



Department
for Business
Innovation & Skills

**RESULTS OF BIS CONSULTATION
ON THE IMPLEMENTATION OF
SEASONAL ADJUSTMENT OF KEY
DATA SERIES IN THE MONTHLY
STATISTICS OF BUILDING
MATERIALS AND COMPONENTS**

NOVEMBER 2014

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BIS Consultation on the implementation of seasonal adjustment of key data series in the Monthly Statistics of Building Materials and Components

Consultation background

The Building Materials statistics are used by supply firms, trade associations, consultancies, government, construction firms, academics and others for market information, industry trends, forecasting, policy development, pricing and research¹.

In work done for the Department for Business, Innovation and Skills (BIS) on improving the quality of statistics published in the Monthly Statistics of Building Materials and Components, the Office for National Statistics' Methodology Advisory Service (MAS) recommended that BIS should start seasonally adjusting key data series (see [ONS/MAS review of building materials statistics: final report](#) for more detail). Seasonal adjustment is widely used in official statistics and aids data interpretation by removing effects associated with the time of the year or arrangement of the calendar.

Consultation approach

Before the formal consultation was launched, members attending the Consultative Committee on Construction Industry Statistics were presented with the proposals and asked for initial comments².

From 15 August 2014 2:15pm to 26 September 2014 11:45pm, BIS sought views to help define several aspects of the seasonal adjustment policy via a formal consultation.

1

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/16195/Buliding_materials_final_review.pdf

2

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/367281/CCCIS_June_2014_minutes.pdf

This consultation concerned the seasonal adjustment of the following key data series from the Monthly Statistics of Building Materials and Components for deliveries of:

- Bricks (Monthly)
- Concrete Blocks (Monthly)
- Ready-Mixed Concrete (Quarterly)
- Sand & Gravel (Quarterly)

The consultation consisted of multiple-choice questions (usually with 'Yes', 'No' or 'No preference' answers) and open questions which sought views on how seasonal adjustment should be implemented with respect to:

- the scope of the seasonal adjustment to the data
- constraining or not constraining seasonally adjusted data to non-seasonally adjusted annual totals
- revision policies for each seasonally adjusted data series
- presentation of the seasonally adjusted statistics

Data were collected through an online consultation. The consultation was advertised on gov.uk³, through the Consultative Committee on Construction Industry Statistics and through the Construction Statistics Community on the Royal Statistical Society's Statistics User Net.

Characteristics of respondents

In total nine submissions were provided. Three responses were from a business representative organisation/trade body. Responses were also received from central government and the media. Four respondents did not provide details of their organisation.

³ <https://www.gov.uk/government/consultations/building-materials-and-components-monthly-statistics-seasonal-data-adjustment>

Scope

Respondents were asked whether they would be happy if BIS started by seasonally adjusting totals only, rather than sub-series as well, eg, the bricks series has sub-series for brick types, brick materials and region of production. They were also asked if they would use seasonally adjusted sub-series data if they were made available in the future.

Six of the nine respondents said they would be happy for BIS to start by seasonally adjusting totals only. The other three respondents gave 'No preference' answers. Six respondents also said they would use seasonally adjusted sub-series if they were made available in the future, with three having no preference.

Respondents revealed why they would use seasonally adjusted sub-series in the future. Reasons included:

- Data analysis on heavyside construction products
- Annual and quarterly comparisons
- Because it would provide a better interpretation of the underlying trend within the data

Constraining seasonally adjusted data to non-seasonally adjusted annual totals

BIS proposed that seasonally adjusted annual totals should not constrain to non-seasonally adjusted annual totals. Two respondents (25%) were happy with this proposal (ie. they would not want totals to be constrained). Three (37.5%), however, wanted the totals to be constrained, whilst three (37.5%) gave no preference.

Just one respondent explained why they wanted constrained totals, suggesting that they were preferable for neatness.

Revision policies

Respondents were presented with revision policy proposals for each of the data series consulted upon. A new data point added to a series can result in revisions to the whole of the seasonally adjusted series, however these changes may be small and therefore users may prefer that the series are adjusted only at certain intervals rather than every month/quarter.

These proposals covered the scope of revisions (what data periods will be eligible for revision), the schedule for revisions (at what time data periods will be eligible for revision) and the how often the seasonal adjustment methodology will be reviewed.

