Annex: The impact of aligning RPI with CPIH

Over the five years from January 2014 to December 2018 the CPIH has on average been 1 percentage point lower than RPI (1.1 percentage points over just 2018).

Table 1 presents 1, 3 and 5-year average impacts on RPI should specific methodology changes be made. The changes are applied retrospectively (so, for example, the 1-year average refers to the average difference for 2018, and the 3-year average refers to the average difference between 2016 and 2018). We have no reason to believe that these differences will persist into the future, however, they are the best indication we have of likely future impacts.

Table 1: Average impacts of aligning RPI and CPIH differences

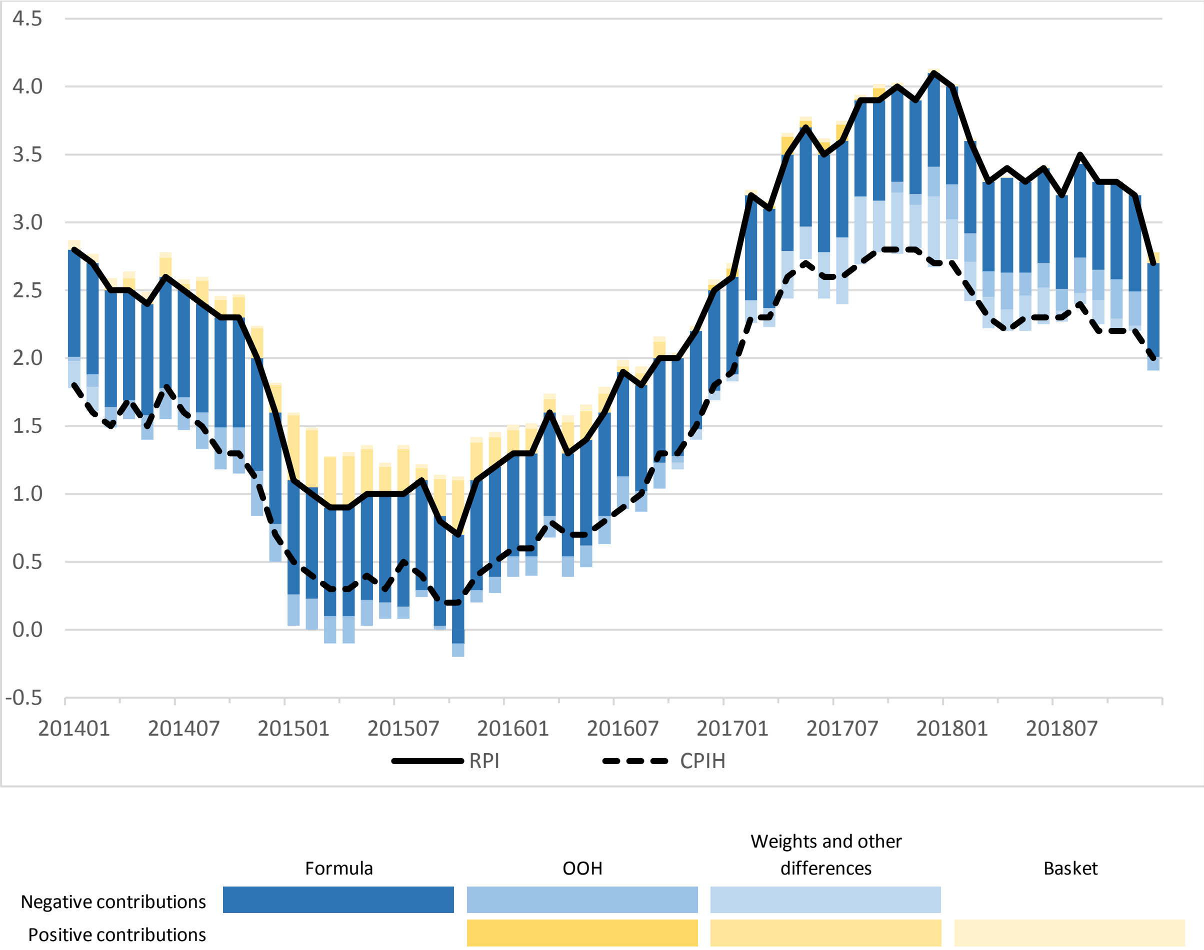
	To replace lower level formulae with those used in CPIH	To remove RPI owner occupiers' housing	To include a measure of imputed rents	Differences in the basket	Differences in weights and other residual differences
1-year average	-0.69	-0.41 *of which MIPs -0.09*	+0.20	0	-0.16
3-year average	-0.72	-0.42 *of which MIPs +0.04*	+0.31	0.03	-0.13
5-year average	-0.76	-044 *of which MIPs + 0.03*	+0.30	0.03	0

