

Consumer Price Statistics

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Topics covered in the presentation

- The Consumer Prices Index (CPI), the Retail Prices Index (RPI) and CPIH:
 - History & related measures
 - Main differences between the CPI & RPI
 - Governance arrangements
- Formula effect work programme
- Consultation on options for improving the RPI

History & related measures

RPI

- 'old lady' of UK inflation measures
- established in June 1947 although not 'official' until January 1956
- 1947 - 1994: improvements via recommendations from RPI Advisory Committees
 - 1956: population coverage established
 - 1962: weighting framework should be updated every year via a household budget survey
 - 1974: measurement of owner-occupied costs changed to Mortgage Interest Payments from rental equivalence
 - 1995: measurement of house depreciation included
- 1995 – 2008: improvements agreed via protocols between ONS (UK Statistics Authority), Bank of England & Treasury
 - 2004: move to hedonic regression approach to quality adjustment for certain high-tech goods
- Since 2009: Consumer Prices Advisory Committee (CPAC) set up to advise the Authority on improvements:
 - 2010: change to Average Effective Rate from Standard Variable Rate in measurement of Mortgage Interest Payments
 - 2011: improved the method used to measure seasonal items in the CPI and RPI
 - 2012: new car measurement harmonised with CPI
 - 2013: ?????

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CPI

- 'new kid on the block' - born Jan 1996
- standards of construction and continuous improvement via European legislation
 - 2000: population extended from private households to also include institutional households and visitors to the UK
 - 2001: hospital services and nursing and retirement homes included
 - 2002: financial services expressed as proportion of transaction value included
- meteoric rise:
 - developed by EU to assess membership of the European Monetary Union
 - became ECB's inflation measure to define/assess price stability in Euro area
 - since December 2003 it has been the UK Government's inflation target
 - from April 2011 used in indexation of benefits, tax credits and public service pensions

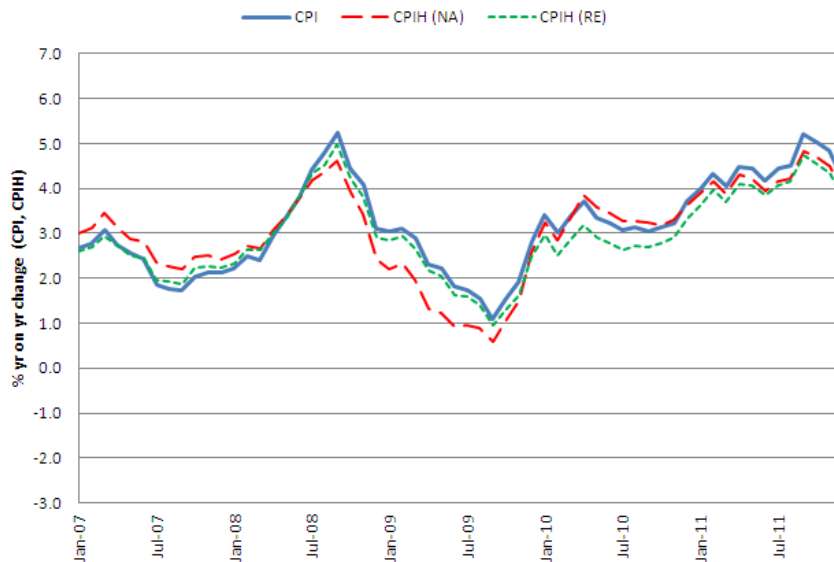
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CPIH

- 'expected arrival' March 2013
- measure of consumer price inflation including owner occupiers' housing costs (OOH)
- OOH methods developed by ONS over a number of years
- From 2010 CPAC guided the development of net acquisitions and rental equivalence approaches
- April 2012 – CPAC recommend the rental equivalence approach
- 11 June 2012 – 31 August 2012: Consultation on the recommended method of reflecting OOH in a new additional measure of consumer price inflation, and the strategy for Consumer Price inflation
- 13 September 2012 – CPAC considered initial summary of responses to the consultation and confirmed decision to use rental equivalence
- 27 September 2012 – CPAC 2012 Annual Report to UK Statistics Authority
- Late October 2012 – consultation response and CPAC 2012 Annual Report published

