

Statistical bulletin

# Business investment in the UK: October to December 2014 revised results

Estimates of short-term indicators of investment in non-financial assets; business investment and asset and sector breakdowns of total gross fixed capital formation.



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# 1 . Main points

- The estimates in this release are short-term indicators of investment in assets, such as dwellings, transport equipment, machinery, buildings and intangible assets. This release covers not only business investment, but asset breakdowns of total gross fixed capital formation (GFCF), of which business investment is a component
- All investment data referred to in this bulletin are estimates of seasonally adjusted chained volume measures. The earliest period being revised in this release is Quarter 1 (Jan to Mar) 2014
- In Quarter 4 (Oct to Dec) 2014, GFCF was estimated to have decreased to £73.6 billion compared with Quarter 3 (July to Sept) 2014. This is a decrease of £0.5 billion (0.6%), the first decrease for GFCF since Quarter 3 (July to Sept) 2012. Business investment decreased to £45.0 billion compared with the previous quarter, an estimated fall of £0.4 billion (0.9%)
- In Quarter 4 (Oct to Dec) 2014 GFCF was estimated to have increased by 5.1% compared with Quarter 4 (Oct to Dec) 2013 whilst business investment increased by an estimated 3.7% compared with Quarter 4 (Oct to Dec) 2013. This was the 19th consecutive quarter of growth compared with the same quarter of the previous year
- In 2014, GFCF increased by an estimated 7.8% since 2013, to £292.8 billion. Business investment increased by an estimated 7.5% since 2013, to an estimated £179.7 billion, the highest level in the published time series
- In 2014, ICT equipment and other machinery and equipment was at its highest annual level in the published time series (£67.7 billion), 14.8% higher than in 2013

## 2 . About this release

The estimates in this release are short-term indicators of investment in assets in the UK, such as dwellings, transport equipment, machinery, buildings and intellectual property products. This release covers not only business investment, but asset and sector breakdowns of total gross fixed capital formation (GFCF), of which business investment is a component.

Business investment is net investment by the private sector and public corporations, in transport, information, technology and communications (ICT) equipment, other machinery and equipment, cultivated assets, intellectual property products (IPP, which includes investment in software, research and development, artistic originals and mineral exploration), and buildings and other structures. It doesn't include investment by central or local government, investment in dwellings or the costs associated with the transfer of non-produced assets (such as land). A full sector and asset hierarchy can be found in the background notes. It should be noted that business investment is not an international concept, and therefore it shouldn't be used to make international comparisons.

All investment data referred to in this bulletin are estimates of seasonally adjusted chained volume measures.

## 3 . Upcoming changes to the Quarterly Survey of Capital Expenditure and other methodological information

## Changes to the Quarterly Survey of Capital Expenditure in Quarter 1 (Jan to Mar) 2015

We will be implementing changes to the Quarterly Survey of Capital Expenditure (Capex) from Quarter 1 (Jan to Mar) 2015. These include changes that are legally required under the European System of Accounts 2010 (ESA 2010) and improvements to the questionnaire design. The changes that will be implemented in the estimates of gross fixed capital formation (GFCF) and its components, from Quarter 1 (Jan to Mar) 2015, include:

- removal of the lower limit of £500 in reporting GFCF
- the inclusion of small tools used in production within the definition of GFCF
- improvements to the questionnaire design through question testing with respondents
- a change of name, from Capex, to the Quarterly Acquisitions and Disposals of Capital Assets Survey (QCAS), which states the purpose of the survey more clearly, in line with good practice

The impact of these changes will not be known until the data are collected. The impact will be monitored, and further information will be available in the Business Investment, Quarter 1 (Jan to Mar) 2015 Provisional Results release on 28th May 2015.

The changes to the questionnaire also include some new questions. Data from these new questions will not be included in estimates of GFCF and its components until 2017, when 2 years of data are available for quality assurance. The article [Changes to the Annual Business Survey, the Quarterly Survey of Capital Expenditure and the Survey into Business Spending on Capital Items, in 2015 \(114.3 Kb Pdf\)](#) has more detail on these changes.

## Further methodological information including upcoming changes for Blue Book 2015

Estimates in this release have been compiled under ESA 2010, in compliance with the UK's legal obligations in producing the national accounts. Articles are available describing the methodology used to estimate GFCF and the impact of the changes implemented for ESA10 in September 2014.

An article was published on 26 March 2015, describing improvements to the deflation of the software asset, which will be implemented in the UK National Accounts (Blue Book) 2015, to be published in October 2015. This article includes an indicative impact assessment.

[Changes to National Accounts for Blue Book 2015: the deflation of investment in software \(522.5 Kb Word document\)](#) 26 March 2015

[Investment - impact analysis of changes to the estimation of gross fixed capital formation and business investment for Blue Book 2014 \(918.4 Kb Pdf\)](#) 30 September 2014

[Changes to the Annual Business Survey, the Quarterly Survey of Capital Expenditure and the Survey into Business Spending on Capital Items, in 2015 \(114.3 Kb Pdf\)](#) 22 August 2014

[Gross Fixed Capital Formation and Business Investment – Impact of ESA10 Changes on Volume Measures \(195.6 Kb Pdf\)](#) 30 June 2014

[How Construction Price Indices are Used in Construction Statistics and Gross Fixed Capital Formation \(80.7 Kb Pdf\)](#) 19 June 2014

[Construction price indices: improvements](#) 19 June 2014

[Measuring and capitalising research and development in the UK National Accounts \(349.1 Kb Pdf\)](#) 10 June 2014

[Implementation framework for Research and Development in the United Kingdom National Accounts \(206.7 Kb Pdf\)](#) 10 June 2014

[Impact of ESA10 changes on current price GDP estimates](#) 10 June 2014

[Transition to ESA10: capitalising government spending on military weapons \(179 Kb Pdf\)](#) 10 June 2014

[Gross Fixed Capital Formation \(Investment\) - Changes for Blue Book 2014 \(excluding ESA10\) \(157.8 Kb Pdf\)](#) 29 May 2014

[Impact of ESA95 changes on current price GDP estimates](#) 29 May 2014

[Revised methodology and sources as a result of addressing Gross National Income reservations \(105.1 Kb Pdf\)](#) 29 May 2014

## **4 . Adjustments, revisions and response rates**

### **Adjustments**

The largest component of the data collected to produce estimates of gross fixed capital formation (GFCF) and business investment comes from our Quarterly Survey of Capital Expenditure (Capex), which has a sample size of 27,500. Large capital expenditure tends to be reported later in the data collection period than smaller expenditure. This means that larger expenditures are often included in the revised (month 3) results, but are not reported in time for the provisional (month 2) results, leading to a tendency towards upwards revisions in the later estimates for business investment and GFCF. Following investigation of the impact of this effect, from Quarter 3 (July to Sept) 2013, we introduced a bias adjustment to Capex, and hence to GFCF and its components, in the provisional estimates.

