

What's New About Holiday Adjustment by 'Halcyon'?

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Over the past 30 years, we have been studying on the most accurate, efficient yet easy way to make holiday adjustments on the world's economic statistics. The latest model of our proprietary 'Halcyon' has several attractive features that are not found in conventional X-13ARIMA-SEATS. Most importantly, with a built-in calendar that covers numerous global Holidays inside, Halcyon is enabled to make a Holiday adjustment to any statistics, regardless of its country/region, instantly and automatically.

We are introducing two types of holiday variables selected from all those Halcyon automatically generates when detecting holiday effects. The former is a combination of pre-holiday and post-holiday variables, while the latter is the day-of-the-week variables, for detecting holiday effects that are possibly varying by the day of the week. Halcyon has got a function, which has been built in experimentally, to automatically select optimal range of pre-and post-holiday periods for holiday effects to be detected. The initial setting has been like this; from -180 to +31 days from Holiday, where 'Holiday' means the base date for the period-setting, often a national holiday.

For the presentation this time, we selected three of the French Holidays, namely Easter, the 1st and the 8th May. While Easter holiday represents a typical moving holiday that we call "Day (of the week) fixed, date shift" type, the other two holidays in May are "Date fixed, day shift" type. Meanwhile, our selected economic statistics this time is the Monthly Survey of Retail Trade. Holiday effects incurred by Easter were observed as increases for pre-Easter and decreases for post-Easter, as is the case for other major holidays in the world. Interestingly, the effects were seen most significantly in the figures for food products.

The implications obtained from Halcyon's calculations were something more than we had expected. We hope to make any contribution to the workshop via our method of holiday adjustments upon this precious opportunity.