

ADVISORY PANELS ON CONSUMER PRICES – TECHNICAL

Minutes

7th July 2023

Teleconference

10:30 – 13:00

Members in attendance

Mr Grant Fitzner (ONS)
Mr Mike Hardie (ONS)
Mr Matt Corder (ONS)
Dr Martin Weale
Professor Paul Smith
Mr Peter Levell
Professor Rebecca Killick
Professor Bert Balk
Mr Rupert de Vincent-Humphreys
Dr Jens Mehrhoff

Secretariat

Ms Helen Sands (ONS)
Mr James Wilkins (ONS)

ONS Contributors

Mr Andrew Yeap (ONS)
Ms Aimee North (ONS)
Mr Liam Greenhough (ONS)
Ms Laura Christen (ONS)
Dr Mario Spina (ONS)
Ms Joanna Corless (ONS)

Apologies

Ms Corinne Becker Vermeulen
Professor Ian Crawford

1. Introduction and apologies

- 1.1. Mr Fitzner opened the meeting and passed on apologies from members unable to attend.
- 1.2. Ms Sands confirmed the position on the outstanding action to circulate a worked example from the annual round process for GEKS-Törnqvist when available.

2. Potential Future Data Source Improvements

- 2.1. Mr Yeap presented a paper on the possibility of using a new Ofgem data source and amended method to estimate gas and electricity price change within the CPI, CPIH and RPI; increasing coverage to include “fixed” tariffs, as opposed to just “variable” tariffs as currently. Mr Yeap presented possible options to continue energy inflation series in light of new Ofgem data, including:
 - 2.1.1 continue solely with current ONS data and practices on calculating energy price indices.
 - 2.1.2 introduce and solely use Ofgem data.
- 2.2 The panel were asked for their views on several issues:
 - 2.2.1 The appropriateness of using a unit value approach for homogeneous items such as gas and electricity.
 - 2.2.2 The optimal time to introduce methodological change by weighing up the benefits and drawbacks to making a mid-year change against a change at the annual reweighting in 2024, or beyond.
- 2.1. A panel member enquired how much variability there is within a tariff mix from month to month. Within a price index something must remain constant to measure the price effect, therefore the member enquired the extent to which using unit values would introduce unit value bias. Mr Yeap stated we do not yet have the full disclosive nature of the data (due to redactions from Ofgem) to enable us to determine this. Mr Corder stated that in terms of fixed and variable tariffs, it has been a relatively slow-moving compositional shift over the last few years, based on the Ofgem data currently available to us. Ofgem data comprise snapshots at the different price cap review periods (currently quarterly) so monthly change cannot be determined.
- 2.2. The panel discussed the composition of the different tariff baskets to determine homogeneity, using the example of pre-payment meter tariff types being distinguishable from other types such as direct debit. Mr Yeap stated the Ofgem data contains detailed information on different tariff types to enable the calculation of average bills for different strata.
- 2.3. Regarding the issue of using a unit value approach, a panel member commented that this depends on how easy it is for the consumer to switch from one tariff to another. If the customer cannot easily switch, a distinction between type of energy by tariff type should be made.
- 2.4. Mr Fitzner highlighted the importance of using the best available data and methods to estimate energy prices within consumer price statistics to accurately reflect inflation and household experience. Panel members agreed that the new data could be an improvement. But the consensus of the panel was to not rush bringing in the proposed changes to consumer price statistics right away to allow a better understanding of the Ofgem data. Current ONS methods are for now accurately representing energy prices while few consumers are on fixed

energy tariffs. Panel members highlighted that delaying implementation prevents reputational damage to the ONS from introducing rushed methods, while delayed introduction of new methods, if there was serious concern with existing methods, could also be a source of reputational damage. Mr Fitzner provided context that the ONS has the additional complication that consumer price statistics cannot be revised if there is a problem with energy inflation estimates.

