

## Statistics

# Methods and Sources: Methodological Notes

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## Business Outlook Survey of Industrial and Service Firms

### **General remarks**

Since 1993 the Bank of Italy has conducted a business outlook survey of firms, between September and October <sup>1</sup>. The survey covers approximately 3,000 firms with 20 and more workers in industry excluding construction and 1,000 in non-financial private service firms (including firms in the wholesale and retail trade, hotels and restaurants, transport and communication companies, real-estate activities, IT and other private services). Since 2007 a parallel survey has been conducted using a simplified questionnaire on a sample of construction firms with 10 and more workers, totaling about 500 units. Most of the firms contacted<sup>2</sup> were the same as those interviewed in the spring of the same year for the Survey of Industrial and Service Firms. The sampling design is the same in both surveys<sup>3</sup>. Table A1 in the set of tables enclosed to each publication contains a breakdown of the sample by number of workers, branch of activity and geographical area.

The firms were asked to provide mainly qualitative information on the performance of the main economic variables<sup>4</sup>. All questions appearing for the first time were tested beforehand.

#### **Estimators**

The aggregates are estimated using a weighting coefficient for each sampling unit that takes account, in respect of marginal distributions by geographical area, number of workers and branch of activity, of the ratio between the number of workers of the firms surveyed and the number of workers of firms in the reference population<sup>5</sup>. By using the number of workers as a scale variable, this method of weighting can provide information on macroeconomic results.

The weighting system based on the number of companies is instead more appropriate to synthesize the behavior of individual firms. Invalid responses ("do not know, no answer" or "not applicable") are excluded from the estimates.

<sup>&</sup>lt;sup>1</sup> The field of observation has evolved, progressing gradually between 1998 and 2002 from manufacturing firms with 50 and more workers to all industrial and non-financial private service firms with 20 and more workers.

<sup>&</sup>lt;sup>2</sup> On average, the response rate is approximately equal to 90 per cent.

<sup>&</sup>lt;sup>3</sup> For further details see

http://www.bancaditalia.it/pubblicazioni/indagine-imprese/2015-indagine-imprese/en\_survey\_methodology\_invind.pdf?language\_id=1

<sup>&</sup>lt;sup>4</sup> Questionnaires are available at the following address <u>https://www.bancaditalia.it/statistiche/tematiche/indagini-famiglie-imprese/imprese-industriali/distribuzione-microdati/questionari-sondaggio/index.html?com.dotmarketing.htmlpage.language=1</u>

<sup>&</sup>lt;sup>5</sup> The weighting is separate for the sectors "industry excluding construction", "services" and "construction", and within them, for the groups of firms with "20-49 workers" and "50 and more workers" (for the construction sector the class 10-19 employees has been included since 2014).

The standard errors of the percentage estimates, in relation to the national total, do not exceed 1 per cent (2 per cent for construction firms), that is, the maximum confidence intervals (at 95 per cent) are 1.5 percentage points (4 points for the construction sector). In the case of narrower domains (such as the geographical area, number of workers or branch of activity), the standard errors are greater as the statistics refer to a smaller sample. Table tab.SE contains the estimates of the standard errors for the whole sample and for some classification variables. The estimates also take account of the necessary finite population correction.