

Assessment of compliance with the Code of Practice for Official Statistics

The Retail Prices Index

(produced by the Office for National Statistics)

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About the UK Statistics Authority

The UK Statistics Authority is an independent body operating at arm's length from government as a non-ministerial department, directly accountable to Parliament. It was established on 1 April 2008 by the *Statistics and Registration Service Act 2007*.

The Authority's overall objective is to promote and safeguard the production and publication of official statistics that serve the public good. It is also required to promote and safeguard the quality and comprehensiveness of official statistics, and good practice in relation to official statistics.

The Statistics Authority has two main functions:

- 1. oversight of the Office for National Statistics (ONS) the executive office of the Authority;
- 2. independent scrutiny (monitoring and assessment) of all official statistics produced in the UK.

Contact us

Tel: 0845 604 1857

Email: authority.enquiries@statistics.gsi.gov.uk

Website: www.statisticsauthority.gov.uk

UK Statistics Authority 1 Drummond Gate London SW1V 2QQ

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ASSESSMENT AND DESIGNATION

The Statistics and Registration Service Act 2007 gives the UK Statistics Authority a statutory power to assess sets of statistics against the Code of Practice for Official Statistics.

Assessment will determine whether it is appropriate for the statistics to be designated as National Statistics.

Designation as National Statistics means that the statistics comply with the *Code of Practice*. The *Code* is wide-ranging. Designation can be interpreted to mean that the statistics: meet identified user needs; are produced, managed and disseminated to high standards; and are explained well.

Designation as National Statistics should not be interpreted to mean that the statistics are always correct. For example, whilst the *Code* requires statistics to be produced to a level of accuracy that meets users' needs, it also recognises that errors can occur – in which case it requires them to be corrected and publicised.

Assessment reports will not normally comment further on a set of statistics, for example on their validity as social or economic measures. However, reports may point to such questions if the Authority believes that further research would be desirable.

Assessment reports typically provide an overview of any noteworthy features of the methods used to produce the statistics, and will highlight substantial concerns about quality. Assessment reports also describe aspects of the ways in which the producer addresses the 'sound methods and assured quality' principle of the *Code*, but do not themselves constitute a review of the methods used to produce the statistics. However the *Code* requires producers to "seek to achieve continuous improvement in statistical processes by, for example, undertaking regular reviews".

The Authority may grant designation on condition that the producer body takes steps, within a stated timeframe, to fully meet the *Code's* requirements. This is to avoid public confusion and does not reduce the obligation to comply with the *Code*.

The Authority grants designation on the basis of three main sources of information:

- i. factual evidence and assurances by senior statisticians in the producer body;
- ii. the views of users who we contact, or who contact us, and;
- iii. our own review activity.

Should further information come to light subsequently which changes the Authority's analysis, it may withdraw the Assessment report and revise it as necessary.

It is a statutory requirement on the producer body to ensure that it continues to produce the set of statistics designated as National Statistics in compliance with the *Code of Practice*.

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1 Summary of findings

1.1 Introduction

- 1.1.1 This is one of a series of reports¹ prepared under the provisions of the *Statistics and Registration Service Act 2007*². The Act allows the Statistics Authority to re-assess whether the *Code of Practice for Official Statistics*³ continues to be complied with in relation to official statistics already designated as National Statistics. The report covers the Retail Prices Index (RPI) statistics, which are currently reported in *Consumer Price Indices*⁴ and *Consumer Price Indices Briefing Note*⁵ produced by the Office for National Statistics. The statistics subject to re-assessment are detailed in 1.1.2.
- 1.1.2 The scope of the assessment does not include ONS's new price index calculated using the Jevons formula (RPIJ), which ONS plans to include in *Consumer Price Indices* from March 2013. The Statistics Authority will carry out a separate assessment of the new RPIJ along with that of the new additional measure of consumer price inflation including owner-occupiers' housing costs (CPIH) during the first half of 2013. That separate assessment will include a reassessment of the remaining sets of statistics that are presented in *Consumer Price Indices*, except the RPI, which were previously assessed in Assessment Report number 79⁶. To summarise⁷:

