

Statistical bulletin

Retail sales, Great Britain: March 2015

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



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1 . Main points

- Year-on-year estimates of the quantity bought in the retail industry continued to show growth for the 24th consecutive month in March 2015, increasing by 4.2% compared with March 2014. This was the longest period of sustained year-on-year growth since May 2008 when there were 31 periods of growth
- The underlying pattern in the data as suggested by the 3 month on 3 month movement in the quantity bought continued to show growth for the 25th consecutive month, increasing by 0.9%. This equals the longest period of sustained growth since November 2007 when there were also 25 periods of consecutive growth
- On the month, the quantity bought decreased by 0.5% compared with February 2015. The largest decrease was reported by petrol stations which fell by 6.2%
- Average store prices (including petrol stations) fell for the 9th consecutive month, falling by 3.1% compared with March 2014. The largest contribution to the year-on-year fall once again came from petrol stations which fell by 12.8% and is the 19th consecutive month of year-on-year falling prices in this store type
- In March 2015, the amount spent in the retail industry increased by 0.7% compared with March 2014 but decreased by 0.3% compared with February 2015. Non-seasonally adjusted data show that the average weekly spend in the retail industry was £6.9 billion, compared with £6.7 billion in March 2014 and £6.6 billion in February 2015
- The value of sales made online decreased by 0.8% compared with February 2015 and accounted for 11.7% of all retail sales in March 2015. Online sales increased by 10.3% compared with March 2014
- Revisions in this release were caused by the incorporation of late data. The earliest revisions point for current price, non-seasonally adjusted data was March 2014. More information on revisions can be found in the background notes

2 . Additional information

This bulletin presents estimates of the quantity bought (volume) and amount spent (value) in the retail industry for the period 1 March 2015 to 4 April 2015. Unless otherwise stated, the estimates in this release are seasonally adjusted.

Users are reminded that the figures contained in this release are estimates based on a monthly survey of 5,000 retailers, including all large retailers employing 100 people or more.

The quality of the estimate of Retail Sales

Retail sales estimates are produced from the monthly business survey – 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 March 2015 was 60.9% of questionnaires, accounting for 93.5% 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 of this bulletin and in the [quality tables \(184 Kb Excel sheet\)](#) of this release.

It should be noted that 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](#) on our website.

For different ways to access the data see the reference tables section on our website. These 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, March 2015 (seasonally adjusted percentage change)

Great Britain

	Most recent month on a year earlier	Most recent 3 months on a year earlier	Most recent month on previous month	Most recent 3 months on previous 3 months
Value (Amount spent)	0.7	1.7	-0.3	-0.6
Volume (Quantity bought)	4.2	5.2	-0.5	0.9
Value excluding automotive fuel	2.6	3	0.2	-0.2
Volume excluding automotive fuel	5	5	0.2	0.5

At a glance

In March 2015, the quantity bought in the retail industry (volume) increased by 4.2% compared with March 2014. The amount spent (value) increased by 0.7%. In March 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 3.1%. More information on how the implied price deflator is calculated can be found in section 3 of the background notes.

Amount spent in the retail industry

In the 5 week reporting period for March 2015, the amount spent in the retail industry was £34.3 billion (non-seasonally adjusted). This compares with £26.4 billion in the 4 week reporting period for February 2015 and £33.7 billion in the 5 week reporting period for March 2014.

This equates to an average weekly spend of £6.9 billion in March 2015, £6.6 billion in February 2015 and £6.7 billion in March 2014.

