

Article

# CPIH-consistent inflation rate estimates for UK household groups: 2005 to 2018

An update to estimates of inflation rates for different types of household in the UK on a Consumer Prices Index including owner occupiers' housing costs (CPIH)-consistent basis.

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# 1 . Main points

- Consumer Prices Index including owner occupiers' housing costs (CPIH)-consistent inflation rates have been calculated for different UK household groups, including households by different tenure types, namely renters, owner occupiers and subsidised renters.
- The average annual rate of inflation for owner occupier households has never risen above aggregate CPIH, while subsidised renters experienced higher growth rates over much of the period, reaching a peak in the 12-month rate of 5.3% in 2008.
- The lowest 12-month inflation rates for all tenure types occurred between January 2015 and July 2016, but the inflation experience of renters during the same period was distinct from the other tenure types.
- Retired and non-retired households have experienced the same average annual inflation rate of 2.6% in 2017.
- The spread of the 12-month growth rate between the 2nd and 9th income and expenditure deciles has continued to narrow over the period since September 2017.

## 2 . Things you need to know about this release

### What are CPIH-consistent inflation rate estimates for UK household groups?

The Consumer Prices Index including owner occupiers' housing costs (CPIH) is our most comprehensive measure of consumer price inflation. It measures the change in the prices of the goods and services as consumed by households. However, because the consumption baskets of specific households differ, the price experience of different groups of households may also differ from the average figure for all households. Producing CPIH-consistent inflation rates for different household groups therefore provides an insight into how these price changes can vary between different groups, within an established framework based on economic principles.

The [first article in this new series](#) was published in November 2017 and covered the January 2005 to September 2017 period. Since then we have started producing data updates on a quarterly basis with the [last data update](#) covering the October 2017 to December 2017 period.

Each year in May, we will also publish a longer annual update alongside these quarterly data releases. As well as the data from January to March of each year, this article will also include additional commentary around the different household groups and introduce the new annual weights for each year. This is the first of these annual updates.

Users should note that the CPIH-consistent inflation rates for different household groups are experimental indices and therefore we would caution against any use other than for research purposes.

### What household groups are presented in this article?

This article will cover the following household groups:

- retired households and non-retired households
- households with children and without children
- households grouped by equivalised expenditure deciles
- households grouped by equivalised disposable income deciles
- households grouped by tenure type; renters, owner occupiers and subsidised renters

Data on households grouped by equivalised disposable income quintiles are also included in the datasets published alongside this release. These datasets also include the full results for each group that are not necessarily covered in this article, including contributions to the 12-month growth rate and expenditure weights over the period since 2005.

The [democratically-weighted dataset](#) also includes the aggregate democratically-weighted CPIH index, as well as a version of this index excluding housing costs (updating an ad hoc user request first published in [Democratic measure of CPIH excluding housing, UK, 2005 to 2016](#)).

For definitions of terms, please see the Glossary at the end of this article.

If you would like to provide feedback on the choice of household groups presented, please send your comments to [cpi@ons.gov.uk](mailto:cpi@ons.gov.uk)

## What is the structure of this release?

We first present results from the latest period (January 2018 to March 2018) in comparison with the long-term historical trend on the household groups analysed in the [previous release](#).

We then present analysis for a new household group, households by tenure type (owner occupiers, renters and subsidised renters). In addition to the analysis conducted for the other groups, we investigate the contribution of specific components of the different categories of spending to the 12-month inflation rate for the different tenure types. This enables us to determine the drivers of any differences in the inflation experience across tenure types.

## Quality and methodology information (including revisions)

Since the last release in February, we have made some minor improvements to the methodology, for example, revising the mapping used to construct the expenditure estimates at the household level from the underlying Living Costs and Food Survey (LCF) source data. The impact of these improvements on the price index for each household group is in the magnitude of plus or minus 0.1 percentage points for most household groups across the time series, but there are differences up to a maximum of 0.6 percentage points, for example, in certain income deciles in 2005. Previous versions of the data are available in the data download section of this release. It should be noted that these revisions do not impact on the published headline CPIH figure as this is constructed using different methodology and data sources.

The methodology that we use to calculate these estimates means that differences in the expenditure shares of the various categories of household spending are the sole driver of any differences in the inflation rates between the household groups.

For more information on the quality and methodology used to calculate these indices, please see the “Quality and methodology” section at the end of this article. We welcome feedback on these statistics to [cpi.ons@gov.uk](mailto:cpi.ons@gov.uk)

## Related publications

We have recently published the first preliminary estimates of the [Household Costs Indices \(HCIs\)](#). The HCIs are a set of measures that aim to reflect UK households' experience of changing prices and costs. More information on the HCIs, including why they are being developed, how they differ from consumer prices indices and progress towards their development, can be found in the [Developing the Household Costs Indices \(HCIs\)](#) article. The HCIs will be updated annually, with the next publication planned for late 2018 or early 2019.

## 3 . Summary table of results

Table 1 presents the average annual inflation rates for our selected household groups for 2006 to 2017 (the last full year of data). Ranking households by income and expenditure, and splitting them into 10 equally sized deciles, allows for the comparison of the inflation experience across the expenditure and income distribution. However, due to the unusual composition of households in the 1st and 10th income deciles, our analysis focuses on the difference between decile 2 and decile 9. For more information on this, please see our [previous analysis](#).

We have also chosen to include retired and non-retired households, and households with and without children in these results because of their current policy interest. This is also true for the inclusion of tenure type, which is included for the first time. Tenure type is divided into three categories of household: renters, owner occupiers and subsidised renters.

**Table 1: Average annual inflation rates for selected groups, UK; average 2006 to 2017; 2017**

| Group                                       | Inflation (%)        |            |
|---|----------------------|------------|
|   | Average 2006 to 2017 | 2017       |
| <b>Expenditure deciles</b>                  |                      |            |
| Expenditure decile 2                        | 2.4                  | 2.4        |
| Expenditure decile 9                        | 2.1                  | 2.6        |
| <b>Income deciles</b>                       |                      |            |
| Disposable income decile 2                  | 2.3                  | 2.5        |
| Disposable income decile 9                  | 2.2                  | 2.6        |
| <b>Households by retirement status</b>      |                      |            |
| Retired households                          | 2.3                  | 2.6        |
| Non-retired households                      | 2.2                  | 2.6        |
| <b>Households with and without children</b> |                      |            |
| Households with children                    | 2.2                  | 2.5        |
| Households without children                 | 2.3                  | 2.6        |
| <b>Households by tenure type</b>            |                      |            |
| Subsidised renter households                | 2.4                  | 2.5        |
| Renter households                           | 2.5                  | 2.4        |
| Owner-occupier households                   | 2.2                  | 2.6        |
| <b>CPIH</b>                                 | <b>2.2</b>           | <b>2.6</b> |

Source: Office for National Statistics

Notes:

1. Deciles of disposable income and expenditure are calculated on an equivalised basis, adjusting for the composition of the household. See the Glossary for more details.
2. Equivalised income deciles (1 equals lowest-income households, 10 equals highest-income households).
3. Equivalised expenditure deciles (1 equals lowest-expenditure households, 10 equals highest-expenditure households).
4. Differences may not sum due to rounding.
5. The average presented is the compound average annual growth rate.

## 4 . What is your household's experience of inflation over the period since 2005?

You can use this interactive to identify which income decile your household belongs to and explore the inflation rate experience and expenditure shares of this decile compared with the aggregate Consumer Prices Index including owner occupiers' housing costs (CPIH). You should note that it is likely that your household has moved between different income deciles over the years as individual circumstances change. Therefore, this is only an indication of what inflation rate you may have experienced over this time period and your actual experience may vary.

## **5 . The difference between inflation experiences for different household groups remains small in the latest data**

### **Retired and non-retired households**

Retired and non-retired households had identical average annual inflation rates (to one decimal place) in 2017; equivalent to the overall Consumer Prices Index including owner occupiers' housing costs (CPIH) annual growth rate of 2.6%.