Subject of this report	New statistics to be assessed in	National Statistics to be re-assessed in the first
RPI and sub-indices: RPIX (All items RPI excluding mortgage interest payments) RPIY (All items RPI excluding mortgage interest payments and indirect taxes) Tax and Price Index Rossi Index Pensioner Price Indices	 first half of 2013 CPIH CPIH special aggregates RPIJ 	 half of 2013 CPI CPIY (CPI excluding indirect taxes) CPI-CT (CPI at constant tax rates) CPI special aggregates

http://www.statisticsauthority.gov.uk/assessment/assessment-reports/index.html

² http://www.opsi.gov.uk/Acts/acts2007/pdf/ukpga_20070018_en.pdf

³ http://www.statisticsauthority.gov.uk/assessment/code-of-practice/index.html

⁴ http://www.ons.gov.uk/ons/rel/cpi/consumer-price-indices/january-2013/stb---consumer-price-indices--january-2013.html

⁵ http://www.ons.gov.uk/ons/rel/cpi/consumer-price-indices/january-2013/consumer-price-indices-detailed-briefing-note.pdf

⁶ http://www.statisticsauthority.gov.uk/assessment/assessment-reports/assessment-report-79---consumer-price-indices.pdf

⁷ The different measures of inflation are explained in Chapter 10 of the CPI Technical Manual, http://www.ons.gov.uk/ons/guide-method/user-guidance/prices/cpi-and-rpi/consumer-price-indices-technical-manual.pdf

- 1.1.3 This report is restricted to an assessment of compliance with the following Principles, Protocols and Practices of the Code, to address aspects of the conduct, findings and outcomes from the National Statistician's consultation about the RPI undertaken in late 20128:
 - Principle 1: Meeting user needs Practice 1, in conjunction with Protocol 1 – User engagement;
 - Principle 3: Integrity Practices 2 and 3; and
 - Principle 4: Sound methods and assured quality including specific reference to Practice 5.
- 1.1.4 The evidence used in this Report is primarily the series of documents published by the National Statistician, ONS and the Consumer Prices Advisory Committee⁹ (CPAC). The Statistics Authority has sought clarification from ONS on some points but has not requested fresh evidence, nor has it commissioned a separate user consultation, given the extensive response to the National Statistician's own consultation (see para 1.1.3).
- 1.1.5 This report was prepared by the Statistics Authority's Assessment team, and approved by the Board of the Statistics Authority on the advice of the Head of Assessment.

1.2 **Decision concerning continued designation as National Statistics**

- 1.2.1 The Statistics Authority judges that the RPI, including the sub-indices and variants listed in section 1.1.2, does not comply with Principle 4 and specifically with Principle 4, Practice 5 of the Code. This view is based primarily on:
 - i) the finding that the methods used to produce the RPI are not consistent with internationally recognised best practices (para 3.4); and
 - ii) the decision to freeze the methods used to produce the RPI, and only to contemplate 'routine' changes (para 3.5).
- 1.2.2 The Statistics Authority notes and supports ¹⁰ the decision by the National Statistician that, to meet the needs of existing users of the RPI in its current form, ONS will not amend its basic formulation. This has the effect that the RPI is inconsistent with the Code of Practice (see paras 3.4 and 3.5).
- 1.2.3 As required by Section 14 of the Statistics and Registration Service Act 2007, and in line with its statement on Criteria for not awarding the National Statistics

⁸ http://www.ons.gov.uk/ons/about-ons/user-engagement/consultations-and-surveys/archivedconsultations/2012/national-statistician-s-consultation-on-options-for-improving-the-retail-pricesindex/index.html

⁹ CPAC was established to advise the Statistics Authority on the implications for the RPI and CPI of improvements recommended by ONS, and to provide advice on RPI methodological issues. CPAC membership is drawn from the Authority, ONS, the Bank of England, HM Treasury, academia, the media and consumer organisations. CPAC papers are available at: http://www.ons.gov.uk/ons/guidemethod/development-programmes/other-development-work/consumer-prices-advisorycommittee/index.html 10 http://www.statisticsauthority.gov.uk/news/statement-consultation-on-the-retail-prices-index-

^{10012013.}pdf

- designation¹¹, the Statistics Authority has cancelled the designation of the RPI, including the sub-indices and variants listed in section 1.1.2, as National Statistics.
- 1.2.4 The cancellation of the RPI designation does not affect the CPI statistics that are presented in *Consumer Price Indices*, which were designated as National Statistics in Assessment Report number 79.

