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Consumer Prices

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Office for National Statistics





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Introduction to Prices

A background to Prices Division including the published series and their histories.

Current suite of measures

CPIH

- Economic principles
- Most comprehensive measure

CPI

- Comparable across EU
- Does not include Owner Occupiers' Housing (OOH) costs

Household Costs Indices (HCIs)

- Household experience of inflation
- Focus on sub-group measures
- Matched with comparable measure of income

RPI

- Legacy measure
- Use discouraged
- Range of sub-indices reduced



History of the Retail Price Index (RPI)

Longest-standing measure of inflation in the United Kingdom

1914

UK Government first began to record changes in the cost of living in 1914

Which continued throughout the 1920s and 1930s

1946

Cost of Living Advisory Committee set up: fundamental changes in the selection and number of items to collect prices for

June 1947

Interim Index of Retail Prices began

1955

Sufficient information available to underpin a new index


January 1956

First official Retail Prices Index became used for indexation and (as RPIX) inflation targeting



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Problems with the RPI

- 
- 2010 A change in the way clothing prices were collected has an unexpected effect on RPI
Detailed work followed which resulted in reappraisal of RPI
- 2012 Consultation on future of RPI: conclusion to leave RPI unchanged and develop alternatives
- 2013 National Statistics status *cancelled*
- Methods not consistent with international best practice
 - Decision to freeze the methods used, and only to contemplate 'routine' changes



HICP & CPI

- **1997:** Harmonised Index of Consumer Prices (HICP) introduced
 - Comparable measure of inflation across EU Member States
- **2003:** HICP in the UK renamed the Consumer Prices Index (CPI) and became inflation target

But CPI always lacked a owner-occupiers' housing element (OOH)

- **2013:** CPIH launched which includes owner occupiers' housing costs





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Comparison of CPI / CPIH as a measure compared to RPI

Including collection and aggregation methods.

A common basis for consumer prices measures

CPIH / CPI and RPI measure price change for a fixed basket of goods and services.

Prices for over 700 items are collected.

Each month 100,000 price are collected 'locally' on over 140 separate locations across the UK.

For all basket items common to both the CPIH / CPI and RPI, the same prices are collected.

For most items, the prices are aggregated differently for the CPIH / CPI and RPI.



How do RPI and CPIH / CPI differ?

	RPI	CPIH	CPI
Population base	<p>Excludes highest earners and pensioner households dependent mainly on state benefit</p> <p>Includes expenditure within the UK and abroad by UK households</p>	<p>Represents all UK households and includes expenditure of institutional households (e.g. nursing homes) and foreign visitors to the UK</p> <p>Includes expenditure within the UK only</p>	
Weights	Based on the ONS Living Costs and Food (LCF) Survey	Derived from ONS National Accounts - Household final consumption expenditure (HHFCE) data	
Index construction formula	Constructed using an arithmetic mean (AM)	Mainly (approximately 70%) uses a geometric mean (GM). For items where substitution is less likely an arithmetic mean is used	
Coverage	Includes Mortgage interest payments (MIPs) and other housing costs	CPI plus Owner Occupiers' Housing (OOH) costs	Includes foreign spend but excludes spend on housing

