

Users and uses of consumer price inflation statistics

Bethan Evans & Ainslie Restieaux, Office for National Statistics

Summary

Consumer price inflation is the speed at which the prices of goods and services bought by households rise or fall. Consumer price inflation is estimated by using price indices. One way to understand a price index is to think of a very large shopping basket containing all the goods and services bought by households. The price index estimates changes to the total cost of this basket. Office for National Statistics (ONS) consumer price indices are published monthly.

Consumer price inflation statistics are important indicators of how the UK economy is performing. They are used in many ways by individuals, government, businesses and academics. Inflation statistics impact on everyone in some way as they affect interest rates, tax allowances, benefits, pensions, savings rates, maintenance contracts and many other payments.

This article provides information about the users and uses of consumer price inflation statistics, and user experiences of these statistics, including the new CPIH and RPIJ measures. In addition, it also provides information on the characteristics of the different measures of consumer price inflation in relation to potential use. The last section covers the history of the indices. Users can use this information to help inform their own decision making in regards to which index is most suitable for their particular purpose.

Introduction

Until recently ONS produced two main measures of consumer price inflation – the Consumer Prices Index (CPI) and the Retail Prices Index (RPI). In March 2013 two additional measures of consumer price inflation were added to the existing suite of indices, CPIH, a new measure of UK consumer price inflation that includes owner occupiers' housing costs (OOH)¹ and RPIJ, an improved variant of the RPI which is calculated using formulae that meet international standards. The history of the four measures of consumer price inflation is available in Annex A.

ONS is responsible for the production and dissemination of a wide range of official statistics to enable informed decision making by individuals, government, businesses and academics. ONS has a role to play in explaining the implications of using statistics for particular

purposes, including their known users and uses. However, it is for users and decision makers outside of ONS to determine which statistics they use for their required purpose.

Users and uses of consumer price inflation statistics

Information on the users and uses of consumer price inflation statistics, and user experiences of these statistics has been gathered from a variety of sources including feedback obtained in response to public consultations held in 2012², discussion posts on StatsUserNet³, communication with RPI/CPI user group members, regular monitoring of the use of consumer price statistics in government, meetings with users and the ongoing monitoring of contact with a wide range of users via email, phone calls and other channels.

The list of known users and uses of the consumer price statistics is presented in Table 1 below. In recent years there has been a shift towards using the CPI in preference to using the RPI for a number of uses. This includes the monetary policy target which changed to the CPI in 2003, as a deflator in the ONS national accounts which changed in 2010 and for the uprating of government pensions and some benefits which changed in 2011.

As the CPIH and the RPIJ are new statistics ONS has very limited information on current users. The new measures are being closely monitored by the Bank of England and HM Treasury in the context of understanding consumer price inflation. ONS is aware of users who are considering the use of RPIJ. The Department for Work and Pensions (DWP) is consulting users on its approach for adjusting for inflation in the Households Below Average Income (HBAI), Family Resources Survey and Pensioners Income Series data and publications⁴. DWP currently adjusts these statistics for inflation using a variant of the RPI. A report from the Institute for Fiscal Studies (IFS)⁵ recommends moving to using RPIJ to adjust past incomes and reasons that it would “represent an unambiguous improvement on the RPI, since the only difference between the two is the unwanted formula effect”. In the context of the HBAI data, the authors of the report also feel that RPIJ is preferable to the CPIH for measuring short-term changes in living standards, since it captures changes in the actual monetary outgoings of owner-occupiers for their housing (whereas the CPIH captures the implicit rental income they forgo by not renting their house out). ONS has also received some interest from landlords considering the use of RPIJ, rather than RPI, to uprate rents and transport pressure groups who argue for using the RPIJ for inflating transport fares in place of the RPI.

In terms of the CPIH, ONS has received a number of queries regarding the difference between the class ‘Actual rents’ (which includes both private and social rents) and the private housing rents series used to calculate OOH. This indicates users are beginning to monitor the series which is likely to lead to its use in the near future.