4 . Economic context

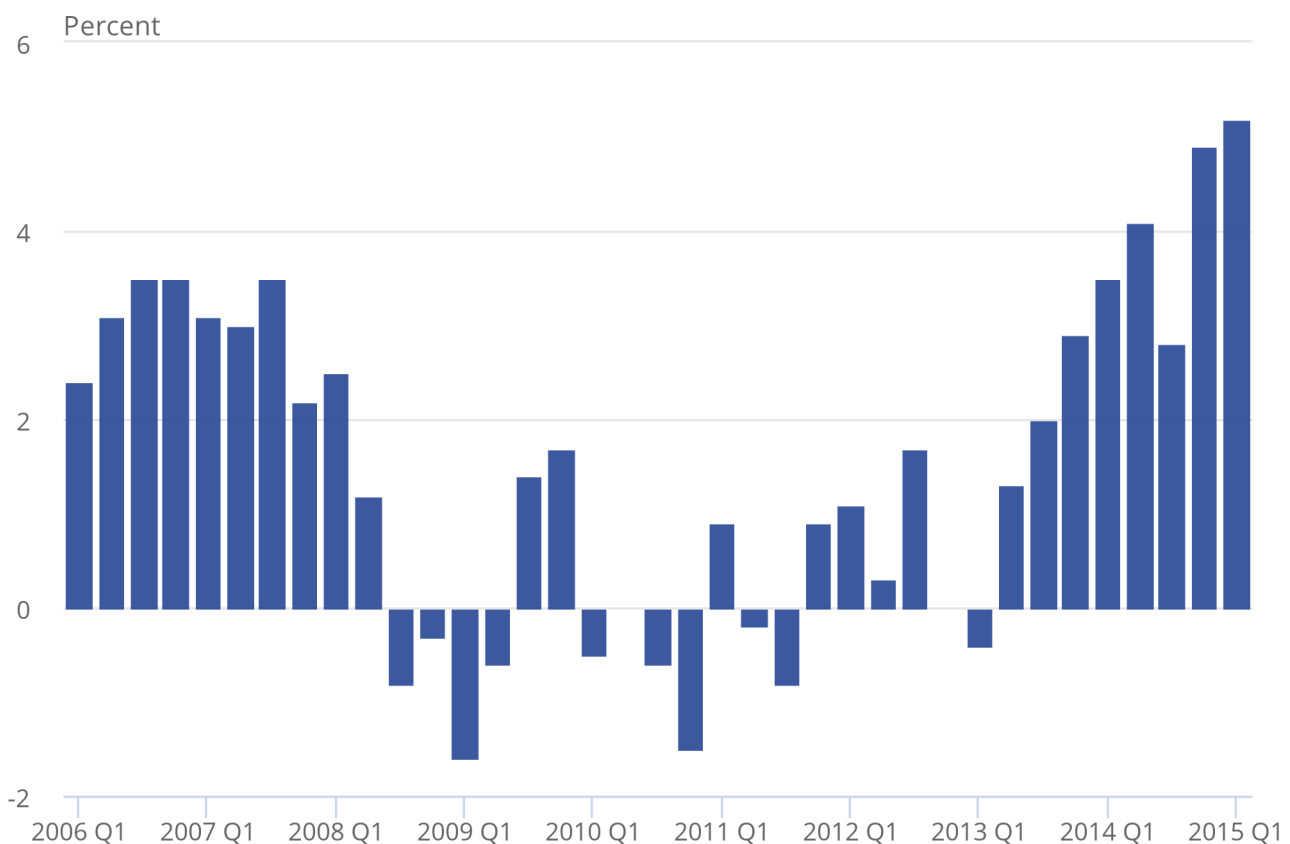
Figure 1 shows how the quarter on same quarter a year earlier growth in the volume of retail sales was affected by the economic downturn in 2008, and highlights the strong growth since 2013.

Figure 1: Quarter on year growth in the volume of retail sales, quarter 1 (Jan to Mar) 2006 – quarter 1 (Jan to Mar) 2015

Great Britain

Figure 1: Quarter on year growth in the volume of retail sales, quarter 1 (Jan to Mar) 2006 – quarter 1 (Jan to Mar) 2015

Great Britain



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

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

Three distinct periods emerge from Figure 1. In the years preceding the downturn, growth in the retail sales was strong. Between the first quarter of 2006 and 2008, the volume of sales increased by 5.8%, or by 0.7% per quarter on average.

However, between January 2008 and January 2013, the volume of retail sales remained flat: quarters of expansion were matched by quarters of contraction, and as a result the same volume of sales was recorded at the beginning and end of the period. This weakness is partly explained by the economic climate. Over this period, growth in average weekly earnings was consistently lower than growth in inflation, which implies that earnings fell in real terms. Real household disposable income, which includes the effect of taxes and benefits, was also broadly flat over the period. However, the value of retail sales continued to grow, increasing by 12.1% over the period, reflecting rising prices between these dates.

The third period shown in Figure 1 starts in 2013, when growth in volume terms began to increase notably. The volume of retail sales in quarter 1 (Jan to Mar) 2015 was 8.8% higher than it was in the same quarter of 2013; corresponding to an average growth rate of 1.1% per quarter, substantially faster than in the years preceding the downturn. This is perhaps surprising given the economic climate; growth in disposable income was still weak, and average weekly earnings grew slower than the [Consumer Price Index \(CPI\)](#).

However, in contrast to the economy as a whole, prices in retail outlets began to fall in 2013 and this fall accelerated throughout 2014 and coincided with the increasing growth in 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% from 2013 onwards.

This month was the first since June 2014 in which the value of retail sales rose more than the volume, implying an increase in prices, although retail prices are still down significantly on the year. The factors driving this are discussed in the [April 2015 Economic Review](#).