A bias adjustment of £850 million was included in the provisional (month 2) release for Quarter 4 (Oct to Dec) 2014. This has been removed for the revised (month 3) release.

### **Forecast data**

In this release, estimates of investment in research and development and in artistic originals have been forecast.

### **Revisions**

The periods revised in this release are Quarter 1 (Jan to Mar) to Quarter 4 (Oct to Dec) 2014.

Revisions in this release are because of revisions to the source data, including:

- revisions to Capex data due to an increased response rate
- revisions to public corporations data
- revisions to estimates of investment in new dwellings and improvements to dwellings
- government investment data replacing forecasts

The most significant component of the upwards revisions to GFCF and business investment in this release is the revision to the Capex data, which impacted the Quarter 3 (July to Sept) and Quarter 4 (Oct to Dec) aggregates.

## Survey response rates

Table 1 presents the revised (month 3) response rates for the Quarterly Survey of Capital Expenditure. The estimates in this release are based on the Quarter 4 (Oct to Dec) 2014 month 3 (revised) survey results.

**Table 1: Response rates for Quarterly Survey of Capital Expenditure**

Period	At month two (Provisional)		At month three (Revised)	
	Survey response rates / %	Period	Survey response rates / %	Period
2013 Q4	80.0	2013 Q4	91.9	
2014 Q1	76.2	2014 Q1	90.7	
Q2	79.5	Q2	91.3	
Q3	78.7	Q3	91.7	
Q4	80.1	Q4	87.6	

Source: Office for National Statistics

## 5 . Economic background

In Quarter 4 (Oct to Dec) 2014, business investment fell by 0.9% to £45.0 billion compared with Quarter 3 (July to Sept) 2014, when it was £45.4 billion. However, the annual level for 2014 is the highest in the published time series. It grew by 7.5% to £179.7 billion.

Gross fixed capital formation (GFCF) also fell in Quarter 4 (Oct to Dec) 2014, by 0.6% compared with Quarter 3 (July to Sept) 2014 to £73.6 billion. The annual level grew by 7.8% in 2014, to £292.8 billion, the highest annual level since 2007 (£294.9 billion).

Annually, net investment (acquisitions minus disposals) in ICT equipment and other machinery and equipment was at the highest level in the published time series, at £67.7 billion. It grew by 14.8% since 2013 (£59.0 billion). Investment in intellectual property products was also at its highest level in 2014, £66.0 billion, growing by 4.5% since 2013.

Asset and industry data collected from the Quarterly Survey of Capital Expenditure (Capex), are bench marked to the annual results from the Annual Business Survey (ABS). This makes up nearly two-thirds of business investment in current prices and can be used for a more detailed analysis of investment. There are 6 asset classes: hardware, software, transport equipment, mineral exploration and evaluation, other buildings and structures, and other machinery and equipment. The Capex estimates are in current prices, not seasonally adjusted.

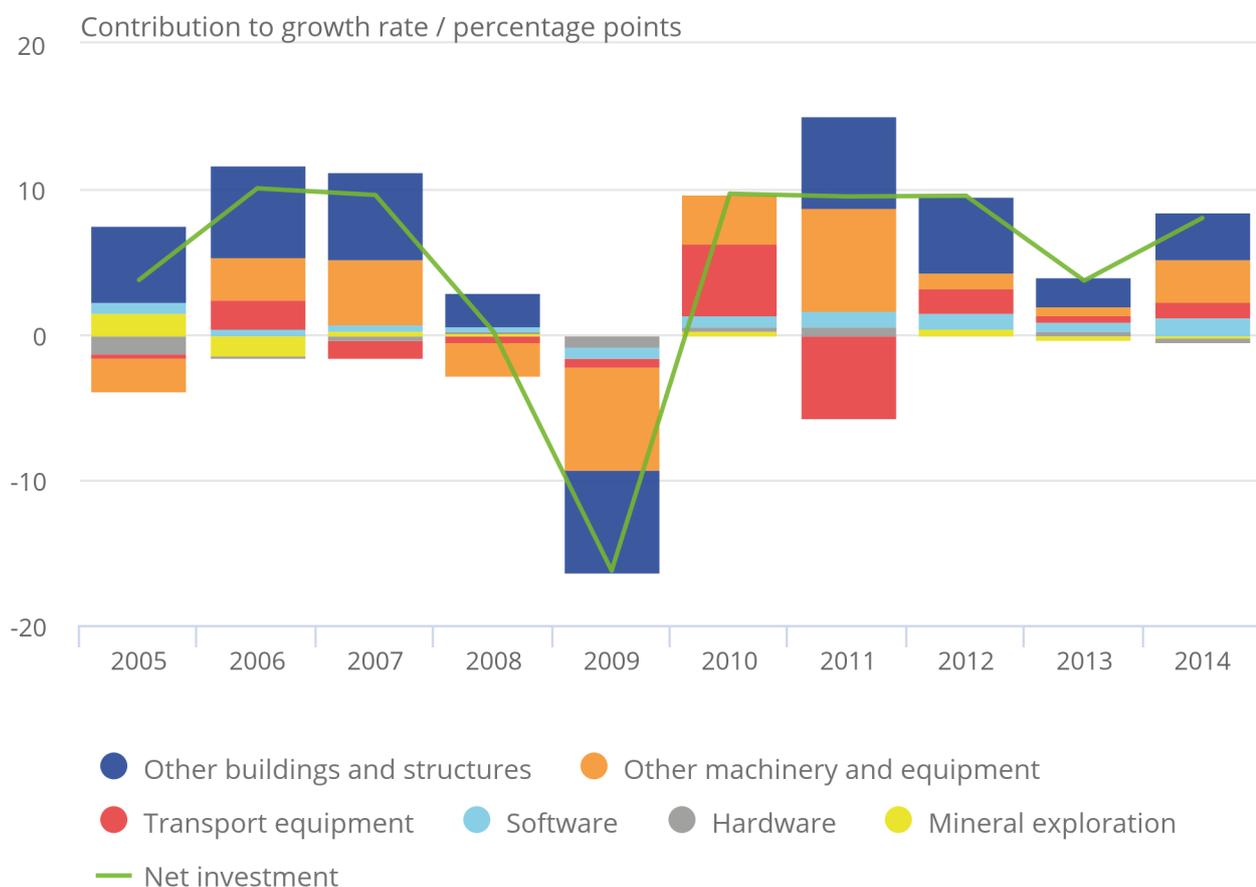
Figure 1a shows the annual contribution to growth of each of the Capex assets (bench marked to ABS) from 2005 to 2014, in current prices. It shows that annual net investment grew by 8.0% in 2014, to £115.5 billion. This was the fifth consecutive year of annual growth. Other machinery and equipment was one of the main contributors to growth, accounting for 3.0 percentage points. The only asset with a higher contribution was other buildings and structures (3.1 percentage points). Investment in hardware and mineral exploration fell slightly, contributing negatively to the overall growth rate.