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CPIH inflation rate



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Related measures

- **CPIY** - Consumer Prices Index excluding indirect taxes
- **CPICT** - Consumer Prices Index at constant tax rates
- **RPIX** - All items Retail Prices Index excluding mortgage interest payments
- **RPIY** - All items Retail Prices Index excluding mortgage interest payments and indirect taxes
- **CPIHY** — available ~6 month after first CPIH publication
- **CPIHCT** — available ~6 month after first CPIH publication

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Main differences between the CPI & RPI

1. Population base

CPI	RPI
<ul style="list-style-type: none">• incl. All UK private & institutional households• incl. foreign visitors to the UK	<ul style="list-style-type: none">• incl. All UK private households• excl. top 4% of highest income households• excl. pensioner households mainly dependent on state benefits

2. Commodity coverage

CPI	RPI
<ul style="list-style-type: none">• excl. owner occupiers' housing costs• incl. uni accommodation fees, foreign students uni tuition fees, unit trust & stockbrokers charges	<ul style="list-style-type: none">• incl. owner occupiers' housing costs (mortgage interest payments, depreciation, buildings insurance and council tax)• excl. uni accommodation fees, foreign students uni tuition fees, unit trust & stockbrokers charges

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3. Elementary aggregate formulae

	RPI	CPI
Carli	27%	0%
Dutot	29%	5%
Jevons	0%	63%
Other/weighted formula	43%	33%

- Carli – average of price relatives
- Dutot – ratio of average prices
- Jevons – geometric mean of price relatives or ratio of the geometric mean of prices

**The use of these different formulae cause the
'Formula Effect' between the CPI and RPI**

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Governance arrangements

Responsibilities & Mandates

- RPI
 - UK Statistics Authority required to produce the RPI under the Statistics and Registration Service Act, 2007
 - Responsibility for production delegated to ONS
- CPI
 - Produced under European regulation (as HICP)
- CPIH
 - Produced according to the Code of Practice for Official Statistics

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Consumer Prices Advisory Committee (CPAC)

- Three distinct roles:
 - to advise the UK Statistics Authority on the implication for the Retail Prices Index (RPI) of the improvements to this index recommended by the Office for National Statistics (ONS)
 - to provide the UK Statistics Authority with advice on RPI methodological issues
 - to advise the UK Statistics Authority on improvements to the UK Consumer Prices Index (CPI) recommended by ONS
- Reporting
 - several meetings per year
 - meeting papers, including a summary note are published on the CPAC webpage following each meeting
 - CPAC produces an annual report for the UK Statistics Authority each September

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CPI and RPI change process

1. ONS carries out analytical work for CPAC and the UK Statistics Authority
2. Changes to the CPI and RPI are usually recommended by CPAC to the Authority
3. Changes to the RPI are referred to the Bank of England to consider whether any change is fundamental and materially detrimental to holders of relevant index-linked gilts
4. If a change to the RPI is considered fundamental and detrimental then the Authority would refer the decision to the Chancellor of the Exchequer
5. In addition, any change is usually subject to a public consultation
6. Changes are introduced into the February index, published in March

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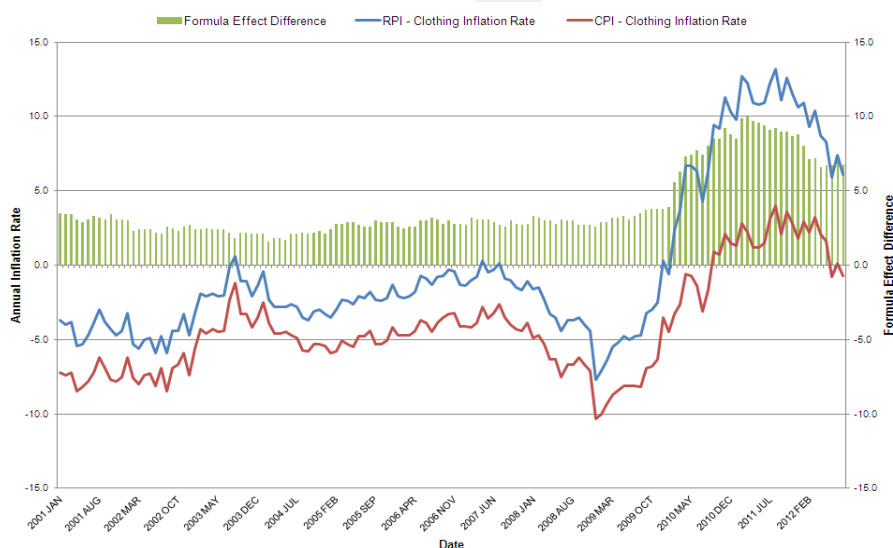
Formula effect work programme