1.3 Consequences following the cancellation of designation as National Statistics

- 1.3.1 To meet its statutory duty¹² to compile, maintain and publish the RPI, ONS intends to continue to produce the RPI each month. However, if it is presented in *Consumer Price Indices*, or in any other publication that carries the National Statistics logo, ONS should:
 - include a statement that clearly explains the status of the RPI statistics to users; and
 - present the RPI separately in some way for example, as an annex.
- 1.3.2 The Statistics Authority has agreed that the statement referred to above should take this form: In accordance with the Statistics and Registration Service Act 2007, the Retail Prices Index and its derivatives have been assessed against the Code of Practice for Official Statistics and found not to meet the required standard for designation as National Statistics. A full report can be found at [link] and further advice on consumer price indices can be found at [link].

¹¹ http://www.statisticsauthority.gov.uk/assessment/assessment/guidance-about-assessment/criteria-for-not-awarding-the-national-statistics-designation.pdf

¹² Under S21(1) of the Statistics and Registration Service Act 2007

2 Subject of the assessment

- 2.1 Consumer price indices seek to measure the change in the general level of prices of consumer goods and services in the UK over time. They are important indicators of how the UK economy is performing and are widely used by the government, business and society in general. They can influence interest rates, tax allowances, wages, state benefits, pensions, contracts and many other payments. They also show the impact of inflation on family budgets¹³.
- 2.2 ONS has in the past produced and published two main measures of consumer price inflation in Consumer Price Indices – the Consumer Prices Index (CPI) and the Retail Prices Index (RPI). The monthly Consumer Price Indices Statistical Bulletin presents the latest headline estimates of consumer price inflation and is published together with Consumer Price Indices Briefing Note. which presents background information about the statistics that lie behind the headline results. A range of time series data and detailed CPI and RPI statistical tables are also made available for users as part of the release.
- 2.3 The subject of this report is the re-assessment of the RPI statistics previously assessed in Assessment Report 79 - Consumer Price Indices, in December 2010. The report noted that 'it is not always clear whether the different approaches that have been adopted in the past for the RPI remain appropriate today' and included a requirement to 'publish information about the history and the reasons for the differences in scope between the CPI and RPI; and explain the implications that these differences have for the uses to which these statistics are put'.
- 2.4 In parallel to the statutory assessment, the Statistics Authority prepared and published a Monitoring Brief: Communicating Inflation¹⁴, which considered whether the statistical messages deriving from different inflation measures were being clearly communicated to users. The report suggested, inter alia, that ONS and CPAC should carry out more analysis of the strengths and weaknesses of the CPI and RPI. It also recommended that ONS consult users about whether proposals for improving the CPI (while maintaining the RPI) represented a suitable approach to developing improved measures of inflation while continuing to meet users' needs for existing measures.
- In its annual report to the Statistics Authority for 2011 15, CPAC noted the 2.5 increased challenge and scrutiny demonstrated by the two Statistics Authority reports. It endorsed a work programme to further explore the increasing impact during 2010 and 2011 of the 'formula effect' on the gap between the CPI and RPI. CPAC suggested that the completion of the work programme should be a top priority for ONS and that implementation of any improvements should take place as soon as possible, most likely early 2013. Based on the information available at the time, the Statistics Authority confirmed the designation of the

statistics-are-used.pdf 14 http://www.statisticsauthority.gov.uk/assessment/monitoring/monitoring-reviews/monitoring-brief-7-2010---communicating-inflation.pdf