The data presented in this annex are based on the reconciliation of differences between CPIH and RPI presented in Table 5a of the Consumer Price Inflation, UK bulletin. The reconciliation differences have been constructed by breaking down RPI and CPIH into additive contributions from each component, which are used to deduce the impact of removing certain elements. The method also makes use of other measures such as RPIX (RPI excluding mortgage interest payments).

Figure 1 below shows the impact on RPI if we were to make the changes listed in Table 1. Completely aligning the formula with those used in CPIH would have the most significant impact on RPI, shifting it down by an average of 0.76 percentage points over the 5-year period.

Figure 1 also shows the impact of replacing the owner-occupiers' housing element in RPI. Removing OOH from RPI altogether is the second most significant impact, averaging 0.44 percentage points over the 5-year period. This impact can be mitigated by replacing the owner-occupiers' housing elements in RPI with the imputed rents used in CPIH, as shown in the chart. In this case the impact averages 0.3 percentage points over the 5-year period. Note that the behaviour of OOH indices over this period has been relatively stable. We would not necessarily expect these impacts to hold in more unusual economic conditions. For example, the average impact of replacing OOH in RPI with imputed rents between 2008 and 2009 would be +1.7 percentage points.

Figure 1: Impact of making specific changes to RPI



Aside from the issues listed in [Shortcomings of the Retail Prices Index as a Measure of Inflation](), the RPI also differs from CPIH and CPI in that its basket has a slightly different composition. This includes the following indices, which are in CPIH but not in RPI:

- University accommodation fees
- International student's tuition fees
- Unit trusts commission -initial charge
- Unit trusts commission -ongoing charge
- Stockbrokers commission fee
- Local Authority supported residency in retirement homes
- In-patient proxy – BUPA
- In-patient proxy - PPP

Figure 1 shows the impact of aligning the CPIH and RPI baskets. The average impact over the 5 years is to shift RPI up by 0.03 percentage points.

Finally, the chart gives the impact of aligning the RPI weights (and other residual differences) with CPIH. Changes to weights include using national accounts data rather than the Living Costs and Food Survey, trimming the top 4% of wealthy households and 1 and 2-pensioner households who are mainly dependent on the state pension, and using gross weights for insurance rather than net weights. This figure is calculated as a residual and so also incorporates any other differences[1]. The average 5-year impact is 0. This is because the impacts change direction after December 2016, and cancel each other out (the reversed relationship between early 2014 and December 2016 coincides with the period where CPI dipped below target and dropped to a period of roughly 0% inflation). The 2-year average may therefore be more helpful. From January 2017, the average impact is to shift RPI downward by 0.24 percentage points.

[1] Specifically, the residual includes:

- Differences in the source of weights; RPI uses the Living Costs and Food survey (LCF), whereas CPIH primarily uses the national accounts
- Coverage difference implied by the different sources of weights; for example, LCF excludes spending by foreign visitors to the UK, and institutional households
- Differences in the coverage of weights; RPI removes the top 4% of wealthy households and 1 and 2 pensioner households mainly dependent on the state pension
- Insurance weights; in CPIH insurance weights are net of claims pool expenditure, whereas RPI uses gross expenditure
- Classification differences; CPIH uses COICOP, an internationally recognised classification structure, whereas RPI uses a bespoke system
- The difference in chain linking; the CPIH is chain linked twice, once in December and again in January; weights are also price updated twice from February 2017
- Temporal sampling of fruit and vegetable items; price quotes for these items are also collected on the Friday preceding index day in CPIH
- Petrol and oil prices, which are collected on index day in RPI (the second or third Tuesday of the month), but averaged over the month in CPIH
- Rounding; RPI growth rates are calculated from rounded data, whereas CPIH rates are calculated from unrounded data