In summary, the users and uses of the CPI and the RPI are established and well understood. The newness of the CPIH and the RPIJ measures means that users are still evaluating them and their use is still being established. The production of both indices reflects an improvement to users in terms of choice of consumer inflation measures. The RPIJ gives an improved alternative to those users whose need is for a measure of inflation based on the same population, classifications, weights etc as the RPI. The CPIH will be useful for those users whose need is based on the same population and expenditure patterns as the CPI but including a measure of owner occupiers’ housing costs.

Table 1 – Users and uses of consumer price statistics

Use	Use detail	User	Index used	Additional detail
MONETARY POLICY	Inflation targeting	Bank of England	CPI	The UK Government has since 1992 based its economic policies around targeting a specific range of inflation. From December 2003 the target has been CPI at 2 per cent. Prior to this RPIX (RPI excluding mortgage interest payments) at 2.5 per cent was the target. If inflation is more than one percentage point higher or lower than the target, the Governor of the Bank of England is required to publish an open letter explaining why inflation has deviated from the target and what action the Monetary Policy Committee intends to take to get it back to target.
INFORMING THE PUBLIC	Understanding the impact of inflation on personal and household budgets	General public	CPI & RPI	The general public uses consumer price statistics to understand the impact of inflation on their personal and household budgets, and to understand how incomings and outgoings linked to inflation (such as taxes, benefits, pensions, wages, rail fares and other costs) are likely to change.
ACADEMIC RESEARCH AND ANALYSIS	Research and analysis by academia	Universities and research institutes	CPI & RPI	Academics and research institutes use consumer price statistics for research and analysis purposes.
INFLATION REPORTING	Publication of articles and reports on inflation	The media	CPI, CPIH, RPIJ & RPI	<p>The monthly publication of consumer price inflation statistics receives a lot of interest from the media. Media coverage of the release is always extensive, including the primary online news providers as well as national (and often regional) newspapers. ONS statisticians provide a number of television and radio interviews to help explain the latest figures.</p> <p>Media reports frequently compare the consumer price inflation statistics to other key statistics, for example average weekly earnings, to help their readers understand how living standards are changing over time.</p>
MACROECONOMIC MEASURE OF INFLATION	Monitoring inflationary pressures in the economy	Economists and analysts in government, business and academia	CPI & RPI	The suite of consumer price inflation statistics is used by economists and analysts as a macroeconomic indicator. The statistics can be used to inform decisions on economic and government policy. A number of government departments use consumer price statistics to monitor how prices for specific goods

Use	Use detail	User	Index used	Additional detail
				or services compare with general levels of inflation.
INDEX LINKED GOVERNMENT BONDS AND NATIONAL SAVINGS	Index-linking government bonds (gilts)	Debt Management Office	RPI	<p>Issued for the first time on 27 March 1981. The semi-annual coupon payments and principal payments associated with these bonds are adjusted in line with movements in the RPI.</p> <p>The redemption values of certain gilt-edged securities and national savings certificates are automatically updated by an account dependent on the RPI.</p>
	National Savings and Investments Index-linked Savings Certificates	National Savings and Investments	RPI	The value of savings tied up in these certificates is guaranteed to grow at least in line with the RPI.
BUSINESS TAX	Corporation Tax on chargeable gains	HM Revenue & Customs	RPI	The RPI is used to calculate the indexation allowance for the effects of inflation when calculating the chargeable gains of companies or organisations.
	Business rates	UK Government for England, Scottish Parliament for Scotland, and the National Assembly for Wales	RPI	Rates are levied on business properties on the basis of their rateable value and the national multiplier. Each year in April, the Government may raise the multiplier by a maximum of the RPI from the previous September.
INDIRECT TAX	Vehicle excise duty	HM Revenue & Customs	RPI	Vehicle excise duty rates increase in line with the RPI. In 2013-14 the vehicle exercise duty rates for heavy goods vehicles, buses and other selected vehicles were temporarily frozen.
	Fuel duty	HM Revenue & Customs	RPI	Fuel duty is often increased in line with the RPI. However, the government announced in the 2013 Budget that the fuel duty increase that was due to take effect on 1 September 2013 would be temporarily cancelled.
	Alcohol duty rates	HM Revenue & Customs	RPI	Alcohol Duty Rates increase by reference to the RPI. The 2013 Budget saw duty for wine, spirits and cider increase by RPI plus 2 per cent. The general beer duty rate was reduced by 2 per cent in 2013.

