

## ADVISORY PANELS ON CONSUMER PRICES – TECHNICAL

### Minutes

21<sup>st</sup> October 2022

Conference Room 2, 2 Marsham St & Teleconference

10:30 – 13:00

#### Members in attendance (in person)

Mr Mike Hardie (ONS - Chair)  
Dr Martin Weale  
Prof. Guy Nason  
Mr Rupert de Vincent-Humphreys  
Prof. Ian Crawford

#### Members in attendance (online)

Dr Jens Mehrhoff  
Prof. Bert Balk  
Prof Paul Smith

#### Secretariat

Ms Helen Sands (ONS)  
Mr Huw Pierce (ONS)

#### ONS Contributors

Mr Liam Greenhough (ONS)  
Dr Mario Spina (ONS)  
Mr Chris Payne (ONS)

#### Observers

Mr Matt Corder (ONS)  
Ms Abi Casey (ONS)  
Ms Sofia Poni (ONS)  
Mr Andy King (ONS)

#### Apologies

Mr Grant Fitzner (ONS)  
Ms Corinne Becker Vermeulen  
Mr Peter Levell

### 1. Introduction and apologies

- 1.1. Mr Hardie opened the meeting and passed on apologies from members unable to attend.
- 1.2. Ms Sands summarised the position of any outstanding actions.

### 2. Index methods: framework for using multilaterals

- 2.1. Mr Greenhough presented the paper in five parts:
  - A reprise of the proposed aggregation structure for alternative data sources.
  - A description of the proposed annual round process utilising alternative data sources.
  - A discussion of the considerations for calculating a GEKS-T index under limited data conditions.
  - Alternative approaches for imputing a missing GEKS-T index: month-on-month, year-on-year, or at product level.
  - An outline of planned further work
- 2.2. A panel member suggested exploring mix-adjusted or trans-log methods as an alternative for handling the situation of prices being missing.
- 2.3. Several panel members requested a worked example to illustrate the proposed annual round process.

**ACTION:** Mr Greenhough to circulate a worked example of the annual round process to panel members.

- 2.4. The panel raised several points connected to the likelihood of imputation being required, suggesting that future work should focus on low turnover products and on strongly seasonal products, as these were thought most likely to be unavailable. A panel member further suggested investigating systematic missingness in the data.
- 2.5. A panel member highlighted that rules for handling missing items were developed and applied during the CoVID-19 pandemic and queried the need for developing new rules.
- 2.6. Also relating to seasonality, a panel member raised a concern that a reappearing product may introduce a downward bias to the index.
- 2.7. The panel discussed the relative merits of broad vs narrow stratum definitions. Broad strata are less likely to require imputation (although can be thought of as introducing imputation implicitly), while narrow strata give advantages by virtue of their homogeneity.
- 2.8. The panel suggested that the best choice of imputation approach may depend on the nature of the product in question.
- 2.9. The panel agreed that on the basis of this work there were no “showstoppers” with regards to introducing methods for second-hand cars and rail fares from 2023.

### **3. Data cleaning within alternative data sources**

- 3.1. Dr Spina presented a draft of the paper, describing scenarios and approaches to data cleaning for alternative data sources. The paper distinguishes between junk filtering – removing data points that are out of scope – and outlier detection - removing extreme prices and price movements. The paper is mostly concerned with outlier detection. Outlier detection is further categorised as global, observation level or relative. A range of approaches for defining and processing outliers is under consideration.
- 3.2. Dr Spina noted, and panel members concurred, that methods based around the interquartile range perform less well on multimodal distributions. One member suggested developing an approach based around the location of the modes.
- 3.3. One member queried how far multiplicative indices are especially sensitive to outliers, arguing that the direction of the outlier is likely to be important. Another member argued for testing each method’s impact on the final index.
- 3.4. Panel members recommended distinguishing between price observations that were wrong versus those that were correct but unusual, as the latter would generally be considered valid. Dr Spina confirmed that the aim of data cleaning is to identify those observations that were wrong.
- 3.5. A member noted that all of the methods under consideration were aiming to detect extreme values, while it was possible that a value in the middle of the distribution could still be wrong. This may need further consideration.

### **4. AOB and date of next meeting**

- 4.1. Mr Payne described the proposed approach to calculating weights for 2023. Subject to international guidance and delivery of relevant data sources the weights process is

expected to follow the same approach as for 2022 and 2021. Mr Payne referred to analysis from these years in support of this approach.

**ACTION:** Panel members to comment by correspondence on a paper circulated prior to the meeting.

4.2. Mr Hardie noted the time pressures encountered in meetings, suggesting that the time given over to presentations could be curtailed in future in favour of panel members' input. Panel members were in broad agreement, provided papers were circulated in good time prior to meetings. A suggestion was made that members could submit questions in advance to presenters to be answered in the meeting.

4.3. The next meeting will be held on January 13<sup>th</sup> 2023.

**Actions:**

No.	Action	Person Responsible
1	Circulate a worked example of the annual round process to panel members.	Mr Greenhough
2	Comment on the proposed weights approach for 2023.	Panel members