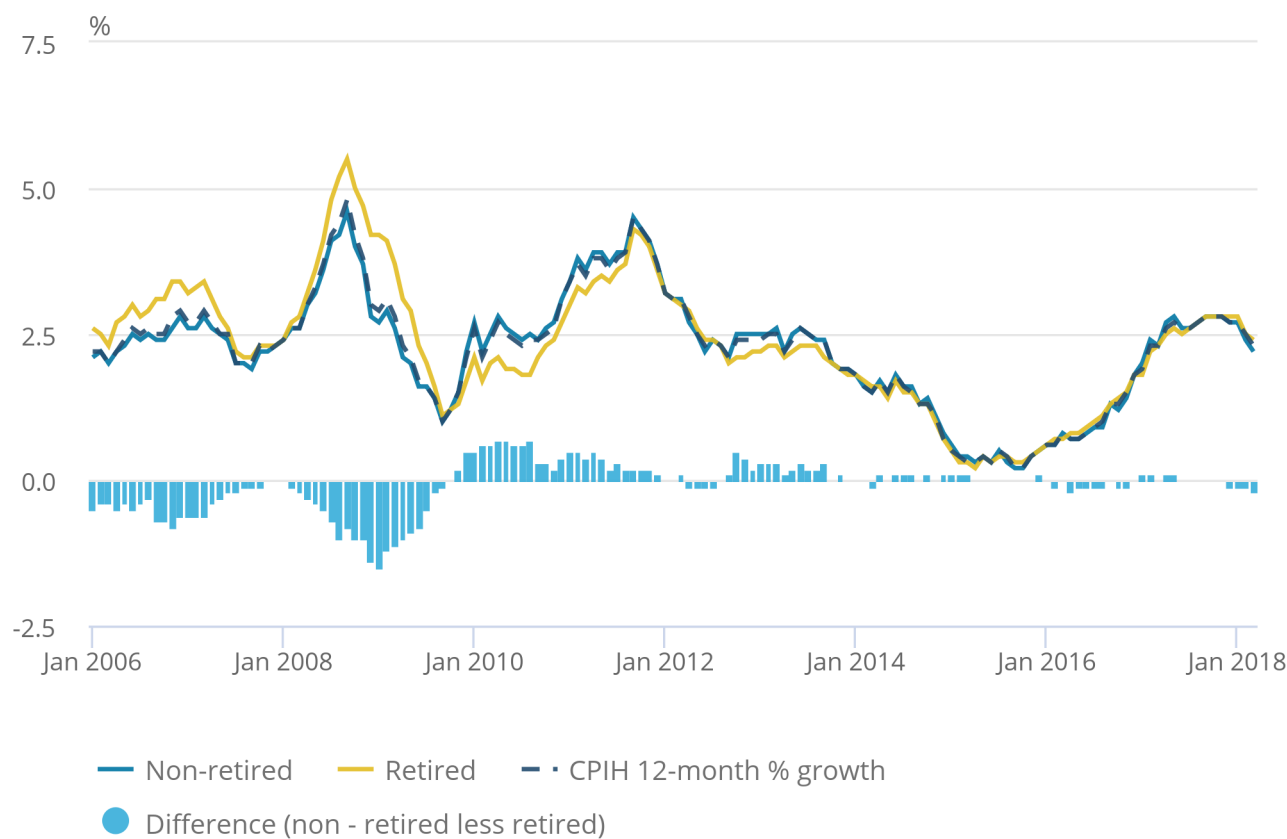
Figure 1 shows the 12-month inflation rate for retired and non-retired households. From January 2006 to September 2009, the retired households 12-month inflation rate was higher than that of non-retired households and overall CPIH. In recent years, the contributions to growth from education, housing and travel costs for retired households and the rest of the population have become more aligned. This has meant that the 12-month inflation rates for the two groups have followed each other more closely over this period, a trend that has continued into the early months of 2018.

**Figure 1: 12-month growth rate for retired and non-retired households; CPIH**

UK, January 2006 to March 2018

## Figure 1: 12-month growth rate for retired and non-retired households; CPIH

UK, January 2006 to March 2018



Source: Office for National Statistics

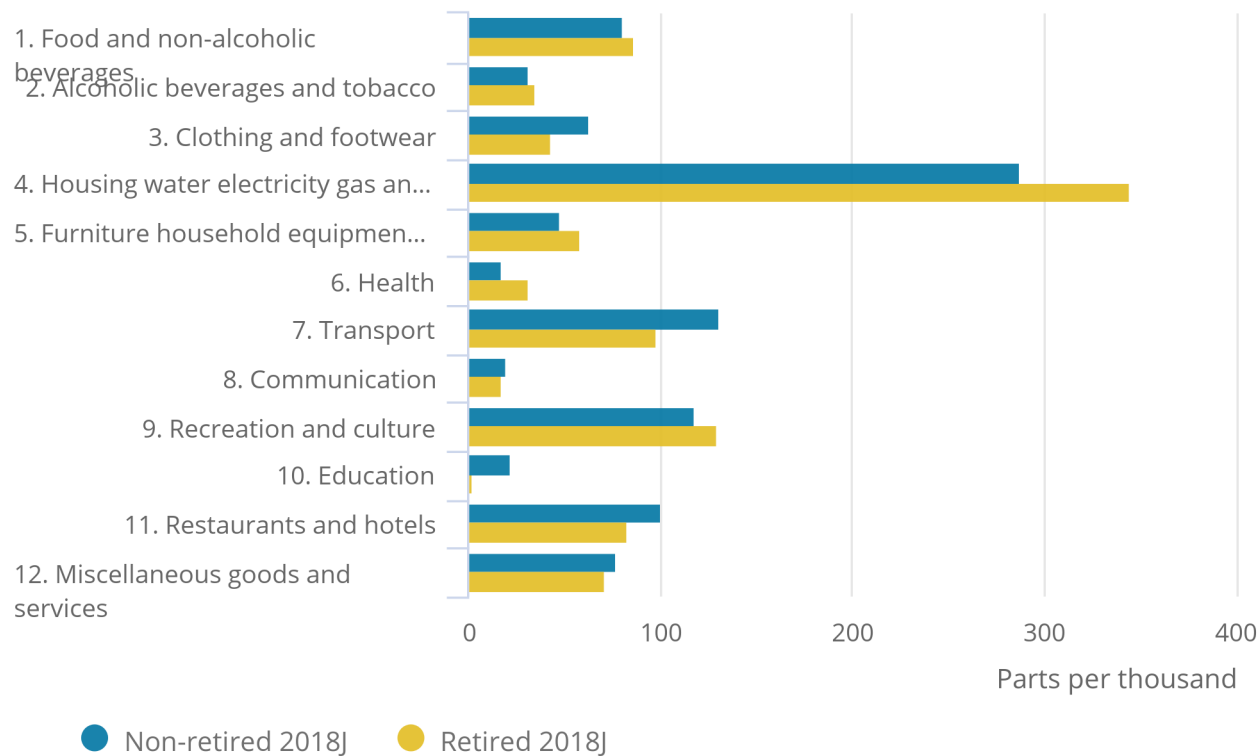
Figure 2 shows the expenditure shares for retired and non-retired households for 2018 (January) <sup>1</sup>. The largest difference between retired and non-retired households is in the expenditure share for housing, water, electricity, gas and other fuels.

Figure 2: Expenditure shares for each category of spending, retired and non-retired households

UK, 2018

Figure 2: Expenditure shares for each category of spending, retired and non-retired households

UK, 2018



Source: Office for National Statistics

Notes:

- 1. Expenditure shares may not sum to 1000 due to rounding.
- 2. The implementation of the double update in 2017 means that for 2017 and 2018, there are two sets of weights produced for these years, one for January, and one for February to December. For consistency with previous years, we compare only the January weights in this analysis. For more information about the double update, please see the [Methodology article](#).

Figure 3 shows the percentage change between 2018 (January) and the average of 2005 to 2017 for each expenditure share category for retired and non-retired households.



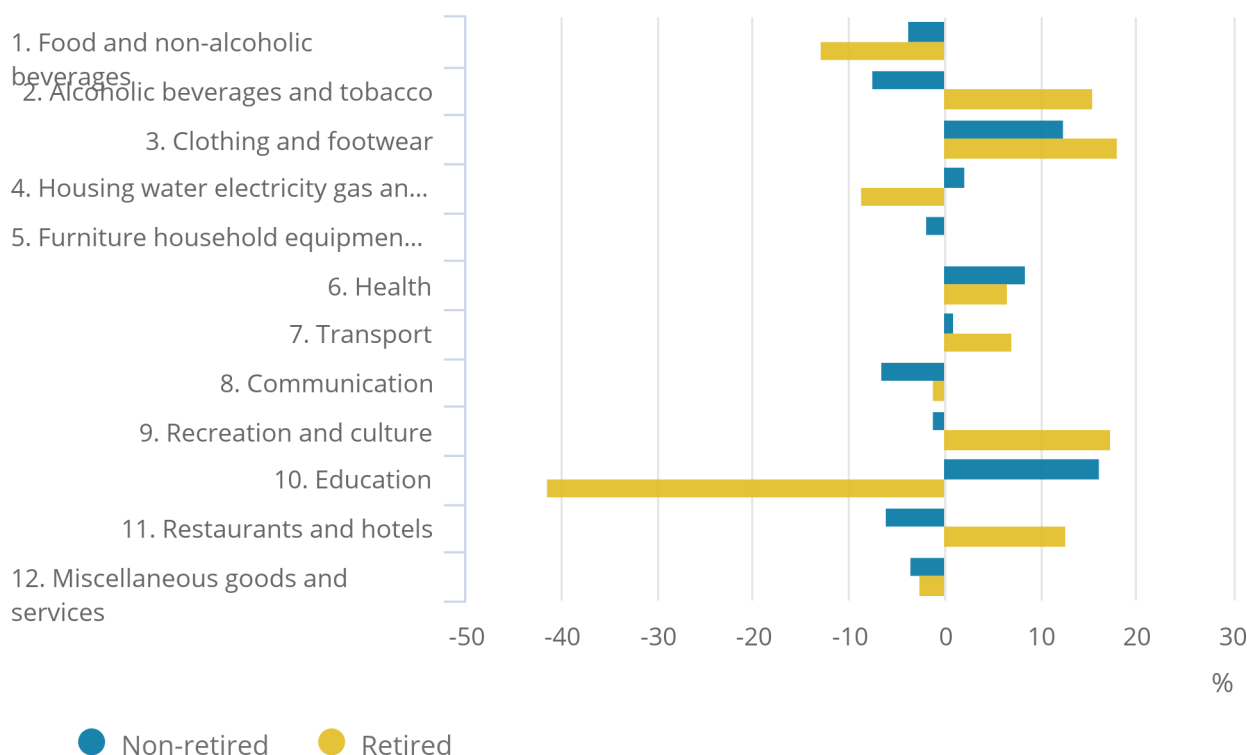
The largest difference between the two groups was the percentage change in the expenditure share on education. Non-retired households saw an increase of 16% in the expenditure share of this category of spending between 2018 (January) and the 2005 to 2017 average. In comparison, retired households saw a decrease in their expenditure share of education by 41%. However, this should be considered in the context of total expenditure shares, which are very small for education. For example, in 2018 (January), the share of education was 0.2% for retired households and 2.2% for non-retired households.

