## Statistical bulletin

## Retail sales, Great Britain: August 2015

A first estimate of retail sales in volume and value terms, seasonally and non-seasonally adjusted.

Contact:
Kate Davies
retail.sales.enquiries@ons.gsi. gov.uk
+44 (0)1633 455602

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## Table of contents

1. Main points
2. About this release
3. Main figures
4. Sector summary
5. Internet sales in detail
6. Focus on large and small businesses
7. Contributions to growth
8. Distribution analysis
9. Economic context
10. International data
11. Background notes

## 1. Main points

- Continuing a sustained period of year-on-year growth, the volume of retail sales in August 2015 is estimated to have increased by $3.7 \%$ compared with August 2014. This was the 29th consecutive month of year-on-year growth
- The underlying pattern in the data, as suggested by the 3 month on 3 month movement in the quantity bought, showed growth for the 30th consecutive month, increasing by $0.4 \%$
- Compared with July 2015, the quantity bought in the retail industry is estimated to have increased by $0.2 \%$
- Average store prices (including petrol stations) fell by $3.3 \%$ in August 2015 compared with August 2014; the 14th consecutive month of year-on-year price falls
- The amount spent in the retail industry increased by $0.2 \%$ in August 2015 compared with August 2014, but decreased by $0.3 \%$ compared with July 2015
- The value of online sales increased by $7.4 \%$ in August 2015 compared with August 2014, but decreased by $2.7 \%$ compared with July 2015
- Revisions in this release were caused by the incorporation of late data. The earliest revisions point for current price, non-seasonally adjusted data was August 2014. More information on revisions can be found in the background notes


## 2. About this release

This bulletin presents estimates of the quantity bought (volume) and amount spent (value) in the retail industry for the period 2 August 2015 to 29 August 2015, thus the August Bank Holiday is not included within this release. Unless otherwise stated, the estimates in this release are seasonally adjusted.

The estimates in this release are based on a monthly survey of 5,000 retailers, including all large retailers employing 100 people or more and those with annual turnover of greater than $£ 60$ million who employ 10 to 99 people. It is estimated that this survey covers approximately $95 \%$ of all known retail turnover in Great Britain.

## The quality of the estimate of retail sales

Retail sales estimates are produced from the monthly business survey - Retail Sales Inquiry (RSI). The timeliness of these retail sales estimates, which are published just 3 weeks after the end of each month, makes them an important early economic indicator. The industry as a whole is used as an indicator of how the wider economy is performing and the strength of consumer spending. Results are revised for the previous 13 published periods. More information about the data content for this release can be found in the background notes.

Revisions are an inevitable consequence of the trade-off between timeliness and accuracy. The response rate in August 2015 was $59.8 \%$ of questionnaires, accounting for $92.5 \%$ of registered turnover in the retail industry. Therefore, the estimate is subject to revisions as more data become available.

All estimates, by definition, are subject to statistical uncertainty and for the retail sales index we publish the standard error associated with the non-seasonally adjusted estimates of year-on-year and month-on-month growth in the quantity bought as a measure of accuracy. More information on these standard errors can be found in the background notes and in the quality tables of this release.

We are continually working on methodological changes to improve the accuracy of the retail sales estimates; progress on these can be found on the continuous improvement page.

The reference tables offer different ways to access the data, they include:

- non-seasonally adjusted and seasonally adjusted volume and value indexes by industry
- year-on-year and month-on-month growth rates by industry


## 3 . Main figures

Table 1: All retailing, August 2015 (seasonally adjusted percentage change)

Great Britain

$$
\begin{array}{cccc}
\text { Most recent month } & \text { Most recent } 3 \text { months } & \text { Most recent month } & \text { Most recent } 3 \text { months on } \\
\text { on a year earlier } & \text { on a year earlier } & \text { on previous month } & \text { previous } 3 \text { months }
\end{array}
$$

| Value (amount <br> spent) | 0.2 | 0.8 | -0.3 | 0.3 |
| :--- | :--- | :--- | :--- | :--- |
| Volume (quantity <br> bought) | 3.7 | 4.0 | 0.2 | 0.4 |
| Value excluding <br> automotive fuel <br> Volume excluding <br> automotive fuel | 1.1 | 1.6 | -0.2 | 0.2 |