Use	Use detail	User	Index used	Additional detail
	Tobacco duty rates	HM Revenue & Customs	RPI	Tobacco duty rates increase by reference to the RPI. The 2013 Budget saw duty increase by RPI plus 2 per cent.
	Gaming duty	HM Revenue & Customs	RPI	Gross gaming yield bands increase in line with the RPI.
	Air passenger duty	HM Revenue & Customs	RPI	Air passenger duty rates increase in line with the RPI.
	Climate Change Levy	HM Revenue & Customs	RPI	Climate Change Levy rates increase in line with the RPI.
PERSONAL TAX	Income tax allowances and thresholds	HM Revenue & Customs	CPI	<p>Income tax allowances and thresholds are often revised annually in line with changes in inflation. For progressive taxes, inflation means that the Chancellor of the Exchequer takes a growing share of a person's income if wages increase over time resulting in a greater proportion of income moving into a higher bracket, known as 'fiscal drag'. To offset this, the Chancellor frequently raises the tax threshold to take account of inflation.</p> <p>Legislation will be introduced in the Finance Bill 2014 to set the personal allowance for people born after 5 April 1948 at £10,000 in 2014-15. Once the personal allowance has reached £10,000, it will then increase in line with the CPI in future years, starting from 2015-16. Historically the RPI has also been used to uprate this threshold.</p>
	Car and van fuel benefit charge	HM Revenue & Customs	RPI	The rate of fuel benefit charge for company cars, fuel benefit charge for company vans, and the benefit charge for company vans all increase in line with the RPI.
REGULATED CHARGES	Regulated rail fares	HM Revenue & Customs, Department for Transport, Train Operating Companies and National Rail	RPI	The maximum allowable increases in regulated fares by train operators in Great Britain are set using the RPI. Regulated fares account for around 40 per cent of total national rail fares and include season tickets on most commuter journeys and off-peak tickets on most intercity journeys. Since 2004, the average annual increase in regulated rail fares is capped at the RPI plus 1 per cent from the previous July.
	Regulation of water and	The Water Services	RPI	The Water Services Regulation Authority sets the maximum allowable annual increase in the overall charge by water

Use	Use detail	User	Index used	Additional detail
	sewerage charges in England and Wales	Regulation Authority (Ofwat) and Water and Sewerage companies		companies. The annual increase of regulated water and sewerage charges, which occurs in April, is capped at the RPI from the previous November plus a constant (called the "K-factor") plus any unused "K-factor" the company has from previous years. The "K-factor" is reviewed every five years and is currently 0.5 per cent.
	Indexation of charges for some of the wholesale services offered by British Telecom (BT)	British Telecom	RPI	Indexation of BT's wholesale charges for Local Loop Unbundling and Wholesale Line Rental services. OFCOM sets a maximum annual increase in these charges. OFCOM expects a real terms decrease in these charges, seeing them fall by between RPI-1.2 per cent and RPI-14.6 per cent (depending on the service). BT is currently (Summer 2013) appealing OFCOM's proposition at the competition commission.
	Stamps	OFCOM and Royal Mail	CPI	In 2012 OFCOM put a cap on second class stamps for letters of 55 pence, indexed in line with CPI for seven years. In 2013 prices for all stamps were unchanged.
INDEXATION OF PENSIONS AND BENEFITS	State pensions	Department for Work and Pensions	CPI	<p>The state pension is a regular payment from the government that UK citizens receive when they reach a set state pension age. To receive this payment UK citizens must have paid or been credited with National Insurance contributions.</p> <p>The basic State Pension increases every year by whichever is the highest:</p> <ul style="list-style-type: none"> • earnings - the average percentage growth in wages (in Great Britain) • prices - the percentage growth in prices in the UK as measured by the CPI • 2.5 per cent. <p>In 2011 the UK Government switched from using the RPI to using the CPI to uprate state benefits.</p>
	Civil service pensions	UK Government	CPI	Similar to state pensions. Since 2011 payments have increased in line with the CPI. Previously the RPI was used.
	Private sector pensions	Private sector companies	CPI & RPI	Private sector pension funds under the rules of The Pensions Trust, the annual rate of increase in the private sector occupational