**Figure 1a: Contributions to growth of net investment by asset (Capex benched to ABS), current prices**

Coverage: UK

Figure 1a: Contributions to growth of net investment by asset (Capex benched to ABS), current prices

Coverage: UK



Source: Quarterly Survey of Capital Expenditure - Office for National Statistics

Figure 1b shows the annual Capex estimates for other machinery and equipment (current prices). Net annual investment in other machinery and equipment in 2014 was at its highest level since 2000, at £41.8 billion. In the quarterly estimates, net investment was also at a peak in Quarter 4 (Oct to Dec) 2014, £11.5 billion, the highest value since Quarter 4 (Oct to Dec) 2000 (current prices, not seasonally adjusted).

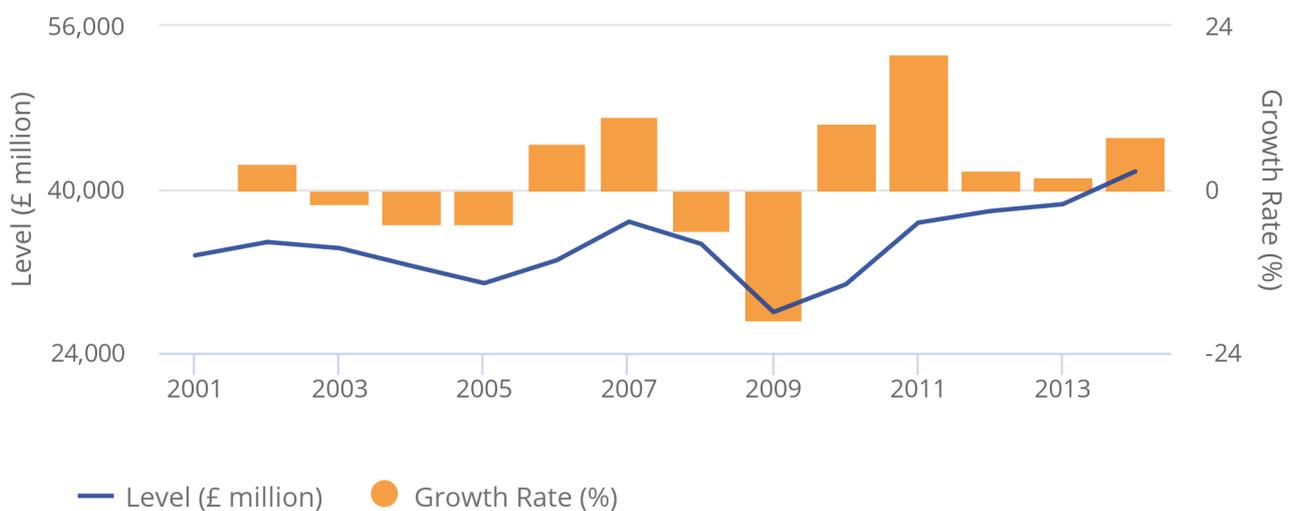
Annual growth in 2014 for other machinery and equipment was 8.3%, up from 1.8% in 2013, reaching a level of £41.8 billion in 2014 (Capex, current prices). The electricity, gas, steam and air conditioning supply industry contributed most to the annual growth. It accounted for 29% of the annual growth. The rental and leasing activities industry made up 17% of total other machinery and equipment growth and was the highest annual value on record for the industry, £1.8 billion. Annual net investment (Capex, current prices) in both of these industries fell in 2012 and 2013.

**Figure 1b: Annual levels and growth rates of net investment in other machinery and equipment (Capex benched to ABS), current prices**

Coverage: UK

Figure 1b: Annual levels and growth rates of net investment in other machinery and equipment (Capex benched to ABS), current prices

Coverage: UK



Source: Quarterly Survey of Capital Expenditure - Office for National Statistics

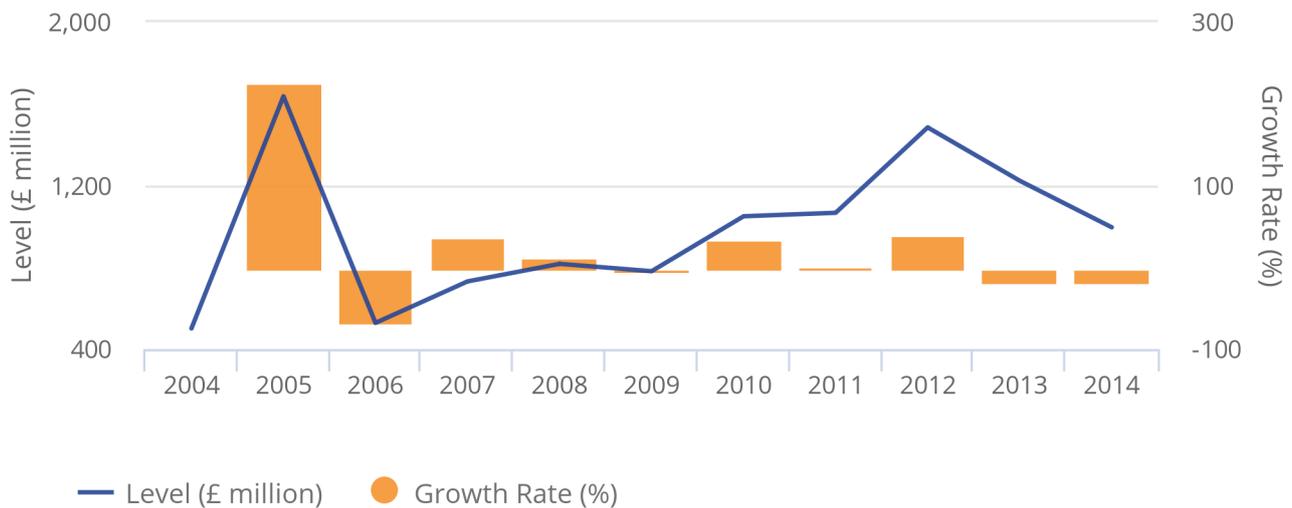
Capex estimates of net investment in mineral exploration in current prices are shown in figure 1c. In 2014, annual net investment in mineral exploration by the extraction of crude petroleum and natural gas industry fell by 18.7% to £1.0 billion; this is the second consecutive annual fall, and the steepest annual fall since 2006. Total net investment for all assets within the same industry fell by 0.3% between 2013 and 2014 to £12.2 billion. In Quarter 4 (Oct to Dec) 2014, total net investment by the industry fell by 7.4% to £3.0 billion (Capex, current prices, not seasonally adjusted).