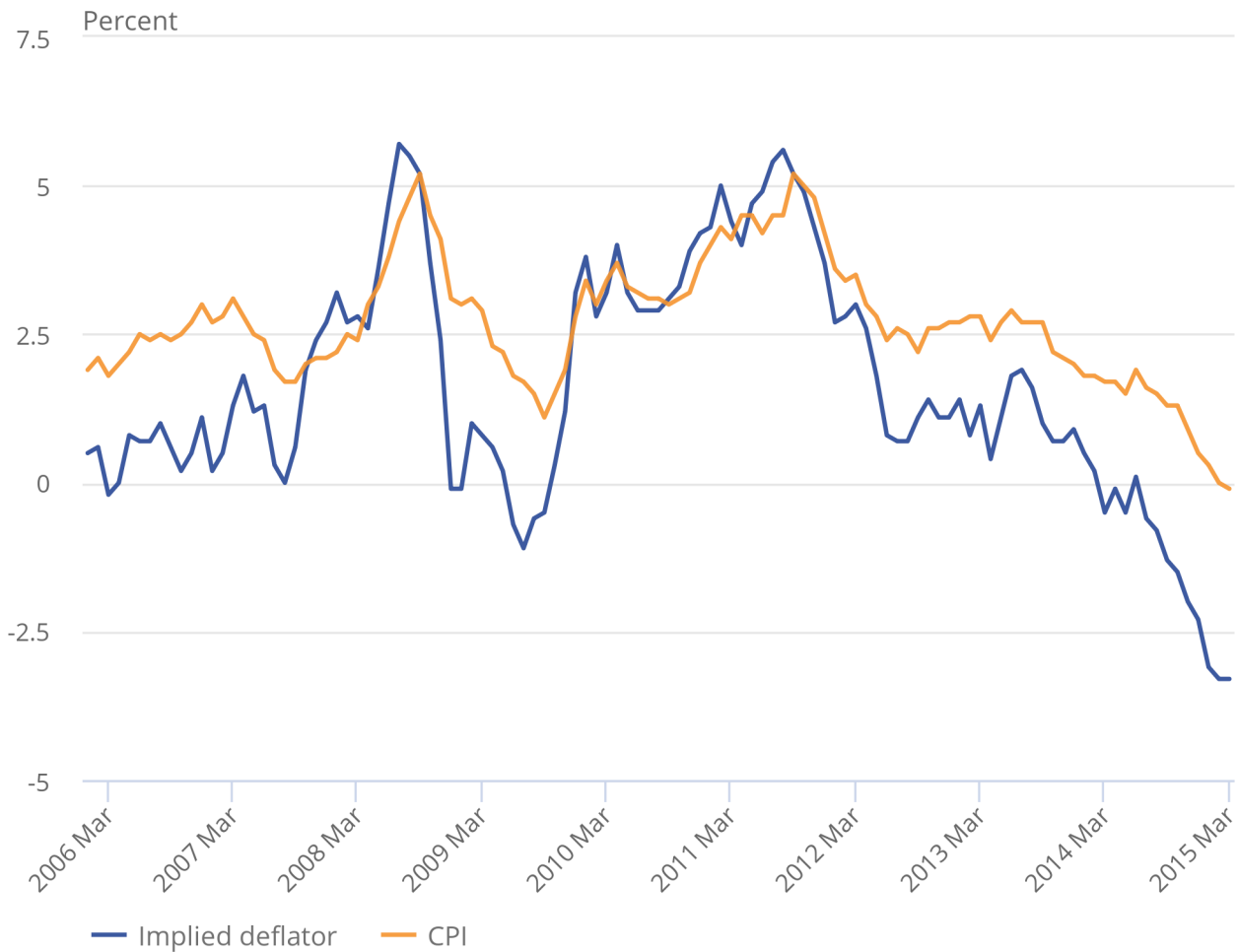
This is in contrast to the CPI, which did not change between March 2014 and March 2015. Figure 2 plots the 12 month growth rate of each series. The retail sales implied deflator and the CPI tend to move closely together, however differences in coverage mean that they are not identical. One important source of divergence is the inclusion of services in the CPI. The price of consumer services has been rising much faster than the price of goods recently and as services are not included in retail sales, this has had the effect of making growth in the CPI significantly higher than in the implied deflator.

Figure 2: 12 month growth rate in the Consumer Price Index (CPI) and the retail sales implied deflator

Great Britain

Figure 2: 12 month growth rate in the Consumer Price Index (CPI) and the retail sales implied deflator

Great Britain



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

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5 . 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 March 2015, for every pound spent in the retail industry:

- 42 pence was spent in food stores
- 41 pence in non-food stores
- 6 pence in non-store retailing
- 11 pence in stores selling automotive fuel

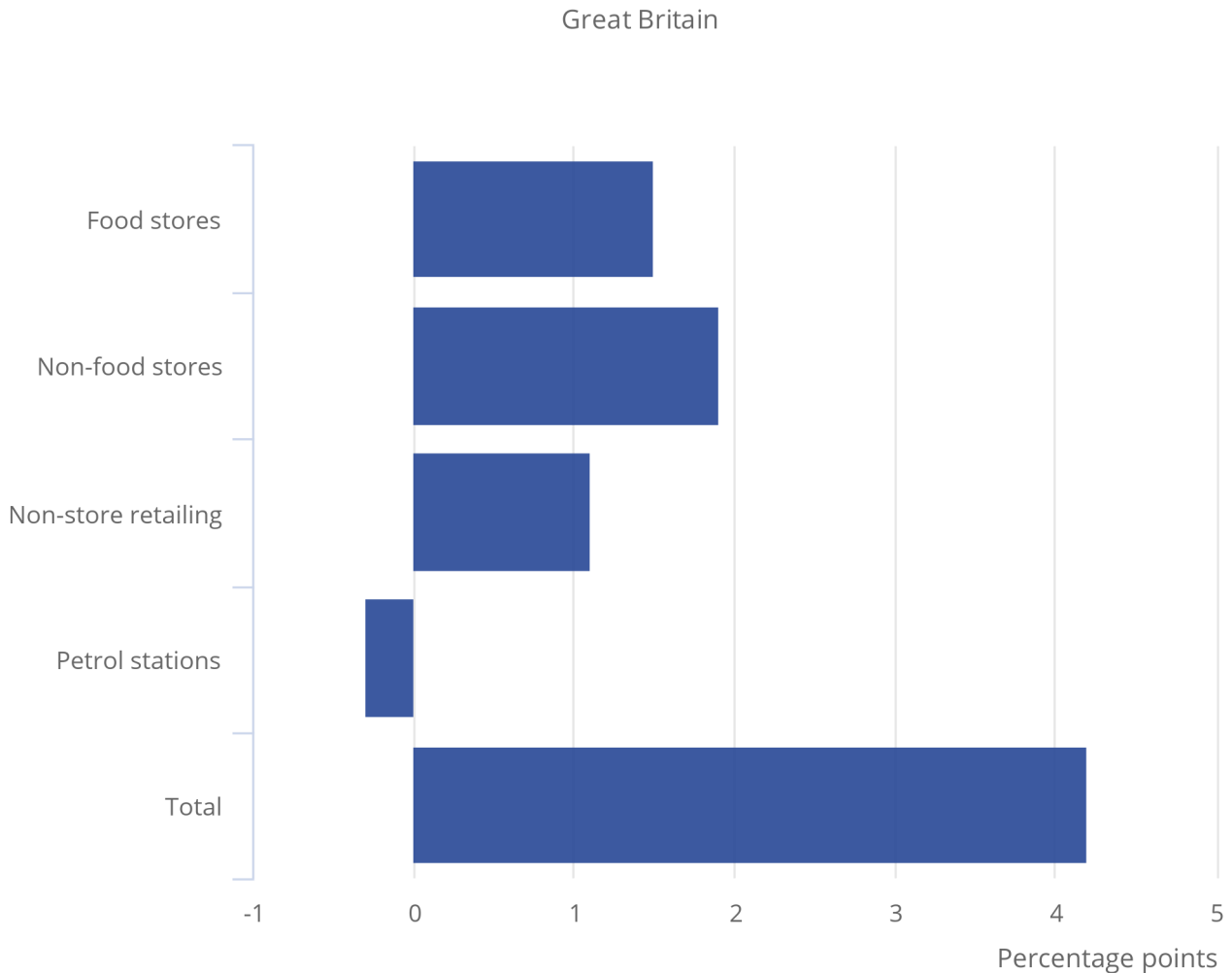
Using these as weights, along with the year-on-year growth rates, we can calculate how each sector contributed to the total year-on-year growth in the quantity bought.