Source: Office for National Statistics

## At a glance

In August 2015, the quantity bought in the retail industry (volume):

- increased by 3.7\% compared with August 2014
- increased by 0.2\% compared with July 2015

The amount spent (value):

- increased by 0.2\% compared with August 2014
- decreased by 0.3\% compared with July 2015

Non-seasonally adjusted data show that the prices of goods sold in the retail industry (as measured by the implied price deflator) decreased by $3.3 \%$.

More information on how the implied price deflator and other estimates in this release are calculated can be found in section 3 of the background notes.

## Amount spent in the retail industry

In the 4 week reporting period during August 2015, the amount spent in the retail industry was $£ 27.4$ billion (nonseasonally adjusted).

This compares with:

- £28.5 billion in the 4 week reporting period for July 2015
- £27.5 billion in the 4 week reporting period for August 2014

This equates to an average weekly spend of:

- £6.9 billion in August 2015, compared with
- £7.1 billion in July 2015
- £6.9 billion in August 2014

You should note that the August Bank Holiday in 2015 is not included in this standard trading period but was included in the August 2014 figures.

## 4 . Sector summary

## Main points:

- in August 2015, all store types showed increases in the quantity bought compared with August 2014
- all store types except predominantly food stores and petrol stations showed increases in the amount spent year-on-year
- in August 2015, all store types saw falls in average store price compared with August 2014 the largest decrease was once again reported by petrol stations, which fell by $12.3 \%$, the 24 th month of consecutive year-on-year falling prices in this store type and the longest run of consecutive year-on-year falls since consistent records began in 1996

Table 2: Sector summary, August 2015
Great Britain

|  | Percentage change over 12 months |  |  | Average weekly sales ( $£$ billion) |
| :---: | :---: | :---: | :---: | :---: |
|  | Quantity bought (volume) | Amount spent (value) | Average store price |  |
| Predominantly food stores ${ }^{1}$ | 0.8 | -1.3 | -2.1 | 2.8 |
| Predominantly non-food stores ${ }^{2}$ | 3.9 | 1.6 | -2.1 | 2.9 |
| Non-specialised stores ${ }^{3}$ | 3.3 | 1.0 | -2.2 | 0.6 |
| Textile, clothing and footwear stores | 1.9 | 1.8 | -0.2 | 0.9 |
| Household goods stores | 4.7 | 2.1 | -2.4 | 0.6 |
| Other stores | 5.6 | 1.5 | -3.6 | 0.9 |
| Non-store retailing | 15.5 | 11.8 | -3.2 | 0.5 |
| Fuel stores | 5.0 | -7.9 | -12.3 | 0.7 |
| Total | 3.7 | 0.2 | -3.3 | 6.9 |

Source: Office for National Statistics
Notes:

1. Supermarkets, specialist food stores and sales of alcoholic drinks and tobacco
2. Non-specialised stores, textiles, clothing and footwear, household goods and other stores
3. Department stores

## 5 . Internet sales in detail

Seasonally adjusted internet sales data are published in the RSI Internet tables and include:

- a seasonally adjusted value index
- year-on-year and month-on-month growth rates

Internet sales are estimates of how much was spent online through retailers across all store types in Great Britain. The reference year is $2011=100$.

