Revision policies

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Objectives of the sequence

- Be aware of revision sources in a seasonally adjusted series
- Identify the available refresh policies to update a series with a new raw data point
- Run an infra-annual review

Sources of revisions

A seasonally adjusted series can be revised because of :

- a raw data revision
- a change in the adjustment model :
  - Reg-ARIMA model
  - filters (and corrections) x11
- revisions due to the addition of new data point(s)

These revisions can :

- take place during annual or infra-annual campaigns
- impact the whole series or only the recent past

(The producer can also choose up to when the published series can be revised.)

The guidelines on revision and dissemination policies

"Revisions to seasonally adjusted data are published in accordance with a coherent, transparent and officially published revision policy and release calendar, which is aligned with the revision policy and the release calendar for the unadjusted data. Revised seasonally adjusted data should not be released more often than unadjusted data. The public is informed about the size, direction and volatility of past revisions of important seasonally adjusted macroeconomic variables."

ESS Guidelines, 4.1 General revision policy and release calendar, alternative A

Available revision policies (1/2)

When a new data point is available, the producer can use :

- forecasted seasonal factors (or even the previous year's when no calendar effect)
- automatic classification as an outlier (AO)
- Method "current" : the model parameters are not re-identified nor re-estimated, the current model is just applied to the new data point
- **partial-concurrent methods** : the model parameters are completely re-identified only once a year, but they are re-estimated each time a new point is available. There are several gradual degrees of re-identification and re-estimation between this and the last option (cf. table and graphical interface)
- Concurrent method : parameters are re-identified and re-estimated with each new point (not recommended)

Available revision policies (2/2)

With all these options (except when the seasonal coefficients are calculated before the new raw point is available), the impacted element is the linearized series. In all cases, decomposition is then entirely done again with the x11 or SEATS algorithms.

Revisions will automatically occur, at some point, when using new data : **freezing estimations is ignoring recent information**.

GUI and cruncher parameters : cf. Refresh_policies.pdf

The guidelines recommendations on revision policies

A) When past data are revised for less than two years and/or new observations are available, partial concurrent adjustment is preferred to take into account the new information and to minimize the size of revisions due to the seasonal adjustment process.
However, if the seasonal component is stable enough, controlled current adjustment could be considered to minimize the frequency of revisions. In this case, a full review of all seasonal adjustment parameters should be undertaken at least once a year.
When revisions covering two or more years occur (as observed in national accounts) model, filters, outliers and regression parameters have to be re-identified and re-estimated.

B) Current adjustment with a full review every year.

C) Current adjustment without annual review as well as concurrent adjustment.

Infra-annual campaigns to take the last raw data point into account

The infra-annual campaign doesn't only mean adding a new data point to the adjusted series : it requires the analysis of the main series (publication, weight) and, often, parameter calibration.

If the producers have little time left for seasonal adjustment, they can focus on :

- checking the presence/removal of outliers at the end of the series
- forcing outliers undetected by JDemetra+
- monitoring revisions of the adjusted series, particularly at the end

Summary of technical revisions : differences between annual and infra-annual reviews

Specifications		Annual campaigns	Infra-annual campaigns
Transformation function		Can be changed	Unchanged
Reg-ARIMA model	ARIMA model	– Re-identified – Re-estimated	– Unchanged –Re-estimated
	Calendar regressors	– Can be changed – Re-estimated	– Unchanged – Re-estimated
	Outliers	– Detection over the whole series – Re-estimated	– Detection over the last year – Re-estimated
X11	Seasonal filter	Can be changed	Unchanged (in theory but not in practice)
	Henderson moving average	Can be changed	Unchanged (in theory but not in practice)

Take home message

A seasonally adjusted series can be revised in different ways when a new data point is available :

- new point calculated thanks to forecasted seasonal coefficients

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- the entire pre-adjustment model is completely re-identified.

These options correspond to different ways of taking into account fresh information.

A substantial revision isn't necessarily false or bad.

Recommended refresh policy for infra-annual campaigns : *Partial concurrent adjustment* > *Last outliers* or *controlled current*.

For series impacted by the covid crisis : do not use the new info right away to re-estimate the seasonal factors : temporary shock. You can use forecasted factors or (systematic) outliers.