2.5. Due to market sensitivity, parts of this discussion are redacted.

3. Implementation of Private Rental Controls in the UK

- 3.1. Ms North presented a paper outlining the emerging risk that rental controls could reduce the appropriateness of measuring owner-occupiers' housing costs using the rental equivalence approach and private rents for measuring consumer price inflation statistics. Scottish Government have also expressed concern that ONS' Index of Private Housing Rental Prices (IPHRP) may have over-estimated annual rental price inflation in Scotland since it remains higher for Scotland (as at May-23 data) than for England and Wales, despite rental controls for existing tenancies in Scotland. The paper summarised data collection limitations in Scotland, potential methodology changes proposed by Scottish Government, collected evidence to inform potential methodology change decisions, and impact analysis. The panel were invited to comment under six headings:
 - 3.1.1 Whether the introduction of rental controls warrants a re-evaluation of rental equivalence for measuring OOH costs,
 - 3.1.2 If so, the further analysis that would be required for a re-evaluation.
 - 3.1.3 Whether there is sufficient evidence to justify an IPHRP methodology change to increase the "time rent price remains unchanged" model assumption to beyond 14 months for Scotland,
 - 3.1.4 If so, the appropriate figure to use for Scotland.
 - 3.1.5 Whether use of a distribution should be considered instead of a single value for the "time rent price remains unchanged" validity period model assumption.
 - 3.1.6 Whether the current narrative in the IPHRP bulletin relating to Scotland's annual inflation accurately reflects the situation.
- 3.2. On the issue of measuring OOH costs, a panel member commented that doing so is already complicated, the addition of rental controls complicates this issue further. Other methods such as the net acquisition approach were discussed; a panel member suggested that if net acquisitions are deemed the target of measuring the price component of OOH costs, then rental controls should not be a concern if they do not feed through to the buying market. Another panel member replied that the OOH index using net acquisitions approach has been negative for a long period of time in the UK. This was suggested to be counter intuitive because it suggests that despite increasing house prices, the cost of housing has gone down.
- 3.3. A panel member recalled that the ONS previously produced the OOH series using the three different approaches to calculate OOH costs. They highlighted it may be helpful to see the potential impact of rental controls and compare across the different approaches. Ms North highlighted that the OOH payment series is in development by another team within the ONS and would be ready later this year, and this analysis could be produced if deemed

helpful. Another panel member queried whether the OOH payments approach would in fact be helpful in shedding light on this issue anyway, given it reflects actual outgoings of households rather than the cost of consuming housing.

- 3.4. On the issue of measuring rental prices in Scotland, the panel concluded that there was not sufficient evidence to justify a change to IPHRP methodology for Scotland, and there was not sufficient evidence to justify changing the “time rent price remains unchanged” validity period assumption of 14 months for Scotland. The panel noted that changing the validity period length would primarily change when high new-let inflation ‘hits’ rather than changing the level that annual inflation would reach. The panel also expressed concern that, without sufficient clear evidence for a change to the validity period, a change would be a “directed methodology change”, which would have clear challenges to communicate and justify, and would risk causing reputational issues for the ONS.
- 3.5. The panel considered that the use of a single value for the validity period is reasonable for modelling purposes since a change to the value of the validity period would cause a break in methodology which would remove the ability to compare outputs over time. This would apply whether it would be a change of 14 months to another single value, or to a distribution that is updated. The panel commented that this proposal was theoretically interesting, but not practical. The panel also acknowledged that no distribution had yet been identified that would be appropriate for modelling the validity period, which would prevent practical implementation even if the panel had supported changing to a distribution.
- 3.6. When the panel considered if the narrative in the IPHRP bulletin accurately reflects the situation in Scotland, the panel felt that it was appropriate to include narrative in the IPHRP bulletin relating to data collection limitations in Scotland. The panel commented that they cannot be confident that IPHRP is reflecting the stock inflation rate in Scotland due to the underlying problem with data collection for Scotland and recommended working with the Scottish Government to improve data collection.