## Main points:

- average weekly spending online in August 2015 was $£ 800.0$ million; this was an increase of $7.4 \%$ compared with August 2014, the lowest increase in this measure since November 2012
- the amount spent online accounted for $12.2 \%$ of all retail spending, excluding automotive fuel, compared with 11.5\% in August 2014
- Table 3 shows the year-on-year growth rates for total Internet sales by sector and the proportion of sales made online in each retail sector


## Table 3: Summary of internet statistics for August 2015

## Great Britain

\(\left.$$
\begin{array}{lrr}\hline \text { Category } & \begin{array}{r}\text { Year-on-year } \\
\text { growth }\end{array}
$$ \& Proportion of total sales made <br>

online\end{array}\right]\)| 12.2 |  |  |
| :--- | ---: | ---: |
| All retailing | 7.4 | 4.2 |
| All food | 10.9 | 9.3 |
| All non-food | 5.4 | 10.7 |
| Department stores | 2.8 | 12.9 |
| Textile, clothing and footwear | 12.4 | 6.7 |
| stores |  | 6.4 |
| Household goods stores | -7.6 | 6.4 |
| Other stores | 7.8 | 69.4 |
| Non-store retailing |  |  |

Source: Office for National Statistics

## 6 . Focus on large and small businesses

Figure 1: Amount spent, (non-seasonally adjusted) all retailing, excluding automotive fuel, large and small businesses

Great Britain, January 2010 to August 2015

Figure 1: Amount spent, (non-seasonally adjusted) all retailing, excluding automotive fuel, large and small businesses

Great Britain, January 2010 to August 2015

## 160

Index 2011=100



Source: Monthly Business Survey - Retail Sales Inquiry - Office for National Statistics

## Source: Monthly Business Survey - Retail Sales Inquiry - Office for National Statistics

Figure 1 shows the longer-term picture of the amount spent in both large and small businesses, all retailing, excluding fuel. The pattern of spending in both large and small businesses is fairly consistent. Looking at a year-on-year comparison of these data we are able to see that both small and large businesses increased by $0.9 \%$ in August 2015 compared with August 2014.

Table 4 shows the year-on-year growth in large and small businesses for each store type. In August 2015 all store types except predominantly food stores and other stores reported growth in small businesses. Within large businesses we saw falls in predominantly food stores, textile, clothing and footwear and household goods stores, however, small businesses within textile, clothing and footwear and household goods stores saw growth of $15.0 \%$ and $8.9 \%$ respectively compared with August 2014.

Table 4: Summary of growth in small and large businesses by sector, non-seasonally adjusted (August 2015 compared with August 2014)

Great Britain, August 2015
Percentage change over 12 months

|  | Large Small Businesses <br> Businesses |  |
| :--- | ---: | ---: |
| Predominantly food stores | -1.2 | -2.6 |
| Predominantly non-food stores | 1.3 | 2.5 |
| Department stores | 0.8 | 3.8 |
| Textile, clothing \& footwear | -0.4 | 15.0 |
| stores | -0.9 |  |
| Household goods stores | 6.7 | 8.9 |
| Other stores | 17.0 | -4.3 |
| Non-store retailing | 0.9 | 1.8 |
| Total (excluding automotive fuel) |  | 0.9 |

Source: Office for National Statistics

Feedback suggests that the increase in the amount spent in small textile, clothing and footwear businesses was a result of increased sales of school uniform.

## 7. Contributions to growth

The retail industry is divided into 4 retail sectors:

- predominantly food stores (for example, supermarkets, specialist food stores and sales of alcoholic drinks and tobacco)
- predominantly non-food stores (for example, non-specialised stores, such as department stores, textiles, clothing and footwear, household goods and other stores)
- non-store retailing (for example, mail order, catalogues and market stalls)
- stores selling automotive fuel (petrol stations)

In August 2015, for every pound spent in the retail industry:

- 41 pence was spent in food stores
- 42 pence in non-food stores
- 7 pence in non-store retailing
- 10 pence in stores selling automotive fuel

Using these as weights, along with the year-on-year growth rates, we can calculate how each sector contributed to the total year-on-year growth in the quantity bought.

Figures 2 and 3 show the contribution of each sector to the quantity bought (volume) and amount spent (value) in the retail industry between August 2015 and August 2014.