Bricks statistics revision policy

Users were asked how frequently they used the statistics on Bricks from tables 9 and/or 10 of the monthly statistics bulletin. Table 1 summarises the responses to this question. If a respondent said that they never use the data then they were asked no further questions with regards to their preferences about a revision policy for the series.

Table 1. How frequently respondents use the Bricks data

Response	Frequency
Daily	0
Weekly	0
Monthly	3
Quarterly	3
Yearly	1
Less than once a year	0
Never	1

Users of the data were then presented with a proposal for the revision policy for the data series. In brief, the following was proposed⁴:

- Data up to 12 months previous to any new data point are eligible for revision caused by seasonal adjustment updates
- The whole historical series (back to 1983) is eligible once a year for revision at the time when 'final' data that completes the series for each calendar year is published
- The seasonal adjustment methodology is reviewed at the same time that the whole historical series is eligible for revision

Six respondents (83%) said that they are happy with this proposal. One respondent said they had no preference.

⁴ Please refer to the full consultation document for full details of the proposals made: <https://www.gov.uk/government/consultations/building-materials-and-components-monthly-statistics-seasonal-data-adjustment>

Concrete Blocks statistics revision policy

Users were asked how frequently they used the statistics on Blocks from tables 11 and/or 12 of the monthly statistics bulletin. Table 2 summarises the responses to this question. If a respondent said that they never use the data then they were asked no further questions with regards to their preferences about a revision policy for the series.

Table 2. How frequently respondents use the Blocks data

Response	Frequency
Daily	0
Weekly	0
Monthly	2
Quarterly	1
Yearly	1
Less than once a year	1
Never	2

Users of the data were then presented with a proposal for the revision policy for the data series. In brief, the following was proposed⁵:

- Data up to 12 months previous to any new data point are eligible for revision caused by seasonal adjustment updates
- The whole historical series (back to 1983) is eligible once a year for revision at the time when 'final' data that completes the series for each calendar year is published
- The seasonal adjustment methodology is reviewed at the same time that the whole historical series is eligible for revision

Five respondents (100%) said that they are happy with this proposal.

⁵ Please refer to the full consultation document for full details of the proposals made: <https://www.gov.uk/government/consultations/building-materials-and-components-monthly-statistics-seasonal-data-adjustment>

Ready-mixed Concrete statistics revision policy

Users were asked how frequently they used the statistics on Ready-mixed Concrete from tables 13 of the monthly statistics bulletin. Table 3 summarises the responses to this question. If a respondent said that they never use the data then they were asked no further questions with regards to their preferences about a revision policy for the series.

Table 3. How frequently respondents use the Ready-mixed Concrete data

Response	Frequency
Daily	0
Weekly	0
Monthly	2
Quarterly	1
Yearly	0
Less than once a year	2
Never	1

Users of the data were then presented with a proposal for the revision policy for the data series. In brief, the following was proposed⁶:

- Data up to 4 quarters previous to any new data point are eligible for revision caused by seasonal adjustment updates
- The whole historical series (back to 1983) is eligible once a year for revision at the time when 'final' data that completes the series for each calendar year is published
- The seasonal adjustment methodology is reviewed at the same time that the whole historical series is eligible for revision

Four respondents (80%) said that they are happy with this proposal. One respondent said they had no preference.

⁶ Please refer to the full consultation document for full details of the proposals made: <https://www.gov.uk/government/consultations/building-materials-and-components-monthly-statistics-seasonal-data-adjustment>

Sand & Gravel statistics revision policy

Users were asked how frequently they used the statistics on Sand & Gravel from tables 4, 5 and/or 6 of the monthly statistics bulletin. Table 4 summarises the responses to this question. If a respondent said that they never use the data then they were asked no further questions with regards to their preferences about a revision policy for the series.

Table 4. How frequently respondents use the Sand & Gravel data

Response	Frequency
Daily	0
Weekly	0
Monthly	1
Quarterly	1
Yearly	0
Less than once a year	3
Never	1

Users of the data were then presented with a proposal for the revision policy for the data series. In brief, the following was proposed⁷:

- Data up to 4 quarters previous to any new data point are eligible for revision caused by seasonal adjustment updates
- The whole historical series (back to 1983) is eligible once a year for revision at the time when 'final' data that completes the series for each calendar year is published
- The seasonal adjustment methodology is reviewed at the same time that the whole historical series is eligible for revision

Four respondents (80%) said that they are happy with this proposal. One respondent said they had no preference.

