector Accounts, Tables I, J1, J2, J3, K1 and K2

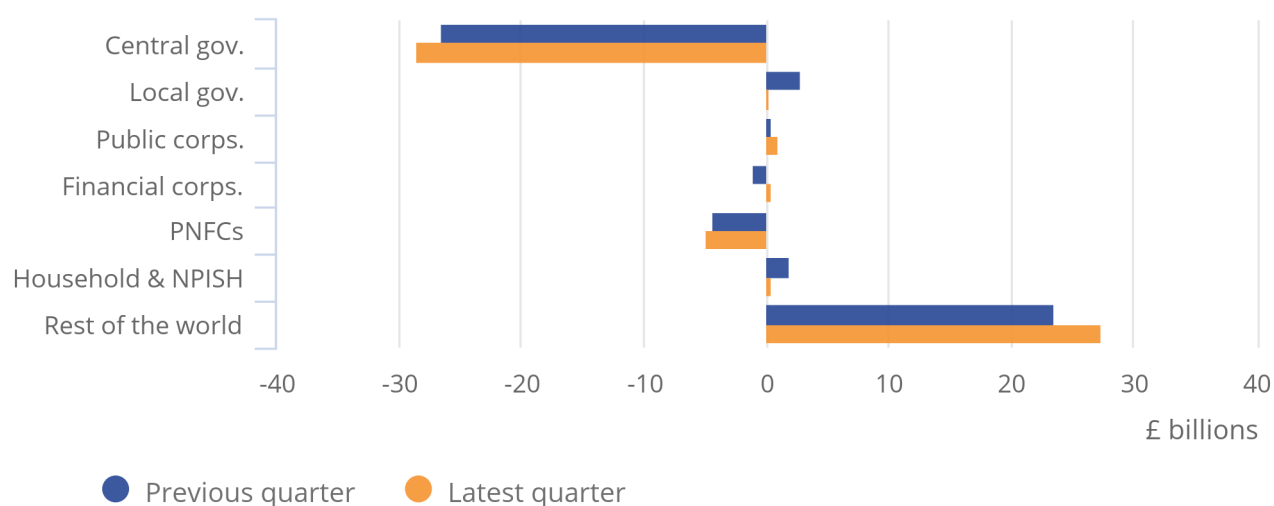
Summary

Annually for 2013, the central government, local government, financial corporations and household sectors were net borrowers. Public corporations, private non-financial corporations and the rest of the world sectors were net lenders.

In Q3 2014, the central government and private non-financial corporations sectors were net borrowers. The local government, public corporations, financial corporations, households and rest of the world sectors were net lenders.

Figure 17: Net lending (+)/net borrowing (-) by sector

Figure 17: Net lending (+)/net borrowing (-) by sector



Source: Office for National Statistics

Compared to the previous quarter, there has been a switch to net lending in the financial corporations' sector. All other sectors remain unchanged.

See table I for further detail.

The household and non-profit institutions serving households (NPISH) sector, tables J1, J2 and J3

Saving ratio:

Annually for 2013 the saving ratio was 6.4%, compared with 8.0% in 2012.

The saving ratio in Q3 2014 was 7.0%, compared with 7.5% in the previous quarter (see Figure 18).

Figure 18: Household saving ratio

current prices, seasonally adjusted

Figure 18: Household saving ratio

current prices, seasonally adjusted

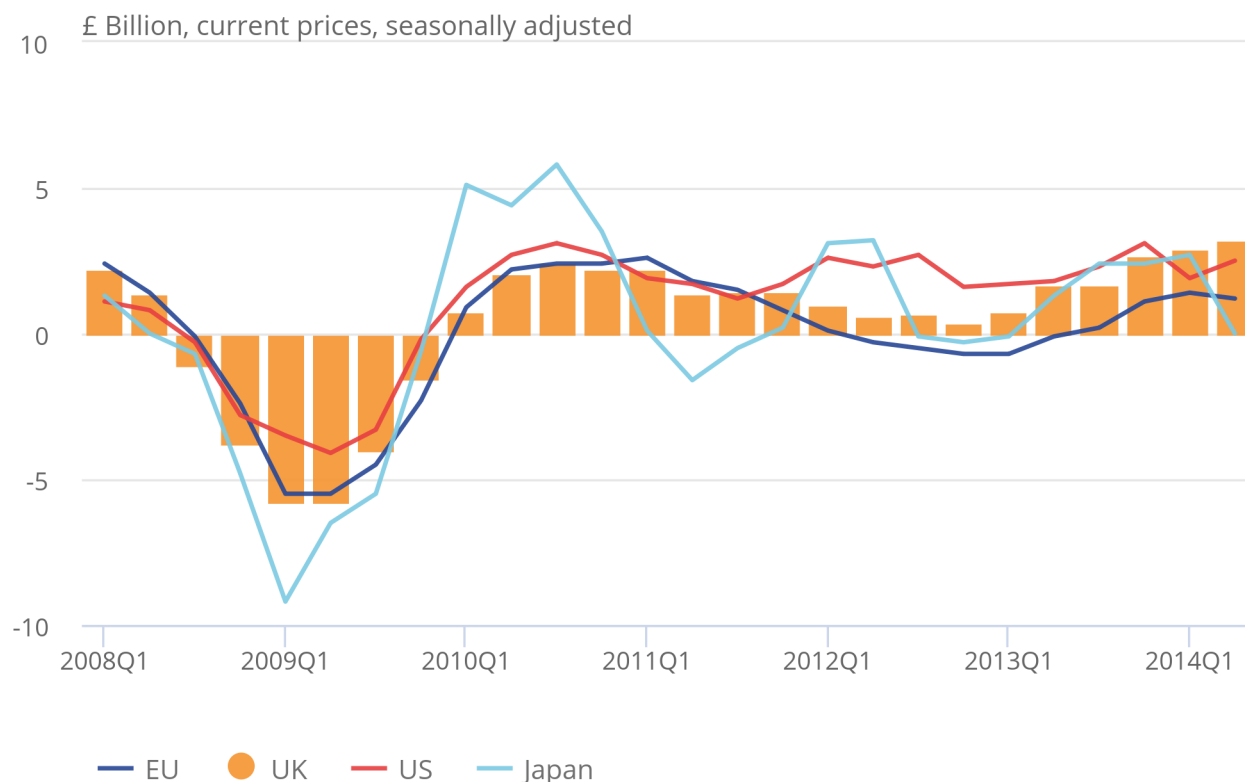


Source: Office for National Statistics

This decrease in the latest quarter reflects a rise in consumption expenditure partially offset by an increase in wages & salaries and social benefits. Figure 19 shows the main components contributing to the quarterly saving ratio movement.

