

01 December 2021

Simon Hayes and Rhys Phillips  
Head of Current Economic Conditions Division, and Head of Sterling Markets Division  
Bank of England  
Threadneedle Street  
London  
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Dear Simon and Rhys,

This letter covers changes to the suite of consumer price inflation statistics in 2022.

**i. Issue**

A request for the Bank of England to assess the changes to the Retail Prices Index (RPI) proposed by UK Statistics Authority (the Authority) for implementation in 2022.

**ii. Action**

To note the contents of this letter, which is being sent to acknowledge the requirements under Section 21 of the Statistics and Registration Service Act 2007. In previous years it has initiated the Authority's consultation with the Bank over whether any proposed changes to the RPI would constitute a fundamental change in the index which would be materially detrimental to the interests of holders of relevant index-linked gilts, and hence trigger the redemption clause.

**iii. Timing**

For response by 3 January 2022.

## **Impact of COVID-19 on our routine processes for consumer price inflation statistics**

Since our last letter to you in November 2020, we have continued to face several challenges in continuing the production of the suite of consumer price statistics during the coronavirus (COVID-19) pandemic, including the continuity of data collection, methods for dealing with prices that we have not been able to collect, and the updating of annual weights to reflect significant changes in consumer spending patterns. Contingency plans remain in action and have been communicated through [correspondence with the Deputy Governor](#) in April 2020, then again through our usual annual correspondence in November 2020. We are faced with further challenges as outlined in this section.

#### iv. Ongoing collection of prices

As government guidance is changing over time in response to the COVID-19 pandemic, we must be flexible with our approach to data collection. We continue to collect prices in physical stores where it adheres with the regional guidelines and is safe and practical to do so. In locations that face tighter restrictions we temporarily collect data through retailer websites or by phone until the time comes that physical stores can be visited again.

#### v. Annual basket and weights update

The standard procedures for the annual updating of the baskets are well rehearsed. Although fixed within each year, the contents of the baskets of goods and services and their associated expenditure weights are updated annually to ensure that they are representative of household spending patterns. The updating mitigates potential biases that might otherwise occur from not allowing for changing consumer expenditure habits.

The annual update of the suite of consumer price inflation statistics will take effect with the February 2022 indices, which will be published on 23<sup>rd</sup> March 2022. An accompanying article describing the changes to the baskets will be published on the ONS website about a week earlier. A full description of the reweighting and updating process can be found in the [basket article](#) and the [weights article for 2021](#). The items in the Retail Prices Index (RPI), Consumer Prices Index including owner-occupiers' Housing costs (CPIH) and Consumer Prices Index (CPI) baskets will be updated in 2022, so that they remain representative of consumer spending and trends.

However, our suite of consumer price indices use a Lowe index methodology, meaning that expenditure data from before the base period are used to weight consumption classes. Given the sizeable shifts in consumption patterns observed during 2020 and 2021, our usual weights update process has been adapted for 2021 and 2022, for the CPIH and CPI, to ensure that the expenditure weights used adequately reflected expenditure in the base year, in this case 2020. The RPI process remained, and continues to remain, unchanged, as discussed in [last year's correspondence](#).

For the upcoming 2022 weights for CPIH and CPI, we will update the 2019 Household Final Consumption Expenditure (HHFCE) in consumption classes where there have been notable shifts in consumer spending since 2019. Typically weights from t-2 are updated but HHFCE data from 2020 has been significantly impacted by the pandemic. The most recent HHFCE estimates for the first 3 quarters of 2021 will be used as the primary data source for these adjustments, with other data sources (such as retail sales and financial transaction data) used to supplement HHFCE estimates where there is limited information. Quarter 4 spending will need to be estimated by applying the typical seasonal growth. This approach is coherent with the [Eurostat guidance](#) provided for the internationally comparable Harmonised Index of Consumer Prices (HICP, which is the same measure as our CPI) that weights should be based on the best estimates possible for HHFCE patterns in t-1.

As with last year's weights update, the RPI will continue to be weighted using annual Living Costs and Food survey data at a lag of 6 months. This means that the 2022 weights will be based on spending patterns between July 2020 and June 2021 and will therefore be affected by changes to spending patterns over the course of the pandemic, and the periods of localised or national movement restrictions that were in place at this time.

Changes in the contents of the baskets and their associated weights are not significant beyond their primary aim of ensuring the continuous and proper representation of consumer expenditure habits.

#### **vi. Location rotation and re-enumeration**

Approximately 140 locations in the UK are visited each month as part of the local price collection. These locations are carefully selected according to retail turnover and controlled to avoid overlaps with current locations within the sample. To maintain the sample of locations, each year 30 locations are refreshed, either by excluding a location and replacing it with a new one (rotation) or refreshing the list of outlets in the existing location (re-enumeration). Due to movement restrictions in 2020, it was not possible for our field collectors to carry out this routine process for 2021. Due to ongoing difficulties, a reduced number of 14 locations have been re-enumerated for 2022 with no locations being rotated. We plan to refresh a full 30 locations again in readiness for our 2023 collections.

### **Other changes to the suite of consumer price statistics in 2022**

#### **vii. Updating route weightings for air fares**

Stratification of item indices is regularly used to improve the accuracy of RPI, CPIH and CPI. It enables the best available information about purchasing patterns to be incorporated in the figures by assigning weights below the item level.