Use	Use detail	User	Index used	Additional detail
				pensions in payment must be greater than a statutory amount which is set by the government. Since 6 April 2011, this statutory amount has been related to the CPI. Prior to this date the statutory amount was related to the RPI. If the rules of a pension scheme specifically refer to the RPI however, then that scheme continues to increase private sector occupational pensions in payment by the stipulated figure unless the scheme changes its rules.
	Benefits	Department for Work and Pensions	CPI	<p>As set out in the 2012 Autumn statement, most benefits are updated by 1 per cent for 3 years beginning in April 2013. Before this most benefits were increased in line with the CPI.</p> <p>The following benefits continue to be updated in line with the CPI:</p> <ul style="list-style-type: none"> • Disability Living Allowance • Attendance Allowance • Carers Allowance • Working-age benefit additions (premiums) for pensioners and disabled people • The Support Group component of Employment and Support Allowance • Disability elements of tax credits.
PAY SETTING AND WAGE NEGOTIATIONS	Wage bargaining and pay setting deals	Public and private sector employers, employees and Trade Unions	CPI & RPI	Consumer price inflation is an important factor in wage bargaining and pay setting deals. Some pay agreements explicitly link their pay rises to either the CPI or the RPI. It is likely that in the future negotiations will also include consideration of the rate of growth shown by the RPIJ and the CPIH.
STUDENT LOANS	Interest payments on student loans	Student Loans Company	RPI	For students in England and Wales who enrolled on courses starting on or after 1 September 2012, the interest rate paid on their student loans is at least in line with the RPI.
BUSINESS CONTRACTS	Private sector business contracts	Private sector companies	CPI & RPI	Consumer price indices are used in some private sector business contracts to inflate and/or deflate monetary values and to set payment amounts.
	Privately issued	Private sector	RPI	Some companies issue index-linked bonds which return to the

Use	Use detail	User	Index used	Additional detail
	index-linked bonds	companies		investor a rate of interest which exceeds the RPI.
DEFLATION	To remove price effects from statistics e.g. in the UK National Accounts	ONS, government departments and other users who want to remove the effects of price change from their statistics.	CPI & RPI	<p>For many purposes, comparisons over time are more useful when the effect of price change is eliminated. For instance, in the estimates made of gross domestic product (GDP) and its main components, revalued at constant prices. In 2010 ONS switched from using the RPI to using the CPI for deflation purposes.</p> <p>Both the CPI and the RPI are used by government departments, business and academia to remove the effect of price inflation from time series.</p>

Source: ONS

Characteristics of the different measures of consumer price inflation

Each of the four measures of consumer prices inflation (CPI, CPIH, RPI and RPIJ) has specific characteristics or differences which can be considered as relative strengths or limitations, in relation to potential use.

Table 2 below describes the main characteristics and key considerations in regards to potential use.

