

# Historical comparison of seasonally adjusted series using GLAS and X-12-ARIMA

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The following charts illustrate the effect on the key monetary series of the change of seasonal adjustment method described in the article published in the December 2003 issue of this publication. The article is reproduced this month (page 4), and paragraph 3 sets out the key characteristics of X-12-ARIMA, and the main differences compared to GLAS.

The moving averages used in X-12 are typically longer than in GLAS. This, combined with the outlier detection features within X-12-ARIMA, enables the identification of a smoother seasonal pattern. As a result, more of any erratic or irregular element in a series is likely to feed through to the seasonally adjusted outturns, so one-period growth rates under X-12-ARIMA show slightly more volatility than the previously published data. An exception to this is Household sector M4 – see Charts I and J. This is an example of a series where the trading day adjustment within X-12-ARIMA removes some of the month-to-month variation in the series.

It is clear from the charts that the twelve-month growth rates are not significantly different under the new method. Exceptions are the lending series adjusted for securitisations where the differences are not solely due to the change in seasonal adjustment methodology, but also because of a new method of calculating growth rates.

(For more details see paragraphs 18 and 19 of the reproduced article.) It should also be noted that the supplementary series for the number of loans approved for house purchase adjusted for the number of working days in a month has been discontinued, because such calendar effects are now dealt with automatically by X-12-ARIMA, though the working day adjusted GLAS series is used here for comparison.

Previously, notes and coin (in M0) was seasonally adjusted on a weekly basis. As a result of the switch to X-12-ARIMA, compiled monthly data is now being adjusted and a set of calendar effect variables is being used to take account of the weekly frequency of the non-seasonally adjusted data. Weekly seasonally adjusted data will no longer be available. (For more details see paragraphs 16, 17 and 25 of the reproduced article.)

The charts below show data, for a range of series, up to November 2003. However, the non-seasonally adjusted data for December have been used in compiling these data, with the exception of notes and coin (in M0), where due to the fact that seasonal factors within GLAS are not updated in December, adjustments on the basis of non-seasonally adjusted data up to November are used for comparison.