**Figure 3: Percentage change between 2018 (January) and 2005 to 2017 average expenditure shares for non-retired and retired households**

UK, 2005 to 2018

Figure 3: Percentage change between 2018 (January) and 2005 to 2017 average expenditure shares for non-retired and retired households

UK, 2005 to 2018



Source: Office for National Statistics

Notes:

1. Expenditure shares may not sum to 1000 due to rounding.
2. The implementation of the double update in 2017 means that for 2017 and 2018, there are two sets of weights produced for these years – one for January, and one for February to December. For consistency with previous years, we compare only the January weights in this analysis. For example, when we take the average of the weights across the period 2005 to 2017, we only include the weights for January 2017 in this average. For more information about the double update, please see the [Methodology article](#).

## Income deciles

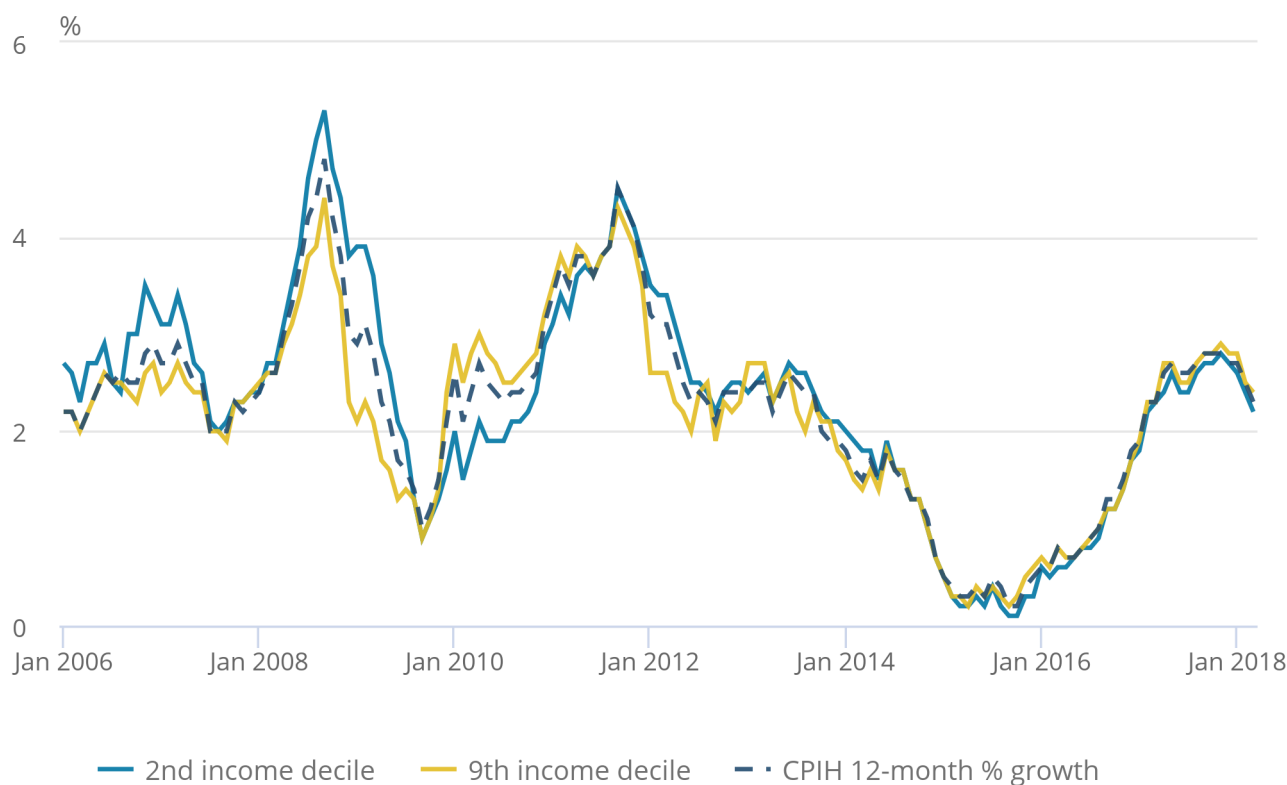
The 12-month inflation rate for the 2nd and 9th income deciles is shown in Figure 4. The largest difference between the two groups occurred in January 2009 when the difference was 1.9 percentage points. However, the spread of the rates between the two income deciles narrowed over the period and this trend continued in the beginning of 2018.

**Figure 4: 12-month growth rates for equivalised disposable income deciles 2 and 9; CPIH**

UK, January 2006 to March 2018

### Figure 4: 12-month growth rates for equivalised disposable income deciles 2 and 9; CPIH

UK, January 2006 to March 2018



Source: Office for National Statistics

**Notes:**

1. Equivalised income deciles (1 equals lowest-income households, 10 equals highest-income households).

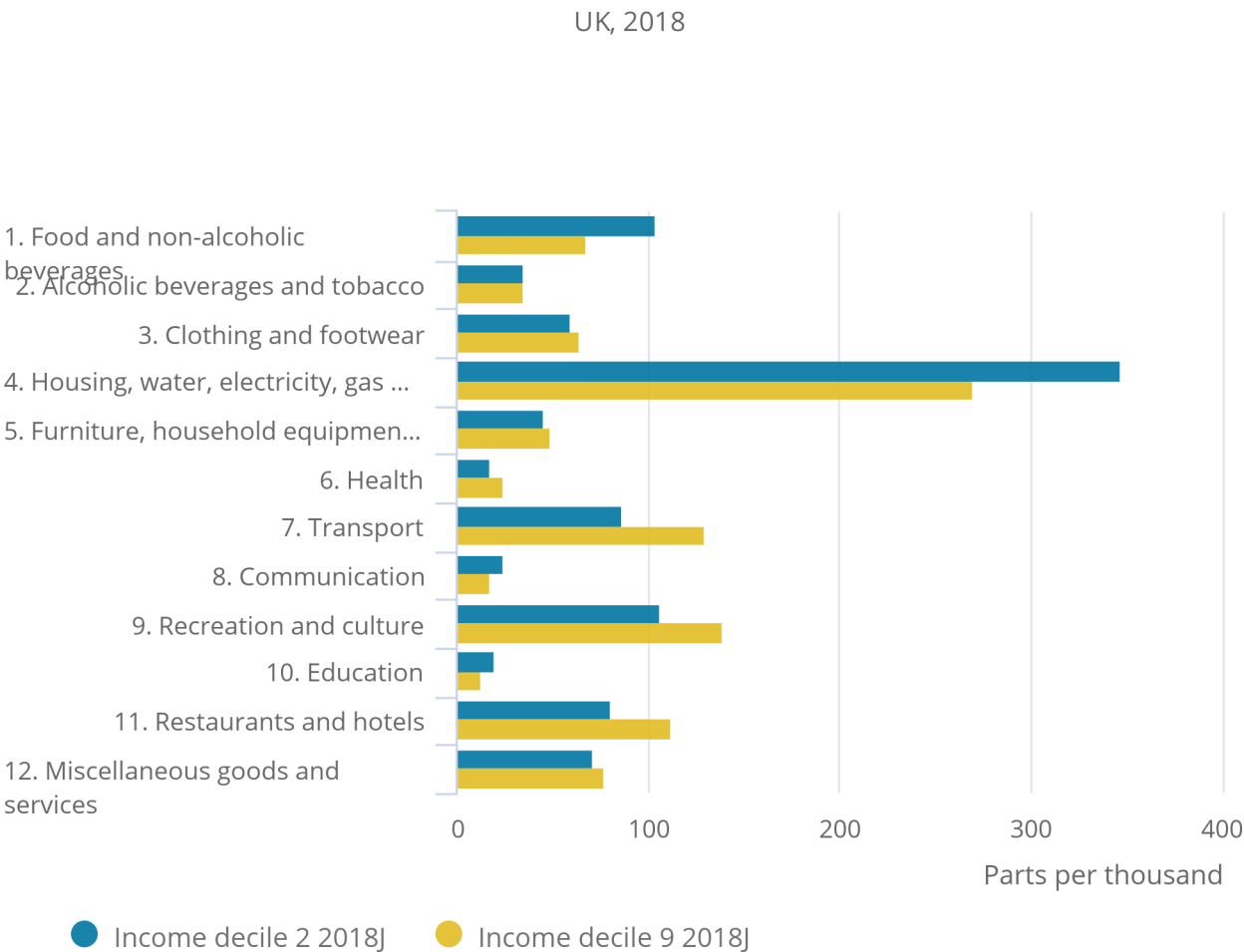
Figure 5 shows the expenditure share for each category of household spending for the 2nd and 9th income deciles for 2018 (January).