Figures 3 and 4 show the contribution of each sector to the quantity bought (volume) and amount spent (value) in the retail industry between March 2015 and March 2014.

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

Great Britain

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



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

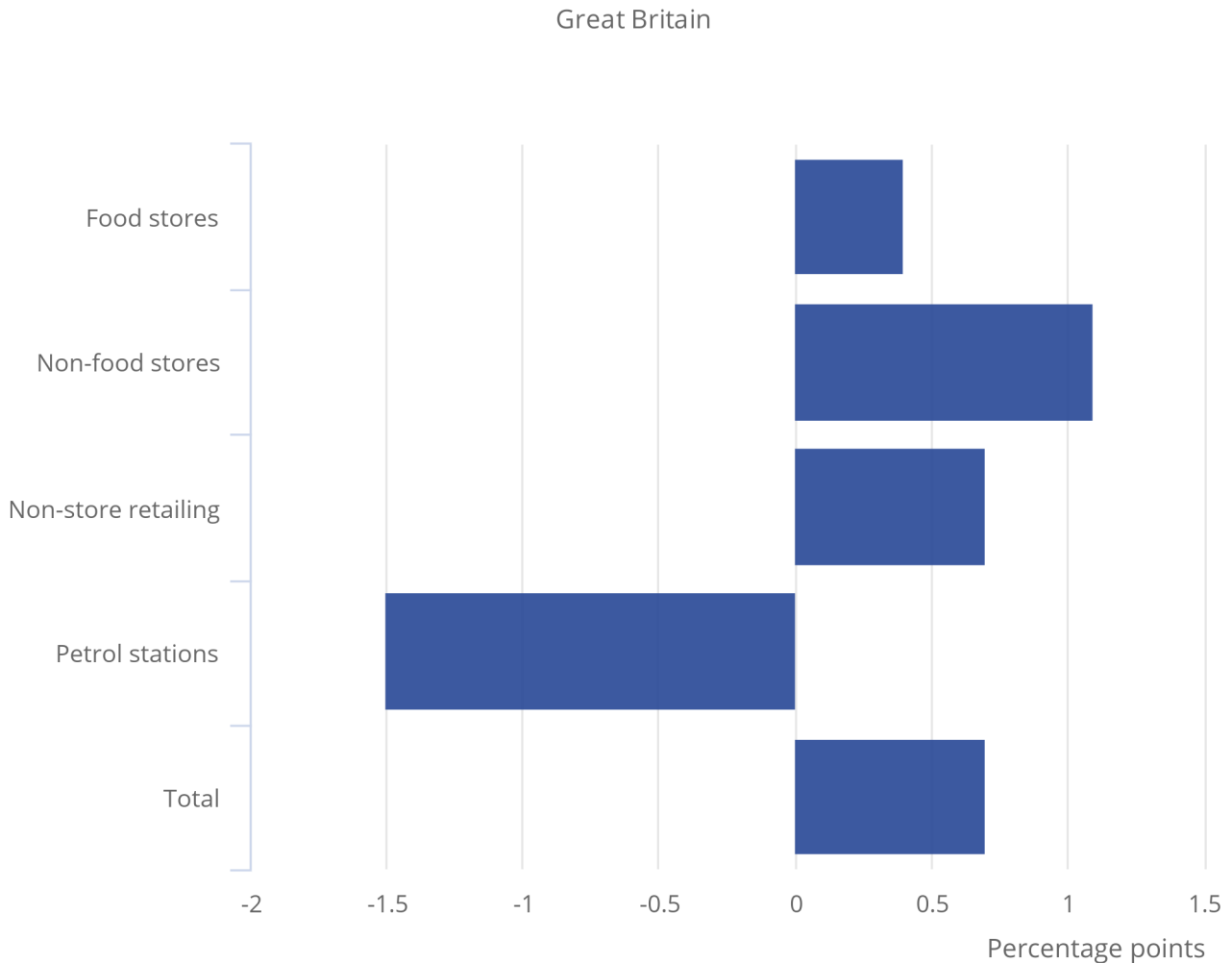
Source: Monthly Business Survey - Retail Sales Inquiry - Office for National Statistics