Changes to clothing in 2010

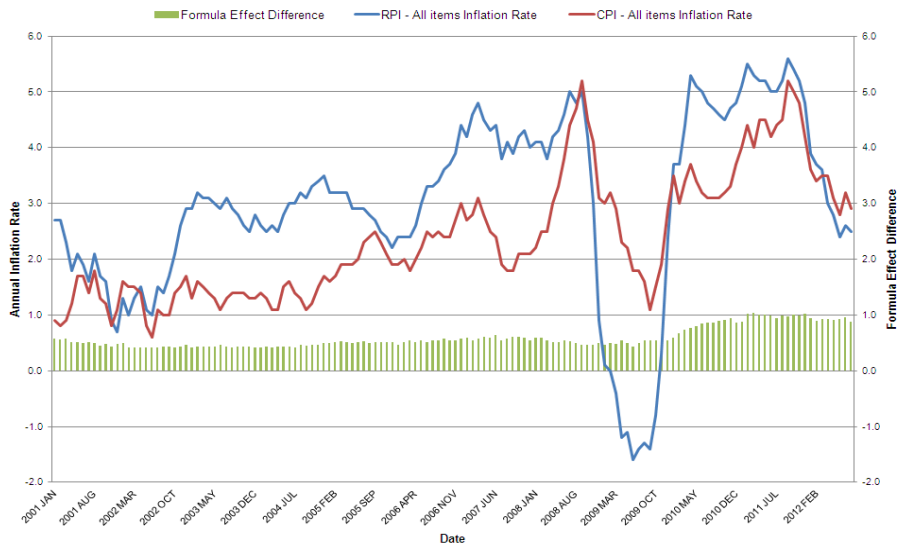
- Consistent negative values since 1996
- Improvements implemented from Jan 2010:
 - Increased sample size
 - Prices collected in the base period (January) now better reflect consumer spending
 - Increased number of price quotes in the calculation of the base period index
- Since the changes were introduced there has been:
 - An increase in the level of clothing and footwear inflation
 - A widening disparity between RPI and CPI clothing inflation

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Clothing inflation rate - CPI & RPI



All item inflation rate - CPI & RPI



Formula effect work programme (1)

- Clothing pilot collection to test the effectiveness of potential improvements:
 - Modified collection and replacement instructions
 - More tightly defined some item descriptions
 - Introduced some additional seasonal items
- Outlet stratification
 - Retail outlets are currently stratified into two types:
 - Independent
 - Multiple
 - Increasing stratification could reduce the formula effect gap by creating more homogenous groups of products for aggregation

Formula effect work programme (2)

- Consumer behaviour and the choice of elementary aggregate formula
 - Can this behaviour be quantified using data on alcohol, coffee and clothing purchases?
 - Consumer behaviour in response to relative price change is too complex to be quantified using a simple model from economic theory
 - Work continues and the results are expected to provide more evidence to support this conclusion
- Expert quality assurance
 - ONS engaged two internationally recognised experts in price statistics:
 - Prof. Erwin Diewert of Statistics Canada and University of British Columbia
 - Prof. Bert Balk of Statistics Netherlands and Erasmus University Rotterdam
 - Used advice from these experts to help shape the formula effect work programme and CPAC has recently considered Prof. Erwin Diewert recommendations.