Overall the expenditure shares for both groups did not change hugely in 2018. Therefore, the trend we saw in the results up to September 2017 continues in the fact that contributions from different categories of household spending offset each other for the 2nd and 9th income deciles. The main differences come from categories such as housing and food (where the 2nd income decile has a higher expenditure share), and transport, recreation and culture, and hotels and restaurants (where the 9th decile has a higher expenditure share).

**Figure 5: Expenditure shares for each category of spending by equivalised income deciles 2 and 9**

UK, 2018

Figure 5: Expenditure shares for each category of spending by  
equivalised income deciles 2 and 9



Source: Office for National Statistics

Notes:

1. Equivalised income deciles (1 equals lowest-income households, 10 equals highest-income households).
2. Expenditure shares may not sum to 1000 due to rounding.
3. The implementation of the double update in 2017 means that for 2017 and 2018, there are two sets of weights produced for these years – one for January, and one for February to December. For consistency with previous years, we compare only the January weights in this analysis. For more information about the double update, please see the [Methodology article](#).

The largest percentage increase in the expenditure share between 2018 and the 2005 to 2017 average for both household groups was in education, similar to retired and non-retired households.

## Expenditure deciles

A similar picture can be seen when looking at households grouped by expenditure deciles: 10 equally-sized groups of households ranked according to their equivalised expenditure totals. There are large differences in expenditure weights between the 2nd and 9th expenditure deciles (larger in magnitude than the differences between the 2nd and 9th income deciles), this can be seen in our [previous publication](#). However, these differences have remained fairly stable in the 2018 (January) data. For example, households in the 9th expenditure decile allocate a larger proportion of spending to transport, restaurants and hotels, whereas households in the 2nd expenditure decile spend a larger proportion of total spending on housing costs as well as food and alcoholic beverages.

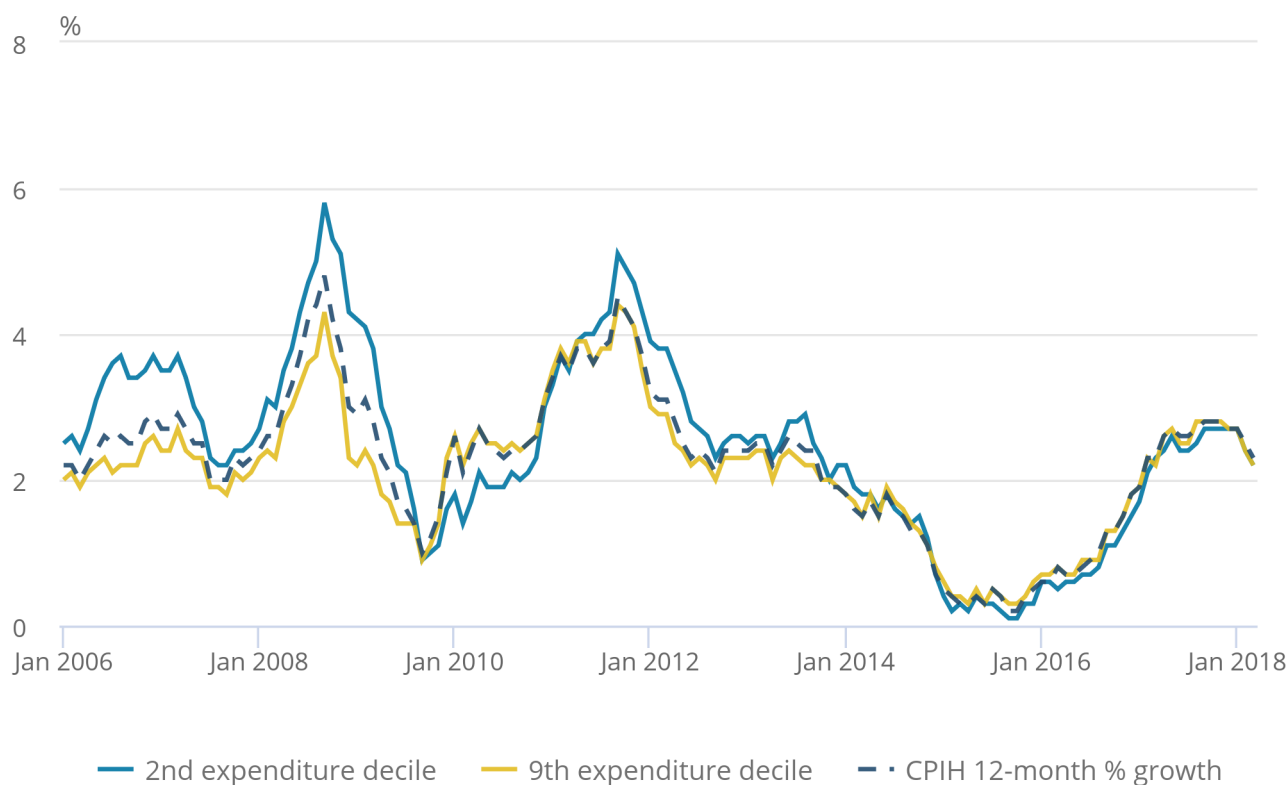
These differences in expenditure weights alongside more volatile price movements in some of these categories contributed to larger differences between the inflation rates experienced by the 2nd and 9th deciles before the beginning of 2015 (Figure 6). For example, higher positive contributions from food and drink have consistently increased the rate of inflation experienced by low-expenditure households compared with high-expenditure households over the period to November 2014. By comparison, transport and package holidays have consistently increased the rate of inflation for high-expenditure households. The convergence of the deciles in terms of annual growth rates and the narrowing spread between them can be explained by a more stable balance of contributions since the beginning of 2015. This pattern has continued in the first three months of 2018.

**Figure 6: 12-month growth rates for equivalised expenditure deciles 2 and 9; CPIH**

UK, January 2006 to March 2018

## Figure 6: 12-month growth rates for equivalised expenditure deciles 2 and 9; CPIH

UK, January 2006 to March 2018



Source: Office for National Statistics

### Notes:

1. Equivalised expenditure deciles (1 equals lowest expenditure households, 10 equals highest expenditure households).

## Households with and without children

Households with and without children have had similar 12-month inflation rates over much of the period since 2006 and this trend has continued into the first three months of 2018. This is due to both groups having similar expenditure shares, with the main difference coming from the share of expenditure for housing, water, electricity, gas and other fuels.

In 2018, about 26% of household expenditure was spent on this division for households with children, compared with nearly one-third of household expenditure for households without children. The expenditure shares also remained fairly stable in 2018 compared with the 2005 to 2017 average.

1. The implementation of the double update in 2017 means that for 2017 and 2018, there are two sets of weights produced for these years – one for January, and one for February to December. For consistency with previous years, we compare only the January weights in this analysis. For example, when we take the average of the weights across the period 2005 to 2017, we only include the weights for January 2017 in this average. For more information about the double update, please see the [Methodology article](#).

## **6 . Rates of inflation for households by tenure type**

This section presents a new household grouping for the Consumer Prices Index including owner occupiers' housing costs (CPIH)-consistent inflation rates. Households are assigned into one of three tenure types: owner occupiers, renters and subsidised renters.

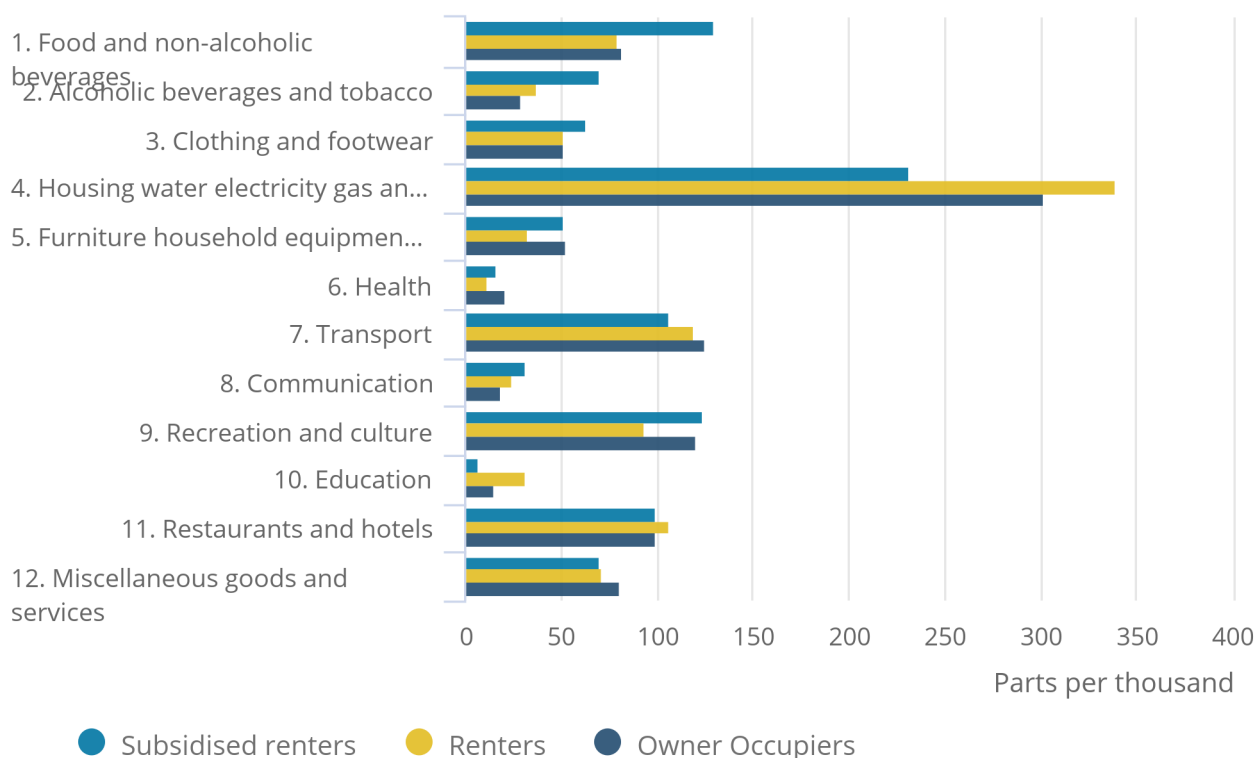
Figure 7 presents household spending on each category as a percentage of total expenditure for each of the three tenure types as an average between 2005 and 2018 (January). Housing, water, electricity, gas and other fuels is the largest component of household expenditure for all tenure types, but the share of expenditure spent on this category is greatest for renters. In 2018, it accounted for over a third of total expenditure for renters, compared with 26.6% and 28.8% for subsidised renters and owner occupiers respectively.