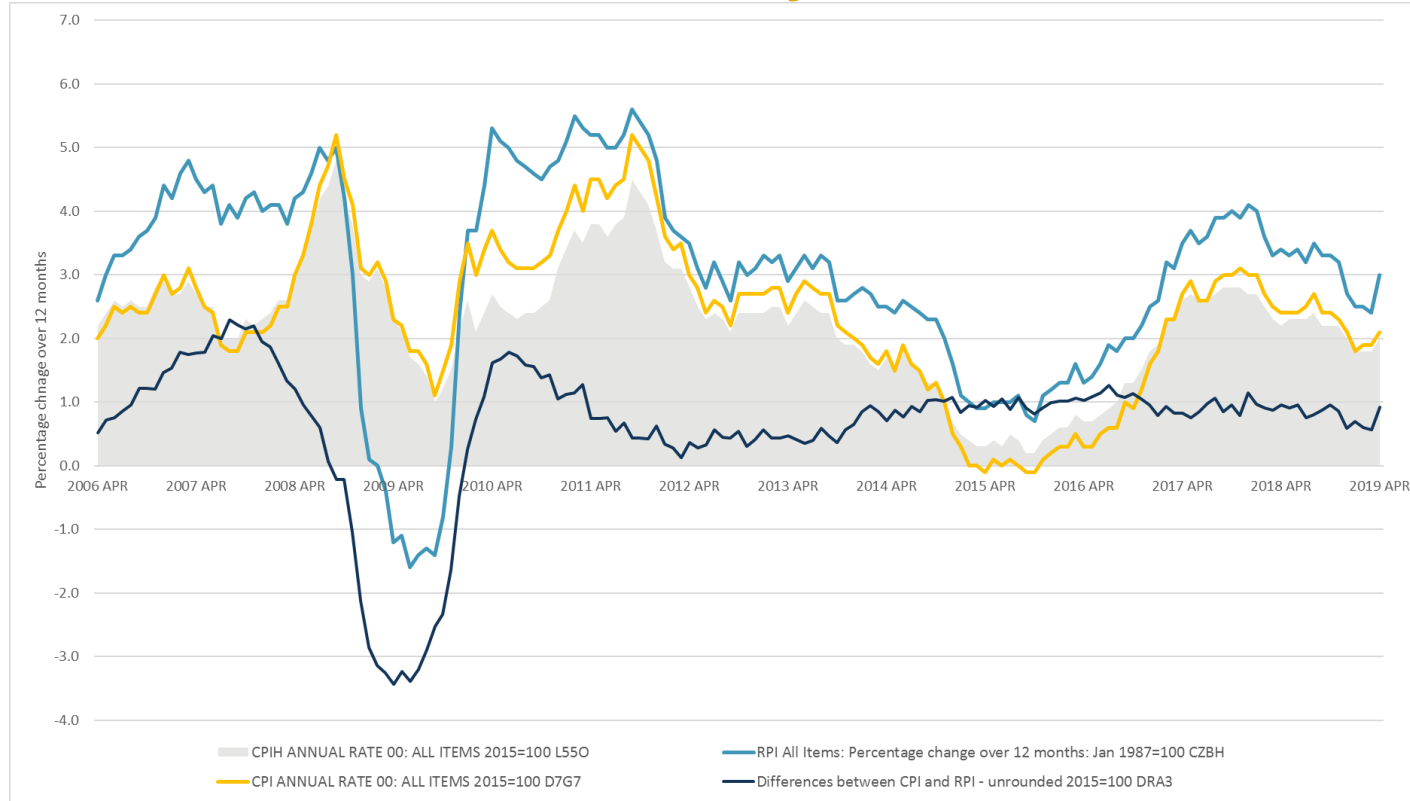


There are differences in coverage

Weights (in parts per 1,000)	RPI	CPIH	CPI
Mortgage interest payments (MIPs)	25.0		
Council tax	39.0	26.0	
House depreciation	84.0		
Building insurance / ground rent	6.0		
House purchase costs	3.7		
Imputed Rents		165.0	
Stockbroker fees		1.3	1.6
University accommodation fees		2.1	2.6
Foreign student tuition fees		3.4	4.2
Unit trust fees (Ongoing)		1.0	1.3
Hospital in-patient services		2.0	2.4
LA Support Retirement Homes		0.5	0.7
Self-catering accommodation		11.3	14.0
Petrol and diesel	Prices are measured at a single point during the month (34.7).	Prices are measured as an average over the month (23.8 and 29.7).	



How do the measures vary over time?





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Outcome of the House of Lords Economic Affairs Committee

Covering the Government's response to the report into Measuring Inflation.

The current situation

- House of Lords' Economic Affairs Committee published their report on Measuring Inflation on 17 January 2019.
- We are currently participating in on-going discussions with other Government departments to establish the Government's fuller response to the HLEAC report.
- The nature of the discussion means that we are currently unable to provide any further detail of timing of the Government's proposed response.
- Given that any announcement could be potentially market sensitive, we would not wish to present an unfair advantage to any party. We are therefore planning to coordinate our response carefully with the Government.





HM Treasury, 1 Horse Guards Road, London, SW1A 2HQ

30 April 2019

The Rt Hon the Lord Forsyth of Drumlean
Chairman
Lords Economic Affairs Committee
House of Lords
London SW1A 0PW

Dear Michael

House of Lords Economic Affairs Committee inquiry – the use of the Retail Prices Index

As I set out in my letter to you on 13 March, the Government is grateful for, and is considering, the Committee's report.

The Committee made several recommendations both to the Government and the UK Statistics Authority (UKSA). The issues it raises are complex and wide-ranging. The breadth, complexity, and importance of the issues mean that your report requires further consideration.

The Government is continuing to discuss the relevant issues with the UKSA, and will respond to the Committee's report as soon as it is practicable to do so. We will communicate the date for this response in due course, with at least 24 hours notice.

I am copying this letter to the Chair of the Treasury Committee.

Philip Hammond

PHILIP HAMMOND



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Chair of the UK Statistics Authority, Sir David Norgrove

The Rt. Hon the Lord Forsyth of Drumlean
Chair, Economic Affairs Committee
House of Lords
London
SW1A 0PW
(via email)

30 April 2019

Dear Lord Forsyth,

As the National Statistician explained last month, the UK Statistics Authority was grateful to receive the Committee's report on measuring inflation. Together with the Office for National Statistics, we have considered the Committee's findings and recommendations carefully.

I have seen the Chancellor's letter to you of earlier today. As he said, the Government and the UK Statistics Authority continue to discuss the issues raised by the Committee. We will respond to the Committee as soon as is practicable.

I am copying this letter to the Chancellor and to the Chair of the Public Administration and Constitutional Affairs Committee.