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Formula effect work programme (3)

- International comparison
 - International best practice can be used to help guide consumer price development
 - The existence of a formula effect gap in other countries is extremely uncommon
 - Slovenia – gap 0.1 percentage points
 - All other European countries have made changes to ensure that their national CPI and their HICP use consistent EA formulae.
 - No other country (in Europe or further afield) could be found to use the Carli in its consumer prices indices.
 - Studies carried out by other National Statistical Institutes (NSIs) on their 'would-be' formula effect were also investigated. Majority reported 0.1-0.2 percentage point formula effect.
 - UK average 1.0 percentage point!

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National Statistician's consultation on options for improving the RPI

National Statistician's consultation on options for improving the RPI

The National Statistician invites views on options for amending the way the Retail Prices Index (RPI) is constructed at the lowest level of aggregation.

Views are also sought on a proposal to change the way private housing rental prices are measured in the RPI and CPI through the use of a new data source.

National Statistician (RPI Consultation)
Government Buildings
Cardiff Road
Newport
South Wales
NP10 8XG

Email: RPIConsultation@ons.gsi.gov.uk

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Option 1 - No change

- The reasons for the formula effect have been identified, explained and understood
- Users may feel the formula effect difference is acceptable given the approach to averaging of elementary aggregates in the RPI
- However, because of the known limitations of the Carli index, it is difficult to defend based on international practice, and on certain approaches to assessing the performance of index numbers

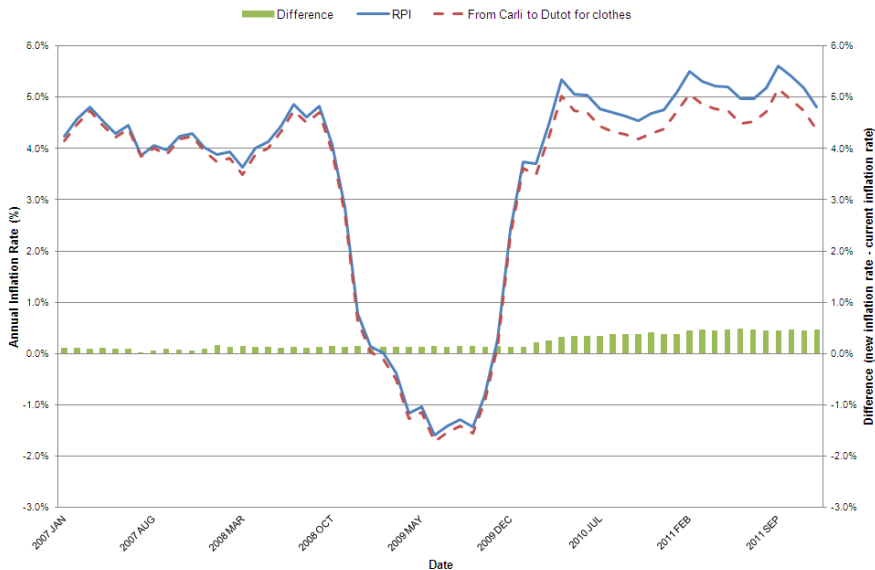
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Option 2 - Change the Carli formula to Dutot or Jevons for clothing

- The clothing and footwear division is the largest contributor to the formula effect
- Changes made to the clothing collection guidelines in 2010 resulted in an increase in the formula effect
- Option 2 leads to a reduction in the formula effect
- Under current conditions, a gap of around 0.3 percentage points would remain