Figure 19: Main household saving ratio components

Figure 19: Main household saving ratio components



Source: Office for National Statistics

What is the the saving ratio?

The saving ratio estimates the amount of money households have available to save (known as gross saving) as a percentage of their total disposable income (known as total available households' resources). Both can be found in table J3 of the Quarterly National Accounts (QNA) release.

Gross saving estimates the difference between households' total available resources (mainly wages received, revenue of the self-employed, social benefits and net income such as interest on savings and dividends from shares but excluding taxes on income and wealth) and their current consumption (expenditure on goods and services).

All of the components that make up gross saving and total available resources, and in fact all sector accounts data apart from real household disposable income (RHDI), are estimated in current prices (CP). These are sometimes known as nominal prices, meaning that they include the effects of price changes.

The saving ratio is published in both non-seasonally adjusted (NSA) and seasonally adjusted (SA) formats with the latter removing seasonal effects to allow comparisons over time. However, the saving ratio can be volatile and is sensitive to even relatively small movements to its components, particularly on a quarterly basis. This is because saving is a small difference between two numbers. It is therefore often revised at successive publications when new or updated data are included.

Real household disposable income:

For the year 2013, real household disposable income increased by 0.1%, following a rise of 1.6% in 2012. This reflects an increase of 2.1% in nominal gross disposable income, partially offset by a 1.9% rise in the household and NPISH final consumption deflator. This increase in nominal gross disposable income was predominantly due to a rise in wages & salaries and social benefits, partially offset by increased taxes on income and wealth.

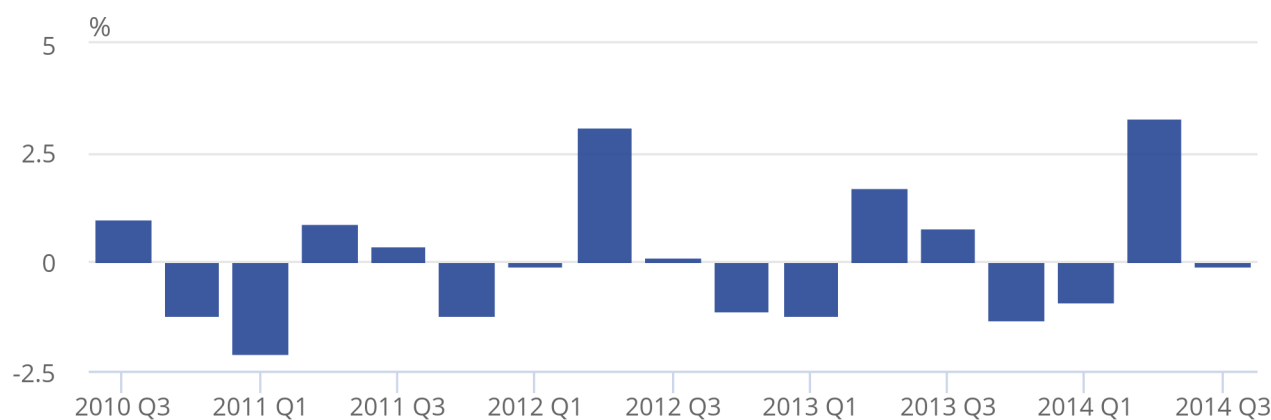
The level of real household disposable income decreased by 0.1% in Q3 2014, following a rise of 3.3% in the previous quarter (see Figure 20).