Table 2 – Characteristics of the different measures of consumer price inflation

Characteristic	Description	Key considerations in relation to use	CPI	CPIH	RPI	RPIJ
POPULATION BASE	Population covered by the indices.	CPI and CPIH, compared to RPI and RPIJ, have a different population base. This difference may be considered more or less desirable depending on use. Some users have informed ONS that they prefer a measure of price inflation that excludes the highest earners and pensioner households mainly on state benefit to use for wage negotiations. Conversely, other users prefer the wider coverage provided by the CPI and CPIH.	Includes expenditure by private and institutional households in the UK and also includes expenditure by foreign visitors to the UK.		Includes expenditure by private households but excludes households whose income lies within the top 4 per cent of the income distribution and pensioner households with at least three quarters of their income coming from state pensions and benefits.	
EXPENDITURE DATA (OR WEIGHTS)	Source of the expenditure data used to calculate the weights.	The CPI and the CPIH, compared to the RPI and the RPIJ, have a different source for expenditure data. This difference may be considered more or less desirable	Expenditure data (or weights) used to represent the population are derived in the main from the final household consumption expenditure component of the UK National Accounts. The weights are based on expenditure within the domestic territory by all private households, foreign visitors to the UK and residents of institutions (such as nursing homes, retirement homes and		Expenditure data (or weights) used to represent the population are derived in the main from the ONS Living Cost and Food survey (LCF). The RPI weights relate to expenditure by private households only, excluding the highest income households and pensioner households mainly dependent on state benefits.	

Characteristic	Description	Key considerations in relation to use	CPI	CPIH	RPI	RPIJ
		depending on the use.	university halls of residence).			
COMMODITY COVERAGE	The goods and services included in the indices.	The CPIH, the RPI and the RPIJ all include a component for owner occupiers' housing costs. As well as housing components the RPI and RPIJ include council tax. Both components may be considered more or less desirable depending on the use.	Covers a number of goods excluded from the RPI, including: <ul style="list-style-type: none"> • University accommodation fees • Foreign students' tuition fees. 	Same as the CPI with the inclusion of OOH costs.	Covers a number of goods excluded from the CPI, including: <ul style="list-style-type: none"> • Council tax • Mortgage interest payments • House depreciation • Buildings insurance • Ground rent • Other house purchasing costs such as estate agents' and conveyancing fees. 	
HISTORICAL TIME SERIES	Available time series.	The RPI has a longer series of data than the other three inflation measures. The length of the available back series may be an important consideration in regards to use.	Launched in 1996. A historical time series is available from 1988.	Launched in March 2013. A historical time series is available from 2005.	Launched in 1947 with the first official estimated being produced in January 1956.	Launched in March 2013. A historical time series is available from 1997.
NATIONAL STATISTIC STATUS	Status of the statistic in accordance with the Code of Practice for Official Statistics.	The National Statistics status of the statistics, which indicates whether or not a statistic is compiled in accordance with the Code of Practice for Official Statistics, should be a key	National Statistic. The CPI was reassessed against the Code of Practice for Official Statistics in 2013 and the UK Statistics Authority confirmed its designation as a	Experimental Statistic (subject to change). The CPIH was assessed against the Code of Practice for Official Statistics in 2013 and the UK Statistics Authority	Official Statistic. The RPI was assessed against the Code of Practice for Official Statistics in 2013 and the UK Statistics Authority cancelled its designation as a	Experimental Statistic (subject to change). The RPIJ was assessed against the Code of Practice for Official Statistics in 2013 and the UK Statistics Authority

