Possible changes to the Retail Prices Index: what they are and why they matter

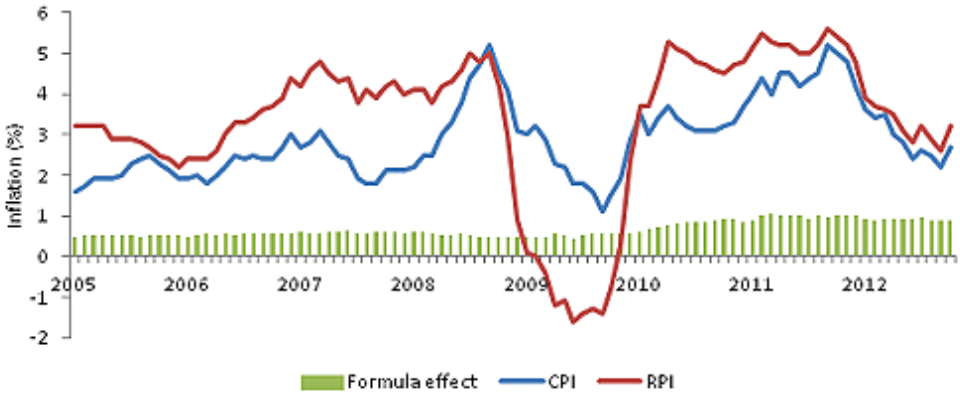
Peter Levell of the IFS analyses changes in the way the Retail Prices Index (RPI) is calculated and discusses what they entail. Most benefit payments and tax rates have already switched to being linked to the CPI and so any change to the RPI would not affect them, but government bondholders may be adversely impacted.

In October the Office for National Statistics announced a consultation on possible reforms to the Retail Prices Index (RPI). These reforms could have far-reaching consequences. Recently, we published **a working paper** with our thoughts on technical aspects of the proposed changes.

The UK has two main measures of consumer price inflation, the Retail Prices Index (RPI) and the Consumer Prices Index (CPI), which can give quite different impressions of how prices are changing from year to year. Some of the differences between these two measures are quite easy to explain. For instance, the CPI does not include mortgage interest costs while the RPI does. But there is one difference that has been a source of confusion for those using the two indices: the RPI and CPI use different mathematical formulae to work out how prices are changing, meaning that even if they were fed the same raw price data, the two would report different inflation rates.

This impact of this specific difference between the RPI and CPI is known as the 'formula effect'. Historically, it has consistently pushed up RPI inflation relative to CPI inflation (see Chart 1). Users of these indices have long been entitled to ask what reason is there for this difference – why is a given method preferable in one index but not the other? These questions only became more pertinent when the size of the formula effect nearly doubled in size following a seemingly minor change to the way clothing prices were sampled in 2010. That's why in October the ONS started seeking views on whether to change the formulae used in the RPI to bring them in line with those used in the CPI (other options in the consultation would serve to reduce the formula effect without eliminating it entirely).

Chart 1: RPI and CPI inflation rates and the formula effect, 2005-2012



Source: Office for National Statistics

So what are these different formulae and why should the ONS want to change them in the RPI? Indices like the RPI and CPI have to combine many different prices into a single inflation figure. They both start by working out the price changes of individual 'items' (such as 'white unsliced bread') from a detailed set of price quotes (such as prices of different brands of white unsliced bread). In the RPI, in some cases, a simple average is taken of the price changes of the individual brands. This is the RPI's 'formula', which

the ONS is considering replacing. In the CPI, on the other hand, a geometric average is usually taken. This method was first proposed in an essay on gold prices written in 1863 by the British economist William Stanley Jevons, and is now called the 'Jevons index'. This difference may sound extremely arcane, but it has a big effect. According to estimates of the size of the formula effect shown in Chart 1, using the same averaging methods in the RPI as in the CPI would reduce RPI inflation by just under one percentage point on average each year.

The case against the current RPI formula essentially boils down to the fact that it can give quite odd results. For example, if prices for some item go up one year and then fall back to their original level the next, the RPI will show that item as being more expensive at the end of the period. This does not seem like a very desirable property for a price index to have, and few other countries still use the RPI method partly for this reason. The CPI's geometric average does not lead to the same problem. However, as we point out in our working paper, moving to the CPI method would not prevent the RPI as a whole (rather than the RPI for particular items) giving these sorts of results, because of the way inflation rates for the individual items are later combined together into an overall figure. Indeed, the same problem occurs with the overall CPI as well. So this issue needn't be fatal for the RPI's formula, though taken together with other problems it does add to a cumulative case for change. The **working paper** goes into more detail about this and other issues.

In any case, even if we could all agree that the current RPI method is inappropriate, reforming it will inevitably create losers. Plenty of contracts are signed guaranteeing one party or the other a return based on RPI inflation. For instance, owners of inflation-indexed bonds get a return equal to RPI inflation plus some yield each year (protecting the value of investments from being eroded by unexpected increases in prices). If RPI inflation were to be reduced, then they would see their investments fall in value, with holders of long term bonds suffering the greatest losses. Importantly, most benefit payments and tax rates have already switched to being linked to the CPI and so any change to the RPI would not affect them. One exception might be increases in excise duties such as fuel, alcohol and tobacco taxes, which are still linked to RPI, though one would expect the government to adjust the way these are uprated if the RPI were changed.

The ONS consultation will close by the end of November, and the intention is that any change would be implemented from March 2013. The eventual decision would have to be considered by the Bank of England, who would assess whether or not the change would be "materially detrimental" to bondholders. If so, responsibility for approval would then pass to the Chancellor. Of course, from his perspective, a reduction in the amount of interest he needs to pay to the holders of government debt would be a welcome windfall – helping him cut the deficit at a stroke. Jevons himself used his own index to assess the consequences of new gold discoveries on prices and noted that "The most remarkable effect of the depreciation of gold is a considerable reduction in the National Debt". Using his index in the RPI might have rather similar consequences today.

This article first appeared on the IFS website.

About the author

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