

Advisory Panels for Consumer Prices

2016 Annual Report to the National Statistician

November 2016

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1. Introduction

This is the first annual report from the Advisory Panels for Consumer Prices (APCP) to the National Statistician. The APCP (Technical and Stakeholder) have met separately three times in the year to November 2016, to discuss a number of issues pertinent to the ongoing progress of consumer price statistics in the UK. This report includes a summary of the discussions held by the panels throughout 2016, and the resulting outcomes. These discussions regard the reassessment of CPIH as a National Statistic, the development of an Index of Household Payments (IHP), the forward work programme for consumer price statistics, and other methodological changes to consumer price statistics in the UK.

2. Recommendations

The APCP recommend to the National Statistician that:

- when ONS introduce Council Tax in the CPIH in 2017, it should be categorised within the housing division of COICOP¹, and the back series should be revised to include Council Tax. Council Tax should be excluded from CPIHY (CPIH excluding indirect taxes).
- ONS should introduce two methodological improvements in the CPI and CPIH in 2017, which will also ensure compliance with Eurostat regulations. The first change is an update to the chain link methodology, and the second a change to the classification structure. The historical CPIH series should not be revised with these changes to ensure greater consistency with the CPI.
- the National Statistician notes the progress ONS has made against the work programme for consumer price statistics, and endorses the forward work programme that focuses on: the use of alternative data sources, CPIH regaining National Statistic status, research into measures of income and price change as experienced by both households and by different household types, and addressing European compliance issues.

3. Background

The establishment of the Technical and Stakeholder APCP was recommended by an [independent review](#) of the governance of price statistics in February 2014, which considered matters relating to the governance arrangements and structures underpinning the production of consumer price indices by the ONS.

The APCP have met regularly throughout 2016. The Technical Panel meet 1-2 weeks prior to the Stakeholder Panel and the Chair of the Technical Panel then provides an update to the Stakeholder Panel on the discussions that have taken place. The APCP do not necessarily discuss the same papers, but there has been much overlap in the discussions held throughout the course of 2016.

The Technical Panel² functions to provide independent advice to the National Statistician on technical aspects of consumer price indices, as requested by ONS and/or the Stakeholder Panel. The Stakeholder Panel³ functions to provide

¹ COICOP (Classification of Individual Consumption According to Purpose) is a [classification scheme defined by the United Nations](#) and used by us and Eurostat to group products in the CPI and CPIH.

² Technical Advisory Panel for Consumer Prices [Terms of Reference](#)

³ Stakeholder Advisory Panel for Consumer Prices [Terms of Reference](#)

independent advice to the National Statistician on the uses and applications of consumer price indices, to ensure that these statistics meet the needs of users and 'serve the public good'.

On 8 January 2015, the UK Statistics Authority (UKSA) published an independent [review of UK consumer price statistics](#) led by Paul Johnson, Director of the Institute for Fiscal Studies. A number of recommendations were made, and the Authority launched a formal [public consultation](#) in the summer of 2015.

Many of the topics that have been discussed by the APCP during 2016 stem from recommendations made by the review and on questions that were raised during the formal public consultation. Other topics surrounded European compliance issues, and methodological papers provided by independent experts.

4. Topics discussed in the past year

The APCP (Technical and Stakeholder) have met separately 3 times in the year to October 2016. A number of topics have been discussed by the APCP, including:

- work towards improving user confidence in CPIH and completing work towards it regaining National Statistic status
- draft proposals for the National Statistician's response to the CPI consultation that took place in 2015
- the ONS paper 'Developing an Index of Household Payments'
- the consumer price statistics strategy and forward work programme

The Technical Panel have also discussed a number of methodological topics, including:

- 'Consumer Price Indices in the UK' (Courtney, 2015)
- the introduction of two methodological improvements into the CPI and CPIH
- the smoothing of volatile weights in the CPI and CPIH

4.1. Improving CPIH

Following the de-designation of the CPIH as a National Statistic in 2014, the re-designation and subsequent move towards the CPIH as the UK headline measure has been the most discussed topic and remains one of the top priorities for the APCP and for ONS.

In the last year both APCP have provided expert advice on a [series of articles](#) regarding the CPIH, that were published on Friday 28 October 2016. These articles have been published on the ONS website as a reference for users seeking information on the CPIH, and in particular the owner-occupiers' housing (OOH) component. Most of the discussion focused on providing suggestions to enhance the articles for users ahead of publication. Although the Technical Panel did not consider it necessary to re-open the discussion on what the best approach is for measuring OOH costs, both APCP felt it imperative that the arguments for the choice of the rental equivalence approach should be made clearly in the surrounding documentation.

The APCP also discussed the inclusion of Council Tax in the CPIH. This was a recommendation endorsed by the National Statistician in his March [letter](#) to the Authority. The Technical Panel agreed that Council Tax should have its own

classification within the housing division in COICOP and that the CPIH should be revised back to 2005 to incorporate this addition. Members also confirmed Council Tax should not be included in the CPIHY (CPIH excluding indirect taxes) and, as Council Tax is a direct tax, that the terminology should be updated to reflect this. The emphasis should be on excluding consumption taxes rather than excluding indirect taxes. The Stakeholder Panel agreed with these recommendations.

4.2. National Statistician's response to the Consumer Prices consultation

In January 2016 both APCP were presented with draft proposals for the National Statistician's response to the CPI consultation that took place in 2015. The APCP discussed questions regarding the measurement of prices across the economy, measurement of the experience and impact of price change on groups of households, and the publication and maintenance of the RPI. The advice provided to the National Statistician on the proposals presented was published separately in a joint note from both APCP in March 2016. This note is provided in Annex A.

4.3. Developing an Index of Household Payments

Both APCP discussed the paper "[Developing an Index of Household Payments](#)" (ONS, 2016), in which ONS explore the concept of an index that measures changes to the cost of payments made by households. This work was stimulated by proposals that were put forward by two members of the APCP, Astin and Leyland (2015), who suggested a "Household Inflation Index". As such, these members supported the proposals as had been made in their paper "[Towards a Household Inflation Index](#)".

The majority of Technical Panel members were in agreement that there is merit in producing an index that goes beyond the range of consumer price statistics currently produced, but expressed that more clarity is needed over the concept. Some members thought the index lacked a sound theoretical framework, and that there was an opportunity to build an index from the ground up (i.e. start from a concept and build the statistical framework around it). Many members held the view that this measure would need to be presented alongside a measure of income, or income receipts, so as not to be misleading for users. Providing users with an index that doesn't take into account income received by households would only provide one side of the picture. Producing the index alongside an income measure would provide users with a more rounded view of a household's economic wellbeing.

The majority of the Stakeholder Panel supported this view, and many members also believed producing indices for population sub-groups would be more informative than producing a single aggregate measure. However, a number of members held the view that an aggregate measure was still needed, as a reference point for the population sub-groups. Many members also believed the index would need to be published more frequently than annually to be of use.