**Figure 7: Average expenditure shares for each category of spending, by tenure type of household**

UK, 2005 to 2018

**Figure 7: Average expenditure shares for each category of spending, by tenure type of household**

UK, 2005 to 2018



**Source: Office for National Statistics**

**Notes:**

1. Expenditure shares may not sum to 1000 due to rounding.
2. The implementation of the double update in 2017 means that for 2017 and 2018, there are two sets of weights produced for these years – one for January, and one for February to December. For consistency with previous years, we compare only the January weights in this analysis. For example, when we take the average of the weights across the period 2005 to 2017, we only include the weights for January 2017 in this average. For more information about the double update, please see the [Methodology article](#).

The expenditure share of housing, water, electricity, gas and other fuels has remained relatively stable over time for owner occupier households. In contrast, renters and subsidised renters witnessed an increase in the expenditure share of this category between 2005 and 2018, with this increase more pronounced for renters. This was offset, for example, by decreases in the expenditure share of restaurants and hotels for both types of renter households.

Table 2 shows the annual rates of price growth experienced by each tenure type between 2006 and 2017 (the last full year of data), compared with the overall CPIH annual average growth rate. The final row of the table shows the average growth rate for each group over the same period. Renters' average growth was above CPIH for most of the period while subsidised renter households' average annual inflation tended to be in-line or above CPIH for most of the period. Between 2006 and 2014, owner occupier households consistently had the lowest annual average rates of price growth of the three tenure types.

**Table 2: Annual inflation rates by household tenure type, Consumer Prices Index including owner occupiers' housing costs, UK, 2006 to 2017**

|                  | %                  |         |                 |      |
|------------------|--------------------|---------|-----------------|------|
| Year             | Subsidised renters | Renters | Owner occupiers | CPIH |
| 2006             | 2.5                | 2.6     | 2.4             | 2.5  |
| 2007             | 2.4                | 2.8     | 2.3             | 2.4  |
| 2008             | 3.7                | 3.7     | 3.5             | 3.5  |
| 2009             | 2.4                | 2.3     | 1.9             | 2.0  |
| 2010             | 2.7                | 2.6     | 2.5             | 2.5  |
| 2011             | 4.4                | 4.1     | 3.7             | 3.8  |
| 2012             | 3.1                | 3.1     | 2.4             | 2.6  |
| 2013             | 2.7                | 2.9     | 2.2             | 2.3  |
| 2014             | 1.7                | 1.9     | 1.3             | 1.5  |
| 2015             | 0.3                | 1.0     | 0.3             | 0.4  |
| 2016             | 0.6                | 1.1     | 1.0             | 1.0  |
| 2017             | 2.5                | 2.4     | 2.6             | 2.6  |
| Compound average | 2.4                | 2.5     | 2.2             | 2.2  |

Source: Office for National Statistics

Notes:

1. The average presented is the compound average annual growth rate and consequently may differ from the arithmetic average of the inflation rates presented.

The cumulative price change for these groups between 2005 and March 2018 is presented in Figure 8. Owner occupier households consistently experienced the slowest increase in prices of all the tenure types. Since 2005, prices of goods and services purchased have risen by 31.3% for owner occupiers, while this figure was 35.3% and 36.7% for subsidised renter and renter households respectively. Subsidised renter and renter households experienced very similar trends in prices until May 2014 when they started to diverge.

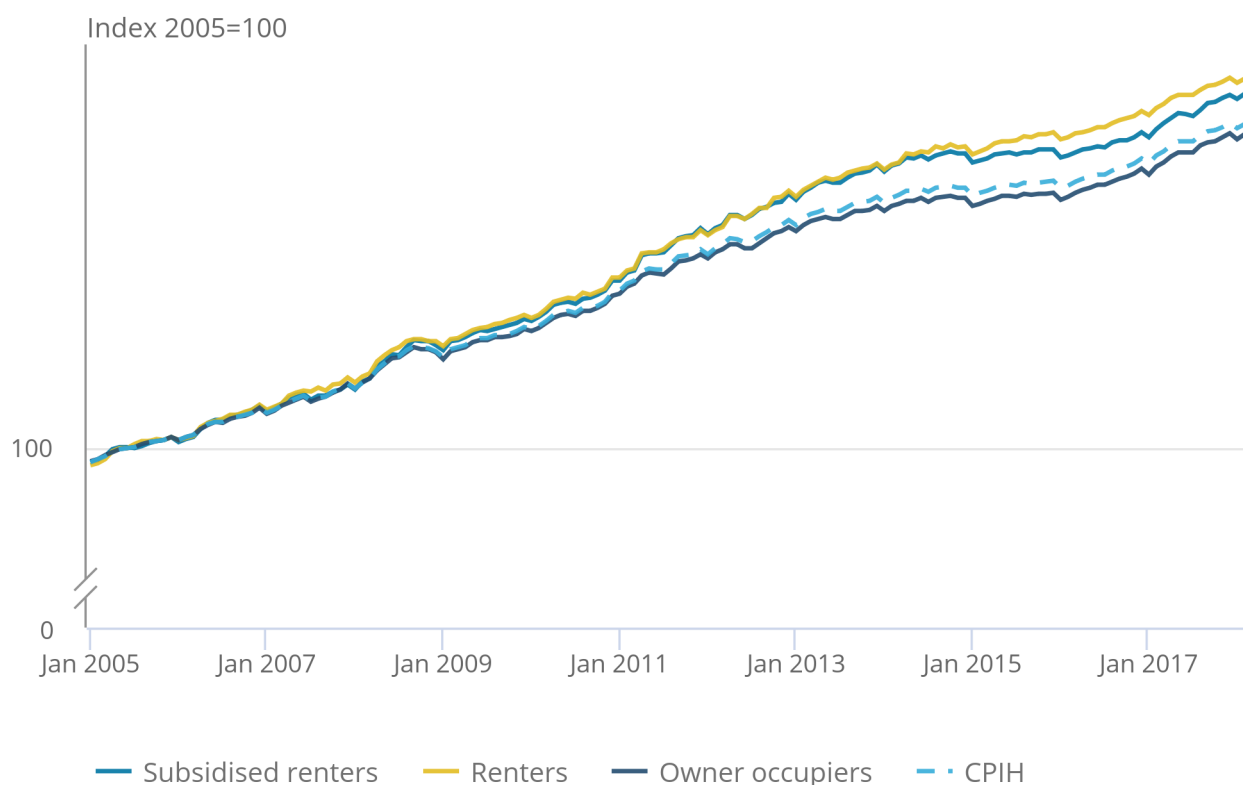


**Figure 8: Cumulative price changes for owner occupiers, renters and subsidised renters; CPIH**

UK, January 2005 to March 2018

## Figure 8: Cumulative price changes for owner occupiers, renters and subsidised renters; CPIH

UK, January 2005 to March 2018



Source: Office for National Statistics

Looking at the 12-month inflation rates for these groups can provide more insight into these trends (Figure 9). As owner occupiers make up a greater proportion of the UK population (around 65% to 70% across this time period), the published CPIH tracks their inflation experience to a greater extent than that of renters and subsidised renters.