**Figure 1c: Annual levels and growth rates of net investment in mineral exploration (Capex benched to ABS), current prices**

Coverage: UK

Figure 1c: Annual levels and growth rates of net investment in mineral exploration (Capex benched to ABS), current prices

Coverage: UK



Source: Quarterly Survey of Capital Expenditure - Office for National Statistics

The weak investment in this asset was also noted by the [Agents' Summary of Business Conditions for December](#), which reported that UK oil and gas investment had shown tentative signs of weakening due to falling oil prices and high exploration costs, partly arising because of the reduction of oil reserves in the North Sea. As a consequence of this latter effect, the output of this industry has been on a long term downwards trend. The [Index of Production for January](#) shows that oil and gas extraction fell by 2.4% in 2014.

The data used in this analysis, including a full breakdown of net investment by industry sector and asset, can be found at: [Net investment by industry sector and asset, from the Quarterly Survey of Capital Expenditure \(Capex\) estimates, benched to the Annual Business Survey, Quarter 1 \(Jan to Mar\) 1997 to Quarter 4 \(Oct to Dec\) 2014.](#)

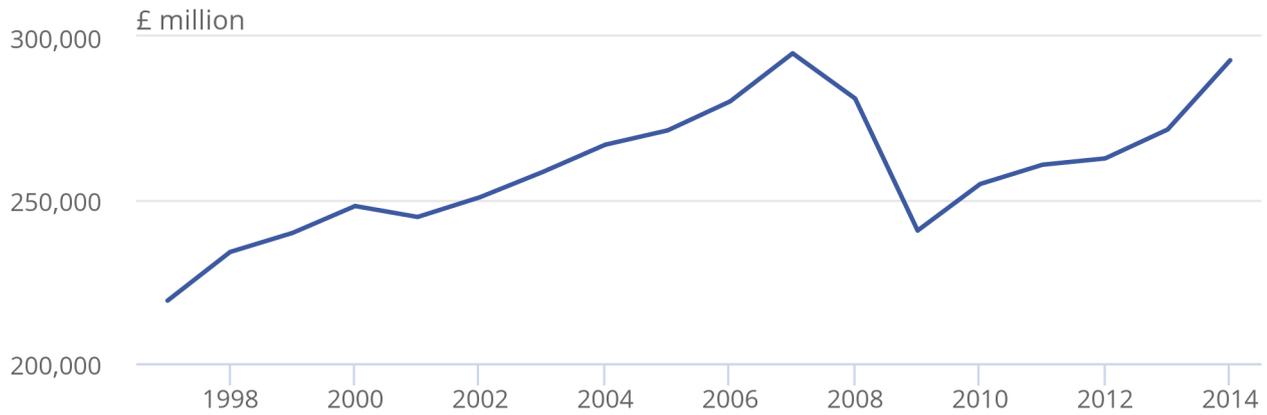
## 6 . Gross fixed capital formation and business investment

Figure 2: Annual gross fixed capital formation chained volume measures

Reference year: 2011, Coverage: UK

Figure 2: Annual gross fixed capital formation chained volume measures

Reference year: 2011, Coverage: UK



Source: Quarterly Survey of Capital Expenditure - Office for National Statistics

**Figure 3: Quarterly gross fixed capital formation chained volume measures**

Reference year: 2011, Seasonal adjustment: seasonally adjusted, Coverage: UK

**Figure 3: Quarterly gross fixed capital formation chained volume measures**

Reference year: 2011, Seasonal adjustment: seasonally adjusted, Coverage: UK



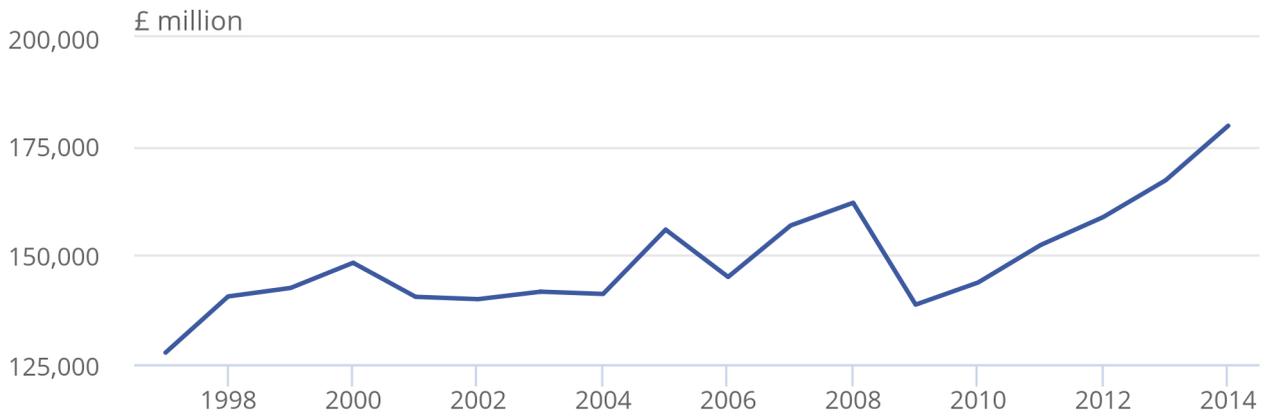
Source: Quarterly Survey of Capital Expenditure - Office for National Statistics