4.4. Consumer price statistics strategy and forward work programme

Both APCP discussed the forward work programme and priorities for consumer prices. The Technical Panel proposed that research into an Index of Household Payments and researching the measurement of income and price change as experienced by different household groups, should be separate on the work

programme, but the work should be coordinated. Members also discussed raising the priority of clothing work with regards to the formula effect and pinning more focus on the services sector as part of a review of quality adjustment in consumer price statistics.

The Stakeholder Panel suggested that work looking at the formula effect should be given a high priority within the work programme, for example, considering clothing and the impact of the wedge between the RPI and CPI as we move into new markets in the future (product differentiation may happen faster in the modern economy). Other suggestions for the work programme included publishing a hierarchy of different indices that should be used when using historical data.

The programme has been updated following comments from both APCP and the updated work programme is provided in Annex B.

4.5. 'Consumer Price Indices in the UK' (Courtney, 2015)

Dr Courtney was invited to the January Technical Panel meeting to discuss his paper 'Consumer Price Indices in the UK' (Courtney, 2015). The paper presented an assessment of the array of official inflation indices in terms of their suitability as an uprating index that measures the purchasing power of wages and pensions. Dr Courtney gave his perspective on the current suite of inflation measures in the UK and summarised his conclusions on research into the choice of elementary aggregate formula (specifically between Carli and Jevons).

Although the Technical Panel members agreed that the mathematical properties of the elementary formulae were finally balanced, it was discussed that these need to be considered in the context of price collection in practice.

4.6. Methodological improvements to CPI and CPIH

The Technical Panel discussed the impact of implementing changes into the HICP (also currently the UK's CPI) to meet Eurostat regulations. One change was the result of an independent report written for Eurostat on the UK's double-chain link methodology. The current method arose due to a conflict between European and UK price reference period, which requires the index to be double chain linked. The recommended methodology would make the index mathematically identical to an index with a single chain link.

The Technical Panel advised that the new methodology should be implemented in 2017 in the CPI and CPIH. Members also endorsed the recommendation that the second link should be made at item level to future proof the method against any further changes to the COICOP structure. The Technical Panel also agreed the new classification structure (COICOP5) should be introduced at the same time.

4.7. Smoothing volatile weights in CPI and CPIH

The Technical Panel discussed the smoothing of volatile weights, as recommended in the Johnson Review. The Panel did not feel strongly about the proposed options and either felt that smoothing was unnecessary (as the difference can be explained), or that further research was required before they could give judgement.

5. Consumer price statistics strategy and forward work programme

ONS has a programme of research and development that is aimed at improving and maintaining the CPI and CPIH – ensuring that they continue to meet user needs, make use of new and innovative methods, and are compliant with EU regulations. Over the last year, considerable progress has been made in delivering against the programme. This includes:

- continuing to investigate the use of alternative data sources for use in consumer price statistics, including the internal use of web-scraping and ongoing sourcing of scanner and panel data
- the roll out of a pilot for a new methodology to produce location boundaries for CPI data collection, and a full roll out of temporal locations.
- continuing work to improve CPIH methodology and user confidence in the statistic, and presenting evidence of this to the Authority's Monitoring and Assessment team
- initiating work to explore the concepts and proposals made towards an Index of Household Payments (previously known as the Household Inflation Index), and discussing the best way forward with a range of users
- working towards full compliance with Eurostat regulations

The programme has been updated to reflect [decisions](#) reached by the National Statistician following the 2015 [consultation](#) on consumer price statistics. The new programme and priorities also reflect the priority placed on the use of alternative data sources by Professor Sir Charles Bean's [review of economic statistics](#) and the advice the APCP have provided to ONS throughout the course of 2016.

ONS expects that its top priorities for the next few years will be to:

- Gain accreditation of CPIH as a National Statistic and refocus commentary on this measure
- Continue to develop the use of alternative data sources such as web scraping and point of sale scanner data
- Publish annual measures of income and price change as experienced by different household types
- Research the concepts and issues raised by the Household Inflation Index (HII) [report](#) and implement these into inflation measures where this is deemed appropriate
- Consider ways to address the formula differences between RPI and CPI

For ONS to be at the cutting edge of international research for consumer price indices, the programme will need to continuously evolve in light of new priorities. Therefore ONS will review and update this work programme periodically and an update will be provided each year to the Authority Board via the National Statistician.

In updating the work programme, ONS will continue to seek the guidance of the APCP and engage with experts and users of these statistics. Further details of the forward work programme are included in Annex B.

6. Membership of the Technical Advisory Panel for Consumer Prices⁴

Members

Mr Nick Vaughan	Director of National Accounts and Economic Statistics, Office for National Statistics (Chair)
Mr John Astin	Independent expert – nominated by RSS
Prof. Bert Balk	Erasmus University, Netherlands
Prof. Alberto Cavallo	Massachusetts Institute of Technology, Boston
Prof. Ian Crawford	University of Oxford
Mr Rupert de Vincent-Humphreys	European Central Bank
Prof. Sir Stephen Nickell	University of Oxford
Mr Mike Prestwood	Office for National Statistics
Dr Jeff Ralph	Office for National Statistics
Mr Paul Smith	University of Southampton
Dr Martin Weale	King's College London

Secretariat

Mr Chris Payne	Office for National Statistics
Miss Helen Sands	Office for National Statistics

⁴ Members of the Technical Advisory Panel for Consumer Prices have been appointed for their expertise rather than their institution.

7. Membership of the Stakeholder Advisory Panel for Consumer Prices

Members

Dame Kate Barker	Chair
Mr Jonathan Athow	Office for National Statistics
Mr Richard Barwell	BNP Paribas
Mr Andy Haldane	Bank of England
Ms Jill Leyland	Royal Statistical Society
Mr Mike Prestwood	Office for National Statistics
Mr Dave Ramsden	HM Treasury
Mr Ian Rowson	Ofgem
Mr Andrew Sentance	PricewaterhouseCoopers
Mr Geoff Tily	Trades Union Congress
Mr Nick Vaughan	Office for National Statistics
Ms Sally West	Age UK
Mr Matthew Whittaker	Resolution Foundation

Secretariat

Dr James Tucker	Office for National Statistics
Mr Jonathan Lewis	Office for National Statistics