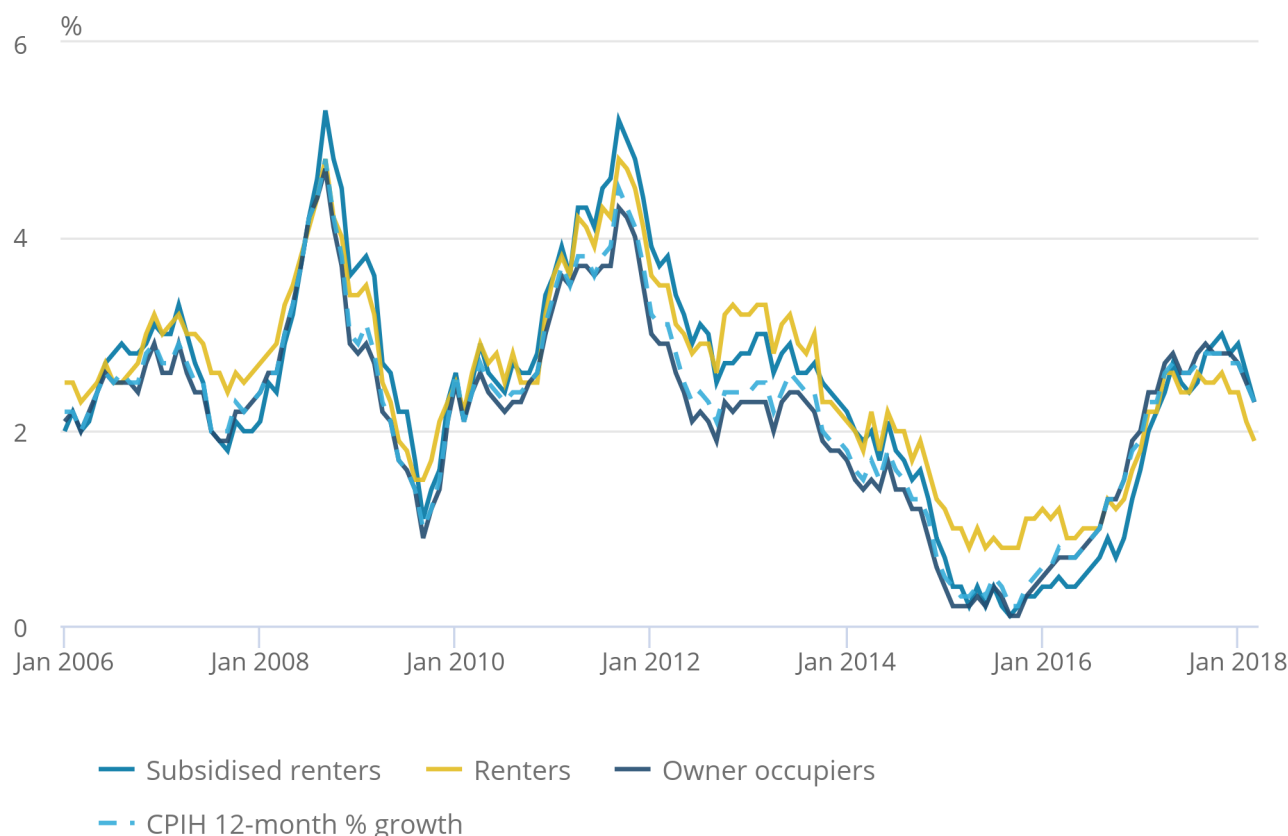
In particular, these households have in general seen lower 12-month inflation rates than renters at almost all points during the period until August 2016 when the pattern changed, and renters began to experience the lower inflation rate. Subsidised renters experienced periods of higher inflation than the other two categories, reaching a peak in the 12-month rate of 5.3% in 2008.

**Figure 9: 12-month growth rates by household tenure type; CPIH**

UK, January 2006 to March 2018

## Figure 9: 12-month growth rates by household tenure type; CPIH

UK, January 2006 to March 2018



**Source: Office for National Statistics**

The lowest inflation rates for all tenure types occurred between January 2015 and July 2016. However, the inflation experience of renter households during this period is distinct from the other tenure types. While the gap between owner occupiers and renters remained fairly stable over the period since the end of 2012, the difference between the inflation experience of renters and subsidised renters increased. In particular, the 12-month growth rate for subsidised renters fell below renters for a prolonged period of around a year and a half from the beginning of 2015.

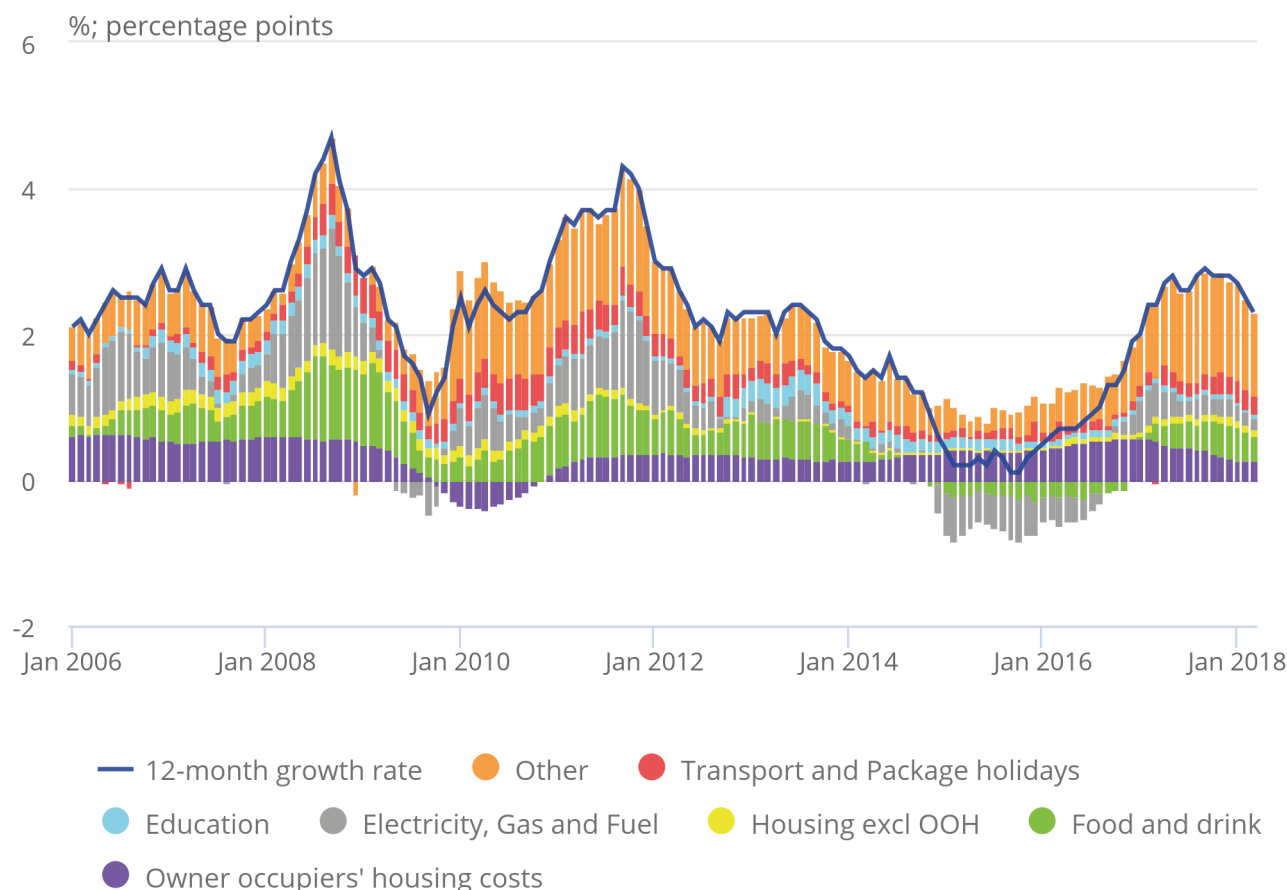
The decline in 2015 for all household types can be attributed to the reduction in contributions to the 12-month growth rate from many categories of spending. In particular, food and drink, as well as transport and package holidays, had a downward pressure on the inflation rate around that period. This is illustrated by Figure 10, which shows the contributions to the 12-month growth rate for owner occupied households.

**Figure 10: Contributions to the 12-month growth rate in inflation for owner occupiers**

UK, January 2006 to March 2018

## Figure 10: Contributions to the 12-month growth rate in inflation for owner occupiers

UK, January 2006 to March 2018



Source: Office for National Statistics

### Notes:

1. Stacked bars reflect the percentage point contributions of each of the 87 class-level items to the annual percentage change in the CPIH-consistent inflation rate. The contribution of each of the 87 class-level items is estimated separately, before being aggregated to the categories. Note that a reduction in the contribution of series to the annual rate of change need not imply falling prices, but could also reflect a lower rate of increase than the previous year.
2. Food, drink and tobacco is composed of food, non-alcoholic and alcoholic beverages and tobacco. Housing is composed of actual rents and products and services for the repair of dwellings. Owner occupiers' housing costs (imputed rents) is a separate category. Elect., gas and fuel includes electricity, gas and other household fuels as well as fuels and lubricants for motor vehicles. Transport and package holidays includes passenger transport by road, rail, air and sea, as well as package holidays. Education reflects the division-level contribution. The "other" category reflects the combined contributions of the remaining class-level items, bringing the sum of contributions to the inflation rate.
3. Contributions may not sum due to rounding.

To understand how the inflation experience varies between tenure types, we can look at the difference in contributions to the 12-month growth rate, as this will indicate which categories of spending have a greater influence on the overall inflation rate for each household group. As renters and subsidised renters do not have expenditure on owner occupiers' housing costs (OOH), this category has been changed to the contribution from actual rents for these groups.

Figure 13 shows the difference in contributions for renters less subsidised renters. If the bar is positive, it means that the contribution for that component is higher for renters than subsidised renters (that is, the component is pushing the inflation rate of renters higher compared with subsidised renters). If it is negative, the contribution is higher for subsidised renters than renters (that is, the component is pushing the inflation rate of subsidised renters higher compared with renters). The line shows the overall difference in the 12-month growth rate between renters and subsidised renters.