**Figure 4: Annual business investment chained volume measures**

Reference year: 2011, Coverage: UK

Figure 4: Annual business investment chained volume measures

Reference year: 2011, Coverage: UK



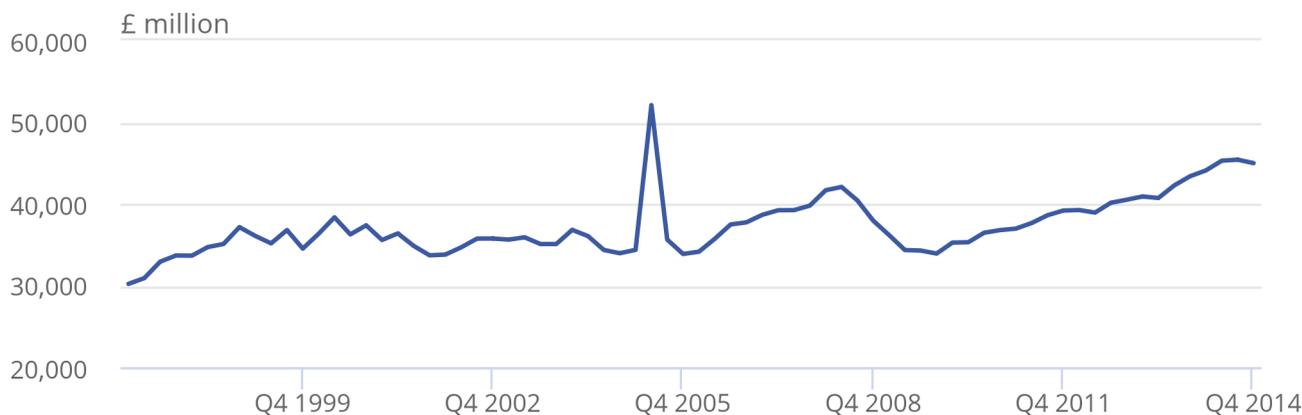
Source: Quarterly Survey of Capital Expenditure - Office for National Statistics

## Figure 5: Quarterly business investment chained volume measures

Reference year: 2011, Seasonal adjustment: seasonally adjusted, Coverage: UK

### Figure 5: Quarterly business investment chained volume measures

Reference year: 2011, Seasonal adjustment: seasonally adjusted, Coverage: UK



Source: Quarterly Survey of Capital Expenditure - Office for National Statistics

Figure 5 shows a large spike in business investment Quarter 2 (Apr to June) 2005. This is due to the transfer of British Nuclear Fuels Ltd (BNFL). In April 2005, nuclear reactors were transferred from BNFL to the Nuclear Decommissioning Authority (NDA). BNFL is classified as a public corporation in National Accounts, while the NDA is a central government body. The business investment series includes investment by public corporations but not government spending, with the positive spike therefore reflecting the £15.6 billion transfer. More information on the transfer of BNFL can be found in the background notes under section 3, 'Further information on methodology'.

## 7 . Summary tables

Total GFCF decreased by an estimated £451m (0.6%) in Quarter 4 (Oct to Dec) 2014 compared with the previous quarter, but is still 5.1% higher than Quarter 4 (Oct to Dec) 2013. All sectors show positive growth of at least 3.0% compared with Quarter 4 (Oct to Dec) 2013. In Quarter 4 (Oct to Dec) 2014, net investment by general government saw the biggest increase compared with the previous quarter, rising by an estimated £173 million (1.7%). This was offset by an estimated decrease in business investment of £420 million (0.9%) and an estimated decrease in private sector dwellings of £199 million (1.4%).

**Table 2a: Total gross fixed capital formation by institutional sector**

	% change		£ million	
	Most recent quarter on previous quarter	Most recent quarter on a year earlier	Most recent level **	Level change from previous quarter
Gross fixed capital formation	-0.6	5.1	73,618	-451
Business investment	-0.9	3.7	44,967	-420
General government	1.7	9.7	10,372	173
Public corporations dwellings	-0.7	8.9	831	-6
Public corporations cost of ownership transfer on non-produced assets	-4.2	3.6	-114	5
Private sector dwellings	-1.4	6.6	13,873	-199
Private sector cost of ownership transfer on non-produced assets	-0.1	3.0	3,689	-4

Source: Office for National Statistics

Notes:

1. \*\* Series may not sum to totals due to rounding

Net investment in intellectual property products increased by an estimated £490 million (3.0%) in Quarter 4 (Oct to Dec) 2014, compared with the previous quarter. This was offset by a decrease in both transport equipment (£431 million, 12.1%) and ICT equipment and other machinery (£384 million, 2.2%) compared with Quarter 3 (July to Sept) 2014.

However, in 2014, net investment in ICT equipment and other machinery and equipment was at its highest annual level since 1997 (£67.7 billion), 14.8% higher than in 2013. Net investment in intellectual property products (IPP) was also at its highest annual level since 1997, at £66.0 billion, an increase of 4.5% since 2013. The largest component of this increase in IPP came from investment in software.

**Table 2b: Total gross fixed capital formation by asset**

	% change		£ million	
	Most recent quarter on previous quarter	Most recent quarter on a year earlier	Most recent level **	Level change from previous quarter
Gross fixed capital formation	-0.6	5.1	73,618	-451
Transport equipment	-12.1	-7.7	3,141	-431
ICT equipment and other machinery and equipment	-2.2	15.6	17,050	-384
Dwellings	-1.4	6.9	14,743	-205
Other buildings and structures and transfer costs	0.4	0.0	22,010	79
Intellectual property products	3.0	3.5	16,674	490

Source: Office for National Statistics

Notes:

1. \*\* Series may not sum to totals due to rounding

## 8 . Where to find more of our data

[Gross fixed capital formation by detailed industry and asset \(508 Kb Excel sheet\)](#) Detailed annual breakdown of gross fixed capital formation in current prices, chained volume measures, non-seasonally adjusted and seasonally adjusted for 1997 to 2013. Consistent with the UK Annual National Accounts (Blue Book) 2014.

[UK National Accounts \(Blue Book\) Chapter 9](#) Gross fixed capital formation by institutional sectors and assets, in current prices, chained volume measures, non-seasonally adjusted and seasonally adjusted. Annually from 1987 to 2014, total gross fixed capital formation data is available back to 1948. Quarterly from Quarter 1 (Jan to Mar) 1997 to Quarter 4 (Oct to Dec) 2014.

[Business investment by industry and asset](#) Detailed breakdown of business investment by industry and asset, in current prices, chained volume measures, non-seasonally adjusted and seasonally adjusted. Annually for 1997 to 2014 and quarterly for Quarter 1 (Jan to Mar) 1997 to Quarter 4 (Oct to Dec) 2014.

[UK Economic Accounts](#) Gross fixed capital formation by institutional sector in current prices, not seasonally adjusted and seasonally adjusted. Annually for 1997 to 2014 and quarterly for Quarter 1 (Jan to Mar) 1997 to Quarter 4 (Oct to Dec) 2014.

We also publish additional analyses of gross fixed capital formation, business investment, and the Quarterly Survey of Capital Expenditure, which have been created in response to ad hoc user requests. These are available to download free from our website. Below is a list of the most recent ad hoc requests, together with a link to the web pages from which they can be downloaded. Enquiries about ad hoc requests may be made to [gcf@ons.gsi.gov.uk](mailto:gcf@ons.gsi.gov.uk).