8. Papers presented to the Technical Advisory Panel of Consumer Prices in 2016

Date	Title	Summary
Jan 2016	Consumer Price Indices in the UK, Courtney (2015) External Paper	Dr Courtney was invited to give a short presentation on his assessment of the array of official inflation indices in terms of their suitability as an uprating index that measures the purchasing power of wages and pensions. Following the presentation panel members were invited to ask any questions of Dr Courtney.
Jan 2016	Draft consultation response APCP-T(16)02	ONS presented draft proposals for the National Statistician's response to the CPI consultation. Panel members were asked to provide their views on these proposals.
May 2016	European compliance APCP-T(16)04	This paper set out the impact of implementing two changes into the HICP (also currently the UK's CPI) to meet EU regulations. Panel members were asked for their views on the change and to sign-off the approach.
May 2016	CPIH assessment APCP-T(16)05	As part of the assessment of CPIH as a National Statistic, the ONS is required to set out its rationale for using the rental equivalence approach and provide additional analysis to explain differences between the rental equivalence and net acquisitions series. Draft papers were provided which panel members were asked to comment on.
May 2016	Draft work programme APCP-T(16)06	The work programme for consumer price statistics was updated following the 2015 consultation on consumer prices. The National Statistician set out his views on the development priorities for consumer inflation statistics in his March letter to Sir Andrew Dilnot. Members of the panel were asked to comment on the draft work programme and in particular the priority assigned to each project.
May 2016	Smoothing volatile weights in the CPI APCP-T(16)07	The Johnson Review recommended that ONS should consider using more than 1 year of National Accounts data in cases where weights are particularly volatile. This paper proposed 3 classes where smoothing could be applied.
Sep 2016	CPIH assessment 2 APCP-T(16)10	Following on from May's meeting, where the evidence for reassessment of CPIH was presented, panel members were presented with one additional document for comment (on the quality assurance of administrative data), and one revised document for comment which was the article comparing alternative measures of OOH.
Sep 2016	Council Tax in CPIH APCP-T(16)11	The National Statistician, John Pullinger confirmed that ONS will be introducing Council Tax into CPIH. Panel members were asked to consider a number of operational issues and provide advice.
Sep 2016	Developing an Index of Household Payments APCP-T(16)12	On 15 th August ONS released a paper that set out discussion points for the development of an "Index of Household Payments". ONS sought feedback from Technical Panel members regarding their views on the required purpose and scope of the index, and its underlying methodology.

Note: excludes Terms of Reference, verbal updates, minutes, agendas and letters

9. Papers presented to the Stakeholder Advisory Panel of Consumer Prices in 2016

Date	Title	Summary
Jan 2016	Draft consultation response APCP-T(16)02	ONS presented draft proposals for the National Statistician's response to the CPI consultation. Panel members were asked to provide their views on these proposals.
May 2016	CPIH assessment APCP-T(16)04	As part of the assessment of CPIH as a National Statistic, the ONS is required to set out its rationale for using the rental equivalence approach and provide additional analysis to explain differences between the rental equivalence and net acquisitions series. Draft papers were provided which panel members were asked to comment on.
May 2016	Users and uses of consumer price inflation statistics APCP-T(16)05	Updating this document is a requirement for CPIH re-designation. Panel members were asked to comment on the content of the document.
May 2016	Draft work programme APCP-T(16)06	The work programme for consumer price statistics was updated following the 2015 consultation on consumer prices. The National Statistician set out his views on the development priorities for consumer inflation statistics in his March letter to Sir Andrew Dilnot. Members of the panel were asked to comment on the draft work programme and in particular the priority assigned to each project.
Sep 2016	CPIH assessment 2 APCP-T(16)08	Following on from May's meeting, where the evidence for reassessment of CPIH was presented, panel members were presented with one additional document for comment (on the quality assurance of administrative data), and one revised document for comment which was the article comparing alternative measures of OOH.
Sep 2016	Council Tax in CPIH APCP-T(16)09	The National Statistician, John Pullinger confirmed that ONS will be introducing Council Tax into CPIH. Panel members were asked to consider operational issues and provide advice.
Sep 2016	Developing an Index of Household Payments APCP-T(16)10	On 15 th August ONS released a paper that set out discussion points for the development of an "Index of Household Payments". ONS sought feedback from Technical Panel members regarding their views on the required purpose and scope of the index, and its underlying methodology.

Note: excludes Terms of Reference, verbal updates, minutes, agendas and letters

Annex A – Advice to the National Statistician on the ‘Measuring Consumer Prices’ Consultation Response

Context

On 22 January 2016, the National Statistician's Advisory Panels on Consumer Prices (APCP), Technical and Stakeholder, met separately to consider their advice to the National Statistician on his proposals to the board of the UK Statistics Authority for changes to consumer price statistics.

This note constitutes the combined advice of the two panels as discussed at these meetings and developed through subsequent correspondence. Panel members have had the opportunity to comment on drafts of this note. Where minority views have been conveyed by members these have been included⁵. The panel chairs (Dame Kate Barker for the Stakeholder Panel and Nick Vaughan for the Technical Panel) have finalised the advice.

The panels considered a paper written by ONS that set out draft proposals and asked panel members to provide advice to the National Statistician on a number of key issues. This note follows the structure of that paper.

Introduction

In providing this advice the panels acknowledged that the present UK landscape for consumer price statistics is complex, with a range of measures, two distinct legal frameworks and a number of areas of methodological contention to deal with. This is not necessarily the starting point one would choose – it is however the starting point we have.

The stakeholder panel noted that this is an opportunity to develop existing or new measures of price change that will meet a range of user needs and are better understood than at present. However, there was also acknowledgment from both panels that it would never be possible to produce sufficient measures to precisely meet every need. Furthermore, members of the technical panel were of the view that it was important for ONS to focus on one particular approach to measuring inflation and “get that right” – acknowledging that no single measure could precisely meet every need.

The panels noted that there should be a distinction between differences in inflation rates resulting from the use of different statistical methods, and the differences resulting from the different perspectives on what constitutes price change.

In developing their advice, panel members took note of the outcomes of the recent consultation on consumer price statistics and wider work including the Johnson review, the advice of the previous Consumer Prices Advisory Committee and ONS research. Doubts were expressed by some members about how widespread knowledge of the consultation had been among sections of the user community. Certain members felt the treatment of owner occupiers' housing costs in CPIH had not been described in sufficient detail in the consultation to enable less expert respondents to reach an informed view on the topic.

A number of panel members expressed concern about the limited time the panels have been given to provide advice.

⁵ Unless specified otherwise, the minority views in this note constitute the combined views of Jill Leyland, Andrew Sentance and Geoff Tily of the Stakeholder panel, plus John Astin of the Technical panel.

A minority of panel members felt particularly strongly about the impact of time constraints, and considered that this had not allowed the panels to give proper consideration to all the complex issues involved. The same members stressed that this was a “once in a lifetime” opportunity to set a new course for measuring consumer prices in the UK. In taking this opportunity, these members stressed the importance of not rushing to a decision and not ruling out options without due consideration.

A – Measuring prices across the economy

A1 – Should there be a main measure of price change across the economy?

Both panels discussed what ‘main’ meant in the context of an inflation measure and whether this was a useful term. On balance, both panels expressed concern over the clarity and relevance of the concept of a main measure as defined in the draft proposals they considered. Members of the stakeholder panel in particular were of the view that there should be further debate about user needs as it was not clear whether a single measure could sufficiently capture the key uses and thus be reasonably designated as ‘main’. Specifically, a number of panel members questioned whether a single measure could adequately fulfil the differing needs for macroeconomic management and for indexation (for example, the uprating of benefits). In summary, the panels were of the view that the use of the term ‘main’ was not helpful to users and that ONS should reconsider its use.

