

Methodological revision of the business survey indicator, April 2009¹

The business survey indicator is one of the most valuable statistics that the Bank circulates each month. Its reputation is due to the reliability which it has demonstrated over several decades in reflecting the pattern of economic activity in Belgium every month. The indicator's importance actually extends beyond the national borders, as it is regarded as an accurate and leading indicator of economic growth in the euro area.

Since 1972 the Bank has published the results of its monthly business survey of enterprises in the form of a business survey indicator. In order to safeguard the indicator's quality, the method of calculation used has been revised on several occasions, most recently in 1990. The Bank considered that it was now desirable to revise this methodology.

This revision gradually became necessary owing to the extension of the survey to business-related services in 1994; prior to the current methodological revision, those results were not included in the business survey indicator. Also, in the recent past the business survey indicator has exhibited some undesirable short-term fluctuations. The aim was to optimise the indicator in terms of its correlation with GDP growth, its short-term volatility and its early response with due regard for the great importance of services in the Belgian economy, so that the indicator would offer a broader picture of economic activity.

The methodological changes are minor and concern only the calculation of the synthetic curves for each industry and the general business survey indicator:

- While the 1990 methodology entailed calculating the synthetic curves per industry as an average for all questions, excluding mainly the questions on prices, the new synthetic curves cover a smaller number of questions, ranging from three to four depending on the industry:
 - Manufacturing industry: assessment of the total order position, assessment of stocks of finished products², employment outlook, demand outlook.
 - Trade: demand outlook, order outlook, employment outlook.
 - Building industry: trend in orders, trend in equipment, assessment of orders, demand outlook.

¹ A more detailed description of the methodology may be found in the June 2009 edition of the Bank's Economic Review.

² With a minus sign, given the negative link to the business situation.

- Business-related services³: assessment of activity, activity outlook, general demand outlook.
- The synthetic business-related services curve was incorporated in the general business survey indicator by revising the weights allocated to the various industries. While the previous indicator was calculated as a weighted average of the synthetic curve in manufacturing industry (70 p.c.), trade (15 p.c.) and the building industry (15 p.c.), those weights were revised to 65 p.c. for manufacturing industry, 15 p.c. for the building industry, 5 p.c. for trade and 15 p.c. for business-related services.

These methodological changes enhanced the quality of the business survey indicator: the indicator's correlation with GDP growth was slightly increased, its early response was maintained and the undesirable short-term volatility was considerably reduced. The month-on-month movements in the gross indicator thus provide considerably more information about the business cycle trend: ***while the gross indicator used to give an accurate business cycle signal in 61 p.c. of cases, that figure has now risen to 76 p.c. for the new indicator⁴.***

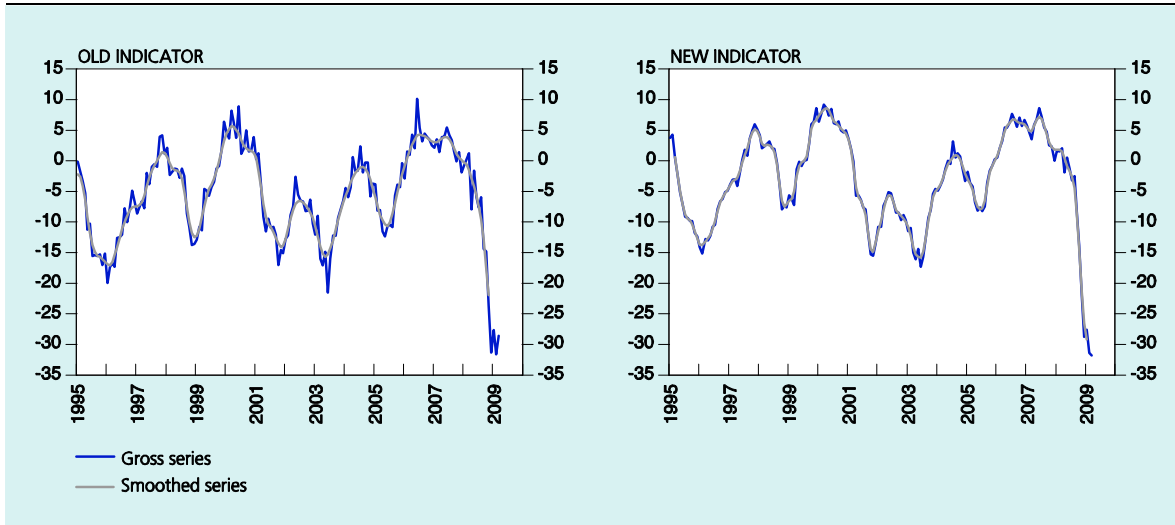
Owing to the reduction in the short-term volatility of the gross indicator, the procedure for smoothing the general indicator has become less onerous, so that the delay in publishing the smoothed general business survey indicator - which reflects the fundamental business cycle trend - has been cut from four months to two.

The revised business survey indicator is available monthly on the Bank's website. Although the earliest reliable results of the services survey date from 1995, the general indicator remains available from 1980. Between 1980 and 1995 the new indicator was calculated exclusive of services, using the old weighting structure. Furthermore, the various survey questions which are no longer all included in the business survey indicator owing to their statistical properties, are still included in the monthly press release.

³ Furthermore, in the service industry the method used to weight the individual answers for the purpose of calculating the balance result for each question is henceforth comparable to that used in the other industries.

⁴ Number of cases since 1995 in which the sign of the month-on-month change in the gross series corresponds to the sign of the month-on-month change in the smoothed series.

Comparison between the new and old general business survey indicator
(January 1995 - March 2009)



Source: NBB

Synthetic curves: statistical properties
(1996-2008)

	Correlation with GDP growth in Belgium ¹		Smoothed series variance/gross series variance ²		Lead (+) / Lag (-) in relation to GDP growth in Belgium ³	
	Old	New	Old	New	Old	New
Manufacturing industry	0.83	0.83	0.79	0.89	0	0
Trade	0.53	0.57	0.68	0.79	0	0
Building industry	0.61	0.67	0.86	0.90	-1	0
Business-related services	0.72	0.72	0.88	0.93	0	0
General business survey indicator	0.82	0.84	0.83	0.91	0	0

Source: NBB.

¹ Correlation between the level of the gross series and year-on-year GDP growth (quarterly data).

² Ratio between the variance of the smoothed series and the variance of the gross series. The higher this ratio, the lower the short-term volatility of the gross series. To maintain the comparability of the results, this measure was calculated on the basis of the old smoothing method.

³ Number of months by which the gross series leads (+) or lags (-) the year-on-year growth of GDP. Derived from the point at which the cross-correlation between the indicator and year-on-year GDP growth reaches a maximum (monthly GDP growth observations obtained via linear interpolation).