¹³ http://www.ons.gov.uk/ons/rel/cpi/consumer-price-indices/july-2011/how-ons-consumer-price-

¹⁵ http://www.ons.gov.uk/ons/guide-method/development-programmes/other-developmentwork/consumer-prices-advisory-committee/cpac-papers/consumer-prices-advisory-committee---2011annual-report.pdf

- set of statistics published in *Consumer Price Indices*, including the RPI, as National Statistics in January 2012¹⁶.
- 2.6 In autumn 2012, the National Statistician carried out a consultation with users about options for possible changes to the methods used to produce the RPI. The options concerned the use of the Carli¹⁷ method for aggregating price change data at the very detailed level in the RPI. ONS's research found that the use of the Carli arithmetic formulation in the RPI is the primary source of the formula effect difference between the RPI and the CPI. It also found that, in the international community, the UK is alone in its use of the Carli method at the elementary aggregate level¹⁸. The National Statistician announced the outcome of the consultation¹⁹ on 10 January 2013 and ONS published the full response on 22 February 2013²⁰. The National Statistician concluded that the RPI does not meet international standards and recommended that from March 2013 a new index be published, RPIJ, which does not use the Carli method²¹.
- 2.7 The National Statistician also announced that, for the foreseeable future, ONS would continue to produce and publish the RPI. This decision was based on the continuing user need for the existing RPI in its current form, for example in the index-linked gilts and bonds market, in private sector business contracts and in the indexation of private pension payments. The Board of the UK Statistics Authority accepted the recommendations of the National Statistician²². However, in the light of the methodological shortcomings of the RPI that had been identified, the Board asked that these statistics be re-assessed immediately to determine whether or not they merit continued designation as National Statistics.
- 2.8 Before announcing her conclusions, the National Statistician presented the outcome of the public consultation²³ to CPAC and sought advice on the recommendations. The summary of the CPAC meeting²⁴ reported that it welcomed and accepted ONS's analysis of the methodological issues and recognised that ONS had to balance user needs in developing its recommendations, noting that the introduction of RPIJ was one way to achieve this. The Committee noted that 'the statistical properties of the Carli meant it was unsuitable (for use in an elementary index)'.

¹⁶ http://www.statisticsauthority.gov.uk/assessment/assessment/assessment-reports/confirmation-of-designation-letters/letter-of-confirmation-as-national-statistics---assessment-report-56--79-and-103.pdf

¹⁷ The average of price relatives (also known as Carli) is calculated as the arithmetic average of price changes

¹⁸ An elementary aggregate is the lowest level at which individual prices are aggregated

http://www.ons.gov.uk/ons/rel/mro/news-release/rpirecommendations/rpinewsrelease.html

²⁰ See footnote 8

²¹ The RPIJ will replace the Carli with the 'Jevons' method, which uses the geometric mean ²² See footnote 10

http://www.ons.gov.uk/ons/guide-method/development-programmes/other-development-work/consumer-prices-advisory-committee/cpac-papers/cpac-papers---january-2013-meeting.pdf http://www.ons.gov.uk/ons/guide-method/development-programmes/other-development-work/consumer-prices-advisory-committee/cpac-papers/cpac-summary-note---january-2013.pdf

3 **Assessment findings**

Principle 1: Meeting user needs

The production, management and dissemination of official statistics should meet the requirements of informed decision-making by government, public services, business, researchers and the public.