Panel members were clear that even if the ONS were to designate a main measure, this should not drive out the perfectly reasonable requirement for a range of measures for different purposes – notably to improve understanding of households’ experiences. This was important to distinguish from ‘inflation shopping’, where users focus on the measure of price change which best suits their financial interests. Some members noted that the effectiveness of a measure (or measures) as ‘main’ would come about through acceptance and use of the measure rather than any designation by ONS. Furthermore, the panels felt that it would be important for ONS to set out in its publications what concepts the different inflation indices were capturing – so that users could judge which measure best met their needs.

Many panel members remained unclear on the meaning of ‘price change across the economy’, and there was a sense that ONS has more to do in explaining this concept or consider renaming it. There was discussion on whether this concept incorporated the ‘cost of living’. There was agreement that it did not cover the formal, economic, definition of the term (i.e. the cost of maintaining a constant standard of living (or utility) over time). However, there was acknowledgement that ‘cost of living’ is often used in different ways. A member noted that the panels should discuss and resolve what this term meant in practice and what measures could meet this definition.

A minority of panel members⁶ believed there were clear *user* needs for two main measures, one designed to reflect price change as experienced by households (in their view, the original aim of consumer price indices including the RPI) and one designed to meet the needs of “macroeconomic management and international comparison including inflation targeting (such as the HICP/CPI)”. One of these members felt the use of the phrase “price

⁶ This view was expressed by the minority group as named above, with the exception of Andrew Sentance who does not support this view.

change across the economy” was dangerously confusing and should be replaced by a more conventional and clearer definition.

A2 - Why CPIH should be the main measure of price change across the economy

A substantive majority of technical panel members supported a move to CPIH using the rental equivalence approach to measure owner occupiers’ housing costs as the focus for ONS reporting on consumer price inflation. They noted that its construction was broadly in line with international best practice and current statistical thinking on the measurement of price change.

The stakeholder panel took a different view, noting that it was not clear that CPIH as currently designed would be suitable to meet a broad range of user needs – indeed, it was unclear if it were possible for any one measure to meet these needs.

Both panels highlighted three priorities for building confidence in CPIH. Firstly, members felt that the technical processing issues with the measurement of owner occupiers’ housing costs in CPIH that resulted in the loss of its National Statistics accreditation had to be fully and publically addressed. Secondly, CPIH had to regain its National Statistics accreditation. Thirdly, the measure needed time to ‘bed in’ and build traction. The panels stressed the importance of ONS communicating the appropriateness of CPIH (notably the OOH component) from a user perspective in order to achieve these priorities.

A minority of members did not view these three priorities as adequate conditions to enable CPIH to become the main measure of inflation published by ONS. They shared a view that the Johnson review’s recommendation that CPIH should become the main measure had been accepted “without proper debate and with little reasoning” either in the review or subsequently. These members also felt that there had not been adequate discussion of user needs (current or evolving) in the Johnson review nor (so far) by the panels.

These members were of the view that CPIH is currently not in a position to be adopted as the main measure of price change across the economy. Whilst acknowledging that it should be possible to resolve the issues that caused CPIH to lose its National Statistics accreditation, these members noted a fundamental need to build public trust in the measure. These members set out a number of steps over and above those endorsed by the majority of panel members they believed necessary to ensure CPIH could be accepted as a reasonable estimate of price change as perceived by the public.

1. A complete review of the appropriate method for measuring owner occupiers’ housing costs – noting concerns over the ability of the rental equivalence method to gain public credibility, the reliance on an imputed method for such a large proportion of the index, and the different evolution of rents from house prices.
2. An examination into the choice of elementary aggregate formula used in CPIH and a resumption of the research into dealing with clothing prices and other goods which have the largest contribution to the formula effect. These members felt this work was needed to counteract a perception and (in the view of these members) a very possible reality that CPI and CPIH underestimate inflation in areas such as clothing and to improve the accuracy of all indices.

3. An active programme to build credibility in CPIH due to its de-designation as a National Statistic and current lack of scrutiny by the user community.
4. A clearer articulation of the purpose of a main measure of inflation. These members felt 'price change across the economy' needs to be clarified as it seems to imply more than just consumer prices.
5. A plan to develop an overall Household Inflation Index which could also act as a check on how close CPIH is to households' experience of price change.
6. A review in due course of certain other areas of CPIH, such as the treatment of insurance, where these members believed current practice could be considered questionable.

These members felt that the first four of these steps should be completed before CPIH became a main measure. It was the view of these members that a main index will very probably be used for uprating purposes by some entities, whether in the public or private sectors, as well as for inflation targeting and other economic management. These members noted that this placed a long term focus on the index, meaning that the cumulative impact of any issue would be greater than it is for short term considerations.

Two of these members felt particularly strongly that the formula effect issues required further consideration before the optimal way forward should be agreed.

On the subject of traction, there was debate around whether a measure could be accepted as the focus for ONS reporting when it was not the Government's inflation target measure and, conversely, whether it was desirable for the inflation target to be based on a measure which was not the ONS focus. Decisions on the choice of target are, of course, for the Government and are outside the remit of the UK Statistics Authority, ONS, and the panels. However, a majority of panel members argued that CPIH could be regarded as a potential option for the Government's inflation target measure once confidence and communication of CPIH was established.

After some discussion, the panels reached a majority view that they supported the inclusion of council tax in CPIH. The panels noted that the arguments previously expressed for and against its inclusion were finely balanced. On the one hand, members noted that council tax reflected a large housing related cost to households and so should be included in the housing component of the index. Members also commented that its inclusion, while justified on other grounds, would also help CPIH gain credibility among the public. On the other hand, a technical panel member noted that its inclusion was (in their view) contrary to international best practice for a consumer price index because it was a tax rather than the cost of consuming a service. The same member noted that the inclusion of council tax would however, in their view, be consistent with international best practice for a cost of living index. Panel members were of the view that, should council tax be included, this should happen before CPIH becomes the focus for ONS and that the back series of CPIH should be revised to include council tax.

A technical panel member disagreed, judging that it still important to be consistent with international best practice, and that council tax could be more appropriately captured in an household groups' analysis.

The panels expressed concern over the name CPIH, with some members feeling this made it sound like a derivative measure (a parallel was drawn with RPIX and RPI). The panels considered whether CPIH should be renamed CPI in due course, but noted that this could be confusing and potentially presented legal complications (for example, where CPI is specified and used in contracts). The panels concluded that the naming of the indices was an important topic that merited further consideration and that users should be given plenty of forewarning of any change in name in order that any transitional problems could be signalled and resolved.