In March 2015, 3 out of the 4 main retail sectors (non-store retailing, non-food stores and predominantly food stores) saw an increase in the quantity bought (volume). The largest contribution came from the non-food stores sector.

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

Great Britain

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



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

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

In March 2015, 3 out of the 4 main sectors (non-store retailing, non-food stores and food stores) contributed to the increase in amount spent (value). The largest contribution came from the non-food stores sector.

6 . Sector summary

Main points:

- in March 2015, all store types except petrol stations showed increases in the quantity bought compared with March 2014
- all store types except other stores and petrol stations showed increases in the amount spent year-on-year, the fall in the amount spent in petrol stations was the lowest since July 2009
- in March 2015, all store types saw falls in average store price compared with March 2014

Table 2: Sector Summary, March 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	3.5	0.9	-2.1	2.9
Predominantly non-food stores ²	4.5	2.8	-1.7	2.8
Non-specialised stores ³	6.6	3.8	-2.2	0.5
Textile, clothing and footwear stores	2.1	2.6	-0.7	0.8
Household goods stores	11.3	7.3	-2.7	0.6
Other stores	1.3	-0.5	-1.7	0.9
Non-store retailing	16.4	11.0	-3.3	0.5
Fuel stores	-2.6	-15.0	-12.8	0.7
Total	4.2	0.7	-3.1	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

7 . Growth in the retail industry

When looking at the 3 month on 3 month volume growth in the retail industry this has been sustained and has spanned 25 consecutive months. This equals the last longest run of growth in the 3 month on 3 month series which ended in November 2007. Looking at the quarter months of March, June, September and December we find that the last time we saw a quarter-on-quarter contraction was quarter 4 (Oct to Dec) 2012.

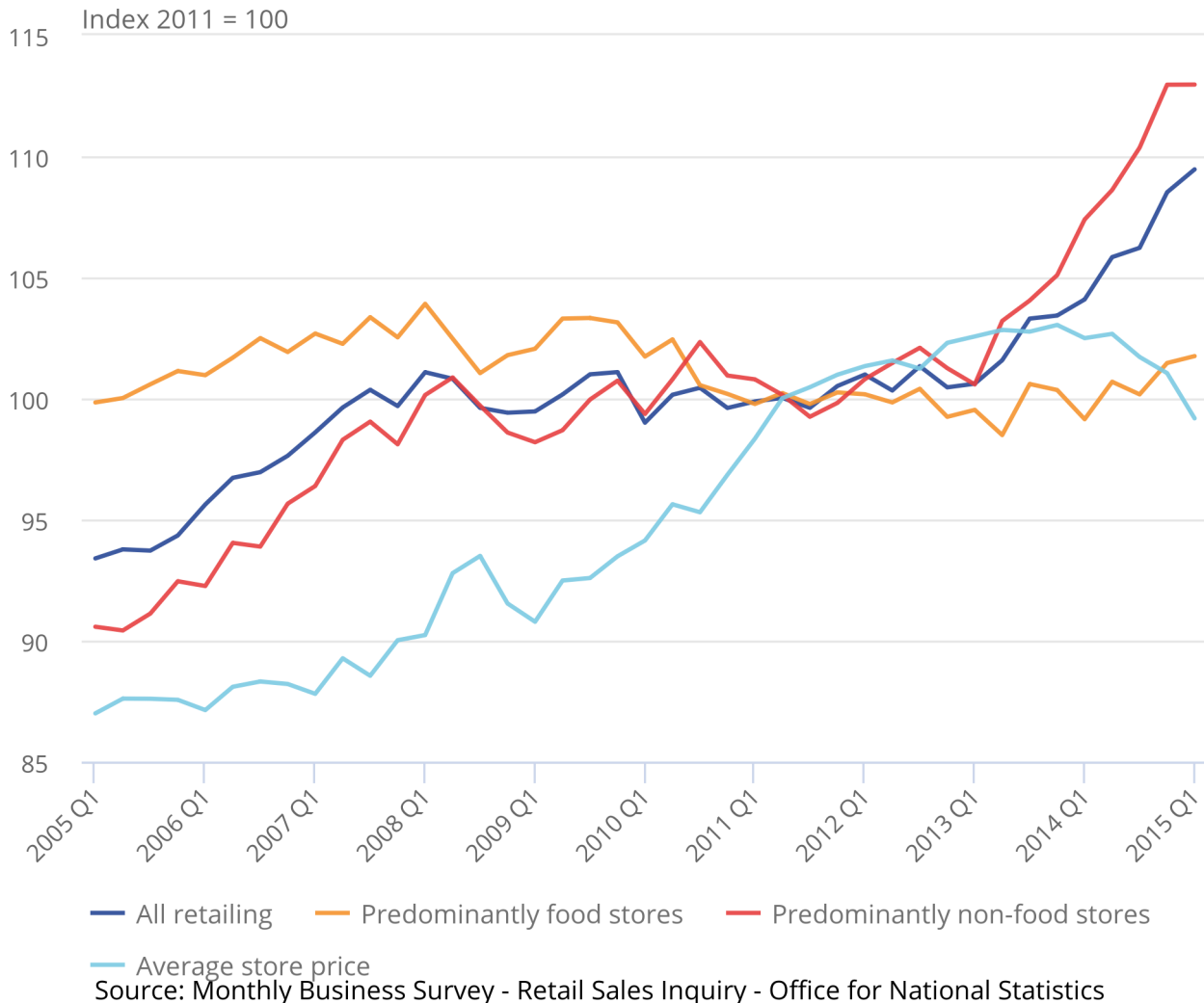
Looking now at the longer-term picture as seen in Figure 5, we see that as with the growth seen between quarter 4 (Oct to Dec) 2005 to quarter 3 (July to September) 2007, this latest span of growth is strong. However, if we compare the growth rates between the start of each span to the end point, we find that this latest 25 month period (quarter 1 (January to March) 2013 to quarter 1 (January to March) 2015) showed growth of 8.8% compared with a growth of 7.1% (quarter 4 (October to December) 2005 to quarter 3 (July to September) 2007).