**Note: all datasets below have been updated from Quarter 1 (Jan to Mar) 1997 to be consistent with the UK Annual National Accounts (Blue Book) 2014.**

[Research and development price index for gross fixed capital formation \(33 Kb Excel sheet\)](#) This time series is derived from the Research and Development dataset and is based on actual current price values up to and including 2012, all periods subsequent have been forecast using X-13-ARIMA-SEATS. The base year for this analysis is 2005. This price index (deflator) is calculated using a weighted labour, capital and material prices and excludes a productivity adjustment. Data is consistent with Business Investment Quarter 4 (Oct to Dec) 2014 Revised Results.

[Regional gross fixed capital formation, 2000-2012 \(110 Kb Excel sheet\)](#) Regional gross fixed capital formation by industry sector at NUTS1 and NUTS2 regional breakdown levels. Annually from 2000 to 2012.

[Gross fixed capital formation quarterly weapons analysis \(181.5 Kb Excel sheet\)](#) Quarterly gross fixed capital formation data relating to spending on weapons systems. Quarter 1 (Jan to Mar) 1997 to Quarter 4 (Oct to Dec) 2014. Consistent with Business Investment Quarter 4 (Oct to Dec) 2014 Provisional Results.

[Private sector investment in computer hardware \(38 Kb Excel sheet\)](#) A time series of investment in computer hardware by the private sector broken down by industry; current price, not seasonally adjusted for Quarter 1 (Jan to Mar) 1997 to Quarter 4 (Oct to Dec) 2014. Consistent with Business Investment Quarter 4 (Oct to Dec) 2014 Provisional Results.

[Total business investment and general government data excluding British Nuclear Fuels Ltd \(BNFL\) in Quarter 2 \(Apr to June\) 2005 \(48 Kb Excel sheet\)](#) Gross fixed capital formation estimates for total business investment and general government, excluding British Nuclear Fuels Ltd (BNFL) in Quarter 2 (Apr to June) 2005; current price, chained volume measure, seasonally adjusted, not seasonally adjusted, for Quarter 1 (Jan to Mar) 1997 to Quarter 4 (Oct to Dec) 2014. Consistent with Business Investment Quarter 4 (Oct to Dec) 2014 Provisional Results.

[Quarterly capital expenditure and survey populations by employment size bands \(32.5 Kb Excel sheet\)](#) Estimates from the Quarterly Survey of Capital Expenditure broken down by employment size bands for manufacturing and non-manufacturing industries. A breakdown of survey populations by employment size bands is also included. Current price, not seasonally adjusted, for Quarter 1 (Jan to Mar) 2012 to Quarter 3 (July to Sept) 2014. Consistent with Business Investment Quarter 3 (July to Sept) 2014 Revised Results.

[Total gross fixed capital formation industry split for purchased software, own-account software, mineral exploration and artistic originals \(1.01 Mb Excel sheet\)](#) Gross fixed capital formation estimates for purchased software, own-account software, mineral exploration and artistic originals; current price, not seasonally adjusted, for Quarter 1 (Jan to Mar) 1997 to Quarter 4 (Oct to Dec) 2014. Consistent with Business Investment Quarter 4 (Oct to Dec) 2014 Provisional Results.

[Gross fixed capital formation asset 'private sector dwellings' broken down to its components 'dwellings new' and 'dwellings improvements' \(45.5 Kb Excel sheet\)](#) Gross fixed capital formation estimates for private sector new dwellings and private sector new dwellings and private sector improvements to dwellings; current price, chained volume measure, seasonally adjusted, for Quarter 1 (Jan to Mar) 1997 to Quarter 4 (Oct to Dec) 2014. Consistent with Business Investment Quarter 4 (Oct to Dec) 2014 Provisional Results.

[Gross fixed capital formation assets new dwellings \(excluding land\) and transfer costs of non-produced assets for households and non-profit institutions serving households sectors \(32 Kb Excel sheet\)](#) Gross fixed capital formation data for new dwellings (excluding land) and costs associated with the transfer of non-produced assets for the households and non-profit institutions serving households sector. The series is in current price, not seasonally adjusted terms, for Quarter 1 (Jan to Mar) 1997 to Quarter 3 (July to Sept) 2014. Consistent with Business Investment Quarter 3 (July to Sept) 2014 Revised Results.

[Capital expenditure \(Capex\) investment made by energy industries \(35.5 Kb Excel sheet\)](#) Total net (acquisitions less disposals) investment by industry for energy industries in current price, not seasonally adjusted terms, for Quarter 1 (Jan to Mar) 2006 to Quarter 3 (July to Sept) 2014. Consistent with Business Investment Quarter 3 (July to Sept) 2014 Revised Results.

[Quarterly capital expenditure estimates, by industry sector and sizeband \(131.5 Kb Excel sheet\)](#) Quarterly estimates from the Quarterly Survey of Capital Expenditure, net expenditure, current prices, not seasonally adjusted for Quarter 1 (Jan to Mar) 2011 to Quarter 3 (July to Sept) 2014. Consistent with Business Investment Quarter 3 (July to Sept) 2014 Revised Results.

[Net investment by industry sector and asset from the quarterly survey of capital expenditure \(107 Kb Excel sheet\)](#) Quarterly estimates from the Quarterly Survey of Capital Expenditure, bench marked to the Annual Business Survey results for net investment by asset and industry sector. Current prices, not seasonally adjusted, for Quarter 1 (Jan to Mar) 1997 to Quarter 4 (Oct to Dec) 2014. Consistent with Business Investment Quarter 4 (Oct to Dec) 2014 Provisional Results.

## 9. Background notes

## 1. Understanding the data

### Short guide to business investment

Gross fixed capital formation (GFCF) is used in the compilation of the UK national accounts' expenditure measure of the second estimate of Gross Domestic Product ([GDP](#)) at month 2 and the Quarterly National Accounts ([QNA](#)) at each calendar quarter. It is an estimate of net capital expenditure by both the public and private sectors. Examples of capital expenditure include spending on machinery and plant, transport equipment, software, new dwellings and other buildings, and major improvements to existing buildings, and structures such as roads. The additional assets research and development and military weapons systems were introduced in the Quarter 2 (Apr to June) 2014 Revised Results release, consistent with the European System of Accounts 2010, and with the UK Annual National Accounts (Blue Book) 2014, published October 2014.