Figure 20: Real household disposable income, quarter-on-quarter

chained volume measure, seasonally adjusted

Figure 20: Real household disposable income, quarter-on-quarter

chained volume measure, seasonally adjusted



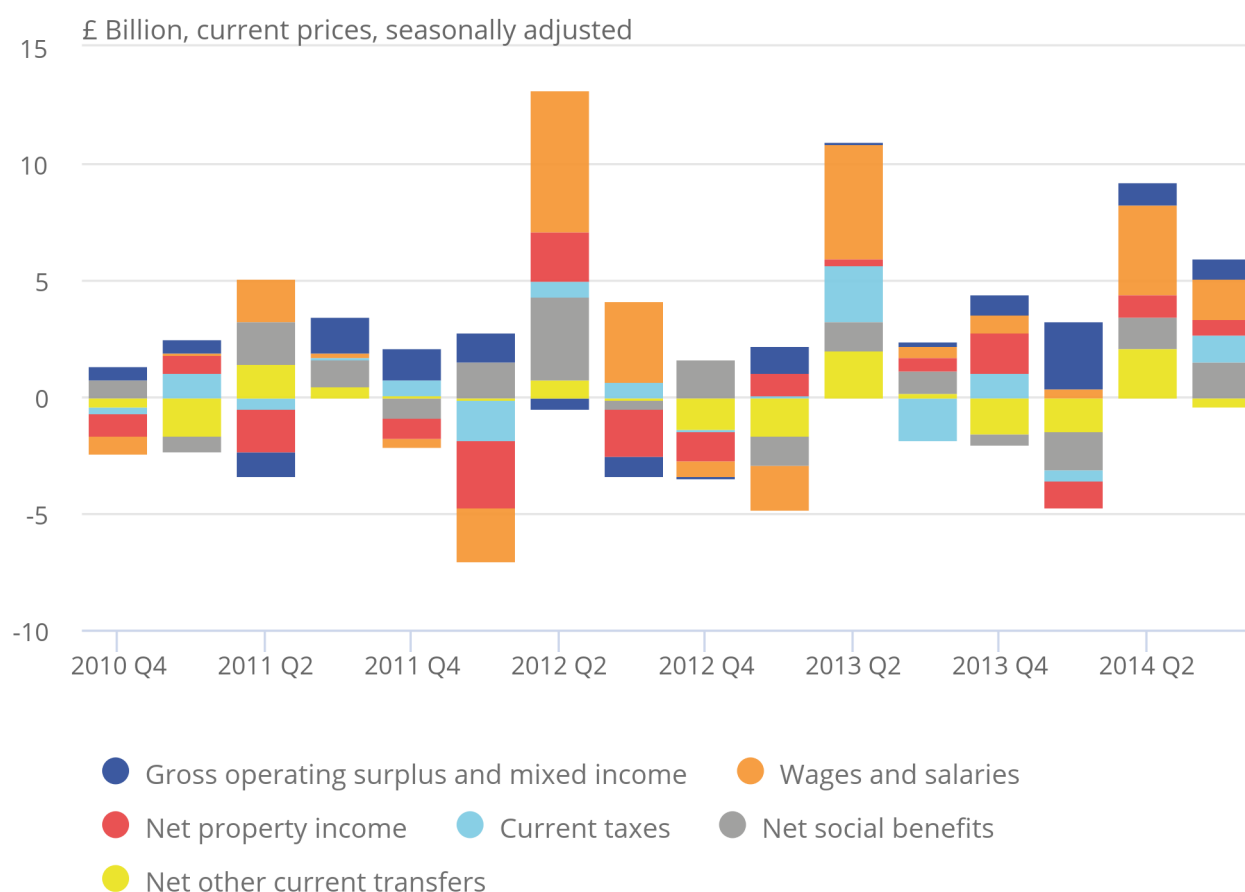
Source: Office for National Statistics

The small fall in the latest quarter reflects a 0.7% rise in the household and NPISH final consumption deflator, partially offset by a 0.6% increase in nominal gross disposable income. The rise in nominal gross disposable income was due to a rise in wages & salaries and social benefits, partially offset by increased taxes on income and wealth.

Figure 21 shows the main components contributing to the quarterly movement of gross disposable income.

Figure 21: Main gross disposable income components, quarter-on-quarter growth

Figure 21: Main gross disposable income components, quarter-on-quarter growth



Source: Office for National Statistics

What is real household disposable income?

There are two measures of household income, in real terms or in current prices (or nominal as it is often called), and both of these time series can be found in table J2 of this release. Gross household disposable income (GHDl) is the estimate of the total amount of money from income that households have available from wages received, revenue of the self-employed, social benefits and net income (such as interest on savings and dividends from shares) less taxes on income and wealth. All the components that make up GHDl are estimated in current prices.

However, by adjusting gross disposable income to remove the effects of inflation, we are able to estimate another useful measure of disposable income called real. This is a measure of real purchasing power of household incomes, in terms of the physical quantity of goods and services they would be able to purchase. We use the household expenditure deflator (which can be found in table J2 of this release) to remove the effects of price inflation.

Private non-financial corporations' sector, tables K1 and K2

For the year 2013, net lending was £13.3 billion following net lending of £38.6 billion in 2012. This decrease was due to a rise in gross capital formation and a fall in net property income offset by a rise in gross operating surplus.

Net borrowing of private non-financial corporations' was £4.8 billion in Q3 2014, following net borrowing of £4.3 billion in the previous quarter. This small decrease in net borrowing in the latest quarter was due to a fall in net property income partially offset by a rise in gross operating surplus.

10 . International comparisons for Q3 2014

In Q3 2014, GDP for the Eurozone quarter-on-quarter increased by 0.2%, while GDP for the European Union (EU 28) grew by 0.3% (see Table 2 and Figure 22). This is the sixth consecutive quarter of growth for the EU28 economy. When compared to Q3 2013, GDP for the Eurozone expanded by 0.8%, while GDP for the EU28 increased by 1.3% (see Figure 23). France and Germany grew quarter-on-quarter by 0.3% and 0.1% respectively in Q3 2014, following contractions of 0.1% for both economies in Q2 2014. Following a 1.1% increase in Q2 2014, GDP for the United States of America rose by 1.0% in Q3 2014. GDP for the United States of America grew by 2.4% between Q3 2013 and Q3 2014. The Japanese economy contracted by 0.5% in Q3 2014, the second consecutive quarter of negative growth, following a contraction of 1.7% in Q2 2014.

Figure 24 shows GDP for UK, EU, the United States of America and Japan, all indexed to Q1 2008 (the pre-downturn peak in the UK).

Table 2: International GDP quarterly growth rate comparisons for selected economic areas, quarter-on-quarter

chained volume, seasonally adjusted

	EU28	Eurozone	France	Germany	Japan	United Kingdom	United States of America
Q2 2012	-0.2	-0.3	-0.2	-0.1	-0.4	-0.2	0.4
Q3 2012	0.0	-0.1	0.2	0.1	-0.5	0.8	0.6
Q4 2012	-0.4	-0.4	-0.3	-0.4	-0.2	-0.3	0.0
Q1 2013	-0.1	-0.4	0.0	-0.4	1.5	0.6	0.7
Q2 2013	0.4	0.3	0.7	0.8	0.7	0.6	0.4
Q3 2013	0.3	0.2	-0.1	0.3	0.4	0.7	1.1
Q4 2013	0.4	0.2	0.2	0.4	-0.4	0.4	0.9
Q1 2014	0.4	0.3	0.0	0.8	1.4	0.6	-0.5
Q2 2014	0.2	0.1	-0.1	-0.1	-1.7	0.8	1.1
Q3 2014	0.3	0.2	0.3	0.1	-0.5	0.7	1.0