- 3.1 Compliance with the Code requires that producers consult users before making changes that affect statistics²⁵. ONS announced the National Statistician's consultation with users on options for improving the RPI on 18 September 2012²⁶. The consultation ran from 8 October to 30 November 2012. ONS employed a range of tools to publicise the consultation with users including news releases, social media and public events, and received 406 responses. Some users expressed concern that the consultation period was too short. Whilst the eight week duration of the consultation is within the bounds set out in the Consultation Principles²⁷ issued by the Cabinet Office, the central guidance stresses that for new and contentious policy, the full twelve weeks may be appropriate. Given the potential impact of any proposals to change the RPI, a longer consultation might have been appropriate. ONS told us that the decision to consult over a period of eight weeks took account of the amount of time the statistical issues had already been in the public arena and sought to balance the importance of the issue against CPAC's suggestion that implementation of any changes should take place as soon as possible. ONS advised that, in practice, this means the annual update of the RPI when it is published on 19 March 2013.
- 3.2 Compliance with the Code requires that official statistics should meet the requirements of informed decision-making by government, public services, business, researchers and the public²⁸. The main conclusion of the consultation on the RPI is that the formula used to produce it does not meet international standards. Hence, ONS has decided:
 - to publish a new index RPIJ²⁹ constructed using a method which is considered to meet international standards, from March 2013; and
 - to continue to produce and publish the RPI, using the Carli method for aggregating price change data at the very detailed level. This decision is intended to meet the needs of certain users for continuity in the existing RPI – for example, in the index-linked gilts and bonds market, in private sector business contracts, and in the indexation of private pension payments.

When considering ONS's recommendations, CPAC³⁰ 'recognised that the ONS had to balance competing user needs' and that 'the ONS recommendation was one way to balance those needs' but noted that 'the statistical properties of the

30 See footnote 24

²⁵ In relation to Principle 1, Practice 1 and Protocol 1, Practice 7 of the *Code of Practice* ²⁶ http://www.ons.gov.uk/ons/guide-method/development-programmes/other-developmentwork/consumer-prices-advisory-committee/cpac-papers/national-statistician-s-statement---september-2012.pdf

http://www.cabinetoffice.gov.uk/resource-library/consultation-principles-guidance

²⁸ In relation to Principle 1 of the *Code of Practice*

²⁹ See footnote 21

Carli meant it was unsuitable (for use in an elementary index) and, as such, those competing user needs would be better balanced by replacing the Carli in the RPI itself with the Jevons elementary aggregation method. ONS could then continue to produce a price index similar to the existing RPI alongside'. One of the outcomes of the consultation on the RPI is that ONS plans to provide users with more advice about the strengths and weaknesses of each index in its family of consumer price indices and the uses to which they might be put. This advice will be of particular importance in helping users to understand the respective merits of the RPI and RPIJ.

Principle 3: Integrity

At all stages in the production, management and dissemination of official statistics, the public interest should prevail over organisational, political or personal interests.

Compliance with the Code requires that those responsible for producing 3.3 statistical reports are protected from any political pressure³¹ and that the statistical Head of Profession has the sole responsibility³² for deciding on statistics methods³³. Reporting on the findings of the consultation ³⁴ ONS states that 'The consultation is an independent statistical consultation, which was decided upon without any pressure from Government or external bodies. The consultation follows a detailed programme of statistical work undertaken by ONS, as set out in the Consumer Prices Advisory Committee's annual report for 2011, to seek to understand the reasons for the formula effect between the RPI and the CPI. The options for improvement set out in the consultation document are based on the findings of that independent statistical work and the National Statistician believes they were the right ones to consult upon³⁵. The Assessment team considers that the process leading up to the publication of the National Statistician's conclusions on the RPI has been open and transparent, with appropriate use of independent expertise, and has found no evidence of any inappropriate political pressure.

³¹ In relation to Principle 3, Practice 2 of the *Code of Practice*

³² Some aspects of the production and dissemination of the RPI are prescribed by legislation. Section 21(1) of the Statistics and Registration Service Act 2007 requires the UK Statistics Authority to 'compile and maintain the retail prices index, and publish it every month'. Section 21(2) says that 'Before making any change to the coverage or the basic calculation of the retail prices index, the Board [Statistics Authority must consult the Bank of England as to whether the change constitutes a fundamental change in the index which would be materially detrimental to the interests of the holders of relevant index-linked gilt-edged securities'. Section 21(3) says that if the Bank does consider that such a change would be detrimental, the Authority 'may not make the change without the consent of the Chancellor of the Exchequer'. The National Statistician explained what this would mean in practice when she preannounced the consultation on options for improving the RPI and as one of the recommendations does affect the RPI - that improvements to the measurement of private housing rents from using an alternative data source should be implemented in the February 2013 RPI indices - it was then subject to consultation with the Bank of England