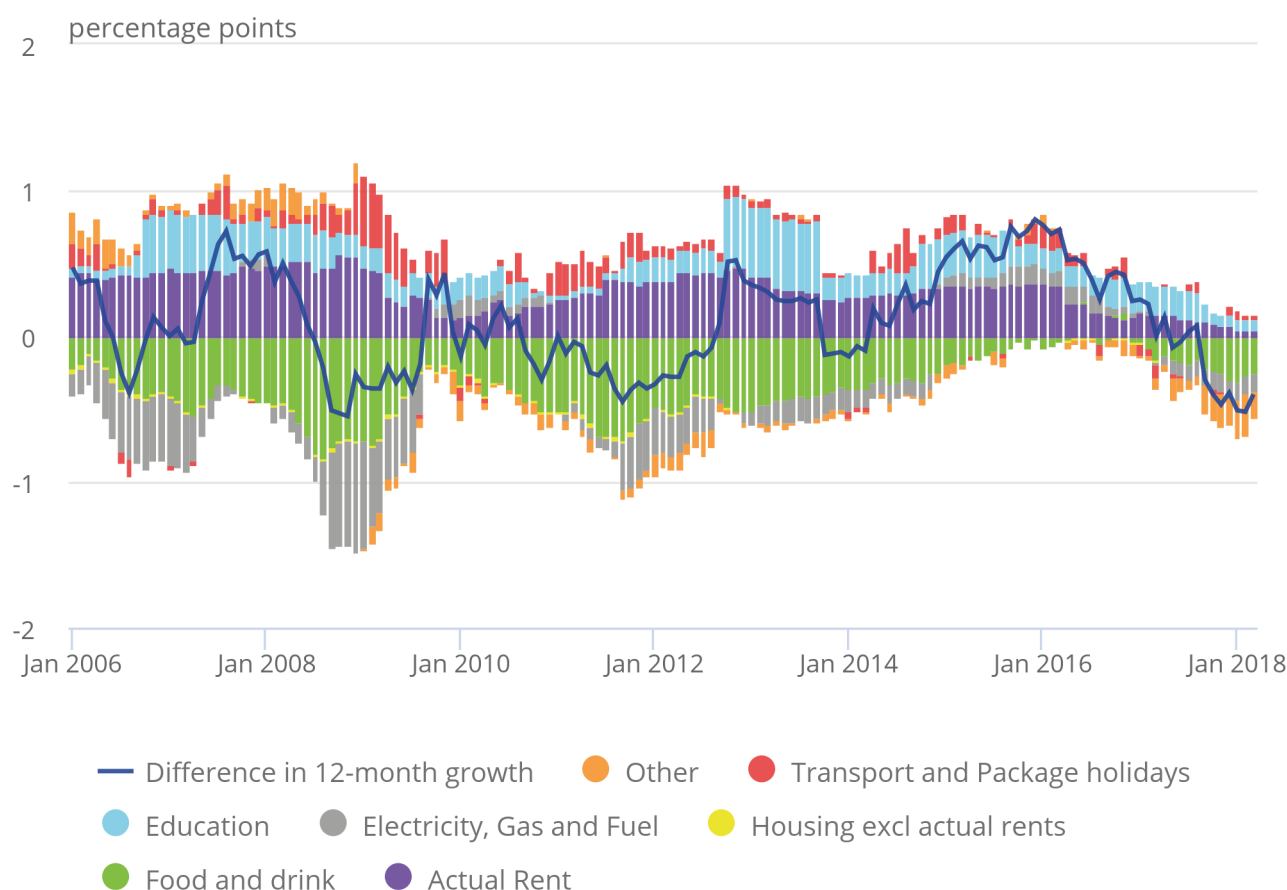
The contribution of rent and education remains higher for renters compared with subsidised renters throughout the period with the gap widening further in 2015. However, the main driver of the difference in 2015 comes from the contribution from food and drink. The decline in prices for this component, which can be attributed in part to a [supermarket price war](#), benefitted subsidised renters more than renters as they have a larger expenditure share for these goods. This meant that the inflation rate of renters was pushed comparatively higher than that of subsidised renters over this period.

**Figure 11: Contributions to the difference in annual inflation: renters less subsidised renters**

UK, January 2006 to March 2018

# Figure 11: Contributions to the difference in annual inflation: renters less subsidised renters

UK, January 2006 to March 2018



Source: Office for National Statistics

## Notes:

1. Stacked bars reflect the percentage point contributions of each of the 87 class-level items to the annual percentage change in the CPIH-consistent inflation rate. The contribution of each of the 87 class-level items is estimated separately, before being aggregated to the categories. Note that a reduction in the contribution of series to the annual rate of change need not imply falling prices, but could also reflect a lower rate of increase than the previous year.
2. Food, drink and tobacco is composed of food, non-alcoholic and alcoholic beverages and tobacco. Housing is composed of products and services for the repair of dwellings. Actual rents is a separate category. Elect., gas and fuel includes electricity, gas and other household fuels as well as fuels and lubricants for motor vehicles. Transport and package holidays includes passenger transport by road, rail, air and sea, as well as package holidays. Education reflects the division-level contribution. The "other" category reflects the combined contributions of the remaining class-level items, bringing the sum of contributions to the inflation rate.
3. Contributions may not sum due to rounding.

The difference in contributions between renters less owner occupied households is shown in Figure 12. In comparison with renters and subsidised renters, the difference between the contributions for food and drink are minimal. Instead, the main drivers for the difference in inflation rates for these two groups are the differences in contributions from education, actual rents and OOH, and electricity, gas and fuel.

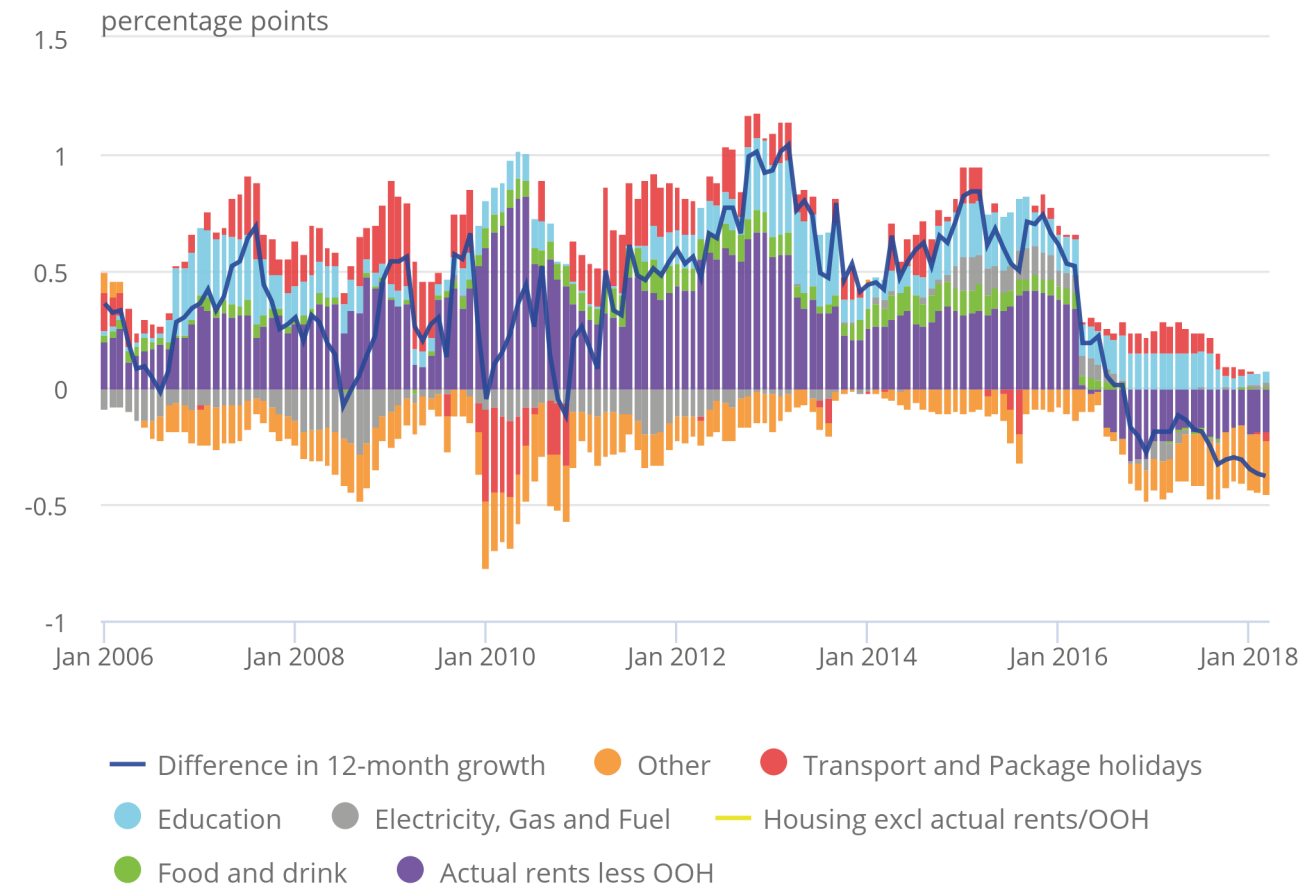
In late 2014, the contribution to electricity, gas and fuel fell sharply for both owner occupiers and renters due largely to the fall in gas prices over this period. However, the drop was greater for owner occupier households, which is shown by the contribution from electricity, gas and fuel becoming higher for renters compared with owner occupiers between December 2014 and November 2016.