Between these 2 periods of growth, from the end of 2007 as we moved into the economic downturn, all retailing was essentially flat until quarter 1 (Jan to Mar) 2013.

Figure 5: Quarterly growth for food, non-food and all retailing, seasonally adjusted sales volumes and implied deflator for all retailing

Great Britain

Figure 5: Quarterly growth for food, non-food and all retailing, seasonally adjusted sales volumes and implied deflator for all retailing
Great Britain



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

Looking at the 2 main contributors within the retail sector, food and non-food, which equate to approximately 83 pence of every pound spent in the retail industry, we see that before the economic downturn in 2008, most of the growth in all retailing came from food stores, but the quantity bought at non-food stores increased at a much more rapid pace. During the economic downturn as with all retailing both were essentially flat. Since quarter 1 (January to March) 2013, the growth in all retailing has mimicked that of non-food stores, food stores were flat and have only begun to show an increase towards the latter part of 2014. So the question arises as to what has contributed towards this change?

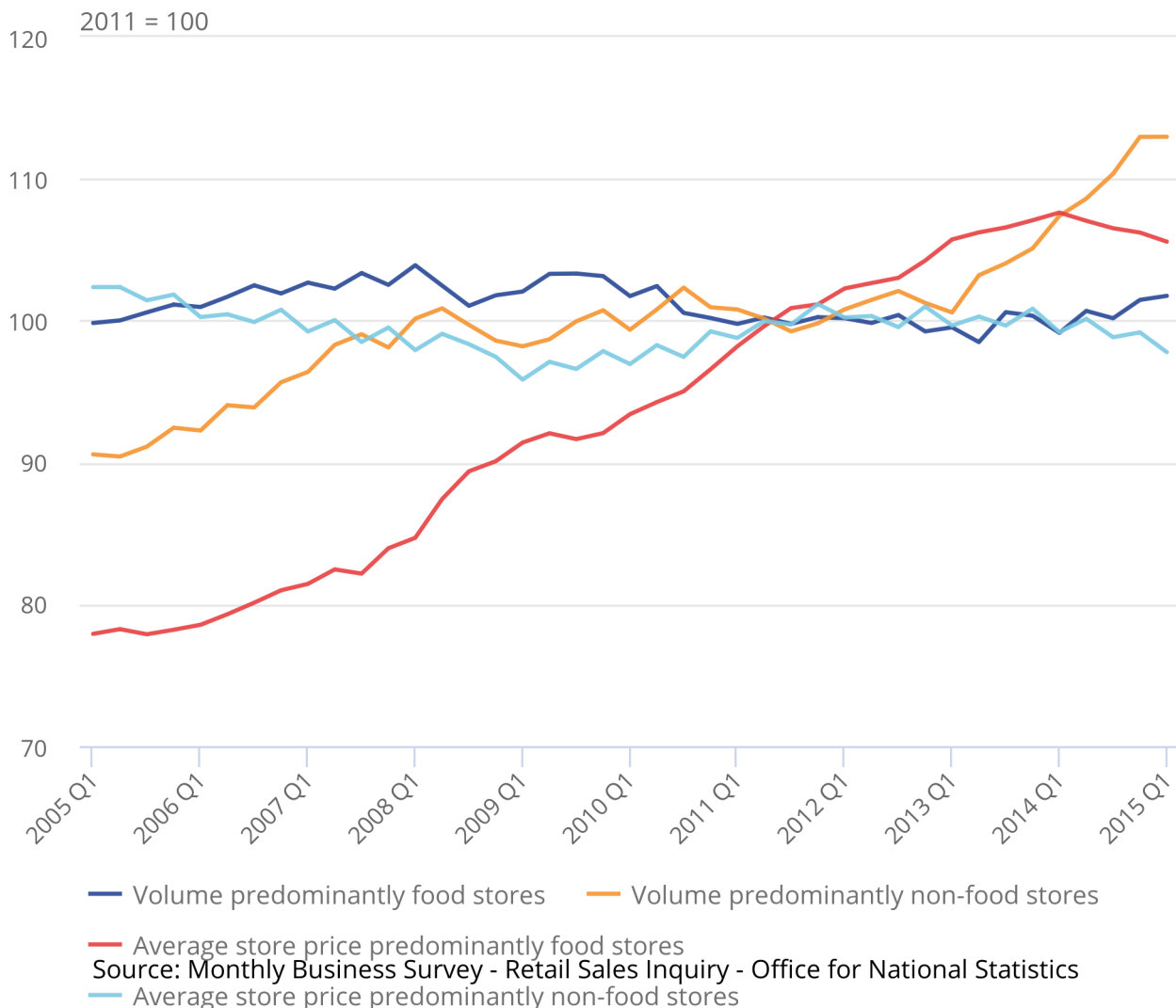
Figure 6 shows the prices of goods sold and the quantity bought within these stores in more detail. Average prices in food stores increased rapidly since 2005 while the quantity bought remained fairly static, although in more recent quarters as prices have started to slow and even fall into deflation, the quantity bought began to rise slowly. This suggests that consumers continue to buy the same amount of food despite price rises. However, the opposite seems to be true of non-food stores where the average price has remained fairly static since 2005 while the quantity bought has increased rapidly, particularly since the end of the economic downturn. This suggests that consumers have been spending money in other stores with savings made by falling prices in other store types such as food and petrol stations.