Business investment estimates are a short term indicator of net capital expenditure by businesses within the UK, at current prices and constant prices both seasonally and not seasonally adjusted. Business investment is a component of GFCF. Business investment estimates exclude expenditure on dwellings and the costs associated with the transfer of ownership of non-produced assets, and capital expenditure by local and central government.

### Interpreting the data

When making comparisons it is recommended that users focus on chained volume, seasonally adjusted estimates, as these show underlying movements rather than seasonal movements, and have the effect of changes in prices removed.

### Definitions and explanations

**Current price (CP)** Current prices are the actual or estimated recorded monetary value over a defined period. They show the value for each item expressed in terms of the prices of that period.

**Deflation and chained volume measure (CVM)** Investment is measured across several time periods. The values measured will include both the change in the volume of investment and the effect of the change of prices over the period. Deflation is the process whereby the effect of price change is removed from a set of values.

Deflation can be done simply by dividing a current price estimate by a deflator, which measures the movement in prices. Doing this creates a constant price series. For deflators to accurately measure the movement in prices they need to accurately reflect changing investment habits. We do this by rebasing deflators.

Rebasing deflators has a significant effect on a constant price series and would cause significant revisions to the investment data. To avoid this it has been the standard to not rebase deflators annually. This, however, means the deflators are not accurately measuring price changes.

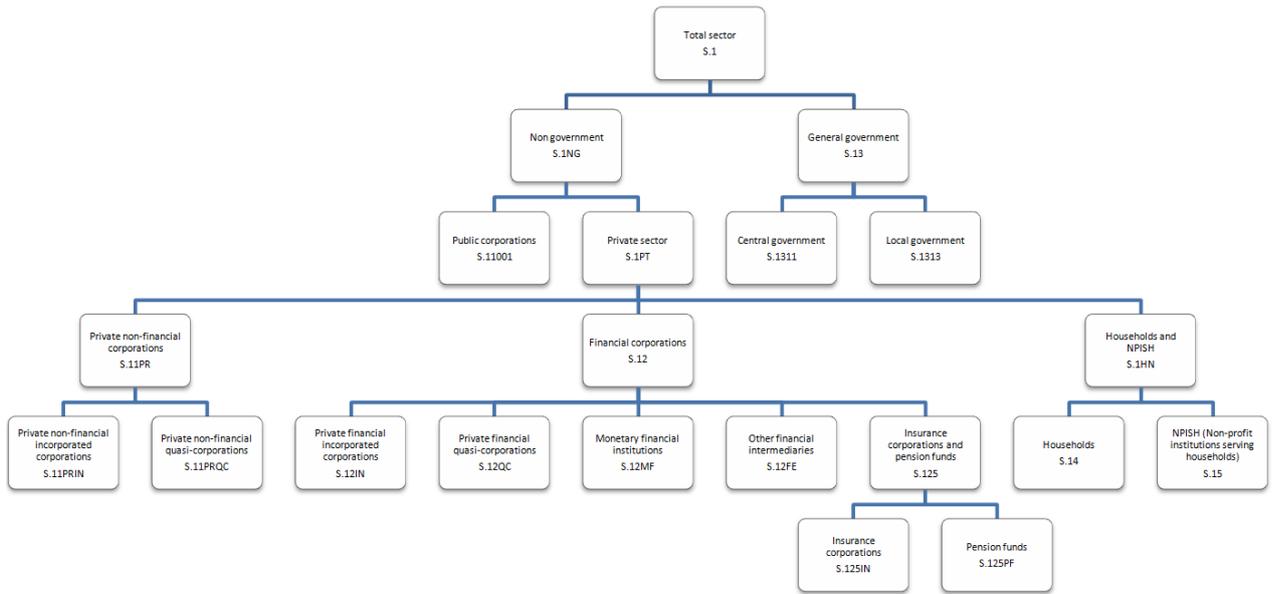
To resolve this we estimate volumes using chained volume measures, which are derived by linking together (compounding) movements in volumes; calculated using the prices of the previous financial year; and applying the movements to the current price estimates of the reference year. This allows us to remove both the effect of prices and rebasing.

**Seasonally adjusted (SA)** Seasonal adjustment aids interpretation by removing effects associated with the time of the year or the arrangement of the calendar, which could obscure movements of interest.

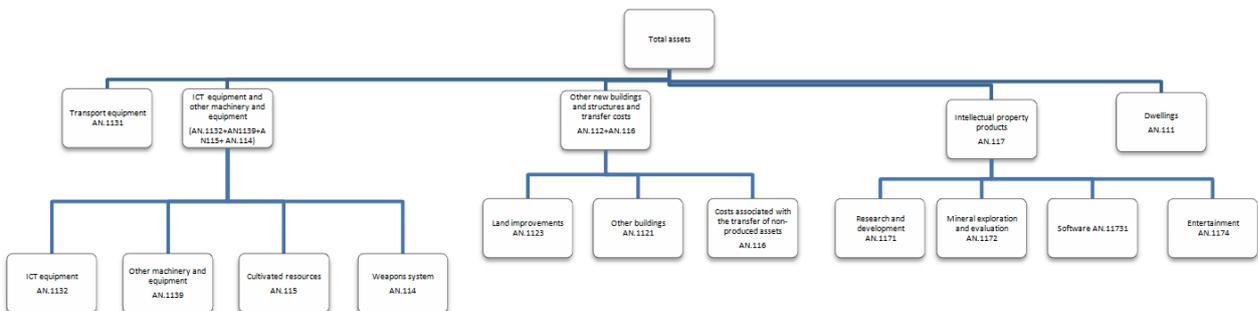
**Asset and sector hierarchies** The diagrams show the institutional and sector hierarchies for GFCF, as set out by the European system of Accounts 2010. The asset hierarchy for business investment is also set out. Business investment is not an internationally defined concept, and the UK's estimates can't be compared with those of other countries due to definitional differences.