⁷ Please refer to the full consultation document for full details of the proposals made: <https://www.gov.uk/government/consultations/building-materials-and-components-monthly-statistics-seasonal-data-adjustment>

Presentation of seasonally adjusted data

Respondents were presented with the proposal for BIS to provide non-seasonally adjusted data alongside seasonally adjusted data but only provide charts for seasonally adjusted data (ie, drop the non-seasonally adjusted charts from our data tables publication).

Four respondents (67%) said that they are happy with this proposal. One respondent said they had no preference. One respondent said they were not happy with this proposal and explained that they would like the initial publications of this data to present non-seasonally adjusted charts to allow users to interpret the effects of seasonal adjustment on each series.

Comments

Respondents were given the opportunity to provide comments on any aspect of the seasonal adjustment implementation proposals. With respect to the question “How do you expect you will use the seasonally adjusted deliveries data?”, the following responses were given:

- To provide a more rapid and nuanced assessment of underlying trends in association with the non-adjusted data
- To cross check construction output data

No further comments were provided.

Conclusions

The consultation results largely provide clear preferences with respect to the proposals. Respondents are happy for us to begin by seasonally adjusting total deliveries data for the four data series, but there is an appetite amongst responders for us to seasonally adjust sub-series data in the future.

Whether or not to constrain seasonally adjusted annual totals to non-seasonally adjusted annual totals appears to be a contentious issue, with the number of people preferring constrained totals slightly outweighing the number of people preferring non-constrained totals. Therefore we will listen to the consensus and constrain totals. Constraining is sub-optimal for seasonal adjustment, but analysis shows that this is expected to have very little effect on the seasonally adjusted figures for any series.

There will be two revision policies; one for the two monthly data series and one for the two quarterly data series. Data up to 12 months/4 quarters previous to any new data point will be eligible for revision, the whole historical data series will be eligible for revision once a

year at the time when 'final' data that completes the series for each calendar year is published, and the seasonal adjustment methodology for the series will be reviewed also at that time.

Although we proposed that the whole historical seasonally adjusted data series will be eligible for revision once a year, following further consideration of expert advice and international best practice⁸ we have concluded that it would be better to only open 12 years of previous data to revision, unless the underlying data itself changes. The Time Search Analysis Branch in the Office for National Statistics recommends that modeling the seasonal adjustment of a data series on 12 years' worth of data provides a good balance between having a sufficient amount of data for estimating a robust model whilst providing flexibility following emerging patterns in the series. By not revising seasonally adjusted data older than 12 years (except if the original data series is revised), users can utilise the data in the knowledge that it will remain consistent over time.

Initial publication of the seasonally adjusted series for Bricks, Blocks and Sand & Gravel is planned for 1 April 2015, as part of the "Monthly Statistics of Building Materials and Components: March 2015" statistical release. Initial publication of the seasonally adjusted series for Ready-Mixed concrete is planned for 3 June 2015, as part of the "Monthly Statistics of Building Materials and Components: May 2015" statistical release. The seasonally adjusted data series including data up until the last month/quarter 2014 will be made available on initial publication of the seasonally adjusted series. Any seasonally adjusted data for months/quarters in 2015 available in time for publication will also be included in the initial publication.

From 2016, the seasonal adjustment methodology will be reviewed for each data series annually, as already outlined. The seasonally adjusted data for Bricks, Blocks and Sand & Gravel produced using the reviewed methodology is expected to be published in March of each year as part of the "Monthly Statistics of Building Materials and Components: February" statistical release. The seasonally adjusted data for Ready-Mixed Concrete produced using the reviewed methodology is expected to be published in May of each year as part of the "Monthly Statistics of Building Materials and Components: April" statistical release. However, this schedule is dependent on data delivery times, which can vary.

Regarding presentation, most respondents were happy for BIS to provide non-seasonally adjusted data alongside seasonally adjusted data but only provide charts for seasonally adjusted data. However, we will provide charts of non-seasonally adjusted data for at least four of the monthly publications to ensure that all data series have at least one occasion where the non-seasonally adjusted and seasonally adjusted data are displayed on charts alongside each other as part of the same monthly publication.

All seasonally adjusted data will be published in a separate table alongside non-seasonally adjusted data tables.

⁸ See page 24 of the ESS Guideline on Seasonal Adjustment:
http://epp.eurostat.ec.europa.eu/cache/ITY_OFFPUB/KS-RA-09-006/EN/KS-RA-09-006-EN.PDF

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