

Box 9

INTRODUCING THE ECB INDICATOR ON EURO AREA INDUSTRIAL NEW ORDERS

Eurostat, the Statistical Office of the European Union, discontinued the provision of euro area industrial new orders statistics as of the reporting period of March 2012. In order to fill this data gap, the ECB has developed a new monthly indicator on euro area industrial new orders. This box describes the methodological approach behind the compilation of this indicator, as well as its use for economic analysis.

The ECB's approach to estimating euro area industrial new orders

The ECB, in close cooperation with national central banks and national statistical institutes of those euro area countries that have continued with the data collection of industrial new orders at a national level, has established regular monthly data transmissions of the remaining official national series for the compilation of euro area aggregates. Furthermore, a common modelling framework has been developed for those countries that no longer report new orders at the national level in order to derive estimates. As model determinants, the official statistics on industrial turnover and the results from the European Commission's harmonised business opinion surveys, as well as the Markit's Purchasing Managers' Index surveys have been used. Emphasis has, therefore, been placed on ensuring that the information comes from a broad range of sources, which helps to enhance the robustness of the model-based proxy for industrial new orders. In summary, the model estimates have proven to provide solid results (out-of-sample and in real time), explaining about 50% of the variation in the month-on-month growth and about 98% at the index level of total euro area new orders. The ECB indicator on euro area industrial new orders is based on a combination of these continued official statistics, collected nationally, and estimates yielded by the model.¹

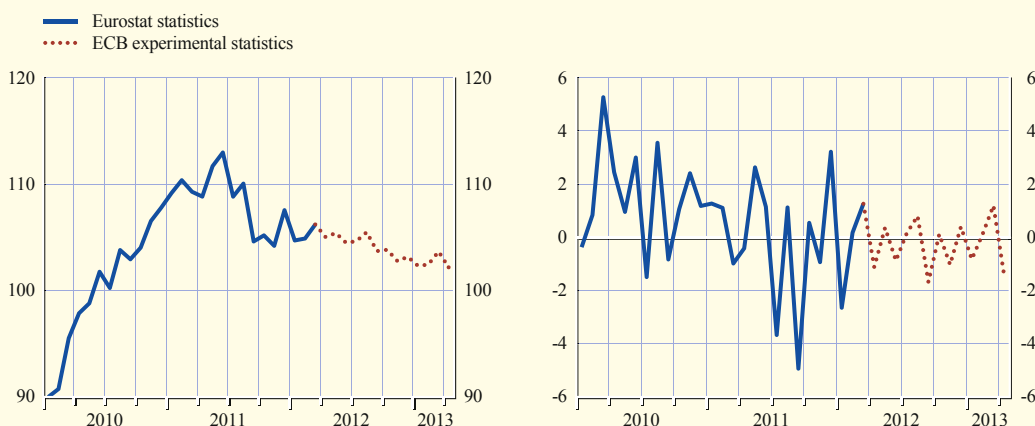
The extended series for the euro area

The euro area series consist of the official data as released by Eurostat for the period up to March 2012 and, from April 2012 onwards, they are based on national data and the model estimates (see Chart A). The ECB indicator for euro area industrial new orders is an aggregate of national results, using a weighting scheme based on Eurostat weights for industrial turnover indices for the base year 2010. The next monthly observation for the euro area is calculated only once the new official national data cover at least 60% of the aggregated euro area level, which is typically achieved around 55 days after the end of the reference month (i.e. close to the timing observed for the official statistics prior to being discontinued).

¹ For a comprehensive description of the modelling framework and the test results, see de Bondt, G. J., Dieden, H.C., Muzikarova, S. and Vincze, I., "Introducing the ECB indicator on euro area industrial new orders", *ECB Occasional Paper*, No 149, ECB, June 2013.

Chart A ECB indicator on euro area industrial new orders

(index level 2010=100, left panel; month-on-month growth rate, right panel)



Sources: ECB experimental statistics based on national data, Eurostat and ECB calculations.

The release of the ECB indicator on euro area industrial new orders provides results for total new orders, total new orders excluding heavy transport equipment, as well as breakdowns for the main industrial groupings, i.e. capital goods, intermediate goods and consumer goods. The latter is further divided into durable and non-durable consumer goods. Another breakdown provided is across the origin of orders: domestic and non-domestic, with the non-domestic orders being further divided into those from the rest of the euro area and those from outside the euro area. As a source, all series are described as “ECB experimental statistics based on national data” and are available in the ECB’s Statistical Data Warehouse. Furthermore, the ECB indicator on total euro area new orders is also included in the Statistical Annex of the ECB Monthly Bulletin (Table 5.2.4 on Page S 52) and the ECB Statistics Pocket Book (Table 3.3 on Page 11).