Characteristic	Description	Key considerations in relation to use	CPI	CPIH	RPI	RPIJ
		consideration for users.	National Statistic subject to ONS implementing a number of enhancements.	determined that it can be designated as a National Statistic subject to ONS implementing a number of enhancements ⁶ . ONS will remove the experimental statistics classification once these enhancements have been made.	National Statistic because of the findings that: i) the methods used to produce the RPI are not consistent with internationally recognised best practices and ii) the decision to freeze the methods used to produce the RPI, and only to contemplate 'routine' changes.	determined that it can be designated as a National Statistic subject to ONS implementing a number of enhancements. ONS will remove the experimental statistics classification once these enhancements have been made.
GOVERNING LEGISLATION	Legislation regulating the production of the indices.	Legislation may be an important consideration for some users.	Governed by a series of legally binding regulations drafted by the European Commission (Eurostat) in conjunction with EU Member States. The UK can only make certain changes to the CPI within the bounds of the European regulation.	No governing legislation at present as in common with many official statistics.	Governed by the Statistics and Registration Services Act 2007. Any methodological changes to the RPI require the approval of the UK Statistics Authority Board before being referred to the Bank of England. If the Bank of England considers the change fundamental and materially detrimental to the interests of the holders of certain index-linked gilts, then the consent of	No governing legislation at present as in common with many official statistics.

Characteristic	Description	Key considerations in relation to use	CPI	CPIH	RPI	RPIJ
					the Chancellor of the Exchequer is also required.	
ELEMENTARY AGGREGATE FORMULAE	Formulae used to combine prices at the first stage of aggregation called the 'elementary aggregate'. In the UK there are three formulae used. Two are arithmetic averages (means) known as the Dutot (or ratio or average prices) and the Carli (or average of price relatives). The third formula is a geometric average called the Jevons.	In constructing consumer price indices most statistical institutes choose between two formulae, the Dutot or Jevons. The RPI also uses the Carli formula. The Carli formula used to produce the RPI does not meet international standards and in early 2012 the RPI status as a National Statistic was cancelled because of this. This should be a key consideration for users of these statistics.	Jevons – roughly two thirds of the index Dutot – around five per cent of the index Other/weighted formula – roughly one third of the index.		Carli – roughly one third of the index Dutot – roughly one third of the index Other/weighted formula – roughly one third of the index.	Jevons – roughly one third of the index Dutot - roughly one third of the index Other/weighted formula – roughly one third of the index.
PRICE COLLECTION	The timing of the price collection.	The approach to the collection of prices may be a consideration for the indices' users.	Intended to reflect prices over at least one working week at or near the middle of the reference month. In practice the collection is the same as the RPI/RPIJ collection except for petrol and oil. Prices for petrol and oil can exhibit particularly volatile price movements and for the CPI and CPIH are averaged over the month, based on the prices prevailing on each Monday during the month.		Intended to reflect prices on a particular Tuesday of each month (Index Day). In practice the collection is the same as the CPI/CPIH except for petrol and oil which are also collected on Index Day in the RPI and RPIJ.	

Characteristic	Description	Key considerations in relation to use	CPI	CPIH	RPI	RPIJ
REVISIONS	The process of revising inflation figures once published.	The CPI and CPIH can, in theory, be revised over time. However this almost never happens in practice. The RPI is not revised once published. The revision policy for the CPIH and the RPIJ is being developed ⁷ . The revisions approach may make the indices more or less desirable.	CPI indices are revisable although the only time the CPI all items index has been revised was when the index was re-referenced to 2005, which took place with the publication of the January 2006 indices.	<p>The revisions policy for CPIH is the same as that used for the CPI. CPIH indices are therefore revisable though no revisions have been made since its launch in early 2013.</p> <p>The revisions policy for CPIH will be reviewed by ONS in light of the outcome of the UK Statistics Authority reviews of the range and governance of price statistics⁸.</p>	Once the RPI indices are published they are never revised.	<p>The revisions policy for RPIJ is the same as that used for CPI. RPIJ indices are therefore revisable although no revisions have been made since its launch in early 2013</p> <p>The revisions policy for RPIJ will be reviewed by ONS in light of the outcome of the UK Statistics Authority reviews of the range and governance of price statistics.</p>
ROUNDING	How and where rounding is used in the indices.	The approach to rounding may be a consideration for the indices' users.	Monthly and twelve month rates of change are calculated using unrounded indices.		Monthly and twelve month rates of change are calculated using published estimates, and so are based on estimates to one decimal point.	
PRODUCT CODING	Classification system used for the aggregation and publication of results.	The number of categories published or how products are grouped together may be considered as part of the indices use. The use of a common classification system may also yield quality gains when more than one	Based on an internationally recognised system classifying household expenditures, known as the Classification of Individual Consumption According to Purpose (COICOP).		Based on a long standing classification system unique to the UK specified and developed by the RPI Advisory Committee.	