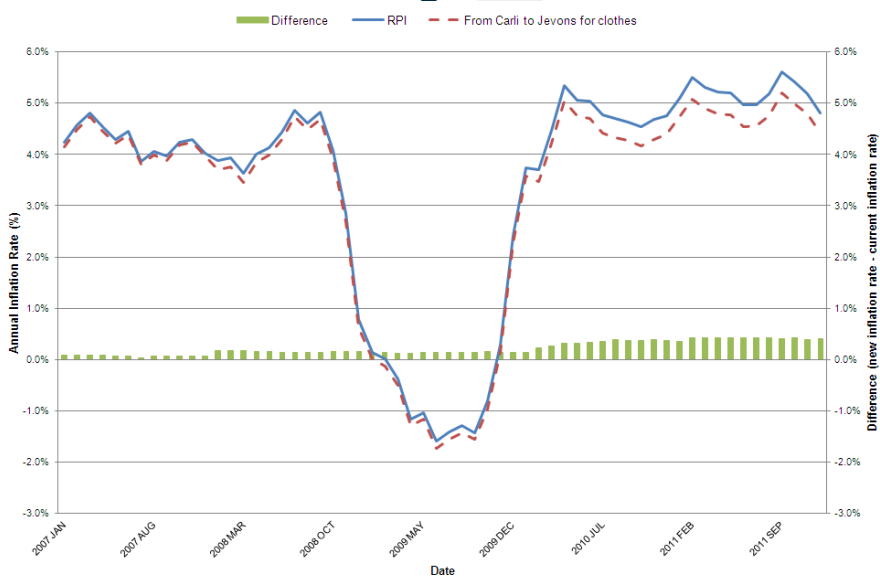
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Option 2: Changing from Carli to Dutot for clothing



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Option 2: Changing from Carli to Jevons for clothing



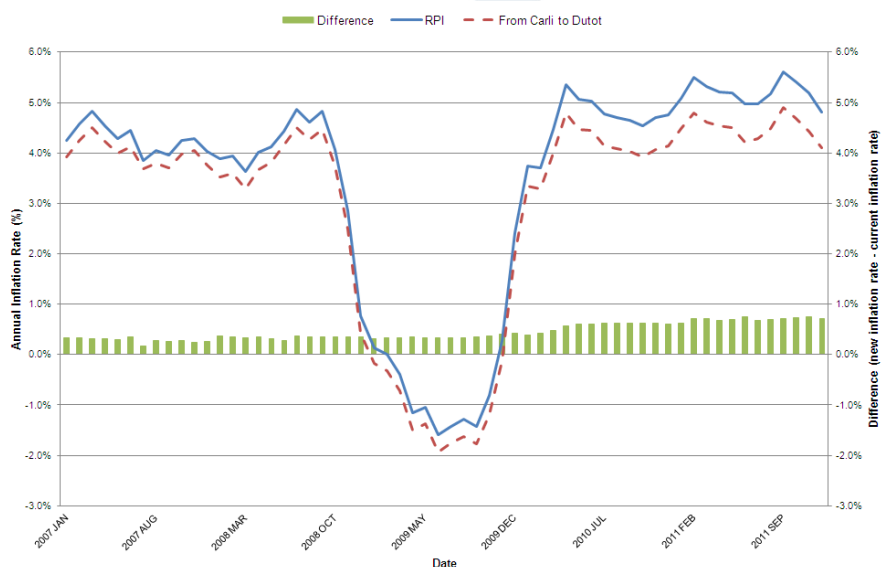
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Option 3 - Change all items which use the Carli formula to Dutot or Jevons

- Extension of option 2, the replacement of Carli is extended beyond clothing such that its use in the RPI is stopped altogether
- Option 3 reduces the impact of the formula effect gap to a minimum
- Some difference between the RPI and CPI formulation would remain

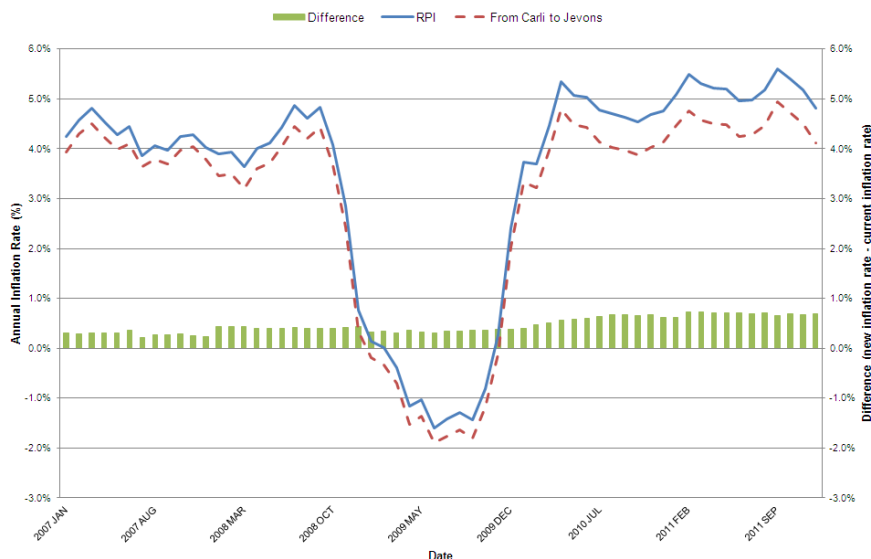
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Option 3: Changing all item which use Carli to Dutot