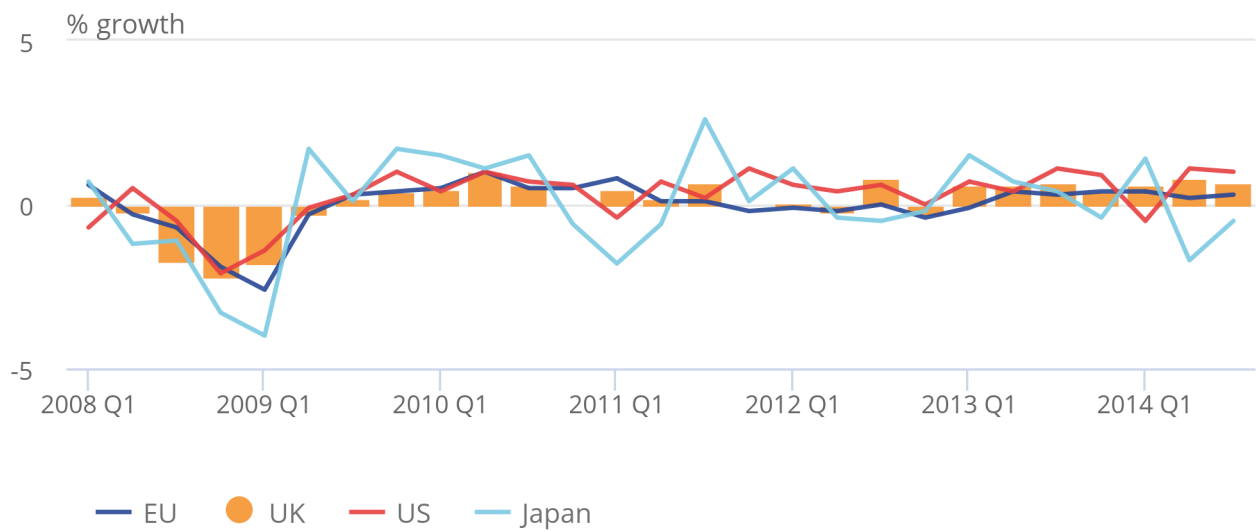
Source: Office for National Statistics

Figure 22: International GDP growth rates, quarter-on-quarter

Chained volume measure, seasonally adjusted

Figure 22: International GDP growth rates, quarter-on-quarter

Chained volume measure, seasonally adjusted



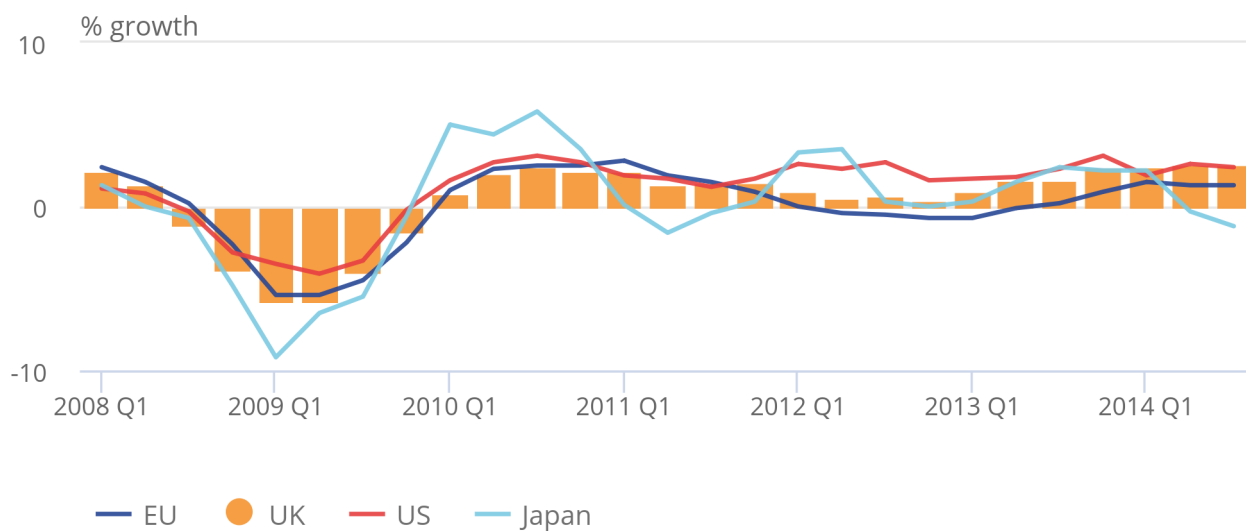
Source: Office for National Statistics

Figure 23: International GDP growth rates, quarter on same quarter a year ago

Chained volume measure, seasonally adjusted

Figure 23: International GDP growth rates, quarter on same quarter a year ago

Chained volume measure, seasonally adjusted



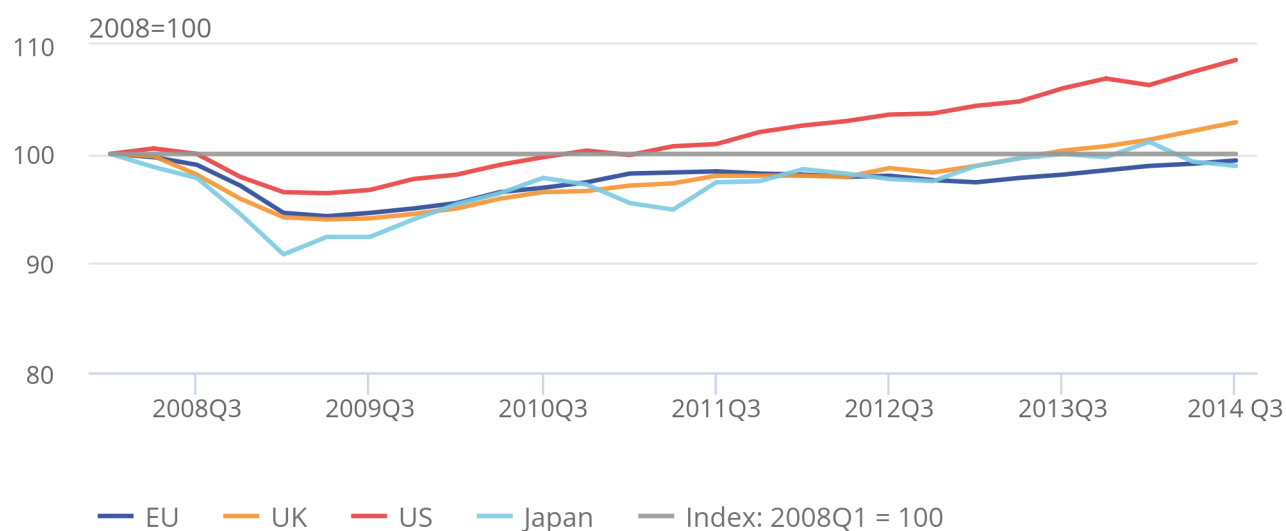
Source: Office for National Statistics

Figure 24: International GDP growth rates, quarter-on-quarter, indexed to Q1 2008=100