Characteristic	Description	Key considerations in relation to use	CPI	CPIH	RPI	RPIJ
		source or use is combined, For example the weights used for CPI use the same classification system as the CPI categories for which estimates of inflation are produced.				
INSURANCE	The treatment of insurance.	The approach to how insurance is calculated may be a consideration for the indices' users.	The amount of expenditure on insurance premiums is distributed amongst other expenditure categories according to the nature of the claim. Only the service charge is allocated to the relevant insurance heading.		All expenditure on insurance is considered to belong to the relevant insurance heading (e.g. housing or motor insurance premiums).	
OWNER OCCUPIERS' HOUSING COSTS (OOH)	The treatment of costs of housing services associated with owning, maintaining and living in one's own home. OOH does not include costs such as utility bills and minor repairs and maintenance which are already included in the consumer price inflation statistics.	CPIH and RPI/RPIJ use a different method to measure OOH costs. The approach used to measure OOH may be important for some users.	OOH is excluded from the CPI.	Measured using the rental equivalence approach which uses the rent paid for an equivalent house as a proxy for the costs faced by an owner occupier. Increases in house prices will not necessarily be captured in this method. The data used to compile the series are available from 2005 onwards for England. For Wales and Scotland data is available from 2009 and	Measured using the payments approach which includes mortgage interest payments (MIPs), house depreciation, buildings insurance and other house purchasing costs such as estate agents' and conveyancing fees. Both the weight and price changes for MIPs are modelled to estimate the interest payment on a standard dwelling for an average household.	

Characteristic	Description	Key considerations in relation to use	CPI	CPIH	RPI	RPIJ
				September 2010 onwards respectively. Before this, the CPI/RPI unfurnished private rent series for Wales and Scotland have been used to calculate OOH. The CPI/RPI unfurnished private rent series for Northern Ireland is used in all years.		

Source: ONS

Annex A: Background information on the history of measures of consumer price inflation

Consumer Prices Index (CPI)

The CPI was first published in 1997 as the Harmonised Index of Consumer Prices (HICP) - a consistent measure of inflation across Europe. The HICP was developed across the European Union (EU) for the purpose of assessing whether prospective members of European Monetary Union would pass the inflation convergence criteria and of acting as a measure of inflation used by the European Central Bank in assessing price stability in the EU member countries.

In December 2003, the National Statistician decided the name of the UK version of the HICP would change to the CPI in all National Statistics publications. This decision was concurrent with the Chancellor of Exchequer's Pre-Budget Report 2003 announcement that the UK inflation target would be based on the HICP, replacing the RPI excluding mortgage interest payments (RPIX).

A full history of the CPI and the RPI is included in an article by Philip Gooding⁹.

Consumer Prices Index including owner occupiers' housing costs (CPIH)

CPIH was introduced in March 2013 as a new measure of UK consumer price inflation that includes owner occupiers' housing costs (OOH). These are the costs of housing services associated with owning, maintaining and living in one's own home. OOH does not include costs such as utility bills and minor repairs and maintenance which are already included in the index. CPIH uses an approach called rental equivalence to measure OOH. Rental equivalence uses the rent paid for an equivalent house as a proxy for the costs faced by an owner occupier. In other words this answers the question "how much would I have to pay in rent to live in a home like mine?" for an owner occupier. OOH does not seek to capture increases in house prices. Although this may be inconsistent with some users' expectations of measures of OOH, the inclusion of an asset price and therefore capital gains makes the measure less suitable for a measure of consumption. OOH currently accounts for just over 12 per cent of the expenditure weight of CPIH. This has increased gradually from a weight of 10 per cent in 2005. CPIH was developed in response to user demand for a measure of OOH.