Yours sincerely

David Norgrove

Sir David Norgrove



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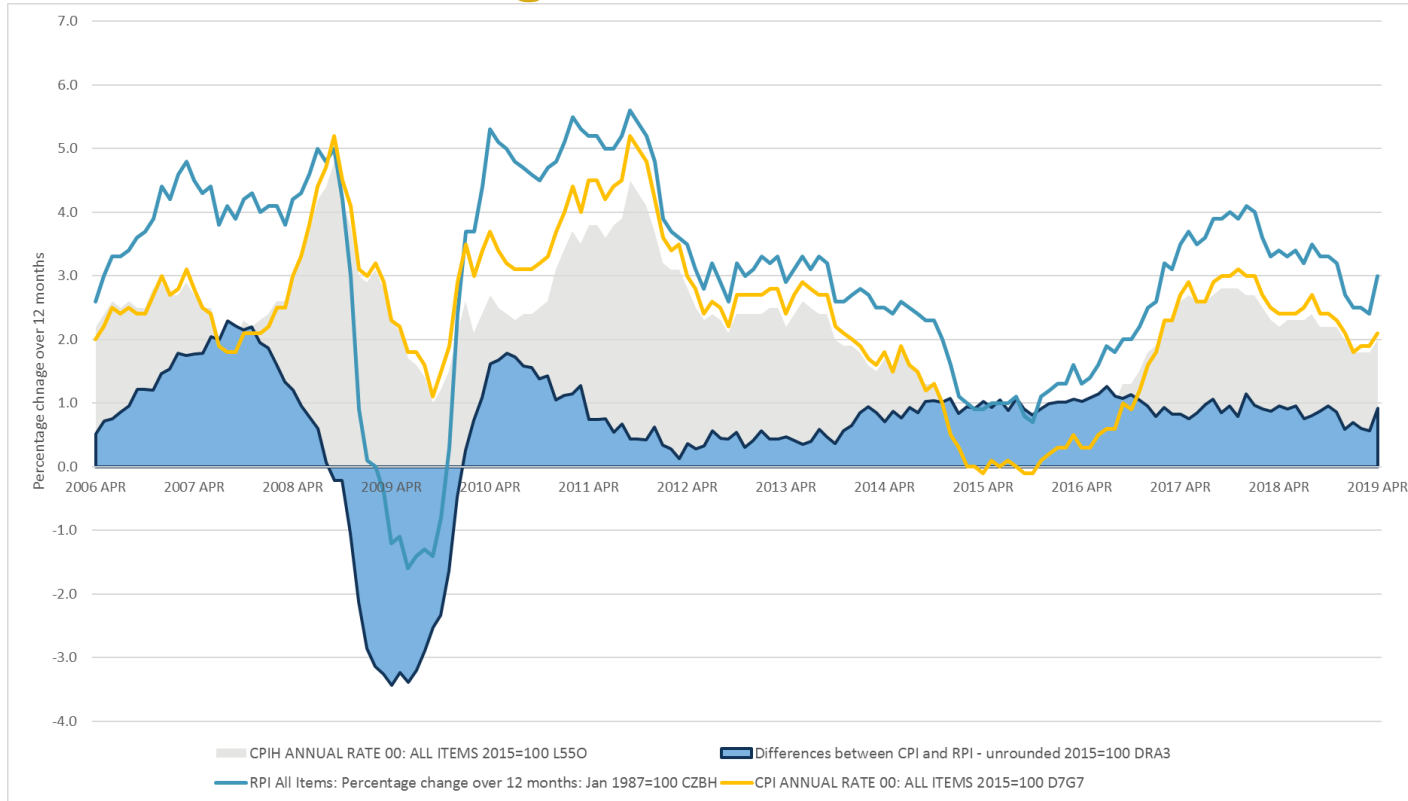


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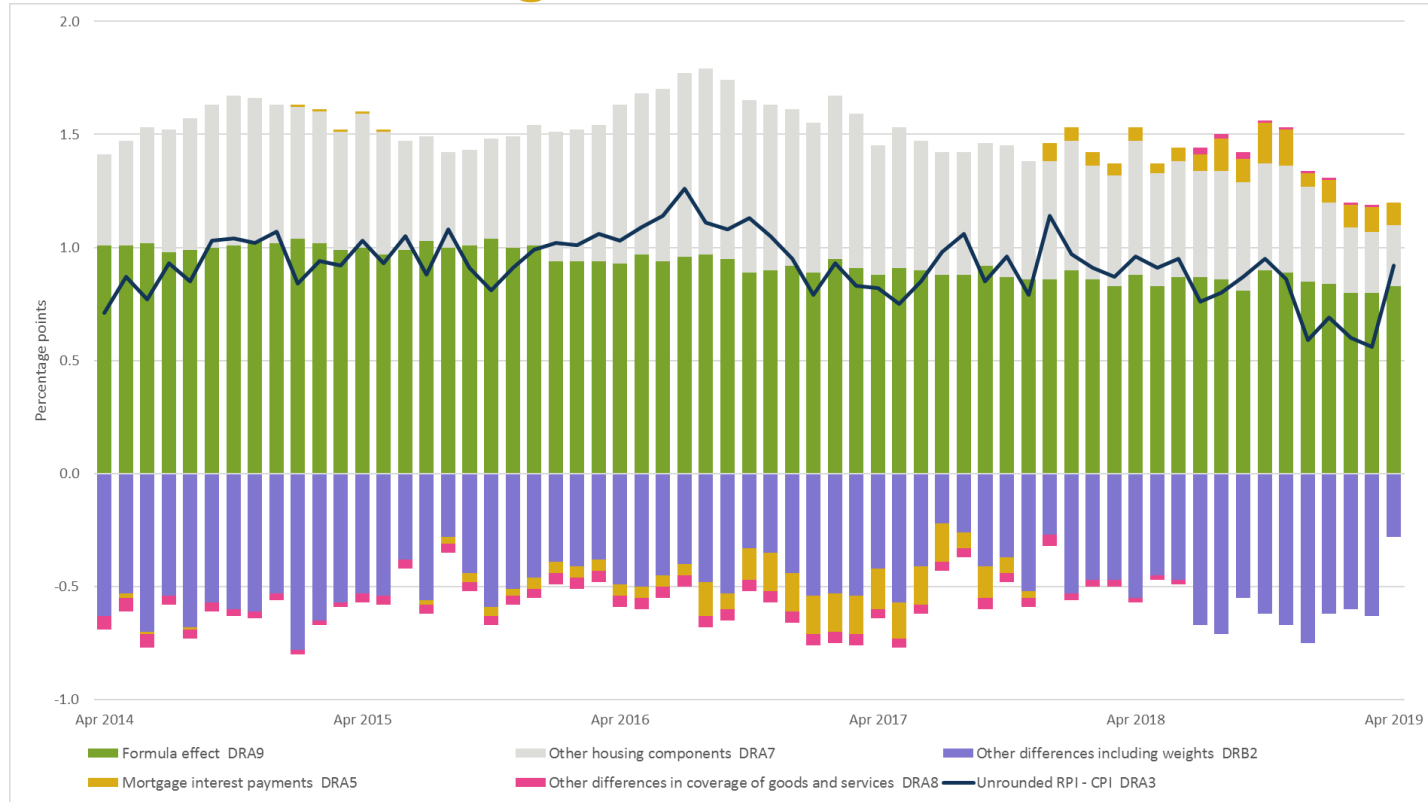
Explanation of the 'wedge' between the CPI and RPI

Summary the contribution to the difference between
the CPI and RPI.