Figure 6: Quantity bought (seasonally adjusted) and average prices in food stores and non-food stores

Great Britain

Figure 6: Quantity bought (seasonally adjusted) and average prices in food stores and non-food stores

Great Britain



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

8 . Internet sales in detail

Seasonally adjusted internet sales data are provided within this release. These seasonally adjusted estimates 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 March 2015 was £766.9 million; an increase of 10.3% compared with March 2014
- the amount spent online accounted for 11.7% of all retail spending excluding automotive fuel, compared with 10.9% in March 2014
- the online spend in non-store retailers increased by 10.5% compared with March 2014; the lowest year-on-year increase in this store type since January 2014 when it increased by 10.0%

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 March 2015 (seasonally adjusted)

Category	Value Seasonally Adjusted Year-on-year growth (%)	Value Seasonally Adjusted Proportion of total sales made online (%)
All retailing	10.3	11.7
All food	12.8	4.1
All non-food	9.1	9
Department stores	11.9	10.5
Textile, clothing and footwear stores	8.6	11.3
Household goods stores	28.7	6.6
Other stores	-1.7	7.3
Non-store retailing	10.5	69.2

Source: Office for National Statistics

9 . Distribution analysis

Table 4 illustrates the mix of experiences among different-sized retailers. It shows the distribution of reported change in sales values of businesses in the RSI sample, ranked by size of business (based on number of employees). It shows that businesses with 40 to 99 employees saw the largest growth in the amount spent, comparing March 2015 with March 2014. Businesses with 100 and over employees experienced growth of 2.9%.

Table 4: Changes in reported retail sales values between March 2014 and March 2015 standard reporting periods (by size of business)

Great Britain		
Number of employees	Weights (%)	Growth since March 2014 (%)
100+	78.5	2.9
40-99	2.2	8.0
10-39	6.6	1.9
0-9	12.8	-4.9

Source: Office for National Statistics

More information on the performance of the retail industry by store type and size can be found in the reference table, Business Analysis. This shows the extent to which individual businesses reported actual changes in their sales between March 2014 and March 2015. The table contains information only from businesses that reported in March 2014 and March 2015. Cells with values less than 10 are suppressed for some classification categories; this is denoted by c. Note that 'large' businesses are defined as those with 100 and over employees and 10 to 99 employees with annual turnover of more than £60 million. "Small and medium" businesses is defined as 0 to 99 employees.

10 . International data

The only international estimate of retail sales available for March 2015 was published by the US Census Bureau on 14 April 2015. In its advanced [retail sales estimates for March 2015](#), the amount spent in the US retail industry, including motor vehicles and parts and food services, increased by 0.9% compared with February 2015 but increased by 1.3% compared with March 2014. Total sales for the 3 months to March 2015 were up 2.2% from the same period a year ago.

The latest estimates from Eurostat for February 2015 of the volume of retail trade across Europe decreased by 0.2% in the euro area (EA19) and remained stable in the EU28 when compared with January 2015. Compared with February 2014, the retail sales index increased by 3.0% in the EA19 and by 3.6% in the EU28. It should be noted that an accurate comparison cannot be made as Eurostat data are calculated on a 2010 = 100 basis, while GB data are now calculated on a 2011 = 100 basis.

11. Background notes

1. What's new

The [Assessment of Short-Term Economic Output Indicators: Preliminary Estimate of GDP, Indices of Production and Services, and Retail Sales](#) has been published.

A [subset of the retail sales dataset](#) will be published on the Data Explorer on 28 April 2015. Please note the link will not work until the data is published.

2. Relevant links

[Overview of internet retail sales in 2014](#)

[Has 2014 been a good year for retailers](#)

[Revisions to the Retail Sales Index \(100 Kb Pdf\)](#) details why revisions to the non-seasonally adjusted and seasonally adjusted data can occur. Revisions triangles can be found under section 5 Quality in the background notes.