Chained volume measure, seasonally adjusted

Figure 24: International GDP growth rates, quarter-on-quarter,
indexed to Q1 2008=100

Chained volume measure, seasonally adjusted



Source: Office for National Statistics

More detailed information on these estimates can be found on the [Eurostat](#) website. Information on the estimates for the United States of America can be found on the [Bureau of Economic Analysis](#) website, while information on the estimates for Japan can be found on the [Japanese Cabinet Office](#) website.

11 . GDP quarterly revisions and more information for revisions to data

GDP and components previously published on 26 November 2014

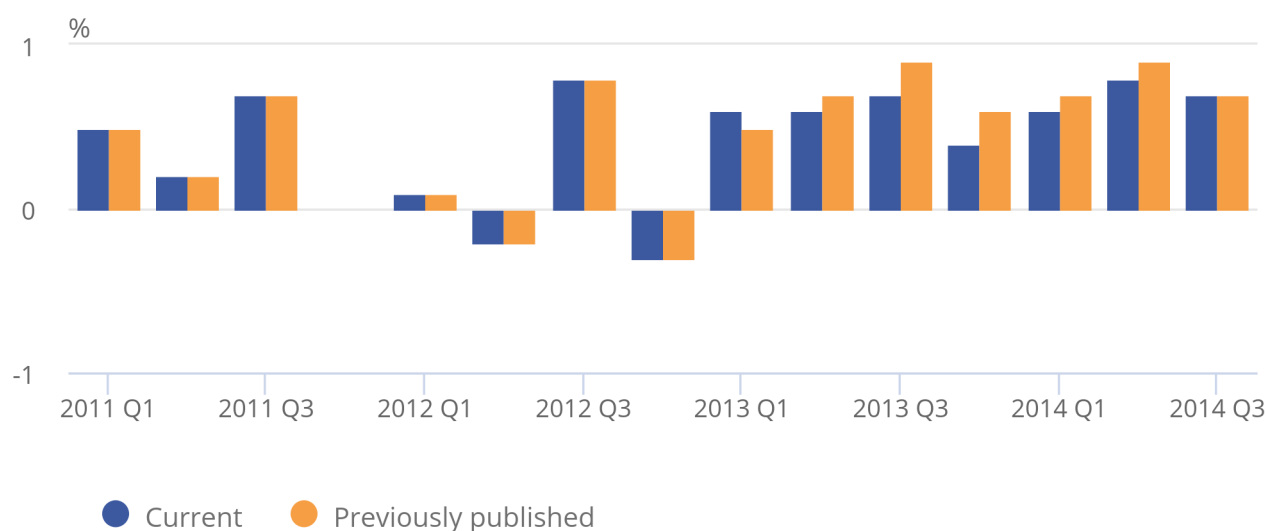
Figure 25 shows quarterly revisions between latest and previously published estimates of GDP. The periods open for revision in this release are Q1 2013 onwards.

Figure 25: Gross domestic product, quarter-on-quarter growth

chained volume measure, seasonally adjusted

Figure 25: Gross domestic product, quarter-on-quarter growth

chained volume measure, seasonally adjusted



Source: Office for National Statistics

Seasonal Adjustment X-13-ARIMA-SEATS: ONS has implemented an updated version of the seasonal adjustment software called X-13-ARIMA-SEATS. The new version is in line with international best practice and is a change from the currently used version X-12-ARIMA. In practice, this will result in an improved quality of outputs for seasonally adjusted estimates.

Published estimates are still subject to the relevant revision policies, so users may not see revisions to historical estimates. Estimates for Quarterly National Accounts Q3 2014 have been processed using this updated software. In addition to the component revisions presented below, the introduction of the updated seasonal adjustment software has introduced small revisions, typically within the range +/-0.1 percentage points.

Key data changes to output components

Construction:

Revisions to quarterly growth are seen in all quarters apart from Q2 2013. As announced in the [Output in the Construction Industry](#) statistical bulletin, the Office for National Statistics has, in the absence of construction price statistics, created a statistical model of the Q3 2014 tender price indices (TPIs) and output price indices (OPIs) used to produce chained volume measures of output in the construction industry and volume measures of new orders. Construction estimates have been revised within this release based on updated survey responses. The largest revision to quarterly growth for Construction is in Q3 2014, revised up by 2.1 percentage points. Key drivers of revisions to the most recent quarters are (a) late responses to the Monthly Business Survey (MBS) and (b) revisions to seasonal adjustment factors which are re-estimated every period.

Production:

Revisions to quarterly growth are seen in all quarters from Q1 2013. Manufacturing has seen downward revisions between Q1 2013 and Q3 2014. The main drivers of these revisions were i) revisions to Index of Production deflators which specifically affect sub-sectors of Manufacturing and ii) the receipt of updated steel data.

Key data changes to expenditure components

Trade in goods:

Revisions from Q1 2013 mainly reflect revised data from HM Revenue & Customs. Estimates of both exports and imports, in current prices (CP) and chained volume measures (CVM), have been revised although, overall, imports more so with a £1.4 billion revision to the CVM estimate for 2013 and a cumulative £11.1 billion revision between Q1 and Q3 2014. Both the CP and CVM deficit on trade in goods widened in 2013. For both years, the largest revisions are in imports of manufactured goods. Within manufactured goods, the largest commodities to be revised were transport equipment in 2013 and machinery in 2014. Exports have been revised by £2.2 billion between Q1 and Q3 2014. The most significant revisions over this period were to exports of fuel; specifically oil.