What is the 'wedge'?



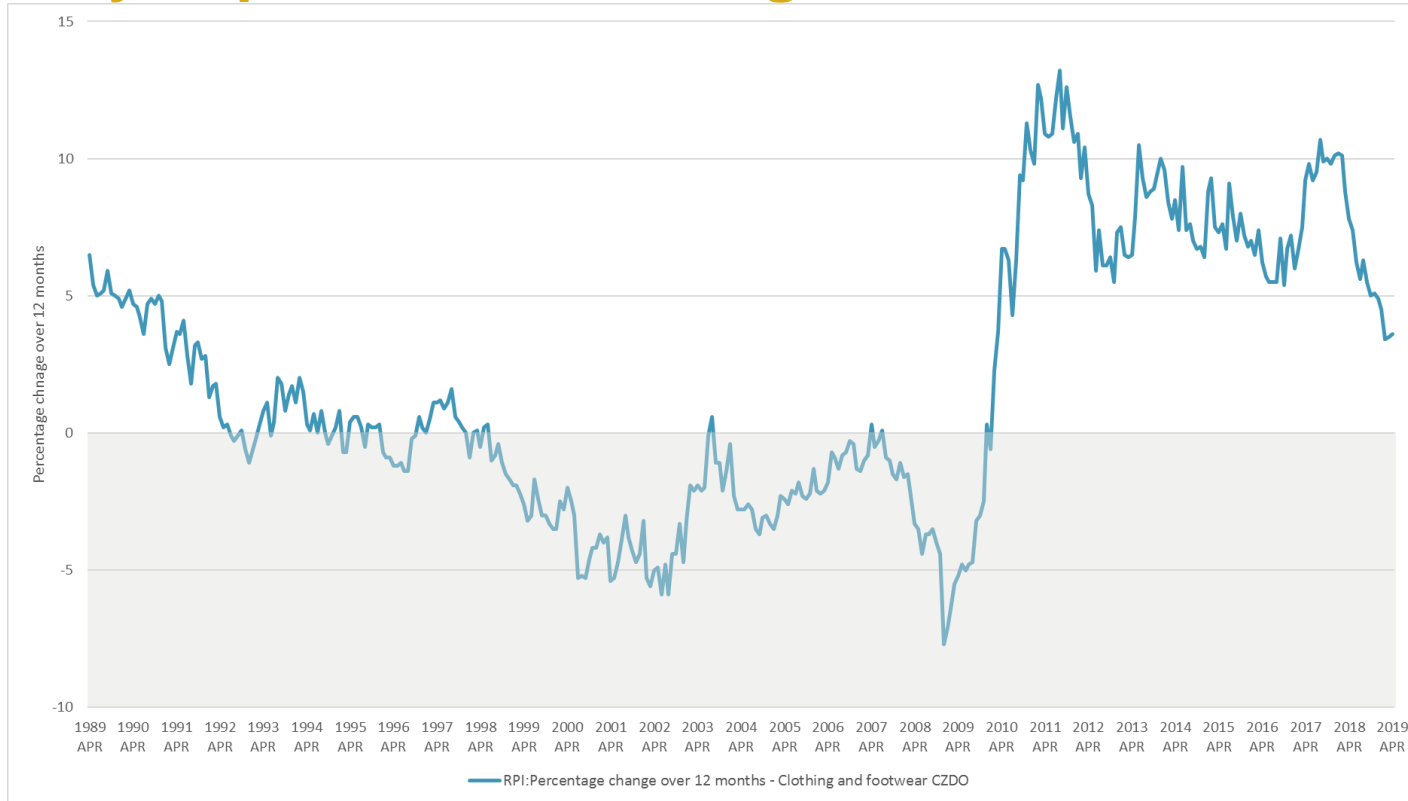
Most of the 'wedge' comes from three factors



The formula effect hasn't always been stable



Why implement the change?