Usefulness of euro area industrial new orders for economic analyses

The ECB indicator on euro area industrial new orders is useful for the monitoring and analysis of economic developments in the euro area for at least three main reasons: first, new orders have historically displayed leading properties for the business cycle; second, they have proved useful for cross-checking data on industrial production, especially in times of heightened uncertainty; and, third, they contain unique information on the origin of demand.

First, industrial new orders have traditionally played an important role in the construction of leading indicators. For example, new orders for capital goods served as one of the inputs for the US Conference Board’s euro area Leading Economic Index. The OECD has also deployed new orders for some euro area countries, for example, Germany, in their composite leading indicator for the growth cycle. In principle, new orders provide signals of current demand and future production, as there is often a lead time between the placement of an order and the delivery of the product. Formal empirical analyses show that the ECB indicator on euro area industrial new orders lead industrial production, whereas this is not the case the other way round. This finding holds across all main industrial groupings, with the exception of non-durable consumer goods.

The latter is not surprising, as orders for non-durable consumer goods have, by nature, a very short production time.

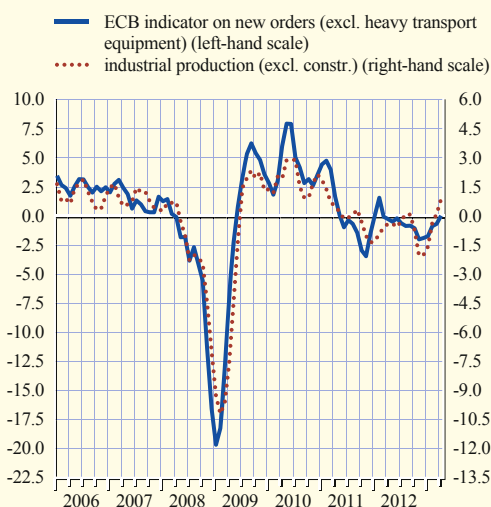
Second, monitoring of industrial new orders is also useful for cross-checking developments in industrial production in real time. In particular, owing to statistical revisions, which are sometimes quite substantial, an assessment of industrial production data in real time is not always straightforward. Information on industrial new orders can be of help in this respect, as illustrated in Chart B, which plots the series of three-month on three-month growth rates of new orders excluding heavy transport equipment against the series of the same growth rates in industrial production excluding construction. The lead time of new orders with regard to production during the period of the “free fall” in late 2008 and the recovery in early 2009 is noteworthy. Turning to recent months, the growth rates in the ECB indicator on euro area industrial new orders has picked up less strongly than industrial production growth in the first four months of 2013.

The third contribution made by the indicator on industrial new orders in the economic analysis of the euro area is that – unlike industrial production data – it provides valuable information on the origins of demand (i.e. domestic or foreign), as illustrated in Chart C. Such information is unique and instrumental to the comprehensive monitoring of the euro area economy, as developments across origins can deviate. The chart shows that in recent months, the developments in non-domestic orders have been decidedly more encouraging than those in domestic orders, and that non-domestic orders are at relatively high levels.

With the release of the ECB indicator on euro area industrial new orders, a monthly indicator, which is useful to analyse and monitor economic developments in detail, has now been restored.

Chart B ECB indicator on euro area total industrial new orders excluding heavy transport equipment and industrial production excluding construction

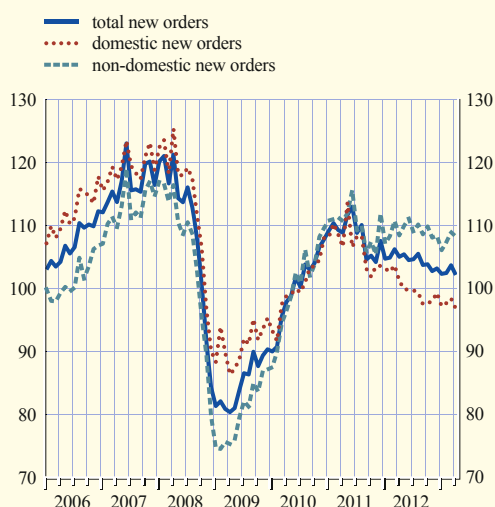
(three-month on three-month growth rates)



Sources: ECB experimental statistics based on national data, Eurostat and ECB calculations.
Note: The ECB indicator is based on Eurostat data up to March 2012 and on national data and model estimates from April 2012 onwards.

Chart C ECB indicator on euro area industrial new orders by origin

(index level 2010=100)



Sources: ECB experimental statistics based on national data, Eurostat and ECB calculations.
Note: The ECB indicator is based on Eurostat data up to March 2012 and on national data and model estimates from April 2012 onwards.

Looking ahead, maintaining the quality of this indicator is essential and will depend much on the availability of high quality and timely monthly national statistics collected by the national statistical institutes. The ECB will closely monitor the information content of the indicator as well as the signals it provides in the future.