³³ In relation to Principle 3, Practice 3 of the *Code of Practice*

³⁴ Annex B, Issue 1 of http://www.ons.gov.uk/ons/guide-method/development-programmes/otherdevelopment-work/consumer-prices-advisory-committee/cpac-papers/cpac-papers---january-2013-

meeting.pdf
³⁵ The programme of statistical work is also described in CPAC's annual report for 2012 http://www.ons.gov.uk/ons/guide-method/development-programmes/other-developmentwork/consumer-prices-advisory-committee/cpac-papers/consumer-prices-advisory-committee---2012annual-report.pdf

Principle 4: Sound methods and assured quality

Statistical methods should be consistent with scientific principles and internationally recognised best practices, and be fully documented. Quality should be monitored and assured taking account of internationally agreed practices.

- Compliance with the Code requires that statistical methods be consistent with 3.4 internationally recognised best practices³⁶. As part of its investigations of the 'formula effect', ONS researched approaches used by other national statistical institutes³⁷. In line with the International Labour Organisation's Resolution concerning consumer price indices³⁸, all of the statistical institutes reviewed choose between two formulae at the elementary aggregate level, the Dutot and the Jevons. Only the UK was found to use the Carli. The National Statistician reported that 'the ONS research programme found that use of the arithmetic formulation (known as the 'Carli' index formula) in the RPI is the primary source of the formula effect difference between the RPI and the CPI, and that this formulation does not meet current international standards'39. On the basis of the evidence presented by the National Statistician, the Assessment team therefore considers that the RPI does not comply with the Code⁴⁰.
- Compliance with the Code requires producers to seek to achieve continuous 3.5 improvement in statistical processes 41. ONS now proposes that 'the basic formulation of the RPI is accepted as currently defined and that any future changes should be limited to issues such as the annual update of the basket and weights, improvements to data validation and quality assurance etc'42. The Assessment team considers that the decision to effectively freeze the formula used at the elementary aggregate level in the RPI, and contemplate only 'routine' changes is inconsistent with the requirement in the Code to seek to achieve continuous improvement⁴³.

³⁶ In relation to Principle 4 of the *Code of Practice*

³⁷ http://www.ons.gov.uk/ons/rel/cpi/international-comparison-of-the-formula-effect-between-the-cpiand-rpi/2012/index.html

³⁸ Paragraph 43, http://www.ilo.org/global/statistics-and-databases/standards-andguidelines/resolutions-adopted-by-international-conferences-of-labourstatisticians/WCMS_087521/lang--en/index.htm
³⁹ See footnote 19

⁴⁰ In relation to Principle 4 of the *Code of Practice*

In relation to Principle 4, Practice 5 of the Code of Practice

⁴² See footnote 23, paragraph 5.iii

⁴³ In relation to Principle 4, Practice 5 of the *Code of Practice*

Annex 1: Summary of assessment process

- A1.1 This assessment was conducted from January to February 2013.
- A1.2 The Assessment team Iain Russell and Donna Livesey primarily used as evidence the series of documents published by the National Statistician, ONS and CPAC during January and February 2013. In order to expedite the assessment process, ONS gave the Assessment team restricted prepublication access to the detailed responses to the consultation and independent expert advice published on 22 February. The Assessment team sought clarification from ONS on some points but has not requested fresh evidence, nor has it commissioned a separate user consultation, given the extensive response to the National Statistician's own consultation.

Key documents used as evidence

National Statistician's consultation on options for improving the RPI (8 October 2012)

National Statistician's announcement about the outcome of consultation on RPI (10 January 2013)

National Statistician's response to the RPI consultation (22 February 2013)

CPAC papers – 8 January 2013 – CPAC Meeting

Individual responses to the National Statistician's consultation on options for improving the RPI

