# ....and Statistics

Statistics are indeed vital for all those with an Armed Forces pension. Every April the pensions of hundreds of thousands of us are increased by the "rate of inflation". But which rate, and how is it calculated, and how might this change?

**Tony Cox,** member of the Royal Statistical Society and Chair of the RPI/CPI User Group, explains.

Over recent years the method used to calculate the inflation rate has been the subject of technical debate and, more important, political controversy. And no wonder – every year the inflation rate for the previous twelve months is measured and then applied to pensions paid from the following year.

The usual month of measurement is September with the new rate applied the following April. This applies to many public and private occupational pensions and it provides one leg of the 'triple lock' for the State Pension. So with very many people's pensions going up every year under this system, even a small difference of a fraction of a percentage point can mean the Government pays out millions of pounds more (or less) than it would otherwise do.

It is an area which is likely to get more, not less, complex in the years to come.

### The Retail Price Index

It all used to be relatively simple. In the beginning there was the Retail Price Index (RPI). This had a long history: its origins were in the First World War [see Box 1].

It was designed around what people actually paid out, from the money in their pocket, on everyday things. The actual things which underpin the index changed from year to year but the principle behind it remained the same. [see Box 2]

And it was this index which was applied across the board to a number of pension schemes (including virtually all public sector schemes), a number of welfare benefits, and the State Pension.

### Consumer Price Index

A new index was then developed, the Consumer Price Index (CPI). This was an index designed to be used for comparisons of inflation rates with other European countries.

There are a number of differences in the way that the RPI and CPI are compiled, but two that contribute significantly to the difference between them.

First, the formula used in the CPI assumes that when prices rise in an uneven manner people will switch to products that have gone up by less, so the actual increase in costs is not as great as it would otherwise be.

This use of a formula that assumes substitution is one reason why CPI almost always delivers a lower estimate of inflation than RPI.

And second, CPI excludes housing costs because it proved too difficult to find a mutually agreeable method of measurement given the different types of housing market across Europe.

At present the government uses a pick and mix approach to RPI and CPI [see table opposite].

## Box 1

In 1914, the Government first began a systematic, continuous check on the increase in the cost of living. The published figures initially covered only food but the index was expanded in 1916 to cover clothing, fuel and some other items. The index was designed as an aid towards protecting ordinary workers from price rises associated with the First World War. It continued throughout the 1920s and 1930s but was increasingly criticised particularly in relation to the weights used. These were based on data from a 1904 survey of urban working class households' expenditure and were influenced by subjective judgements of what constituted legitimate expenditure for a working class family. For example, beer was completely excluded. In 1936, the then Ministry of Labour announced its intention to update the weights using the results from a large-scale household expenditure survey carried out in 1937-38. However, by the time the results became available, war had broken out and further action was deferred.

Source ONS

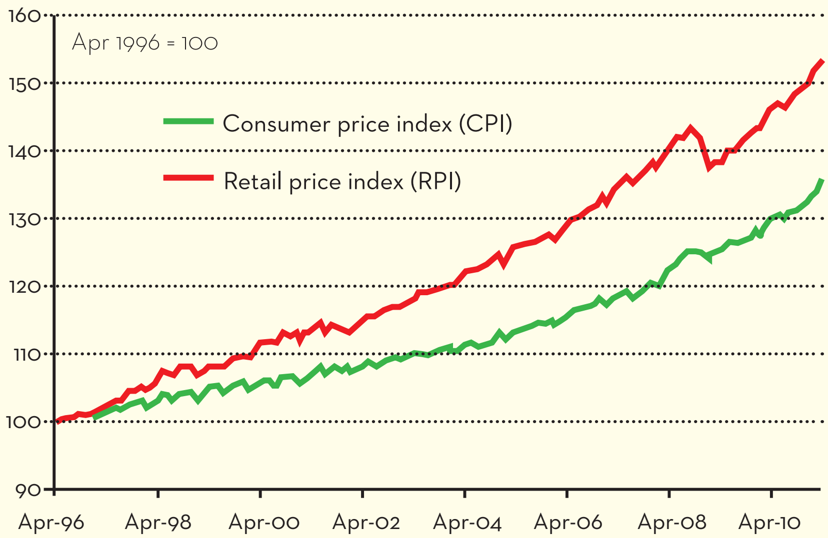
## Box 2

Various relatively minor changes were introduced in the 1960s and 1970s including:

- the introduction of a meals out group from 1968.
- the introduction of seasonal weights for fresh fruit and vegetable items from 1975.
- a component for foreign holidays from 1993.
- UK holidays from 1994.
- random sampling of locations for price collection in 1995.
- local probability sampling for the selection of some high turnover, high technology goods within retail outlets in 2004.

Source ONS

## 15 years of the two




Source: Office for National Statistics (ONS)

### It's all about politics

But of course there's more to it than that. It is not and never has been just a matter of a different technical approach.

The key political fact is that over the years CPI has tended to be lower than RPI, and therefore the government saves money by making the shift.

It is not true that CPI is always lower than RPI but, as can be seen above, for most years this has been true, and this year the CPI increase that will be applied to all pensions in April is 1.0%; had it been RPI the increase would have been 2.0%.

CPI has other failings too. It is better at measuring accurately the expenditure of richer households, but it tends to be less accurate at measuring the expenditure of lower spending groups.

Most of all, the key omission of owner occupied housing costs has long been recognised as a shortcoming of the CPI. For that reason we have been looking for a new index which includes housing costs. There is a technical challenge here: just how do you identify and measure these costs? Is it typical mortgage payments? Or some proxy based on the cost of new builds?

### A New Index?

A way through this has now been developed by the Office of National Statistics. It is called CPIH - the H is for housing - and it has been submitted to the UK Statistical Authority for their validation.

This validation has not yet been formally granted, but it is expected soon. If and when that happens, the government will have a decision to make on whether or not to use CPIH rather than CPI, as the key index measuring inflation which will be used to uprate pensions every year.

This is a very important decision and it will not be taken in a hurry: the earliest it might happen would be 2018 (for pension increases in April 2019) but do not put your housing costs on it!

### The Answer – Perhaps!

Of course the question many people reading this article want to know is, will CPIH be higher than CPI. The answer is, as we statisticians say, perhaps. Research shows that between January 2015 and January 2017, CPIH was approximately 0.3% per annum higher than CPI. However, going back to January 2007 reverses the difference and CPI was marginally higher than CPIH.

This longer period does include the recession and the ONS has indicated it expects that a CPIH of 0.3% higher is more likely to hold true in the future.

While a difference of 0.3% may not sound large in terms of an individual's pension increase, it should be remembered that any difference applied to pensions is cumulative for the individual and is an awful lot when measured across all the pensions to which it would apply.

But that is not all. Dissatisfaction with the fundamentals of CPI, and even CPIH, continues; and work is going on to develop another index – the Household Inflation Indicator (HII) which goes back to first principles and measures more accurately what households actually spend. This is still on the drawing board, but it could be the long-term solution.

**To an outsider this might seem technical and rather dry, but it strikes to the heart of our pensions, how they are calculated, how much they are worth, and what they are supposed to cover. The Forces Pension Society, through its membership of the Public Service Pensioners Council, is very close to these discussions.**

## Some official uses of RPI and CPI

| RPI | CPI |
|---|---|
| Rail fares | Macro economic targets |
| Water charges | Various pensions |
| Energy charges | State and other pensions |
| Telecomms | Benefits (currently frozen) |
| Postal services | Inheritance tax |
| Business rates | Tax allowances |
| Student loans | |
| Gilts & NS&I index linked certificates | |