**Figure 12: Contributions to the difference in annual inflation: renters less owner occupiers**

UK, January 2006 to March 2018

Figure 12: Contributions to the difference in annual inflation.  
renters less owner occupiers

UK, January 2006 to March 2018



Source: Office for National Statistics

Notes:

1. Stacked bars reflect the percentage point contributions of each of the 87 class-level items to the annual percentage change in the CPIH-consistent inflation rate. The contribution of each of the 87 class-level items is estimated separately, before being aggregated to the categories. Note that a reduction in the contribution of series to the annual rate of change need not imply falling prices, but could also reflect a lower rate of increase than the previous year.
2. Food, drink and tobacco is composed of food, non-alcoholic and alcoholic beverages and tobacco. Housing is composed of products and services for the repair of dwellings and actual rents for owner occupiers (this is negligible in most cases but some owner occupiers may pay some rent on second properties, for example). The difference between owner occupiers' housing costs (imputed rents) for owner occupiers and actual rent for renters is a separate category. Elect., gas and fuel includes electricity, gas and other household fuels as well as fuels and lubricants for motor vehicles. Transport and package holidays includes passenger transport by road, rail, air and sea, as well as package holidays. Education reflects the division-level contribution. The "other" category reflects the combined contributions of the remaining class-level items, bringing the sum of contributions to the inflation rate.
3. Contributions may not sum due to rounding.

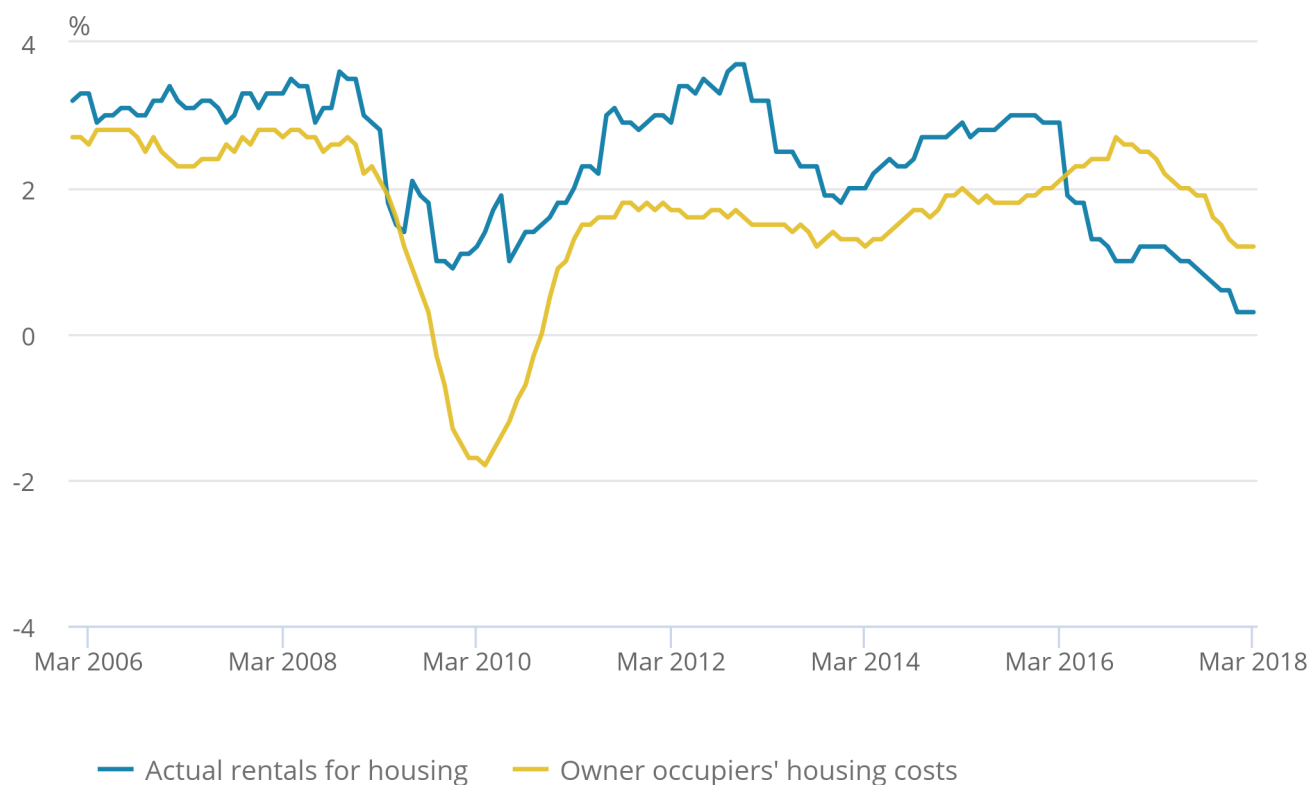
Since August 2016, the inflation rate for renters has been below that of owner occupiers. Over this period, the contribution from actual rent for renters dropped lower than the contribution of OOH for owner occupier households. We can explain the changes in contributions for these two components by looking at the 12-month growth in prices in Figure 13.

**Figure 13: 12-month growth rate of actual rent and owner occupied housing costs**

UK, January 2006 to March 2018

## Figure 13: 12-month growth rate of actual rent and owner occupied housing costs

UK, January 2006 to March 2018



Source: Office for National Statistics

Figure 13 shows the 12-month growth rate of actual rentals and OOH between January 2006 to March 2018. Over much of the period, the growth rate for actual rentals was higher compared with OOH (ensuring that the gap between owner occupiers and renters remained fairly stable). This reversed in March 2016 and contributed to the fact that renters now have a lower inflation rate compared with owner occupiers.

## 7 . Glossary

### Disposable income

Disposable income is that which is available for consumption and is equal to all income from wages and salaries, self-employment, private pensions and investments, plus cash benefits less direct taxes.



## **Disposable income deciles**

Households are grouped into deciles (or tenths) based on their equivalised disposable income. The richest decile (decile 10) is the 10% of households with the highest equivalised disposable income. Similarly, the poorest decile (decile 1) is the 10% of households with the lowest equivalised disposable income. Similarly, disposable income quintiles are grouped into twentieths.

## **Equivalised**

Income and expenditure groups are based on a ranking of households by equivalised income and expenditure. Equivalisation is the process of accounting for the fact that households with many members are likely to need a higher income to achieve the same standard of living as households with fewer members.

Equivalisation takes into account the number of people living in the household and their ages, acknowledging that while a household with two people in it will need more money to sustain the same standard of living as one with a single person, the two-person household is unlikely to need double the income. This analysis uses the modified Organisation for Economic Co-operation and Development (OECD) equivalisation scale.

## **Expenditure deciles**

Households are grouped into deciles (or tenths) based on their equivalised expenditure. The highest-expenditure decile (decile 10) is the 10% of households with the highest equivalised expenditure. Similarly, the lowest-expenditure decile (decile 1) is the 10% of households with the lowest equivalised expenditure.

## **Households with children**

Households with children are defined as any household with one or more household members who are under 18 years of age, in full-time education and have never been married.

## **Owner occupier households**

Owner occupier households are defined as any household in which the residents own the property outright or are buying the property with a mortgage. This includes shared owners (who own part of the property; paying both rent and mortgage).

## **Renter households**

Renter households are defined as any household that rents their property from a private sector landlord. It excludes households who live in their property rent-free.

## **Retired persons and households**

A retired person is defined as anyone who describes themselves (in the Living Costs and Food Survey (LCF)) as “retired” or anyone over the National Insurance pension age describing themselves as “unoccupied” or “sick or injured but not intending to seek work”. A retired household is defined as one where the combined income of retired members amounts to at least half the total gross income of the household.

## Subsidised renter households

Subsidised renter households are defined as any household that either rents their property from a council, a registered social landlord or live in their property rent-free.

## 8 . Quality and methodology

More information on the methodology used to calculate these indices can be found in the related [Methodology to calculate CPIH-consistent inflation rates for UK household groups](#) publication.

### Limitations

While the calculation of inflation rates for household groups is straightforward analytically, a range of data constraints make their estimation challenging in practice. For instance, an analysis of household group-specific inflation rates would ideally use price indices and expenditure weights specific to each household group. This would reflect the fact that different households will purchase goods and services from different outlets and therefore face different prices.

However, data are not available on specific price indices and therefore we have had to use national price indices as an approximation. There are also a number of challenges that arise from the data sources that we have available for us to calculate the expenditure shares. These limitations do not impede the validity of the chosen methodology and its robustness. For more information, please see the related [methodology publication](#).

### Weights

Price indices are constructed using price and expenditure data. These expenditure shares can be calculated using different methodological approaches; the main two are democratic and plutocratic weighting. An overview of these approaches and their associated concepts can be found in Section 7.2 of the [Consumer Price Indices Technical Manual](#) (PDF, 674KB). We have also produced a methodology article [Investigating the impact of different weighting methods on CPIH](#) that compares the two approaches, alongside additional approaches to weighting a price index.

For the purpose of this article, [plutocratic weighting](#) is used, which is consistent with the method of weighting used in Consumer Prices Index including owner occupiers' housing costs (CPIH). Plutocratic weighting is also the most common approach used internationally. Using plutocratic weighting allows for comparisons to be made between the household group inflation rates and the headline CPIH because both are produced within an established framework.

However, for analytical purposes we have also produced democratically-weighted inflation rates for each household group. Data are available to download alongside this release in the [data download section](#).