## Institutional sector hierarchy

Business investment is solely non-government, S.1NG

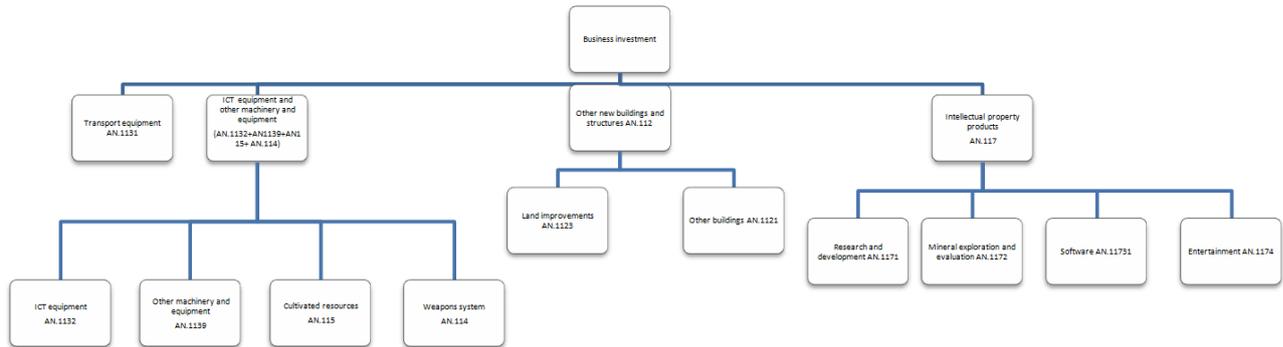


## Gross fixed capital formation asset hierarchy



## Business investment by asset

Business investment is not an international definition, and international comparisons are not possible



## Use of the data

Business investment estimates are used in the [compilation of the UK National Accounts](#), and by the Bank of England and Her Majesty's Treasury to monitor economic performance and inform monetary and fiscal policy decisions. Business investment is also used by other government departments, such as the Department for Business, Innovation and Skills. In addition, these estimates are frequently used by the business, education and research communities, the media and the general public.

## 2. Methods

Details of the business investment methodology are published in the [Quality and Methodology Information \(287.8 Kb Pdf\)](#). This report describes the intended uses of the estimates presented in this publication, their general quality and the methods used to produce them.

### Composition of the data

Estimates of GFCF and business investment are produced twice each quarter: an early provisional estimate in month 2 and revised estimates in month 3. The largest component of the estimates is collected via the Quarterly Survey of Capital Expenditure. This survey collects data on the acquisition and disposal of capital assets from the manufacturing, other production, construction, distribution and other services sectors. Other key sources for GFCF include data returned by local and central government and public corporations, data on construction, data on new dwellings and improvements to dwellings, and artistic originals. GFCF by local and central government, investment in new dwellings and the costs associated with the transfer of non-produced assets (primarily costs associated with the transfer of land and existing buildings) are excluded from the business investment estimates, but included in total GFCF. The acquisition and disposal of land and existing buildings, including dwellings, is excluded from both the business investment and GFCF estimates.

More information about the Quarterly Survey of Capital Expenditure can be found in the [Summary Quality Report for Quarterly Capital Expenditure Inquiry \(287.8 Kb Pdf\)](#).

### 3. Further information on methodology

Further information about the UK National Accounts and the programme of continuous improvement can be found at:

[National Accounts methodology and articles](#)

[Continuous Improvement of Gross Domestic Product: Sources, Methods and Communication](#)

#### British Nuclear Fuels Ltd (BNFL)

In April 2005 nuclear reactors were transferred from British Nuclear Fuels Ltd (BNFL) to the Nuclear Decommissioning Authority (NDA). BNFL is classified as a public corporation in National Accounts and the NDA as a central government body. The capital formation estimates in this release reflect this transfer from the public corporations manufacturing category. The value of the transfer was negative £15.6 billion. The negative value reflects the fact that the reactors are at the end of their productive lives and have large decommissioning and clean-up liabilities. This shows up as a prominent trough in Quarter 2 (Apr to June) 2005 in the general government series, and a complementary peak in Quarter 2 (Apr to June) 2005 of the business investment series, which includes investment by public corporations (except dwellings and transfer costs). A more detailed explanation about the transfer can be found in the [December 2006 Business Investment release \(414.3 Kb Pdf\)](#).

#### Aircraft imports

On 1 January 2011 a change was made to the 0-rating of VAT on qualifying aircraft. More information on this can be found on the [HMRC website](#). This may have contributed to the high level of aircraft imports for Quarter 4 (Oct to Dec) 2010 and the low level of aircraft imports for Quarter 1 (Jan to Mar) 2011.

### 4. Other relevant sources of data

International business investment comparisons are not available on a like-for-like basis as the compilation of European statistics on business investment differs from the data provided within this release. However, European estimates of business investment provided by Eurostat, the European statistical office can be found on the [Eurostat website](#).

Business investment in the UK accounts for over half of total GFCF.

The [GSS Business Statistics – interactive user guide](#) is an interactive tool to help you find what business and economic statistics are available, and choose the right data for your needs.

We publish the following statistical releases, which provide complementary information on UK business and economic performance:

- [Profitability of UK Companies](#) - quarterly data on capital employed by Private Non-Financial Corporation's (PNFCs), contains annual, net and gross rates of return (expressed as percentages) on capital used by PNFCs
- [Quarterly National Accounts](#) - includes UK data on GFCF and changes in inventories
- [UK Economic Accounts](#) - quarterly detailed estimates of national product, income and expenditure, UK sector accounts and UK balance of payments, including data on GFCF
- [UK National Accounts - The Blue Book](#) - annual publication of the UK National Accounts, including data on GFCF
- [Retail Sales](#) - monthly estimate of UK retail sales
- [UK Manufacturers' Sales by Product \(PRODCOM\)](#) - annual output by manufacturers
- [Labour Market Statistics](#) - monthly data on employment, unemployment, economic inactivity, claimant count, average earnings, labour productivity, vacancies and labour disputes
- [Business Demography](#) – annual statistics on UK business births, deaths and survival

## 5. Feedback

We welcome your feedback on the business investment release and data. Further enquiries about business investment can be addressed to the business investment team at [gcf@ons.gsi.gov.uk](mailto:gcf@ons.gsi.gov.uk). To engage in discussion about business investment, and to share information with other users or producers of financial and economic statistics, visit the Financial and Economic Statistics User Group on the Royal Statistical Society's [StatsUserNet](#) discussion forum.

## 6. Publication policy

Details of the policy governing the release of new data are available from the [Statistics Authority](#) or from the Media Relations Office email: [media.relations@ons.gsi.gov.uk](mailto:media.relations@ons.gsi.gov.uk). A [list of the names](#) of those given pre-publication access to the contents of this bulletin is also available.

## 7. Accessing data

The business investment statistical bulletin conforms to the standards set out in the [UK Statistics Authority Code of Practice](#).

Time series used in this bulletin and time series datasets carry unique identifiers for ease of use. More information on these identifiers is available in the article, [New series identifiers for GDP\(O\), IoS and IoP and GCF \(35.4 Kb Pdf\)](#), published on 25 August 2011.

## 8. Code of Practice for Official Statistics:

**National Statistics** are produced to high professional standards set out in the [Code of Practice for Official Statistics](#). They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from any political interference. © Crown copyright 2015.

## 9. Next publication:

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