The governance of CPIH was briefly discussed. Panel members noted that respondents to the consultation were generally not in favour of legislation. A member of the stakeholder panel questioned whether this was the right approach, noting that users who required long-term consistency in a measure of price change would need sufficient reassurance that the Authority was committed to the continued and consistent production of CPIH. This would be particularly true if CPIH index-linked gilts were to be issued.

B – Measuring the experience and impact of price change on groups of households

There was general support from both panels for the value of producing measures of the impact and experience of price change for different household groups.

The panels noted that this type of measure would be useful from a public policy perspective, particularly when considered alongside comparable measures of income and expenditure. The panels felt that there should be a clear distinction between these measures and the CPIH or CPI, reflecting the different perspective on which they were based.

There was some discussion on the technical composition of these indices. The inclusion of interest payments (notably mortgage interest payments) was supported in the context of measures for different household groups subject to the inclusion of interest received (for example, from savings) in comparable measures of income. The potential inclusion of interest in the form of financial intermediation services indirectly measured (FISIM) was also raised. The subject of whether households should be equally weighted was discussed. The panels broadly supported the principle of an initial annual analytical publication of this type of measure but noted that the frequency of the release should be kept under review. The panels encouraged ONS to commence publication sooner rather than later.

The concept of an aggregate Household Inflation Index (HII) was discussed. There was agreement with the proposal for ONS to conduct research into the concepts raised in the 'Towards a Household Inflation Index' paper (Astin and Leyland, 2015). Most members agreed that the measures of the experience and impact of price change for different household groups was the right starting point for empirical testing and credibility building for the results of this research.

A minority of members felt that, while there was clear and agreed value in developing inflation measures for household groups, these were not a substitute for a single measure aimed at measuring inflation experienced from the household perspective and capable for use for uprating and informing wage negotiations. These members supported the

development of a HII alongside the use of CPI or CPIH, noting that this could reduce the use of RPI in the future.

C - The RPI

C1 – Publication of RPI data

The panels broadly supported the proposal for limiting the future publication of RPI data to the aggregate RPI, its components, and RPIX. There was some consideration of continuing publication of RPIJ to help users understand the scale of the ‘formula effect’ in the RPI. However, there was agreement among a majority of members that publication of RPIJ was not essential should ONS improve the reconciliation of the differences between RPI and the main measure of price change across the economy. ONS noted that they were committed to doing this.

There was a minority view that RPIJ should be maintained as it is the “least worse” of current household-based indices and held National Statistics status. These members noted that RPIJ held much in common with the proposed Household Inflation Index and could be a ‘staging post’ in developing the latter index⁷. These members also noted that RPIJ was an analytical tool but does not resolve the formula effect issue.

C2 – Principles for maintenance of the RPI

Both panels supported the clarification of the definition of ‘routine maintenance’ for the RPI as all changes required to continue production of a consistent, fit for purpose RPI. The annual update of the basket and weights, computer systems upgrades and improvements to data validation and quality assurance methods are all considered to be routine maintenance.

The discussions on the principles for developing the RPI focussed on the potential for future improvements to alter the size of the formula effect. Panel members considered whether ONS should adopt a clear stance to maintain or reduce the size of the formula effect. Panel members did not reach a conclusion one way or another on this point. However, there was general agreement that ONS should conduct thorough assessments, including consultation, about the likely impact of any change to the formula effect before proposing it for implementation.

In summary, there was broad support for the principle for the development of the RPI as set out in the draft proposals paper. Namely that, with due consideration to the requirements of the Statistics and Registration Services Act 2007, ONS will only incorporate improvements to the RPI if to not do so would inhibit the improvement of the CPI or CPIH. However, the support was caveated on ONS conducting thorough impact assessments of any proposed change on the path of each index and the size of the formula effect gap.

A minority of members noted that the RPI continues to be widely used in contracts and indexation, is vital for index linked bonds and is the longest index available for measuring consumer prices. These members were of the view that RPI would continue to be used for many years to come and should therefore be as accurate as possible, given the constraints on changing it. These members viewed a policy of ‘managed decline’ of the RPI as

⁷ Jill Leyland abstained from commenting on RPIJ having declared a conflict of interest.

irresponsible and noted the importance of resuming work on the size of the formula effect. These members expressed strong reservations about setting aside a measure of inflation that still enjoys public recognition and confidence until there is another proven and accepted measure that can meet its original aims. Finally, these members noted that they viewed the ONS as having an advisory role to play in commenting on the practice of 'index shopping' by government.

Annex B – Consumer Price Statistics Strategy and Forward Work Programme

Introduction

The work programme has been updated to reflect decisions reached by the National Statistician⁸ following the 2015 consultation on consumer price statistics⁹. The consultation followed a review led by Mr Paul Johnson (commonly referred to as the Johnson review) which took a comprehensive look at how inflation is measured in the UK and made a series of recommendations about the future development of these statistics¹⁰. The programme and priorities also reflect the priority placed on the use of alternative data sources by Professor Sir Charles Bean's review of economic statistics (commonly referred to as the Bean Review)¹¹.

ONS expects that its top priorities for the next few years will be to:

- *Gain accreditation of CPIH as a National Statistic and refocus commentary on this measure*
- *Continue to develop the use of alternative data sources such as web scraping and point of sale scanner data*
- *Publish annual measures of income and price change as experienced by different household types*
- *Research the concepts and issues raised by the Household Inflation Index (HII) report¹² and implement these into inflation measures where this is deemed appropriate*
- *Consider ways to address the formula differences between RPI and CPI*

For ONS to be at the cutting edge of international research for consumer price indices, the programme will need to continuously evolve in light of new priorities. Therefore ONS will review and update this work programme periodically and an update will be provided each September to the Authority Board via the National Statistician. In updating the work programme, ONS will seek the guidance of the Advisory Panels on Consumer Prices and engage with experts and users of these statistics.

High priority

High priority items are the cornerstone of the development programme and if necessary will be prioritised over the delivery of medium and low priority items. High priority items are listed in order of implementation (of the first deliverable).

Use of alternative data sources	
Overview	Improvements in technologies have resulted in new, alternative, sources of price data which could be used in the compilation of

⁸ Letter from John Pullinger to Andrew Dilnot in which he sets out his emerging thoughts on the future of consumer price statistics can be found [here](#).

⁹ 2015 consultation on consumer price statistics can be found [here](#).

¹⁰ Details of the Johnson review and the final report can be found [here](#).

¹¹ In July 2015, the Chancellor of the Exchequer commissioned Professor Sir Charles Bean to conduct an independent review of the quality, delivery and governance of UK economic statistics. The terms of reference, final and interim reports from the Bean review can be found [here](#).

¹² The concept of a HII was first proposed by Leyland and Astin, culminating in a [paper](#) submitted as a response to the 2015 consultation on consumer prices.