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Option 3: Changing all item which use Carli to Jevons



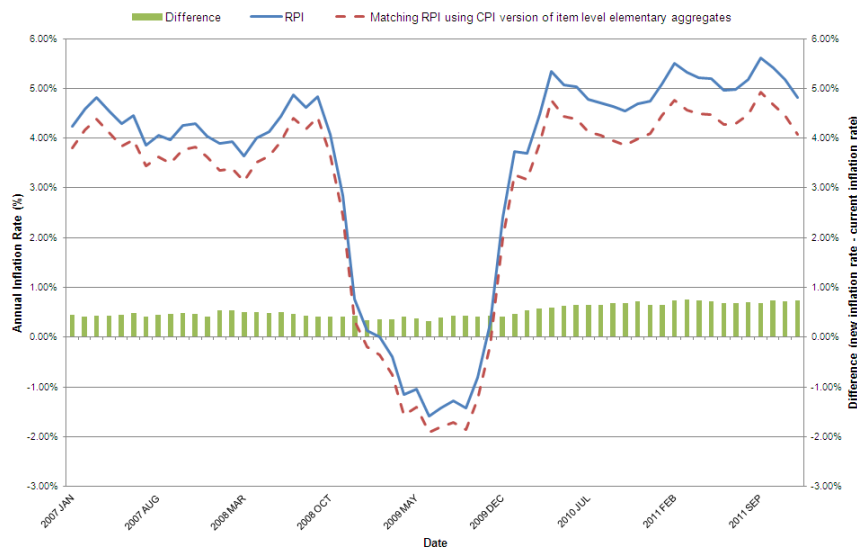
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Option 4: Fully align RPI formulae with CPI formulae

- Option 4 removes the formula effect between the RPI and CPI
- Differences between the RPI and CPI would remain because of the different coverage, weights and scope used

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Option 4: Fully align RPI formulae with CPI formulae



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Private housing rental prices in the RPI and CPI

- Currently collected from letting agents in 141 locations throughout the UK
- In each location rental prices for six furnished and six unfurnished properties are collected on a quarterly basis
- Recommendation
 - to use private housing rental data from the Valuations Office Agency (VOA) plus comparable data from the Welsh and Scottish Governments to measure private housing rental prices in the RPI and CPI
- Introduced for the February 2013 RPI and CPI, published in March 2013
- Impact:
 - RPI – increase annual growth up by to 0.09 percentage points January 2008 and December 2011
 - CPI – increase annual growth by 0.05 percentage points between January 2008 and December 2011

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Next steps

- CPAC will meet after the consultation has closed and responses have been compiled to discuss the options for change
- Based on the consultation responses, discussion at the CPAC meeting and any further expert advice the National Statistician may put forward a recommendation on the options for change
- The UK Statistics Authority Board would be asked to consider the recommendation
- Before changes could be made, the additional governance requirements for the RPI would need to be satisfied
- It is anticipated that any recommendation for change would be announced by the National Statistician in January 2013

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Questions?

Contact details:

Email: ainslie.restieaux@ons.gsi.gov.uk

Tel: 01633 45 6299

Consultation open meeting:

Church House, Westminster

26 October 14.00-16.30

Email: RPIConsultation@ons.gsi.gov.uk

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