4. Scanner Data Research – Date Trimming

- 4.1. Ms Christen introduced a paper outlining how date trimming may be used in grocery scanner data. As opposed to traditional consumer price statistics measured through point-in-time price collection, grocery scanner data uses information beyond a single day to give a better representation of the average transaction price paid by the consumer. It is not always practically possible to include representative prices from every day of the month, therefore date trimming is used. A provisional choice for date trimming was presented, which involves using all data available. Where aggregated data is received daily from the retailer this would include all days that fall within the month. Where aggregated data is received in weekly format only data where the full week falls within the month would be used.
- 4.2. The panel were asked for input under two headings:
 - 4.2.1 Whether the provisional choice for date trimming is appropriate.
 - 4.2.2 The further issues that could be caused by implementing date trimming.
- 4.3. In response to the issue of potential bias from data loss, a panel member clarified that data loss does not necessarily result in bias within the estimator and suggested caution when

applying this rationale within the paper. As an example, current price indices use two collection days within a month and are not interpreted as biased. Another panel member noted that if bias was a concern from loss at the beginning and end of the month where weekly data is received and is not fully within the month, then it is possible to disaggregate the weekly data by using a time series model.

- 4.4. A panel member stated that the decision on the approach to take with date trimming should consider scenarios of extreme inflation. For example, if prices increase by two percent in one month it may make a difference to the index when date trimming is done.
- 4.5. Within the paper, a panel member noted that it implicitly takes the average price across the whole month of transactions as the target; as this has never been stated as a target by the ONS, they suggested it should be made explicit. Another panel member suggested to trim the daily data to match the scenarios we are interested in and then compared each result with full month of daily data (“the target”) to assess whether there is bias.
- 4.6. A panel member highlighted an assumption within the paper’s provisional choice for date trimming that it is better to trim possibly six days of data than possibly letting two days from the adjacent month seep into the calculation of the representative price, the panel member raised that this assumption can be tested empirically. Mr Fitzner followed this point up by asking if trimming dates which fall on days with a high proportion of overall spend should be captured within the calculation. In the panel member’s experience, this has not been the case and no systematic difference has been found in the context of hedonics data, however, the panel member stated index impact analysis would need to be done to test this. If there is no systematic difference with the different approaches, it then becomes a problem of a practical nature to select the approach which allows the highest level of certainty of data quality. In literature on the topic, Ms Christen commented she had found conflicting results when comparing the different approaches and if they lead to bias, so agreed that index impact analysis and practical concerns need to be considered.
- 4.7. Panel members considered the issue of representativeness, as removing whole weeks when they partly do not fall within the month could lead to a different number of weeks within a year being compared with the number of weeks in other years when comparing across retailers. A panel member concluded that this kind of effect already occurs with current point in time collections for consumer price statistics, because of the way index days could fall, a year may contain a different number of weeks in the calculation. The panel member stated that the grocery scanner data approach regardless of when you date trim is a superior method to this.

5. Scanner Data Research – Data Cleaning

- 5.1. Dr Spina introduced a paper outlining how data cleaning methods may be used in grocery scanner data. The paper considers theoretical approaches the ONS plans to take to determine the best methods for data cleaning with the aim to remove erroneous transactions from the index’s calculation. These approaches involve junk filters to remove various types of observation based on a certain criterion of the data, and outlier detection to remove products with extreme movements in price and quantity using fixed fences. The panel were invited to comment under two headings:

- 5.1.1 The combined use of price filters with price-quantity dump filters.