The current method for airfares splits the sample out into domestic flights (collected at a one-month lead time), European flights (collected at both a one- and three-month lead) and long-haul flights (collected at one-, three- and six-month leads). Within each of the long-haul strata, weights for each route in the sample are calculated by multiplying passenger numbers by the average price for the continent to derive an estimate of expenditure. A long-haul stratum index for each lead time is calculated by taking the expenditure-weighted sum of price relatives. However, we cannot derive average prices in a similar way for European or domestic flights, given that they cannot be disaggregated any further by continent. The sample data for these strata have therefore previously been aggregated using a Dutot approach, where the ratio of average prices in the current and base periods is calculated without the use of weights. The methodology is the same for RPI, CPIH and CPI.

From February 2022 we plan to introduce weights for routes within the European and domestic strata. These weights would be calculated by multiplying passenger numbers for a given route by the base prices in the sample. We would then calculate the expenditure-weighted sum of price relatives in the same manner as for long-haul indices.

Ultimately, this new approach should improve the representativity of flights within the air fares index across the suite of consumer price statistics.

### **Ongoing quality improvements and developments in consumer price statistics**

Quality improvement continues to be integral to our work in Prices Division and across ONS. We continue to maintain high standards through external accreditation of our suite of inflation statistics and housing index (ISO 9001:2015) and have also recently assessed our outputs using Statistical Quality Maturity Models (SQMMs) achieving the highest score across all ONS statistics assessed. We have a quality improvement plan in place

and are making some substantial improvements to the way that we process, calculate and quality assure our statistics over the coming years, our highest priority deliverables are outlined in this section.

#### **viii. Quality improvements in the Living Costs and Food survey (LCF)**

The Living Costs and Food survey (LCF) data underly the construction of weights in the RPI and are also used to inform weights at the lowest levels of the CPIH and CPI hierarchies (where HHFCE data are not granular enough to provide this information).

In July 2021, the Office for Statistics Regulation (OSR) published a [report assessing the Living Cost and Food Survey \(LCF\) for compliance with the Code of Practice for Statistics](#). This report identified two requirements and three considerations for improvements to be made to ensure that the LCF and its outputs continue to be fit for purpose. A [progress report in response to OSRs assessment](#) was published in October 2021 detailing our ongoing work and actions.

This work will ultimately improve the quality of our suite of consumer price statistics and reduce the risk of errors in the calculation of expenditure weights.

#### **ix. Development of the private rental series**

We are investigating new methodologies to improve our private rental prices statistics, which feed into the Owner Occupier Housing (OOH) component of the CPIH as well as the private rental components of the RPI, CPIH and CPI. We have extended the timeline in our latest [development plan](#) given the importance of these statistics to allow time to appropriately quality assure the new methodology and develop a sustainable system on a strategic platform to support their ongoing production.

#### **x. Transformation of consumer price statistics using new data and methods**

We continue our endeavour to obtain point-of-sale transaction (scanner) data feeds from UK retailers and have made substantial progress in accessing both historic and regular feeds of these data, currently covering up to 50% of the grocery sector. We are aiming, as part of our [wider transformation](#), to begin incorporating alternative data sources into the CPIH and CPI from 2023. These data will be [aggregated with traditionally collected data](#) in calculating price indices for food and non-alcoholic beverages, alcohol, and tobacco. We plan to continue to improve our coverage of this sector using scanner data in the coming months and years. In 2021 we have also gained access to transaction data for rail fares in Great Britain that will allow us to improve our calculation of price indices for this sector.

Over the course of 2020 and 2021 we have made significant progress with regards to both system and methods development and, in 2022, we will begin to publish experimental indices showing the impacts of these new data and methods. We aim to incorporate these data and methods into CPIH and CPI from 2023, once we are satisfied with their quality and the integrity of their ongoing production.

We are also investigating the use of web-scraped data collection for some other sectors, but due to complexities of methodologies needed for use with these data they will not be incorporated into our headline statistics until 2024 at the earliest, experimental indices will continue to be published as part of our [research series](#) in the interim.

**xi. Improvements to the scrutiny process**

The current scrutiny process is an important part of our production as it prevents incorrect prices from impacting the published RPI, CPIH and CPI figures. Due to the human nature of many of the errors that occur, and the need to make decisions that don't always have a clear outcome, this cannot be easily automated. An intensive manual process is therefore completed monthly to investigate any observations deemed as outliers, to either validate, correct, or remove the associated prices and/or metadata.

During 2021 this scrutiny process was reviewed, concluding that the manual process is still of fundamental importance, but some improvements could be made. Therefore, in 2022, we plan to:

- a) move the scrutiny onto a new system with an improved user interface and functionality, including improved reporting of changes
- b) bring some of the process forward so that it occurs earlier in the production round, allowing time for additional checking
- c) improve training and supporting information provided to price collectors, particularly regarding accurate assigning of indicator codes (used to provide additional information as to whether a product is on sale or a replacement, for example)

These changes will allow us to streamline the process and improve traceability of any changes made, ultimately providing additional reassurances over the quality of price quotes and quality adjustments being made in our suite of consumer price statistics.

**xii. Barcode pilot collection**

Since July 2021 our field collectors have been collecting barcodes alongside prices for a small sample of retailers and items, with the aim of providing an effective means of matching products collected in the field with those provided to us through scanner data. Matching products between the field collection and scanner data can serve as an important cross-validation tool in the short-term; in the medium-term we plan to investigate the impact of substituting field collected prices in the RPI directly with prices derived from the scanner data. If the latter is found to be feasible this would allow us to refocus our field collection to boost regional coverage and coverage of smaller/independent businesses, improving the coverage of our suite of measures.

Please let me know if you have any queries or would like to discuss any of the changes raised in this letter further.

A copy of this letter goes to Simon Kirby, Carleton Webb and Sarah Illingworth at the Bank of England, to Daniel Gallagher and Thomas Yeomans at the Treasury and to Sam Beckett, Grant Fitzner and Helen Sands here at ONS.

Yours sincerely,



Michael Hardie  
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