Trade in services:

Revisions to 2013 data are mainly due to new (benchmark) data from the Annual International Trade in Services Survey. This is usual practice where once a year data from the larger annual survey is incorporated into the estimates. Estimates for both exports and imports, chained volume measures, have been revised up in 2013, exports by £4.8 billion to £205.1 billion and imports by £3.4 billion to £128.3 billion. For exports, the largest revisions are from other business services and intellectual property, partially offset by a large downward revision in insurance services. The largest upward revision in imports is from telecommunication, computer and information services.

On 18 November 2014 and 27 November 2014, ONS announced errors had been identified in the expenditure estimates for UK residents visits abroad and overseas residents' visits to the UK within the Overseas Travel and Tourism release. The tourism expenditure series compiled from the International Passenger Survey data form part of Trade in Services. These figures capture expenditure of non-resident visitors leaving the UK (UK exports of travel services), and of UK residents returning from abroad (UK imports of travel services). In addition, Household Final Consumption Expenditure (HHFCE) reflect these estimates as the Net tourism measure, an adjustment to move from UK domestic consumption, to UK national final consumption. In terms of GDP, there is no effect on the level or growth rate from these errors, nor is there any effect on GNI. Any revision to the expenditure of UK households abroad recorded as an import of services is offset exactly by a revision to consumers' expenditure in GDP that records the consumption expenditure of UK households at home and abroad.

The errors in the expenditure estimates affected data between January 2014 and September 2014. These errors have been corrected in this release and a summary of their impact is shown in Table 3.

Revisions to Q3 2014 differ from those quoted in UK trade because UK trade was comparing the latest monthly publications, as opposed to this release, comparing latest estimates to those in the second estimate of GDP.

Table 3: Summary of impact due to the errors in the expenditure estimates

£ million, current prices

	Total revision to import of services	Of which due to correction of expenditure estimates for UK residents visits abroad	Total revision to export of services	Of which due to correction of expenditure estimates for overseas residents to the UK
Q1 2014	1418	1149	735	-194
Q2 2014	895	1516	141	32
Q3 2014	-11	1785	478	147

Source: Office for National Statistics

The upward revisions to imports in 2014 are mainly from the correction of the expenditure estimates for UK residents' visits abroad. The impact of this correction is, though, partially offset by other revisions from Q2 2014 onwards. There are downward revisions to imports of other business and professional services in Q2 2014 and in both business & professional services and telecommunication, computer & information services in 2014. The impact of the corrections on the export of services is relatively small but also includes the impact of an improved estimation process. During the review of the Overseas Travel and Tourism data processing system, following the identification of the error within the expenditure estimates, the treatment of extreme expenditure outliers was standardised. In the February and August data there were extreme outliers whose impact on the monthly expenditure estimates has been reduced by the revised outlier process and has artificially increased the difference observed between the original and revised expenditure estimates.

Household Final Consumption Expenditure:

Revisions to 2013 data are mainly due to new data from the Living Costs and Food Survey. Revisions to Classification of Individual Consumption by Purpose (COICOP) data are widespread but the largest contributors to the upward revision to 2013 were 01 Food and non-alcoholic drink and 04 Housing, revised up £0.7 billion and £1.3 billion respectively (chained volume measures). In addition, Housing saw further revisions to the current price measure of HHFCE on 'Imputed Rental' and 'Actual Rental'. Revisions have brought the 2013 and 2014 data in line with the change in the equivalent Consumer Price Inflation including owner occupiers' housing costs (CPIH). A summary of the revisions to HHFCE is presented in Table 4.

Table 4: Summary of revisions to HHFCE

£ million, chained volume measures

	Total revision to HHFCE	Total domestic revision	Total net tourism revision
Q1 2013	-136	-40	-96
Q2 2013	194	436	-242
Q3 2013	379	535	-156
Q4 2013	558	352	206
Q1 2014	342	-742	1084
Q2 2014	232	-1501	1733
Q3 2014	580	-960	1540

Source: Office for National Statistics

A summary of the revisions to GGFCE split by central government (CG) and local government (LG) is presented in Table 5. The LG downward revisions between Q2 2013 and Q3 2014 are largely driven by Local government final outturn revenue expenditure data for the financial year 2013/14 from England, Wales and Northern Ireland. The CG revisions between Q1 2013 and Q3 2014 reflect new research and development data and an update to HMT data for Q3 2014 only.

Table 5: Summary of revisions to GGFCE

£ million, chained volume measures

	Total revision to GGFCE	Total Central Government revision	Total Local Government revision
Q1 2013	390	-119	509
Q2 2013	-1270	-226	-1044
Q3 2013	-1339	-203	-1136
Q4 2013	-1303	-205	-1098
Q1 2014	-858	-293	-565
Q2 2014	-510	-118	-392
Q3 2014	-1218	-711	-507

Source: Office for National Statistics

Financial Corporations (FinCos): Revisions to 2013 data are mainly due to new (benchmark) data from the Financial Inquiries Survey. This is usual practice where once a year data from the larger annual survey is incorporated into the estimates. In addition, this release includes updates on insurance and pensions data from Standards and Poor's. Although revisions to the FinCos cannot be separated out, the full impact is shown in Table 6.

Table 6: Summary of revisions to FinCos

£ million, current
prices

	Total revision to Fincos
Q1 2013	-366
Q2 2013	2493
Q3 2013	620
Q4 2013	1341
Q1 2014	-622
Q2 2014	-141
Q3 2014	-3087

Source: Office for National Statistics

The large downward revision to FinCos in Q3 2014 is driven by actual returns from external data sources replacing forecast data used in the previous publication – in particular within the Insurance & Pension sector.

Detailed revisions for the three GDP approaches are shown in the Annexes listed.

Output revisions are shown in [Annex E \(30.5 Kb Excel sheet\)](#) of this release.

Expenditure revisions are shown in [Annex F \(29 Kb Excel sheet\)](#) of this release.