- 5.1.2 General feedback on the draft paper.
- 5.2. A panel member enquired if there is an objective way to apply the fixed fences for outlier detection, as opposed to user defined fences which is currently done. Dr Spina stated the need to look at the impact of fences on final indices, while keeping in mind the guiding principles: to remove what is believed to be an outlier and remove a minimal amount of data. These principles will fine tune the choice of fences used. A panel member referenced a graph used in the analysis and stated the principle of removing a minimal amount of data does not seem to be adhered to in this instance. Dr Spina replied that the graph referred to is not currently optimised and final results will remove less data, this would be done by applying different fences to the data, and if there was a similar impact on the indices the fence which removed the least amount of data would be used. Mr Greenhough added when interpreting the graph that points lay over one another especially in the centre, meaning it is difficult to analyse the data loss caused by the fences based wholly on the graphs.
- 5.3. To identify which part of the distribution may or may not want to consider fences, a panel member identified that it would be helpful to see a typical histogram of price and quantity relatives for grocery scanner data. Dr Spina agreed with considering the distribution of the data and highlighted the challenges of doing so for data with a large number of consumption segments but would nonetheless bring this analysis to the next panel meeting. Mr Greenhough added that typically most prices do not change in the data, as a result there is a large peak around no price change for the distribution. This presents challenges in approaching the issue of fences in a systematic way given the distribution of the data around no price change.
- 5.4. A panel member raised “winsorization” as a potential alternative to the proposed method, adding that the ONS previously considered it as a method. Dr Spina highlighted the potential difficulties implementing this in current pipelines, and other panel members also raised caution with “winsorization” highlighting lack of ease for prices and impact it may have on the data.

6. Scanner Data Research – Handling Outlets and Store-types

- 6.1. Ms Corless presented research on options for how to treat different outlets and store types within retailers. Within grocery scanner data, average prices can be calculated at the individual outlet level, across distinct store types, or across all stores in a region with no breakdown by outlet or store type. Ms Corless presented analysis which showed that when average prices are calculated at the outlet level, the aggregate price index and growth rates diverge compared to when average prices are calculated with no outlet or store-type breakdown. The panel were invited to comment under two headings:
- 6.1.1 The suggested approach to account for different outlets and/or store-types within retailers.
- 6.1.2 How to investigate the observed differences between indices created using outlet-level prices and the other scenarios.
- 6.2. Ms Sands clarified the difference between store-type and outlet. Breakdown by outlet within the average price calculation is comparing a different branch of the same retailer, such as comparing two convenience versions of the same retailer in two different locations,

while the other option of comparing store types is less granular and looks across all stores in a region within a retailer.

- 6.3. The panel discussed what could be causing the divergence at the aggregate level when calculating the average price from the grocery scanner data by outlet level. In response to a question about sales within different outlets, Ms Corless stated that outlets from the same retailer would have the same promotions at the same time, meaning sales should not be accounting for the variance seen. A panel member replied that while this is the case for national sales campaigns, there is also discretion at the outlet level for local promotions from their experience of working with retailers, which may account for the variance in average price at outlet level.
- 6.4. The panel consensus was that this variation at the outlet level was caused by increased volatility in the more granular data and it would be preferable to avoid adding this volatility to price indices. Therefore, calculating average price at store type level was preferred and the detail at outlet level is not required within the index. This would be unless more was learnt about the data, or local policies in the area were implemented which would justify making a distinction at the outlet level.

7. AOB

- 7.1. Discussion redacted due to market sensitivity.

8. Publication Status of Papers and date of next meeting

- 8.1. The papers on grocery scanner data research will be published alongside the minutes with the paper on rental controls. The paper on potential future data source improvements will be published in due course.
- 8.2. The next meeting will be held on Friday 27th October 2023 in a joint panel meeting with the APCP-S

No.	Action	Person Responsible
1	APCP-T Secretariat to circulate the GEKS-Törnqvist annual round example.	APCP-T Secretariat
2	Dr Spina to return to the APCP-T panel with additional analysis on the impact of data cleaning.	Dr Spina
3	APCP-T Secretariat to update the meeting invite for the next APCP-T meeting to reflect the new meeting date in the joint session with the APCP-S.	APCP-T Secretariat