[International Measures of Retail Sales](#)

[Disclosure control policy \(337 Kb Word document\)](#)

[Comparability of RSI Sales and External Indicators \(95.5 Kb Pdf\)](#)

[RSI Workplan \(87.3 Kb Pdf\)](#)

[Why is the retail sales revisions policy different from the National Accounts revisions policy? \(53.9 Kb Pdf\)](#)

[RSI Quality and Methodology Information paper \(245.6 Kb Pdf\)](#)

[BRC Sales Monitor March 2015](#)

[National Accounts Workplan \(410 Kb Powerpoint presentation\)](#)

[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 \(163.7 Kb Pdf\)](#)

[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 \(110 Kb Pdf\)](#)

[Government Statistical Service \(GSS\) uncertainty guidance](#)

3. Understanding the data

1. Quick Guide to the Retail Sales Index

Please visit [Quick Guide to the Retail Sales Index \(117.1 Kb Pdf\)](#) .

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 per cent 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, would also be excluded
- 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 \(117.1 Kb Pdf\)](#)

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 gross domestic product (GDP) in two 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 which is published in the [Quarterly National Accounts](#).

4. Methods

- Information on [retail sales methodology](#) is available

1. Composition of the data

Estimates in RSI 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 three months prior. The response rates for those historical periods are updated to reflect the current level of response, incorporating data from late returns. Two response rates are included with one 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 5: Overall response rates

Great Britain, December 2014 to March 2015

Year	Period	Turnover	Questionnaire
2015	March	93.5	60.9
	February	96.7	74.3
	January	98.6	76.4
2014	December	98.2	76.7

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 December 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-ARIMA-SEATS. 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 (see section Methods, Calendar effects), 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 December and the fall in January)

- **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 December each year and a fall in the following January, but these are not evident in the seasonally adjusted index. This peak in December 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 as 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 March 2015 was 1 March 2015 to 4 April 2015, compared with 2 March 2014 to 5 April 2014 in the previous year. Table 6 shows the differences between the calendar and seasonally adjusted estimates.

Table 6: Retail sales, calendar effects

Great Britain		
	Year-on-year percentage change	
	Value	Volume
Calendar adjusted	2.1	5.1
Seasonally adjusted	0.7	4.2

Source: Office for National Statistics

5. 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 three months of the seasonally adjusted estimates
- When interpreting the data, consideration should be given to the relative weighted contributions of the sectors in the all retailing series. Based on SIC 2007 data, total retail sales consists of: predominantly food stores 41.5%, predominantly non-food stores 41.3%, non-store retailing 5.7% and automotive fuel 11.5%

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%. Since September 2012, this standard error has been at 0.9% for all but 3 months. It was lower in May 2014, at 0.8%, while the only other difference was for the year-on-year movements up to August 2013 and September 2013, where there was a standard error of 1.0%
- Table 7 shows the year-on-year movement for the non-seasonally adjusted chained volume measure alongside the standard error, across the published sector breakdowns for March 2014 and 2015. It highlights that the standard error has decreased the most in "Household goods stores" and the greatest increases are for "Non-store retailing" and "Automotive fuel"

- More information on standard errors can be found in the '[Retail Sales Quality Tables \(184 Kb Excel sheet\)](#)' reference tables, which are part of this release

Table 7: Year-on-year estimates and standard errors (chained volume measures, non-seasonally adjusted) March 2014 and March 2015

Great Britain

Sector	March 2014		March 2015	
	12-month movement March 2014 (percentage change)	Standard error of 12-month movement, median (percentage points)	12-month movement March 2015 (percentage change)	Standard error of 12-month movement, median (percentage points)
All retailing	3.1	0.9	5.2	0.9
Predominantly food stores	-3.1	0.6	5.8	0.6
Predominantly non-food stores	7.9	1.2	5.3	1
Non-specialised stores	7.1	1.7	8.7	1.7
Textile, clothing and footwear stores	5.4	1.4	3.5	1.3
Household goods stores	5.5	1.9	12.5	1.4
Other stores	12.1	2.9	0.4	2.6
Non-store retailing	11.9	4.5	13.9	5.3
Automotive fuel	4.8	3.5	-2.4	4.1

Source: Office for National Statistics

3. Summary quality report

The [RSI Quality and Methodology Information paper](#) describes in detail 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 key indicators. Table 8 shows summary information on the size and direction of the revisions made to the volume data covering a five-year period. Note that changes in definition and classification mean that the revision analysis is not conceptually the same over time.

Table 8: All Retailing, volume seasonally adjusted, revisions triangles summary statistics, March 2015

Volume seasonally adjusted

	Growth in Revisions between first publication and estimates 12 months later latest period (percentage points)		
	(%)	Average over the last 5 years (mean revision)	Average over the last 5 years without regard to sign (average absolute revision)
Latest 3 months compared with previous 3 months	0.9	-0.27	0.36
Latest month compared with previous month	-0.5	-0.13	0.40

Source: Office for National Statistics

A spreadsheet giving these estimates and the calculations behind the averages in the table is available in the data section of this publication.

6. Publication policy

Details of the policy governing the release of new data are available from the 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. The [Time Series Data](#) can be accessed.

Alternatively, for low-cost tailored data call 0845 601 3034 or email info@ons.gsi.gov.uk

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7. 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