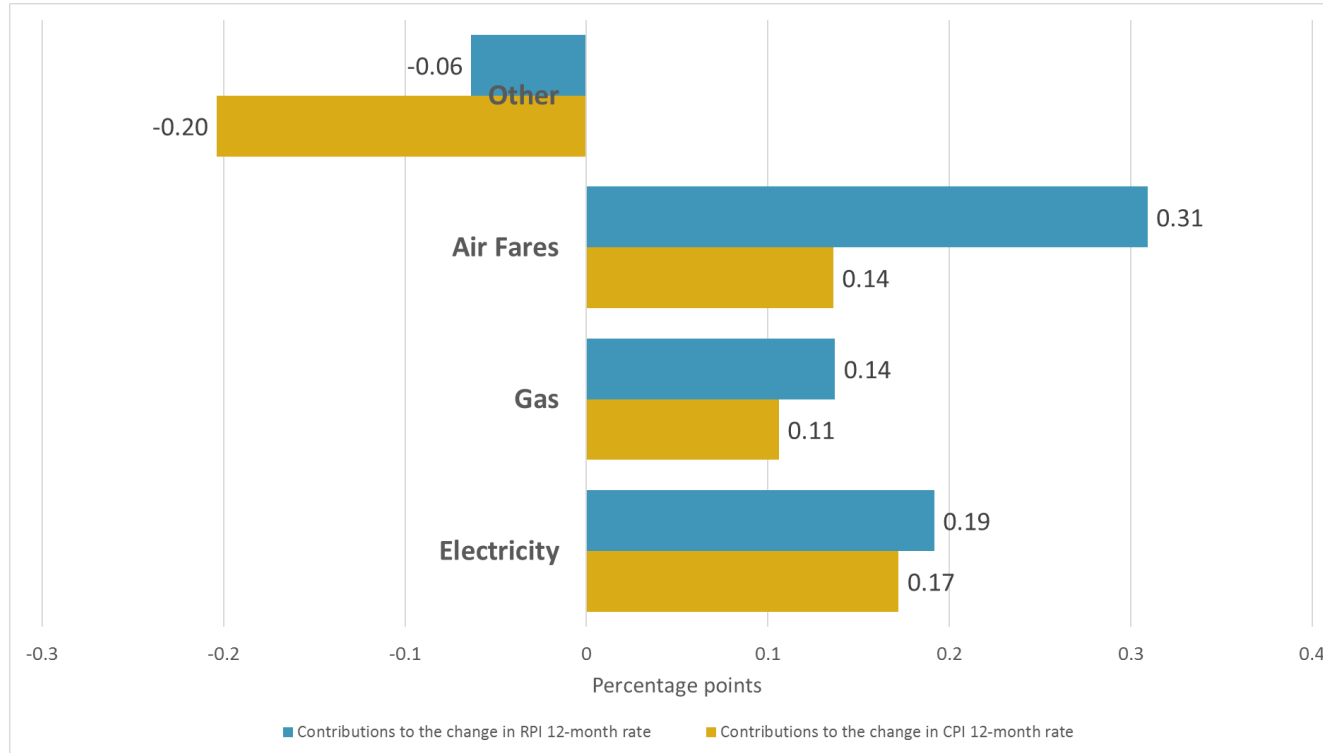


How do the weights differ?

Weights (in parts per 1,000)	RPI	CPIH	CPI	% difference
Electricity	19	14	17	11.8%
Gas	15	9.8	11.8	27.6%
House contents insurance	2.9	0.7	1.5	95.9%
University tuition fees	4.2	8.6	10.6	-60.4%
Used cars	13.3	7.0	8.5	56.0%
Petrol	20.7	14.9	18.6	11.0%
Diesel	14	8.9	11.1	26.1%
Car insurance	16.9	1.9	2.8	507.2%
Air fares	11.5	4	5	130.4%
Rail fares	5.1	7.8	9.9	-48.6%
Sea fares	0.4	2	3	-88.0%
Hotel, single night accommodation	2.2	6.9	8.6	-74.2%



How the relative weights impact on the change in 12-month rates (between March and April 2019)?



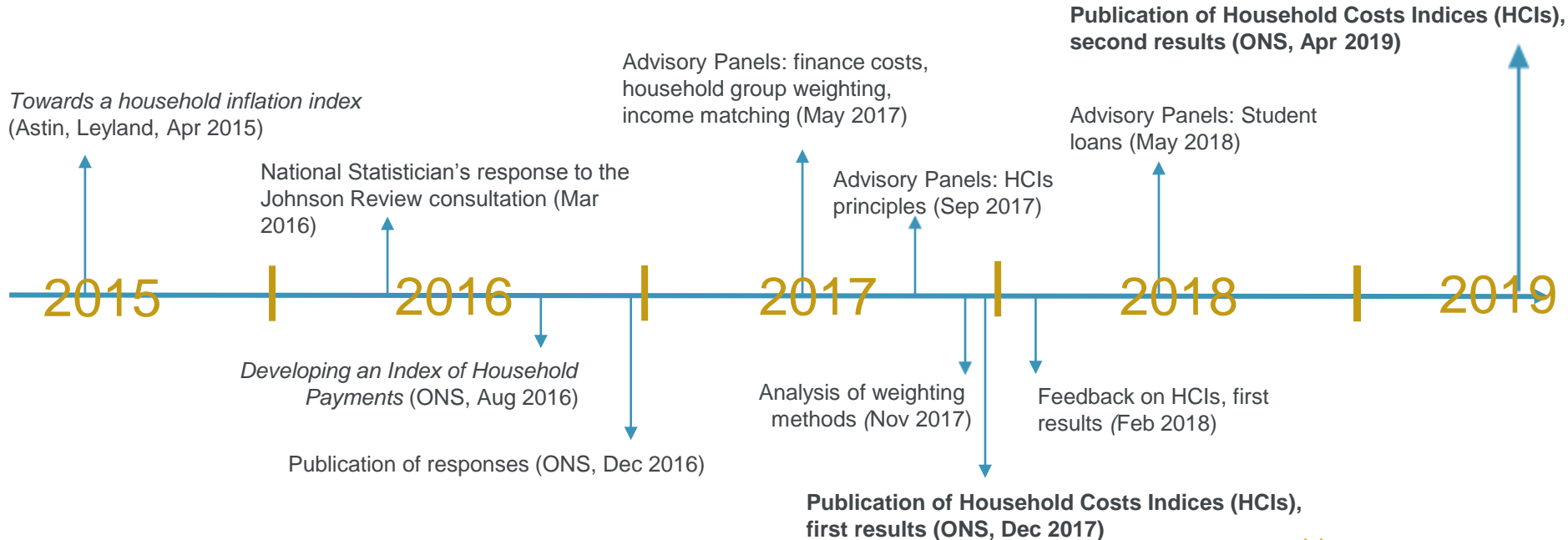


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Household Cost Indices

Introduction to the HCIs, what they represent and how they differ from the CPI.

Timeline of development



Concepts measured

The Household Costs Indices (HCIs) are a set of experimental measures that aim to reflect UK households' experience of changing prices and costs. More specifically they will aim to measure how much the nominal disposable income of different household groups would need to change, in response to changing prices and costs, to enable households to purchase the same quantities of goods and services at a fixed quality.