	<p>price indices. There are two main alternative data sources which could be used, specifically:</p> <ol style="list-style-type: none"> i. point of sale scanner data - often referred to as scanner data, collected by retailers as goods are scanned across the till. These data are often considered the gold standard for consumer prices statistics as the data include both price and volume information; and ii. web scraped data - collected using automated robots which scan retailers websites and extract price information. <p>The Johnson Review and Bean Review recommended that ONS should give priority to obtaining these data, developing methods and capabilities to use them. ONS currently has several streams of research looking at these alternative sources of data. These are:</p> <ul style="list-style-type: none"> • Since May 2014 ONS has scraped daily prices from three large supermarket websites, collecting around 150,000 prices monthly for 33 grocery items. Preliminary indices using this data were published in September 2015 and the indices were updated again in May 2016¹³. Further updates to the indices (including the development of a new index which may be more suited to high frequency data) will continue to be published. • In 2015, web-based platforms for extracting data from web sites began to become widely available. They use a point and click interface which enables analysts to create web scrapers without the need for specialist programming expertise. This form of web scraping is now used to support the production of hedonic models which are used to quality adjust three high-tech goods in the basket. The hedonic models require detailed attribute data which have historically been collected manually from websites. Where possible web scraped data extracted using this technology have been used to replace this data collection. • This technology has also been used to pilot web scraping for 10 centrally collected items in the CPI basket. The scrapers have been designed to replicate the manual on-line collection so existing index number methodology can be applied. The pilot started in January 2016 and the scrapers are run once a month. Depending on the success of the pilot, import.io could be used as a monthly price collection tool from early 2017. • Recently ONS has obtained web scraped data for clothing websites from a company called WGSN. The suitability of this data for creating price indices will be assessed and a report published in mid 2017.
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¹³ Research indices using web scraped data paper and appendix tables available [here](#).

	<ul style="list-style-type: none"> ONS is investigating the potential use of a database of rail fares transactions owned by the Association of Train Operating Companies, to improve the rail fares item in CPI. Whilst not strictly speaking scanner data, this database does have many similar characteristics to retailer transaction data, i.e. it holds a near census of transactions. Finally, whilst previous efforts to obtain scanner data have proved unsuccessful, there are renewed efforts within ONS, led by senior managers, to obtain such data from retailers. The timeframe to implementation is dependent on the acquisition of data and in the interim the use of web scraped data is the priority. However, if scanner data are received, the balance of priorities between web scraping and scanner data will be reviewed. 	
Implementation	Regular publication of indices produced using prices scraped from supermarket websites	Late 2016
	Import.io potentially used as a monthly price collection tool	Early 2017
	Report on using WGSN data (web scraped from clothing retailers) to create price indices	Mid 2017
	Recommendations to Eurostat on use of web scraped data in UK consumer price indices	July 2017
	Implementation of improvements to rail fares	Early 2019

Developing an Index of Household Payments		
Overview	<p>The concept of an Index of Household Payments (IHP) was first proposed by Leyland and Astin (as the Household Inflation Index, HII), culminating in a paper¹⁴ submitted as a response to the 2015 consultation on consumer price statistics. Suggested differences from existing measures of price change include the potential inclusion of asset prices and interest payments, plus giving each household's expenditure equal weight. Following the consultation the National Statistician decided that the IHP could serve as an important complement to the suite of consumer price indices.</p> <p>ONS has conducted research into the concepts and issues raised by Astin and Leyland's paper and, in August 2016, released a discussion paper¹⁵. ONS is currently considering responses to this paper, alongside the advice of its advisory panels, which will feed into the future development of the index.</p>	
Implementation	Consider responses to the discussion paper	End 2016

¹⁴ Towards a Household Inflation Index available [here](#).

¹⁵ Developing an Index of Household Payments available [here](#).

	Publication outlining final decisions on the production of IHP	Mid 2017
	Initiate new collections	Mid 2017
	Release experimental IHP index as part of a wider analysis of income, expenditure and price change	End 2017

Measures of income and price change as experienced by different household types

Overview	<p>Research published in 2014¹⁶ shows that different household groups can experience difference rates of inflation. Following the 2015 consultation on consumer price statistics the National Statistician reached the decision ONS should produce comparable measures of income and price change for different household groups on an annual basis in one publication. The initial publication will take place in 2017. ONS will ensure that it engages fully with users to gain feedback that will shape the further development of the measures in line with user needs.</p> <p>The research on the inflation rates experienced by different household groups is based on the same price data sourced from the CPI (and CPIH). The indices could be developed further by differentiating between different products purchased, producing specific prices indices for each household group. Household subgroups will also be produced for the IHP work, and so this item will be coordinated with the previous one.</p>	
Implementation	Annual publication of measures of income and price change as experienced by different household types, followed by gathering of user feedback	2017

CPIH regaining its National Statistics status

Overview	<p>CPIH is a measure of consumer price inflation including Owner Occupiers' Housing costs (OOH). CPIH uses an approach called rental equivalence to measure OOH. Rental data collected by the Valuation Office Agency (VOA) for England, as well as comparable data collected by the Welsh Government and Scottish Government, are used in the calculation of OOH. In August 2014 the National Statistics status of CPIH was suspended due to shortcomings identified in the methodology used to produce the rental indices for OOH. Improvements were implemented in 2015 and the reassessment of CPIH as a National Statistic commenced in September 2015.</p> <p>The CPIH assessment report was published on 3rd March 2016¹⁷. The report includes a number of requirements that need to be implemented for CPIH to regain its status as a National</p>	
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¹⁶ Variation in the inflation experience of UK households: 2003 – 2014 available [here](#).

¹⁷ CPIH assessment report available [here](#).

	<p>Statistic. ONS reported to the UK Statistics Authority on 26th September 2016 on the actions that it has taken to address these requirements. ONS will be publishing the new CPIH supporting documentation on 7 October 2016.</p> <p>As part of the reassessment process, ONS has used the Authority's Administrative Data Quality Assurance Toolkit¹⁸ to implement the required level of quality assurance for all sources of administrative data used in CPIH (and CPI). In particular this includes the administrative rental data sources used for OOH. Other publications will include a CPIH Compendium, which provides information for users on the rationale behind rental equivalence, and the methodology used to construct it, a Users and Uses article, which details how the various measures of inflation are used and by whom, and a quarterly article which compares the different approaches to measuring OOH costs.</p> <p>Before CPIH regains its National Statistics status it will be subject to a formal period of close scrutiny before the regulation committee is asked to consider whether ONS has met the requirements and CPIH can be badged as a National Statistic. The National Statistician considers that, subject to regaining its National Statistic status, the CPIH should become the preferred measure of inflation, and the focus of ONS commentary.</p>	
Implementation	Evidence submitted for the CPIH assessment report	September 2016
	Publication of CPIH supporting documentation	October 2017
	CPIH badged as a National Statistic	TBC