Figure 2: Contributions to year-on-year volume growth from the 4 main retail sectors (August 2015 compared with August 2014)

## Great Britain

Figure 2: Contributions to year-on-year volume growth from the 4 main retail sectors (August 2015 compared with August 2014)

Great Britain



Source: Monthly Business Survey - Retail Sales Inquiry - Office for National Statistics

Source: Monthly Business Survey - Retail Sales Inquiry - Office for National Statistics

In August 2015, all 4 main retail sectors saw an increase in the quantity bought (volume). The largest contribution came from the non-food stores sector.

Figure 3: Contributions to year-on-year value growth from the 4 main retail sectors (August 2015 compared with August 2014)

## Great Britain

Figure 3: Contributions to year-on-year value growth from the 4 main retail sectors (August 2015 compared with August 2014)

Great Britain


Source: Monthly Business Survey - Retail Sales Inquiry - Office for National Statistics

Source: Monthly Business Survey - Retail Sales Inquiry - Office for National Statistics

In August 2015, 2 out of the 4 main sectors (non-store retailing and non-food stores) contributed to the increase in amount spent (value). The largest contribution came from the non-store retailing sector.

## 8 . Distribution analysis

Table 5 shows how sales varied among different-sized retailers. It shows the distribution of reported change in sales values of businesses (from the RSI sample), ranked by size of business (based on number of employees). Businesses with 10 to 39 employees saw the largest growth in the amount spent in August 2015 compared with August 2014 (9.3\%). Businesses with 100 and over employees showed no growth.

Table 5: Change in reported retail sales values between August 2015 and August 2014
Great Britain

| Number of employees | Weights (\%) | Growth since August 2014 (\%) |
| :--- | ---: | ---: |
| 100 and over | 77.2 | 0.0 |
| 40 to 99 | 2.8 | -0.2 |
| 10 to 39 | 6.7 | 9.3 |
| 0 to 9 | 13.3 | 4.9 |

Source: Office for National Statistics
Notes:

1. The table contains information only from businesses that reported in August 2014 and August 2015; it shows reported actual changes in their sales
More information on the performance of the retail industry by store type and size can be found in the Business Analysis reference table.

## 9 . Economic context

Figure 4: 3 month on 3 month a year earlier growth in the volume of retail sales, 3 months to August 2006 to 3 months to August 2015

## Great Britain

Figure 4: 3 month on 3 month a year earlier growth in the volume of retail sales, 3 months to August 2006 to 3 months to August 2015


Source: Monthly Business Survey - Retail Sales Inquiry - Office for National Statistics

Source: Monthly Business Survey - Retail Sales Inquiry - Office for National Statistics

Figure 4 compares a rolling 3 month period with the same period in the previous year and highlights that retail sales started to grow strongly from mid 2013. However, over the last 5 months the rate of growth is shown to have slowed consistently.

Three distinct periods emerge from Figure 4. Between August 2006 and July 2008, retail sales volumes were experiencing continuous growth, although to a different degree, with the volume of sales increasing by $2.4 \%$ over the period as a whole. Growth in inflation (Consumer Prices Index (CPI)) was lower than average weekly earnings over most of this period; this resulted in rising real earnings, an indicator of the purchasing power of consumers.

However, between August 2008 and May 2013, the volume of retail sales fluctuated between periods of contraction and expansion, and as a result broadly the same volume of sales were recorded toward the beginning and end of the period. This weakness may be partly explained by the economic climate during this time. Growth in average weekly earnings was lower than inflation over most of the period, which implies that earnings fell in real terms. However, the value of retail sales continued to grow, increasing by $12.8 \%$ over the period, reflecting rising prices between these dates.

The third period shown in Figure 4 started in June 2013, when growth in volume terms began to increase notably, despite average weekly earnings growing mostly at a slower rate than CPI until September 2014. In 2013 prices in retail outlets began to fall and this accelerated throughout 2014 and coincided with increased growth in the volume of retail sales over this period. In addition, this upturn in spending has been accompanied by a decline in the savings ratio, from an average of $8.5 \%$ over the period 2008 to 2012 , to an average of $6.2 \%$ over the period 2013 to 2014.