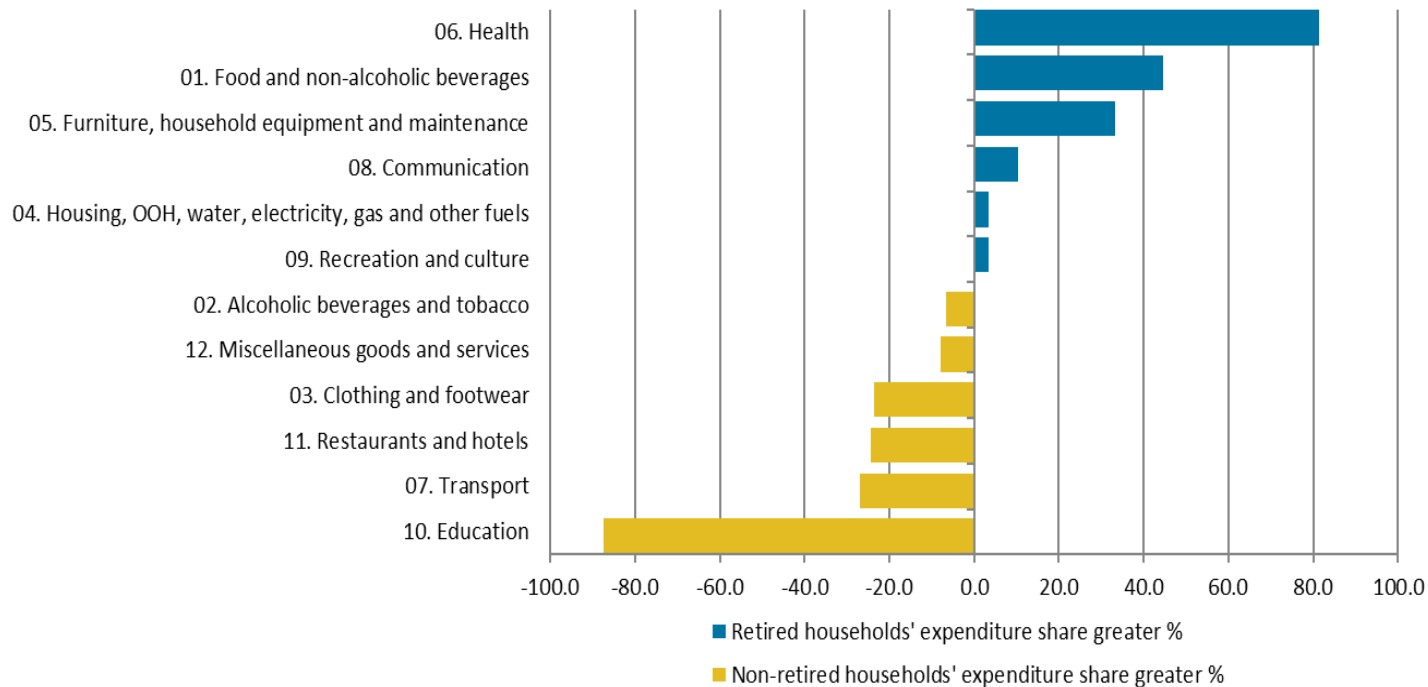
In attempt to measure this concept, the HCIs differ from the CPIH in the following ways:

- Democratic weighting (weights each household equally)
- A payments approach (with particular regards to owner occupiers' housing costs and the cost of higher education)
- Inclusion of interest payments (currently only on mortgage and credit card debt)
- Full insurance premia measured without accounting for insurance pay-outs
- Measured for different population groups – retired/non-retired, income deciles etc.



Retired and non-retired households expenditure

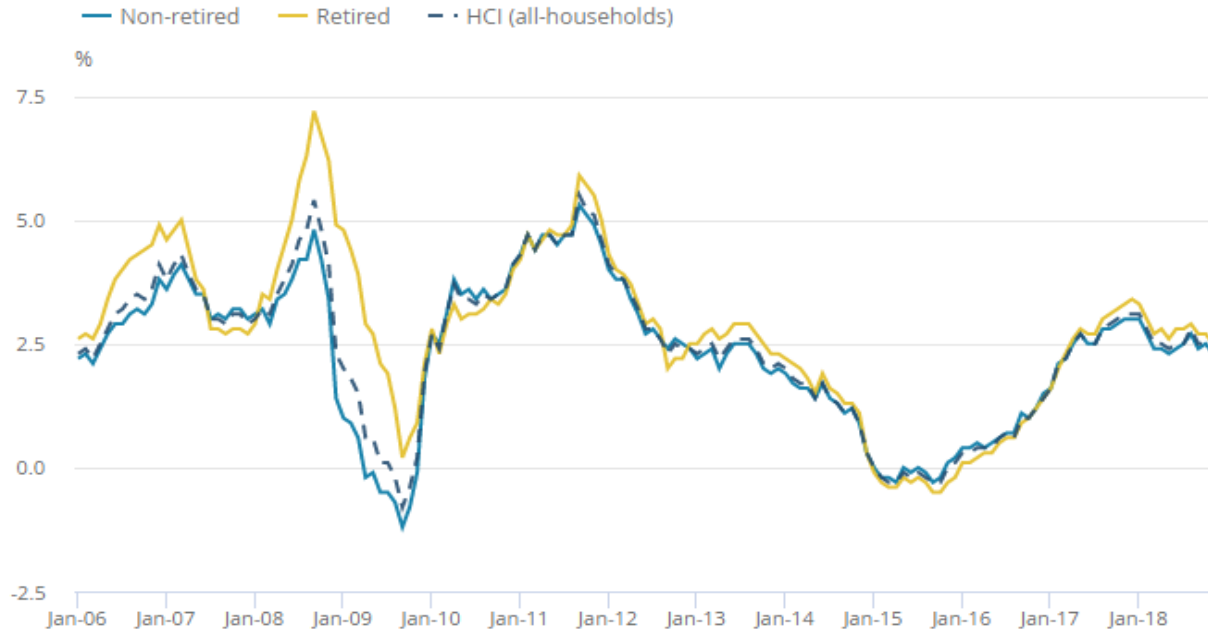
Household Costs Indices, retired and non-retired households, UK, 2005 to 2018