Inclusion of council tax in CPIH		
Overview	<p>Following the 2015 consultation on consumer price statistics the National Statistician reached the decision that council tax (and domestic rates for Northern Ireland) should be included in CPIH, and that this should take place with the 2017 basket update.</p> <p>Consumer Price statistics are rarely revised. However, once CPIH has regained its status as a National Statistic, the back series will be revised to re-introduce CPIH on the best possible footing.</p>	
Implementation	Inclusion of council tax in CPIH	March 2017

Develop a reconciliation between CPIH and RPI and review the existing methodology for reconciliation		
Overview	<p>With the move towards making CPIH the preferred measure of inflation, ONS will develop a reconciliation between CPIH and RPI, and use the opportunity to review the reconciliation method</p>	

¹⁸ The Authority's Administrative Data Quality Assurance Toolkit is available [here](#).

	used. ONS will seek the advice of the Advisory Panel on Consumer Prices – Technical and other expert users.	
Implementation	Reconciliation between CPIH and RPI published	Early 2018
	Improved reconciliation method	2019

Addressing the formula effect

Overview	<p>In 2010, ONS made a number of changes to the methodology used to collect clothing prices. These changes meant that the gap between RPI and CPI, which use different formulae at the lowest level of aggregation¹⁹, widened.</p> <p>Constructing price indices for clothing items can be problematic. This is because the high product turnover associated with fashion items makes it difficult to identify comparable replacements. ONS will continue to explore the measurement of clothing prices through analysis of the web scraped clothing data provided by WGSN (see use of alternative data sources), as well as considering other ways that the measurement of clothing price changes could be improved. ONS will seek the advice of its advisory panels in this matter.</p>	
Implementation	Report on using WGSN data to create price indices	Mid 2017
	Further research into clothing price indices	2019

Medium priority items

Medium priority items form an important part of the work programme but if necessary delivery may be delayed for high priority items. Medium priority items are listed in order of implementation (of the first deliverable).

Short-term European compliance issues

Overview	<p>The UK CPI is also the UK's Harmonised Index of Consumer Prices (HICP). The HICP is a measure of inflation produced by all EU member states in line with EU regulations. ONS is working to ensure compliance in a number of areas including:</p> <ul style="list-style-type: none"> i. introducing a lower level of aggregation, called COICOP5; ii. implementing a temporal sample for fresh fruit and vegetables; and iii. addressing compliance issues related to the double chain link. <p>COICOP5 (Classification of Individual Consumption According to Purpose) is a new level of disaggregation which sits below the class (or COICOP4) level indices already published. The need</p>	
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¹⁹ CPI and RPI: increased impact of the formula effect in 2010 available [here](#).

	<p>to introduce these changes into CPI is driven by the implementation of new European legislation. COICOP5 will be introduced in CPI and CPIH in March 2017.</p> <p>Prices for fresh fruit and vegetables are collected on a single Index Day, a Tuesday, in or around the middle of the month. To address temporal sampling requirements, a second collection day for fresh fruit and vegetables is in pilot. In 2016 the pilot was rolled out to a full collection with implementation in the CPI and CPIH in 2018, following a parallel run in 2017. The results and recommendations for implementation will be presented to the Advisory Panels for Consumer Prices in 2017 for consideration.</p> <p>The CPI (and CPIH) uses a double chain link to introduce new class level weights in January, and new item level weights in February. Eurostat has been considering whether this approach is compliant with HICP regulations. An independent report written for Eurostat on this issue concluded that ONS should price-update weights twice a year to remove differences between the UK CPI and European HICP methodologies. In a meeting with Eurostat in December 2015 it was agreed that ONS would implement the recommendation for the HICP. As the UK CPI and HICP are one and the same the change will also apply to the CPI and CPIH.</p>	
Implementation	Introduction of COICOP5	March 2017
	Implementation of price-updated weights twice a year	March 2017
	Introduction of temporal sampling for fresh fruit and vegetables	Early 2018

Monitoring of quality adjustment and quality change

Overview	<p>One of the more difficult issues in producing consumer price inflation statistics is the accurate measurement and treatment of quality change due to changing product specifications. The Johnson review considered quality change and recommended ONS provide more information to explain how quality change is monitored. In response to the 2015 consultation on consumer price statistics some users suggested that ONS should devote more resources to improving and monitoring methods of quality adjustment. In particular the quality adjustment of services could be given more consideration. The Bean Review²⁰ also considered quality change, and found that the issue is likely to grow in importance with the “spreading tentacles of the digital revolution”.</p> <p>To address these finding ONS will launch a project to review quality adjustment methods used in consumer price inflation statistics and provide more detail on how quality adjustment is</p>
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²⁰ Details of the Bean review and the final report can be found [here](#)

	monitored.	
Implementation	Report on quality adjustment methods used and how quality adjustment is monitored	Late 2017

Improvements to CPIH methodology

Overview	<p>There are a number of ways in which the OOH component of CPIH could be further improved. ONS intends to explore these potential developments to further improve the effectiveness of CPIH as a measure of inflation. These are described below:</p> <ul style="list-style-type: none"> When the OOH component in CPIH was developed in 2011 using administrative data sources for England, Wales and Scotland, comparable rental data for Northern Ireland were not suitable. At the time the Northern Ireland Housing Executive (NIHE) received private rental data biannually, covering the Belfast Metropolitan Region only. As a result the existing CPI private rental data series for Northern Ireland has continued to be used. Since then the coverage across Northern Ireland has improved and the data are now available monthly. ONS has received an extract of these data from NIHE and started analysis with the ultimate aim of producing a rental index suitable for inclusion in OOH in 2018. Currently, dwelling stock data from the Department for Communities and Local Government (DCLG) are used to mix adjust rental data to reflect the OOH market. However, the property type split is not available on a regional basis, so the same property type split is applied across all regions. ONS will explore other potential sources of data to improve the stratification. The Johnson Review²¹ identified that recent research into the measurement of rental equivalence has suggested using a flow measure (new lets only), rather than a stock measure (new and existing lets). ONS will also explore the appropriateness of using this new approach to measuring rental equivalence costs. 	
Implementation	New rental data source for Northern Ireland implemented in OOH	Early 2018
	Improved property type split for stratum weights	2018
	Present findings from investigation into stock and flow measures of rental equivalence	2019

²¹ Details of the Johnson review and the final report can be found [here](#).