Income revisions are shown in [Annex G \(32 Kb Excel sheet\)](#) of this release.

12 . Sector Accounts revisions, previously published 30 September 2014

Sector Accounts revisions are shown in [Annex H \(28.5 Kb Excel sheet\)](#) of this release.

13. Background notes

1. Release policy

This release includes data available up to 11 December 2014. Data are consistent with the Index of Production statistical bulletin published on 9 December 2014 and the current price trade in goods data within the UK Trade statistical bulletin published on 10 December 2014.

2. UK trade

On 18 November 2014 and 27 November 2014, Office for National Statistics announced errors had been identified in the expenditure estimates for UK residents visits abroad and overseas residents' visits to the UK within the Overseas Travel and Tourism release which feed into the imports and exports of services in the UK Trade release. The errors in the expenditure estimates affected total trade data between January 2014 and September 2014 and the UK Trade releases over the same period.

These errors were corrected in the October 2014 UK Trade release and consistent with the [Authority's letter](#) of 14 November 2014, UK Trade will now be re-assessed for National Statistics status. The UK Statistics Authority plan to start the reassessment in January 2015 but this will be confirmed once ONS's review into the errors in the expenditure series has been completed.

Household Final Consumption Expenditure reflected these estimates as the Net Tourism measure, an adjustment to move from UK domestic consumption, to UK national final consumption. In terms of GDP, there was no effect on the level or growth rate from these errors, nor was there any effect on GNI. Any revision to the expenditure of UK households abroad recorded as an import of services was offset exactly by a revisions to consumers' expenditure in GDP that records the consumption expenditure of UK households at home and abroad.

The ONS statement regarding this error can be found on [ONS' website](#).

3. Output in the construction industry

On 11 December 2014 the UK Statistics Authority announced its decision to suspend the designation of [Construction Price and Cost Indices](#). As a result the UK Statistics Authority announced its decision to suspend the designation of Construction Output and New Orders as National Statistics. The [letter from UK Statistics Authority](#) to the National Statistician suspending the designation of BIS Construction Price and Cost Indices as National Statistics is available on the ONS website.

ONS has released a statement regarding this de-designation on [ONS' website](#).

4. What's new

ONS has implemented an updated version of the seasonal adjustment software called X-13-ARIMA-SEATS. The new version is in line with international best practice and is a change from the currently used version X-12-ARIMA. In practice, this will result in improved quality of outputs for seasonally adjusted estimates.

National Accounts continuously seeks to improve its publications. During this process it was identified in the Q2 2014 United Kingdom Economic Accounts, the non-financial corporations' sector tables were not as comprehensive as the accompanying private non-financial corporations and public corporations sub-sector tables. Therefore in this release of the quarterly national accounts we have added new time series to the non-financial corporations' sector to provide more detail for users. No existing time series have been withdrawn as part of this process.

In November 2014 ONS published an article on [Economic Well-being Framework](#) and Indicators. Following its publication, ONS are today releasing a dashboard of indicators and commentary to assess changes in economic well-being, presenting a dashboard of indicators and commentary that, together, give a more rounded and comprehensive basis for assessing changes in economic well-being.

5. Release content and context

This release includes the third estimate of GDP. Data content for each successive release of GDP varies according to availability.

The Preliminary Estimate of GDP is based on output data alone. These are based on survey estimates for the first two months of the quarter with estimates for the third month of the quarter based on forecasts using early returns from businesses. Other (non-survey based) data used in the compilation of the output approach are also based on forecasts.

For the Second estimate of GDP output estimates, based on survey data, are available for all three months of the quarter, in addition to other significant data sources. Estimates of the expenditure and income approaches to measuring GDP are also available in this release based on a combination of limited survey data, other data sources and forecasts.

For the Quarterly National Accounts (QNA) release, output survey data are available for all three months of the quarter, along with most other data sources. For the expenditure and income approaches to measuring GDP, more extensive survey data are available, in addition to other data sources and a more limited use of forecasts.

After this release, the current quarter will be subject to revision in accordance with [National Accounts revisions policy \(43.3 Kb Pdf\)](#) as further data, annual benchmarks and methodological improvements are implemented. More information on the annual data and benchmarks included in this release can be found in the Quarterly Revisions section of this bulletin.

For more information on the different estimates of GDP, ONS has released a [video explaining these differences](#).

6. Forthcoming changes

As the QNA consistent with Blue Book is in June for 2015, ONS has decided to reduce the revisions period in the March 2015 QNA to avoid opening this period up to potential revisions three quarters in a row. This decision is consistent with the recommendations of the recently published [National Statistics Quality Review \(NSQR\): Review of National Accounts and Balance of Payments](#).

In early 2015 ONS will consult more widely on options for the revisions periods in future QNA rounds as part of a wider consultation on the National Accounts five year work plan.

7. Special events

ONS maintains a list of candidate special events in the [Special Events Calendar](#). There were several special events in 2012. There was some evidence to suggest that construction output was affected by the storms and high rainfall in January and February 2014. However, over the quarter, the storms have not had a significant impact on GDP growth in Q1 2014 and ONS has not classified them as a statistical special event. In addition, ONS is keeping the effects of the weather in January and February 2014 under review in

line with the [ONS Special Events policy](#). More information can be found in the report on [Adverse weather conditions in December 2013 and January and February 2014 \(49.9 Kb Pdf\)](#) published 27 March 2014. As explained in ONS's Special Events policy, it is not possible to separate the effects of special events from other changes in the series.

8. National Accounts methodology and articles

ONS regularly publishes [methodological information and articles](#) to give users more detailed information on developments within the National Accounts; supplementary analyses of data to help users with the interpretation of statistics and guidance on the methodology used to produce the National Accounts.

ONS has produced an article '[Interpreting the Recent Behaviour of the Economy](#)' 'Interpreting the Recent Behaviour of the Economy' available on the ONS website to aid interpretation of movements in the economy.