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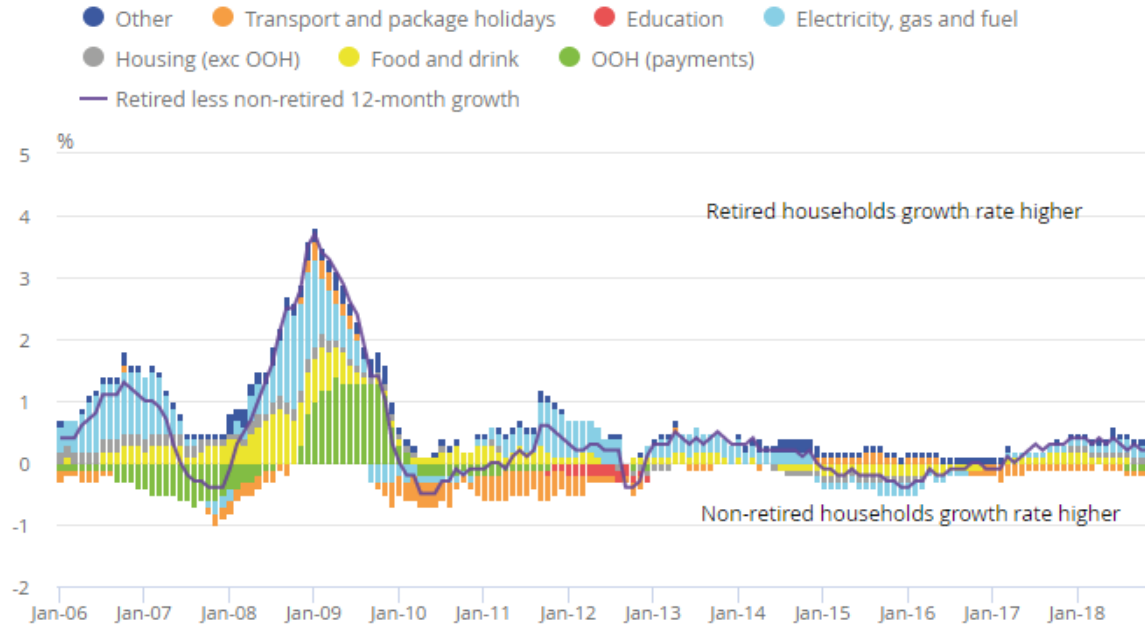
Retired and non-retired households change in prices and costs

Household Costs Indices, retired and non-retired households, 12-month growth, UK, January 2006 to December 2018

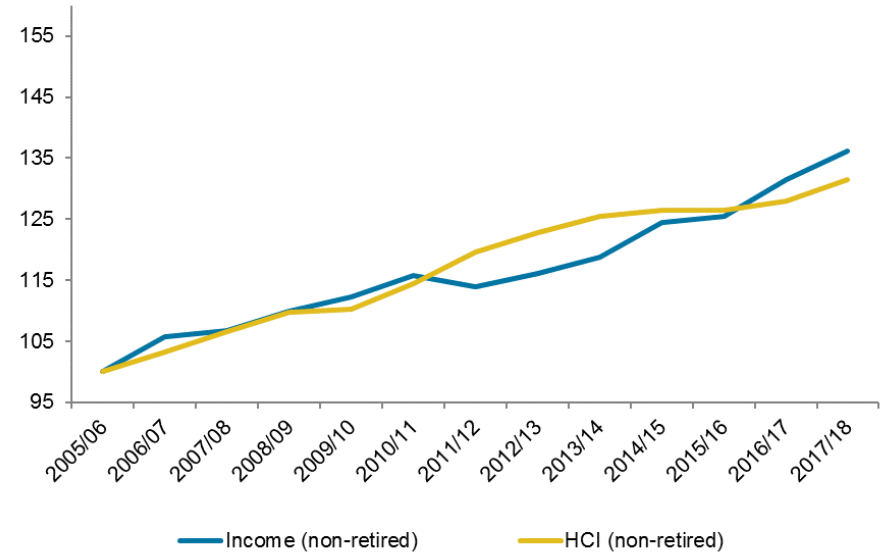
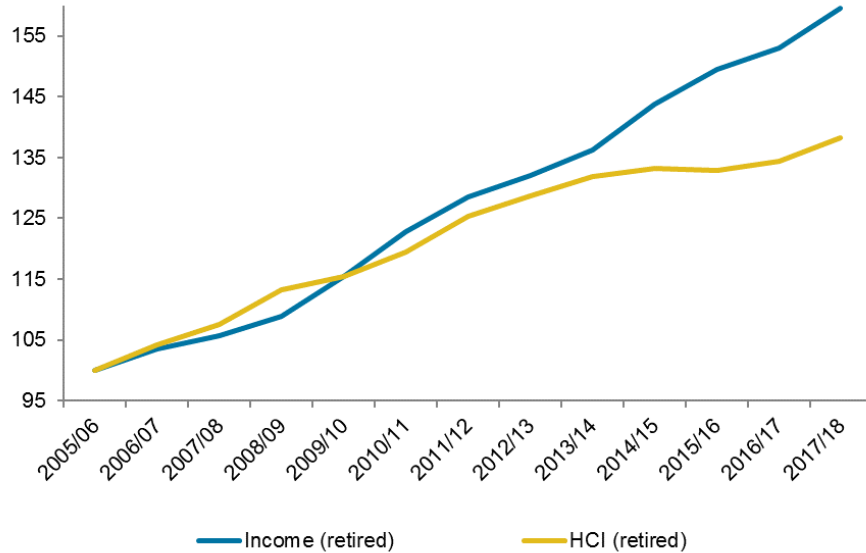