Improvement to the transparency of CPI and CPIH		
Overview	<p>The Johnson Review made two recommendations around transparency, specifically the review suggested that ONS provide more information to explain:</p> <ul style="list-style-type: none"> i. why prices for some items are sourced from the internet, while others are obtained from local shop-based collections²²; and ii. what criteria are applied when deciding on the formula used to combine items at the lowest level of aggregation²³. <p>To address these recommendations ONS will review how these decisions are made, and publish information on how this works in practice.</p>	
Implementation	Improvement to the transparency of CPI and CPIH	Mid 2018

Regional Indices		
Overview	<p>Relative Regional Consumer Price Levels (RRCPL) are an example of a spatial price index which can be used to compare relative price levels to the UK for the nine regions of England, as well as Scotland, Wales and Northern Ireland. ONS published RRCPLs every 6 years using data collected to calculate Purchasing Power Parity (PPP) Spatial Adjustment Factors (SAF). The next SAF collection is taking place in 2016, and the data may potentially be used to publish the RRCPL in 2017.</p> <p>The regular collection of prices for consumer price inflation statistics is optimised for measuring inflation at the UK level. Prices are collected locally in 141 locations spread across Scotland, Wales, Northern Ireland and the nine regions of England. As a result, the number of locations visited per region is small, making the data less suitable for regional indices. Additionally, the prices for many products are collected centrally with no regional breakdown. The viability of using the existing price data to produce more geographically disaggregated price indices will be re-assessed.</p>	
Implementation	Feasibility report on the creation of regional breakdowns of consumer price indices	Mid 2018

Location Boundary Review	
Overview	<p>The current sample frame used to select locations for the local price collection was drawn over ten years ago. While the sample has been updated using rotation of locations and selection of outlets, the location boundaries need to be updated to reflect changing expenditure patterns.</p>

²² Ibid, Recommendation 11

²³ Ibid, Recommendation 12

	Four new locations boundaries are being piloted in 2016 and in 2017 and 2018 another eight and fifteen new location boundaries will be piloted. Depending on feedback received from collectors in the field, the new boundaries could be rolled-out over a 5 year period starting in 2019. Advice will be sought from the Advisory Panels for Consumer Prices in 2018.	
Implementation	Roll-out of new boundaries	January 2019

Low priority items

The delivery of low priority items may be delayed or even stopped to ensure the delivery of high and medium priority items. Low priority items are listed in order of implementation (of the first deliverable).

Discounts		
Overview	<p>Retailers are offering an increasing array of discounts to attract customers. Single product discounts (available to all consumers without conditions) are captured in consumer price statistics. However, many other types of discounts, such as multi-buy offers or loyalty schemes are excluded. The Johnson Review recognised the difficulty of accurately reflecting all discounts in consumer price statistics and recommended that ONS carry out more work in this area, ultimately seeking to reflect a wider range of discounts in its consumer prices statistics.</p> <p>In 2017 ONS will pilot the collection of discounts data on items which are already collected locally. Field collectors will be asked to record information on discounts (including multibuy discounts) on the handheld devices. The pilot will be run on all food and drink items, with the facility to expand to other product groups in the future. The functionality on the handheld devices has been developed, and field testing is currently underway. In the interim web scraped data is being used to explore the prevalence of discounts for the three supermarkets collected.</p>	
Implementation	Pilot discount collection	January 2017
	Analysis of discounts in web scraped data	2017
	Analysis of discount data collected locally	2018
	Implement outcome of pilot	2020

Weights	
Overview	<p>The Johnson Review made a number of recommendations to improve the weights used in consumer price inflation statistics. In early 2014 ONS improved the commentary in the annual weights article to explain why weights differ and the publication was also brought forward to coincide with the implementation of the annual weights in the consumer price inflation publication.</p>

	<p>The review also recommended that ONS consider:</p> <ul style="list-style-type: none"> i. whether weights for some items should be based on more than one year of data to smooth irregular movements (and what causes those movements);²⁴ ii. whether the stratification of items by shop type can be improved²⁵; <p>ONS has developed a proposal to use a three-year moving average to smooth the weights for three volatile items with irregular movement in the CPI and CPIH baskets. Insurance weights are currently based on three year's data, although this is due to the insurance regulation rather than volatility. The Advisory Panel for Consumer Prices – Technical considered these proposals in May 2016, and ONS will be conducting more analysis.</p> <p>ONS will also seek to introduce an appropriate stratification where weights for different types of shops are available and can be updated.</p>	
Implementation	Further analysis on smoothing volatile weights in the CPI and CPIH	2017
	Update shop type weights in the CPI and CPIH	Early 2018

Medium-term European compliance issues

Overview	<p>The UK CPI is also the UK's Harmonised Index of Consumer Prices (HICP). The HICP is a measure of inflation produced by all EU member states in line with EU regulations. ONS is working to ensure compliance in a number of areas. Specific items²⁶ within CPI and CPIH which are being considered for improvement are:</p> <ul style="list-style-type: none"> i. package holidays, and ii. airfares. <p>In 2015, Eurostat published the UK Compliance Report²⁷ which stated that ONS's method for package holiday collection is non compliant. This is because price relatives for package holidays are calculated by comparing the price in the current month to the price the same month a year ago, rather than comparing the price to January. Additionally, in 2014 Eurostat made recommendations for the treatment of airfares and package holidays which highlighted several possible areas for improvement including last minute deals, booking fees, treatment of seasonal items, and booking methods.</p> <p>In the UK airfares are a particularly volatile index and ONS is</p>
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²⁴ Ibid, Recommendations 15-16

²⁵ Ibid, Recommendation 17

²⁶ Items for improvements can be identified via a number of avenues including, but not limited to, internal reviews, feedback from price collectors and auditors, Eurostat assessments and user feedback.

²⁷ UK Compliance Report available [here](#).

	investigating whether volatility due to one off events, such as Easter and school holidays, could be better captured with a temporal collection of airfare prices.	
Implementation	Implementation of improvements to airfares	Early 2018
	Implementation of improvement to package holidays	2019

Develop alternatives to the use of RPI data

Overview	<p>Following the 2015 consultation on consumer price statistics, the National Statistician reached the decision that ONS would publish the bare minimum of RPI related data necessary to ensure the critical and essential needs of existing users are met. To aid users in finding alternatives to the use of RPI data ONS will:</p> <ul style="list-style-type: none"> i. develop a new method for calculating average prices using CPIH; ii. shift the long run (1750 onwards) inflation series from RPI to CPIH; iii. update the personal inflation indicator (PIC) to CPIH; and iv. develop and publish a hierarchy of historical indices. 	
Implementation	Alternatives developed to the use of RPI data	Mid 2018

Improvements to OOH(NA)

Overview	<p>ONS currently produces an experimental net acquisitions index for Eurostat, as part of a pilot to incorporate OOH costs into the HICP. Currently there is no weight for the component 'existing dwellings new to the household' sector, which means that it is given a zero weight in the aggregation. Moreover, the weight for the 'acquisition of new dwellings' component includes new dwellings outside the OOH sector (i.e. the weight is gross acquisitions, rather than net). ONS will explore data sources that could be used to improve this experimental index.</p>	
Implementation	Improved methodology for the net acquisitions index	2019

The extent to which consumers substitute between outlets

Overview	<p>The Johnson Review recommended that ONS should research the extent to which consumers substitute between outlets. For example, this would capture how prices for the same goods have changed with the move from corner shops to supermarkets, and from supermarkets to online providers.</p>	
Implementation	Report on the extent to which consumers substitute between outlets	2019