9. National Accounts classification decisions

The UK National Accounts are produced under internationally agreed guidance and rules set out principally in the [European System of Accounts \(ESA 2010\)](#) and the accompanying [Manual on Government Deficit and Debt - Implementation of ESA 2010 - 2014 edition \(MGDD\)](#).

In the UK, ONS is responsible for the application and interpretation of these rules. ONS therefore makes [classification decisions](#) based upon the agreed guidance and rules, and these are published on the ONS website.

10. Economic context

ONS publishes a monthly [Economic Review](#) discussing the economic background, giving economic commentary on the latest GDP estimate and other ONS economic releases. The next article will be published on 8 January 2015.

11. Basic quality information for GDP statistical bulletin

A [Quality and Methodology Information \(518.9 Kb Pdf\)](#) report for this Statistical Bulletin can be found on the ONS website.

12. Key quality issues

Common pitfalls in interpreting series: Expectations of accuracy and reliability in early estimates are often too high. Revisions are an inevitable consequence of the trade-off between timeliness and accuracy. Early estimates are based on incomplete data.

Very few statistical revisions arise as a result of 'errors' in the popular sense of the word. All estimates, by definition, are subject to statistical 'error' but in this context the word refers to the uncertainty inherent in any process or calculation that uses sampling, estimation or modelling. Most revisions reflect either the adoption of new statistical techniques or the incorporation of new information which allows the statistical error of previous estimates to be reduced. Only rarely are there avoidable 'errors' such as human or system failures and such mistakes are made quite clear when they do occur.

13. Reliability

Estimates for the most recent quarters are provisional and are subject to revision in the light of updated source information. ONS currently provides an [analysis of past revisions in the \(244.6 Kb Pdf\)](#) GDP and other Statistical Bulletins which present time series.

ONS has a webpage dedicated to [revisions to economic statistics](#) which brings together ONS work on revisions analysis, linking to articles, revisions policies and key documentation from the Statistics Commission's report on revisions.

Revisions to data provide one indication of the reliability of key indicators. Tables 7 and 8 show summary information on the size and direction of the revisions which have been made to data covering a five-year period. A statistical test has been applied to the average revision to find out if it is statistically significantly different from zero. An asterisk (*) shows if the result of the test is significant.

14. Revisions to GDP estimates

Table 7 shows the revisions to month 1 (preliminary) and month 2 (second) estimates of GDP. The analysis of revisions between month 1 and month 2 uses month 2 estimates published from February 2010 (Q4 2009) to November 2014 (Q3 2014). The analysis of revisions between month 2 and month 3 (third estimate of GDP) uses month 3 estimates published from December 2009 (Q3 2009) to September 2014 (Q2 2014).

Table 7: Revisions to early estimates of GDP growth

	Estimate in latest period %	Revisions between early estimates of GDP growth (quarterly, CVM)	
		Average over the last five years	Average over the last five years without regard to sign (average absolute revision)
Between M1 and M2	0.7	0.03	0.05
Between M2 and M3	0.7	0.01	0.05

Source: Office for National Statistics

Table 8 shows the revisions to GDP growth and the household saving ratio between the estimate published three months after the end of the quarter and the equivalent estimate three years later. The analysis uses month 3 estimates first published from December 2006 (Q3 2006) to September 2011 (Q2 2011) for GDP.

Table 8: Revisions to month 3 of GDP growth

	Estimate in latest period %	Revisions between first publication and estimates three years later	
		Average over the last five years	Average over the last five years without regard to sign (average absolute revision)
GDP growth (quarterly, CVM)	0.7	-0.09	0.4
Household saving ratio	7	-0.95	1.21

Source: Office for National Statistics

Revisions triangles for the main components of GDP from expenditure, output and income approaches and spreadsheets containing [revisions triangles \(real-time databases\)](#) of estimates from 1992 to date and the calculations behind the averages in both tables are available on the ONS website.

An article titled '[Revisions to GDP and Components](#)' (513.5 Kb Pdf), published on 28 January 2014, is available on the ONS website.

15. Balancing GDP

Information on the methods ONS uses for [balancing the output, income and expenditure approaches](#), to measuring GDP can be found on the ONS website.

The different data content of the three approaches dictates the approach taken in balancing quarterly data. In the UK, there are far more data available on output than in the other two approaches. However, in order to obtain the best estimate of GDP (the published figure), the estimates from all three approaches are reconciled to produce an average.

Annually, the estimates from all three approaches are reconciled through the creation of Input-Output Supply and Use tables for the years for which data are available.

For years in which there is no Supply and Use balance, a Statistical Discrepancy exists which reflects the differences between the published headline estimate of GDP and the expenditure and income estimates.

For all periods, the expenditure and income estimates are aligned to the published headline GDP figure. Although annual data is aligned for balanced years, there will still be quarterly differences for balanced and post balanced years, due to timing and data content issues. These are dealt with by means of explicit alignment adjustments which are applied to specific components (gross operating surplus of private non-financial corporations in the income approach and changes in inventories in expenditure) to align the three approaches. As these are purely quarterly discrepancies, the alignments sum to zero over the year and are published explicitly in the GDP statistical bulletins. They are also published as “of which” items within the specific components, to enable users to ascertain the underlying picture.

Alignment adjustments typically have a tolerance of +/-£2,000 million on any quarter. However, in periods where the data sources are particularly difficult to balance, slightly larger alignment adjustments are sometimes needed.

The size and direction of the quarterly alignment adjustments in Q3 2014 indicate that in this quarter the levels of expenditure and income were both lower than that of output.

16. Further information

Latest copies of this and other ONS releases are available under Publications on the ONS website. ONS has also produced a [short guide to the UK National Accounts \(105.5 Kb Pdf\)](#).

Details of the policy governing the release of new data are available from the media relations office. Also available is [a list of the names of those given pre-publication access](#) to the contents of this bulletin.

17. Following ONS

You can follow ONS on [Twitter](#) and [Facebook](#).

18. Details of the policy governing the release of new data are available by visiting www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html or from the Media Relations Office email: media.relations@ons.gsi.gov.uk

These National Statistics are produced to high professional standards and released according to the arrangements approved by the UK Statistics Authority.