Retail Prices Index (RPI)

The RPI was initially developed as a compensation index, derived from an index designed as an aid to protect ordinary workers from price increases associated with the First World War. The RPI provides estimates of inflation from 1947 onwards with the first official release of consumer price inflation being produced in January 1956. Until the introduction of the UK CPI (also known at the time Harmonised Index of Consumer Prices, HICP) in 1996, the RPI and its derivatives, were the only measures of UK consumer price inflation available to users.

Retail Prices Index calculated using the Jevons Formula (RPIJ)

Following a consultation on options for improving the Retail Prices Index (RPI)¹⁰, the National Statistician, Jil Matheson, concluded that one of the formulae used to produce the RPI does not meet international standards and recommended that a new index be published.

Therefore, an improved variant of the RPI was published from March 2013 which is calculated using formulae that meet international standards. The rationale for creating RPIJ was to give users a better alternative to the RPI if their needs were for a measure of inflation based on the same population, classifications, weights etc as the RPI. Currently, RPIJ also acts as an analytical series, in that it allows users to see the impact of using the Jevons (which meets international standards) in place of the Carli formula (which does not meet international standards) in the RPI. The use of the different formulae at the elementary aggregate level is currently the only difference between the two indices.

Further Information

For further information please contact the Prices Division on 01633 456900.

Alternatively email: cpi@ons.gov.uk

© Crown copyright 2013

¹ These are the costs associated with owning, maintaining and living in one's own home. The approach used to measure OOH is rental equivalence where increases in house prices will not necessarily be captured in this approach.

² 'Consultation on the recommended method of reflecting owner occupiers' housing costs in a new additional measure of consumer price inflation, and the strategy for Consumer Price Statistics' (2012), ONS: <http://www.ons.gov.uk/ons/about-ons/get-involved/consultations/archived-consultations/2012/owner-occupiers-housing-costs/index.html> and 'National Statistician's consultation on options for improving the Retail Prices Index' (2012), ONS: <http://www.ons.gov.uk/ons/about-ons/user-engagement/consultations-and-surveys/archived-consultations/2012/national-statistician-s-consultation-on-options-for-improving-the-retail-prices-index/index.html>

³ StatsUserNet: <http://www.statsusernet.org.uk/StatsUserNet/Home>

⁴ 'DWP Family and Household Income Statistics – adjusting for inflation' (13 June 2013), DWP: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/206856/statistical_notice_13_06_2_013.pdf

⁵ 'Living Standards, Poverty and Inequality in the UK' (2013), IFS: <http://www.ifs.org.uk/comms/r81.pdf>

⁶ Assessment and Designation of experimental statistics (2011), ONS: <http://www.statisticsauthority.gov.uk/news/assessment-and-designation-of-experimental-statistics.html>

⁷ 'Consumer Price Inflation Revisions Policy' (15 October 2013), ONS: <http://www.ons.gov.uk/ons/guide-method/user-guidance/prices/cpi-and-rpi/consumer-price-inflation-revisions-policy-october-2013.pdf>

⁸ 'Statistics Authority launches reviews of price indices' (2013), UK Statistics Authority: <http://www.statisticsauthority.gov.uk/news/statement---reviews-of-price-indices.pdf>

⁹ Gooding, P. (July 2011), 'Consumer Prices Indices, History of and differences between the CPI and RPI', ONS: <http://www.ons.gov.uk/ons/rel/cpi/consumer-price-indices/history-of-and-differences-between-the-consumer-prices-index-and-retail-prices-index/index.html>

¹⁰ 'National Statistician's consultation on options for improving the Retail Prices Index' (2012), ONS: <http://www.ons.gov.uk/ons/about-ons/user-engagement/consultations-and-surveys/archived-consultations/2012/national-statistician-s-consultation-on-options-for-improving-the-retail-prices-index/index.html>