A notable feature of the retail industry has been the recent decline in prices (as measured by the retail sales implied deflator(see background note 3)). The 12 month growth rate in the implied deflator has been negative since July 2014.

Figure 5 shows that the fall in the prices of all retail sales has been reflected in the 4 main retail sectors to a different extent. The biggest fall in prices was observed in "predominantly automotive fuel stores", coinciding with the recent fall in oil prices and subsequently petrol prices. In contrast, "predominantly non-food stores" showed the smallest decrease in prices.

Figure 5: 12 month growth rate in the implied deflators for the 4 main retail sectors

## Great Britain

Figure 5: 12 month growth rate in the implied deflators for the 4 main retail sectors

Great Britain



## Source: Monthly Business Survey - Retail Sales Inquiry - Office for National Statistics

Figure 6 shows that the fall in prices for the 4 main retail sectors coincided with increases in the volume of sales in these 4 sectors. Although "predominantly automotive fuel stores" have seen the biggest fall in prices, the increase in the volume of sales for this retail grouping has been relatively small (7.3\% since January 2013). However, "non-store retailing", which are those companies that sell predominantly online or through mail order, saw the fastest increase in sales' volumes ( $40 \%$ since January 2013) despite the fall in the prices of this sector being less pronounced, showing the growth in Internet-only retailing.

Figure 6: Volume of sales of the 4 main retail sectors, 2013 to 2015

## Great Britain

# Figure 6: Volume of sales of the 4 main retail sectors, 2013 to 2015 

Great Britain



90
February 2013
August 2013
February 2014
August 2014
February 2015
August 2015

> - Predominantely food stores - Predominantly non-food stores
> - Non-store retailing - Predominantely automotive fuels stores Source: Monthly Business Survey - Retail Sales Inquiry - Office for National Statistics

## Source: Monthly Business Survey - Retail Sales Inquiry - Office for National Statistics

## 10 . International data

The only international estimate of retail sales available for August 2015 was published by the US Census Bureau on 15 September 2015. In its advanced retail sales estimates for September 2015, the amount spent in the US retail industry, including motor vehicles and parts and food services, increased by $0.2 \%$ from the previous month and increased by $2.2 \%$ compared with August 2014. Total sales for the 3 months to August 2015 were up 2.2\% from the same period a year ago.

The latest estimates of the volume of retail trade across the European Union, from Eurostat for July 2015, show a $0.4 \%$ increase in the euro area (EA19) and a $0.3 \%$ increase in the EU28 when compared with June 2015. Compared with July 2014, the retail sales index increased by $2.7 \%$ in the EA19 and by $3.3 \%$ in the EU28. Note that an accurate comparison cannot be made as Eurostat data are calculated on a $2010=100$ basis, while data for Great Britain are calculated on a $2011=100$ basis.

## 11. Background notes

## 1. Future improvements

Estimates for September 2015 published on 22 October 2015 will incorporate a rebasing and referencing of the indices to 2012=100 to align with the National Accounts outputs. This change will result in changes to the level of retail sales but growth rates should be maintained.

Estimates for September 2015 will also incorporate the results of the annual seasonal adjustment review.

## 2. Understanding the data

1. Quick Guide to the Retail Sales Index

## 2. Interpreting the data

- The Retail Sales Index (RSI) is derived from a monthly survey of 5,000 businesses in Great Britain. The sample represents the whole retail sector and includes the 900 largest retailers and a representative panel of smaller businesses. Collectively all of these businesses cover approximately $90 \%$ of the retail industry in terms of turnover
- The RSI covers sales only from businesses classified as retailers according to the Standard Industrial Classification 2007 (SIC 2007), consistent with the international NACE Rev 2 classification of industries. The retail industry is division 47 of the SIC 2007 and retailing is defined as the sale of goods to the general public for household consumption. Consequently, the RSI includes all internet businesses whose primary function is retailing and also covers internet sales by other British retailers, such as online sales by supermarkets, department stores and catalogue companies. The RSI does not cover household spending on services bought from the retail industry as it is designed to only cover goods. Respondents are asked to separate out the non-goods elements of their sales, for example, income from cafes. Consequently, online sales of services by retailers, such as car insurance, are also excluded
a. The monthly survey collects 2 figures from each sampled business: the total turnover for retail sales for the standard trading period, and a separate figure for internet sales. The total turnover will include internet sales. The separation of the internet sales figure allows an estimate relating to internet sales to be calculated.