Key drivers of the differences between retired and non-retired households

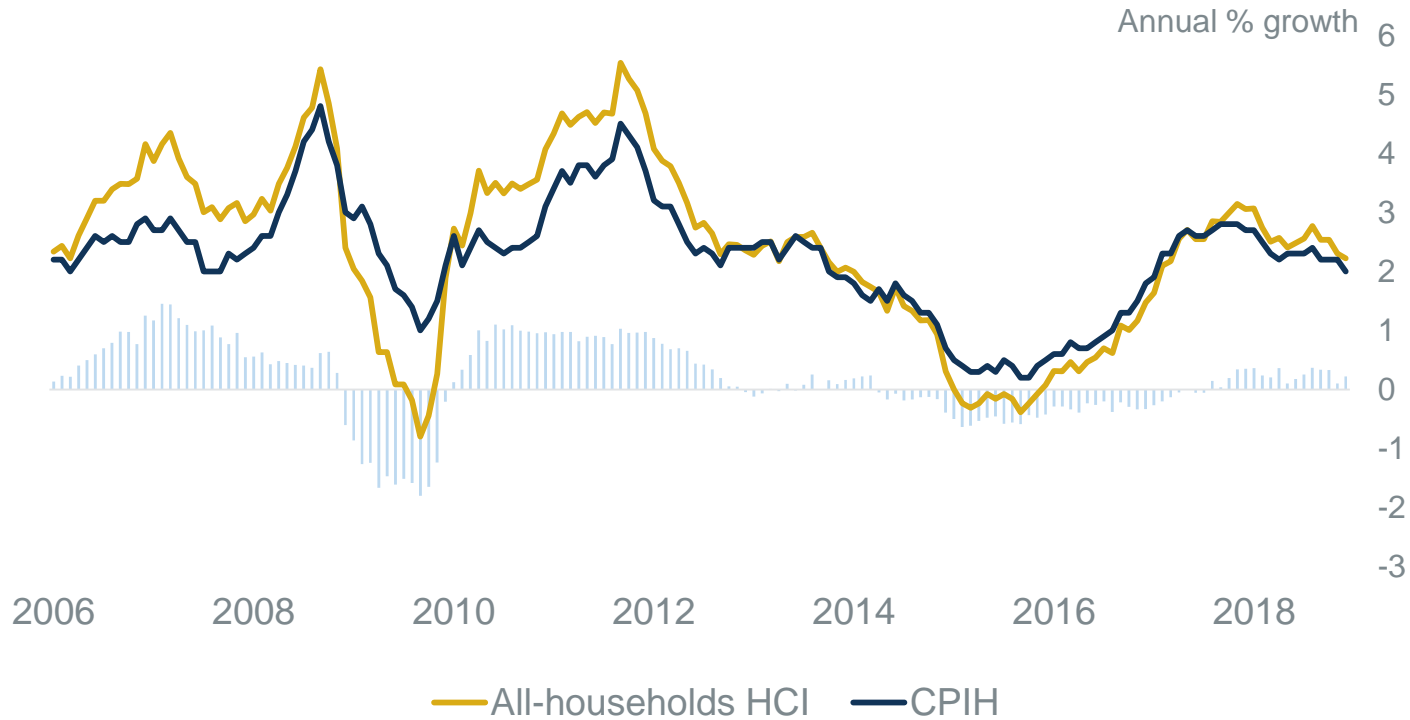
Household Costs Indices, retired and non-retired households, contributions to difference in 12-month growth, UK, January 2006 to December 2018



Retired and non-retired households, income and costs, cumulative growth since FYE 2006



Cumulative impact





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Forward Workplan

Outlining our future workplan to integrate scanner and webscraped data within the CPI/CPIH by 2023.

Forward workplan

Alternative data sources

- We plan to integrate scanner and web-scraped data within the CPI/CPIH by 2023
- This includes work to explore and develop:
 - A processing pipeline
 - A framework for assessing the quality of consumer price indices produced using alternative data sources and the quality of unique methods used
 - Classification techniques
 - Weight sources and methods
 - Product definitions that allow groups of products (rather than individual products) to be followed over time
 - The impact of product returns and discounts on indices compiled using alternative data sources
 - Areas where alternative data sources may be able to improve the existing calculations, such as package holidays, clothing and technology items.



Forward workplan

Developing the Household Costs Indices

- Ongoing experimental publications will be produced on an annual basis
- Further work will look at improving the measures of student loan repayments and mortgage interest payments, and expanding the interest on debt class to incorporate other forms of interest

Developing a historical series for CPIH

- An official historical series dating back to 1988 was published for CPIH in December 2018. We plan to update this work and produce the index back to 1947 by the end of 2019

Developing measures of accuracy for CPIH

- We plan to publish estimates of the variance of CPIH by the end of 2019. This will include estimates of variance due to variance in the data used as weights, and estimates of variance due to variance in the collected prices



Forward workplan

Further quality assurance of CPIH

- We continue to seek the required assurance for the data sources used in consumer price statistics and will aim to update the Quality Assurance of Administrative Data document biennially

Review of quality adjustment and monitoring of quality change

- We are reviewing the quality adjustment methods used in consumer price inflation statistics and how these methods (and the impact of these methods) are monitored. We plan to have implemented changes to the way we monitor the use and subsequent impact of quality adjustment methods by 2021

Improvements to CPIH methodology

- We plan to improve the data source used for Northern Ireland rents as well as improving the property type split for stratum weights within the rental and rental equivalence indices. We also plan to publish findings into stock and flow measures of owner occupiers' housing (using rental equivalence method)

Regional indices

- We continue development to work towards the regular production of regional CPIH indices



Questions

Comments

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