## 3. Definitions and explanations

- The value or current price series records the growth of the value of sales "through the till" before any adjustment for the effects of price changes
- The volume or constant price series are created by removing the effect of price changes from the value series. The Consumer Prices Index (CPI) is the main source of the information required on price changes. In brief, a deflator for each type of store ( 5 -digit SIC) is derived by weighting together the CPI components for the appropriate commodities, the weights being based on the pattern of sales in the base year. These deflators are then applied to the value data to produce volume series
- The implied deflator or the estimated price of goods is derived by dividing the non-seasonally adjusted value and volume data to leave a price relative. In general, this implied price deflator should be quite close to the retail component of the CPI. More information on the implied price deflator can be found in the Quick Guide to Retail Sales (195 Kb Pdf)


## 4. Use of the data

The value and volume measures of retail sales estimates are widely used in private and public sector organisations, both domestically and internationally. For example, private sector institutions such as investment banks, the retail industry itself and retail groups use the data to inform decisions on the current economic performance of the retail industry. These organisations are most interested in a long-term view of the retail sector, taken from the year-on-year growth rates. Public sector institutions use the data to help inform decision and policy making. They tend to be most interested in a snapshot view of the retail industry, which is taken from the month-on-month growth rates.

In a recent survey users found the Retail Sales Index statistics important to their work. It was found crucial for financial modelling of sectors and recognised as a timely indicator for the economy. It has been used as a comparative tool with BRC and other market sources to boost context. Practically, it has been utilised as a comparative tool for business performance and the ability to access internet retail sales has been particularly beneficial to some. On a non-industry level, the RSI was perceived as important for informing political opinions or simply for curiosity by individuals who were not necessarily utilising it as a reference for work purposes

The Retail Sales Index feeds into estimates of GDP in 2 ways. Firstly, it feeds into the services industries when GDP is measured from the output approach. Secondly, it is a data source used to measure household final consumption expenditure, which feeds into GDP estimates when measured from the expenditure approach.

The data feed into the first (or preliminary) estimate of GDP, the second estimate of GDP and the third estimate, published in the Quarterly national accounts.

## 5. Methods

Information on retail sales methodology is available on our website

## 1. Composition of the data

Retail sales estimates are based on financial data collected through the monthly Retail Sales Inquiry. Response rates at the time of publication are included for the current month, and the 3 months prior. The response rates for those historical periods are updated to reflect the current level of response, incorporating data from late returns. There are 2 response rates included with 1 percentage for the amount of turnover returned, and the other percentage for the amount of questionnaire forms. Historical response rates are available in the quality information reference table.

Table 6: Overall response rates (\%)
Great Britain, May 2015 to August
2015

| Year Period | Turnover | Questionnaire |
| ---: | ---: | ---: |
| 2015 August | 92.5 | 59.8 |
| July | 97.9 | 74.8 |
| June | 98.7 | 77.0 |
| May | 99.2 | 77.3 |

Source: Office for National Statistics

## 2. Seasonal adjustment

Seasonally adjusted estimates are derived by estimating and removing calendar effects (for example, Easter moving between March and May) and seasonal effects (for example, increased spending in January as a result of Christmas) from the non-seasonally adjusted (NSA) estimates. Seasonal adjustment is performed each month and reviewed each year, using the standard, widely used software, X-13-ARIMASEATS. Before adjusting for seasonality, prior adjustments are made for calendar effects (where statistically significant), such as returns that do not comply with the standard trading period (there is more information in the Methods, Calendar effects section), bank holidays, Easter and the day of the week on which Christmas occurs.

The data collected from the retail sales survey estimate the amount of money taken through the tills of retailers; these are non-seasonally adjusted data. These data consist of 3 components:

- trend which describes long-term or underlying movements within the data
- seasonal which describes regular variation around the trend, that is, peaks and troughs within the time series (the most obvious is the peak in January and the fall in February)
- irregular or "noise", for example, deeper falls within the non-seasonally adjusted series due to bad weather impacting on retail sales

To ease interpretation of the underlying movements in the data, the seasonal adjustment process estimates and removes the seasonal component. It leaves a seasonally adjusted time series made up of the trend and irregular components.

In the non-seasonally adjusted RSI we see large rises in January each year and a fall in the following February, but these are not evident in the seasonally adjusted index. This peak in January is larger than the subsequent fall, but the trend and irregular components in both months are likely to be similar. This means that the movements in the unadjusted series are almost completely a result of the seasonal pattern.

## 3. Calendar effects

The calculation of the RSI has an adjustment to compensate for calendar effects that come from the differences in reporting periods. The reporting period for August 2015 was 2 August 2015 to 29 August 2015, compared with 3 August 2014 to 30 August 2014 in the previous year. Table 7 shows the differences between the calendar and seasonally adjusted estimates.

Table 7: Retail sales, calendar effects

Great Britain, August 2015

|  | Year-on-year percentage <br> change |  |
| :--- | :---: | ---: |
|  | Value | Volume |
| Calendar adjusted | 7.5 | 3.2 |
| Seasonally <br> adjusted | 0.2 | 3.7 |

Source: Office for National Statistics

## 6. Quality

## 1. Basic quality information

- The standard reporting periods can change over time due to the movement of the calendar. Every 5 or 6 years the standard reporting periods are brought back into line by adding an extra week. For example, January is typically a 4 week standard period but January 1986, 1991, 1996, 2002, 2008 and 2014 were all 5 week standard periods. The non-seasonally adjusted estimates will still contain calendar effects. If the non-seasonally adjusted estimates are used for analysis, this can lead to a distortion depending on the timing of the standard reporting period in relation to the calendar, previous reporting periods and how trading activity changes over time
- The non-seasonally adjusted series contain elements relating to the impact of the standard reporting period, moving seasonality and trading day activity. When making comparisons, users should focus on the seasonally adjusted estimates as these have the systematic calendar-related component removed. Due to the volatility of the monthly data, growth rates should be calculated using an average of the latest 3 months of the seasonally adjusted estimates
- When interpreting the data, the relative weighted contributions of the sectors in the all retailing series should be considered. Based on SIC 2007 data, total retail sales consists of: predominantly food stores $40.9 \%$, predominantly non-food stores $42.0 \%$, non-store retailing $7.0 \%$ and automotive fuel 10.1\%


## 2. Standard error

- Standard errors determine the spread of possible movements and are a means of assessing the accuracy of the non-seasonally adjusted month-on-month and year-on-year estimates of all retail sales volumes. The lower the standard error, the more confident we can be that the estimate is close to the true value for the retail population
- The standard error of year-on-year movement for "All Retailing" is 0.9\%. It has remained at 0.9\% since June 2014. It was lower at $0.8 \%$ in May 2014. Before this period, the year-on-year movements mostly remained at $0.9 \%$ with the only other fluctuations occurring in August 2013 and September 2013, where there was a standard error of $1.0 \%$
- Table 8 shows the year-on-year movement for the non-seasonally adjusted chained volume measure alongside the standard error, across the published sector breakdowns for August 2014 and August 2015. The differences between August 2014 and August 2015 highlight that the standard error has increased the most in "Non-store retailing" and "Household goods stores". The greatest decreases are for "Textiles, clothing and footwear stores"
- More information on standard errors can be found in the " Retail Sales Quality Tables (167.5 Kb Excel sheet) " reference tables, which are part of this release

Table 8: Year-on-year estimates and standard errors (chained volume measure, non-seasonally adjusted), August 2014 and August 2015

| Sector | August 2014 |  | August 2015 |  |
| :---: | :---: | :---: | :---: | :---: |
|  | 12-month movement (percentage change) | Standard error of 12month movement, median (percentage points) | 12-month movement (percentage change) | Standard error of 12month movement, median (percentage points) |
| All retailing | 3.8 | 0.9 | 3.4 | 0.9 |
| Predominantly food stores | 0.0 | 0.6 | 0.7 | 0.6 |
| Predominantly non-food stores | 9.1 | 1.1 | 3.8 | 1.1 |
| Nonspecialised stores | 8.7 | 1.6 | 3.3 | 1.7 |
| Textile, clothing and footwear stores | 9.3 | 1.4 | 2.0 | 1.2 |
| Household goods stores | 12.1 | 1.5 | 4.6 | 1.8 |
| Other stores | 7.3 | 2.7 | 5.2 | 2.8 |
| Non-store retailing | 2.7 | 4.5 | 14.7 | 5.2 |
| Automotive fuel | -1.2 | 3.9 | 5.1 | 4.0 |

Source: Office for National Statistics

## 3. Summary quality report

The RSI Quality and Methodology Information paper (245.6 Kb Pdf) details the intended uses of the statistics in this bulletin, their general quality and the methods used to produce them.

## 4. Revisions triangles

Revisions to data provide one indication of the reliability of main indicators. Table 9 shows summary information on the size and direction of the revisions made to the volume data covering a 5 year period. Note that changes in definition and classification mean that the revisions analysis is not conceptually the same over time.

Table 9: Revision triangles summary, August 2015

|  | Growth in <br> latest period <br> $(\%)$ | Revisions between first publication and estimates 12 months later <br> (percentage points) |  |
| :--- | :---: | :---: | :---: |
| Average over the last 5 <br> years (mean revision) | Average over the last 5 years without to sign (average absolute revision) |  |  |
| Latest 3 months <br> compared with previous 3 <br> months | 0.4 | -0.19 | 0.30 |
| Latest month compared <br> with previous month | 0.2 | -0.13 | 0.35 |

Source: Office for National Statistics

## 7. Relevant links

A subset of the retail sales dataset will be published on our Data Explorer page. Please note the link will not work until the data are published.

Disclosure control policy
Comparability of RSI Sales and External Indicators

## RSI Workplan

RSI Quality and Methodology Information paper
Revisions to the Retail Sales Index
Has 2014 been a good year for retailers?
Overview of internet retail sales in 2014
BRC Sales Monitor August 2015
International Measures of Retail Sales
National Accounts Workplan
Why is the retail sales revisions policy different from the National Accounts revisions policy?
14 ways ONS statistics help you understand the economy - A closer look at the circular flow of income Impact of quarterly employment question on the monthly survey response

Investigating the effect of quarterly collection of employee jobs data on the estimated standard error of change for total turnover on the Monthly Business Survey

Government Statistical Service (GSS) uncertainty guidance

## 8. Publication policy

Details of the policy governing the release of new data are available from our Media Relations Office. Also available is a list of the organisations given pre-publication access to the contents of this bulletin.

## Accessing data

The complete run of data in the tables of this statistical bulletin is available to view and download in electronic format using our Time Series Data service. Users can download the complete bulletin in a choice of zipped formats, or view and download their own sections of individual series.

Alternatively, for low-cost tailored data call 08456013034 or email info@ons.gsi.gov.uk
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Media contact: Tel Media Relations Office 08456041858 Emergency on-call 07867906553
Email media.relations@ons.gsi.gov.uk
Statistical contact: Tel Kate Davies +44 (0)1633 455602 Email retail.sales.enquiries@ons.gsi.gov.uk
Contact us: Tel 08456013034 Email info@ons.gsi.gov.uk Website Twitter
9. 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

