

Increasing respondents' involvement in the statistical process: the experience of the Bank of Portugal in the field of monetary and financial statistics

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1. Introductory remarks

“Nothing is more important for monetary policy than good statistics.”
Alexandre Lamfalussy, 1996

This famous quotation by the former President of the European Monetary Institute and General Manager of the BIS, stressing the fundamental importance that policy-makers attribute to quality in statistics, has not been in any way tarnished by the passage of time. Central banks have to compile significant amounts of data in order to appropriately accomplish their missions. Their statistics are typically the basis for policy decisions that impact the economy and, ultimately, peoples' lives, providing a service to the community as a whole by fulfilling an important part of its statistical data needs. Therefore, nurturing a culture of good practices in central bank statistics, with a focus on delivering high quality statistical products that meet users' requirements is, indisputably, of paramount importance.

Data quality is often perceived by the public at large as simply the degree to which the statistics correctly describe the phenomena they are meant to measure. Central bank statisticians, however, know very well that such narrow interpretation is insufficient to ensure that the quality of the information is suitable for its intended uses. Under a strategy, such as the one adopted by the Bank of Portugal (henceforth, “the Bank”), which is designed to produce statistics that are “fit for use” (ie suited to users' needs), other dimensions of quality – eg relevance, timeliness, accessibility, interpretability and coherence – must appropriately address users' requirements and priorities.

This paper, however, does not attempt to define data quality or its dimensions. Suffice it to say that we recognise established references in this area, such as the Fundamental Principles of Official Statistics adopted by the United Nations Statistical Commission, the IMF's Data Quality Assessment Framework, the OECD's Quality Framework and the European Statistics Code of Practice, to name a few. Instead of exploring this area, the present paper concentrates on the ways in which a relationship of transparency, cooperation and mutual trust with the respondents who provide data can, based on the Bank's experience, positively affect these various dimensions of quality, particularly in the field of monetary and financial statistics.

2. Wise traditions in central bank statistics

The Bank has been involved in the production of statistics for quite some time. It is safe to say that, so far, the statistical data compiled and disseminated by the Bank have met with a

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high degree of satisfaction on the part of the key stakeholders for whom they were intended. In order to meet users' requests and continually assess whether the information collected by the Bank properly matches changes in their data requirements, close contact with the industry is essential.

Indeed, the quality of the Bank's statistics must be credited, to a certain extent, to the Bank's long-standing policy of actively working with its data providers and fully exploring the possible synergies and mutual benefits of such partnerships – as opposed to a more conservative, or reactive, stance towards respondents. From its inception, this approach has proven to be beneficial.

Good practices include ensuring:

- (i) that respondents are thoroughly informed about the reasons why the statistical information is being collected, and the expected uses for the data;
- (ii) that the data to be collected from respondents, as well as the practical aspects of reporting, are unambiguously set forth in the Banks' reporting instructions, and that these are complemented by a handbook highlighting elements of a more operational nature (eg, technical specifications for data transmission, linear constraints and consistency tests that can be applied to the data being reported, a number of practical examples meant to facilitate response, and even some bridging tables, tentatively aligning the statistical categories in the reporting scheme with the particular respondent's accounting framework);
- (iii) that the Bank provides assistance to respondents (through specific training courses, when called for), so that the time and effort required for them to collect data are kept to a minimum;
- (iv) that when the situation requires (eg persistent non-compliance with reporting requirements), the Bank promotes high-level bilateral meetings with respondents to discuss the issues and try to find mutually satisfactory solutions;
- (v) that the Bank assumes an informal commitment not to change statistical requirements for a given period of time (typically a 5-year period), thus guaranteeing stability in the reporting scheme.

3. Paving the way for further enhancements in data quality

After the Bank's Statistics Department² was created 10 years ago, the Bank's relationship with respondents experienced a remarkable boost.

As a result of this institutional change, a single entity (the Statistics Department) was charged with responsibility for statistical processes that previously had been scattered among different departments of the Bank. This resulted in:

- (i) *Streamlining of existing statistical processes* to make more efficient use of available resources, while improving the quality of the statistics. One important outcome was the creation of the Integrated System of Securities Statistics, designed to replace three previously existing systems.

² Formerly, the Bank's core statistical functions (eg balance of payments statistics and monetary and financial statistics) were located in the (now defunct) Research and Statistics Department. Other departments of the Bank, however, were also involved in the compilation of statistics.

- (ii) *Elimination of redundant data requests* by using alternative sources of information available at the Statistics Department. As a result, the statistics on the distribution of bank credit by region, type of economic activity and certain highly detailed breakdowns by institutional sector, began being compiled on the basis of Central Credit Register data, making it possible to discontinue reporting of this information by the monetary financial institutions (MFIs), which serve as reference reporters for monetary statistics purposes.
- (iii) *Regular and systematic cross-checks on the data* submitted by respondents, through so-called overall consistency exercises. These are designed to evaluate the overall accuracy of the information reported for statistical purposes, comparing data from the various sub-systems (eg monetary statistics, securities statistics, balance of payments statistics, financial accounts statistics and Central Credit Register data).

These developments had a major impact on the quality of the Bank's statistics. The first two factors helped lessen the burden on reporters, and led to more efficient use of available resources. The overall consistency exercises, while delivering obvious gains in data accuracy, had an additional noteworthy effect – one that was neither deliberately intended nor entirely expected – on the respondents' internal processes. Faced with the need to justify discrepancies in the data submitted to the Bank for various statistical purposes, respondents (especially larger ones) took the initiative of reorganising their own reporting procedures, particularly by creating stronger links between the different areas contributing to the report and, in some cases, through new organisational arrangements to deal with statistical reporting in an integrated way. Among other interesting outcomes, this led to:

- (i) further improvements in data accuracy and conceptual compliance, enhancing the quality of the statistical information reported to the Bank;
- (ii) respondents being much better prepared to discuss with the Bank's statisticians any data developments requiring explanation.

Exogenous factors also played a major role. Particularly important were advances in information and communication technologies, which:

- (i) allowed for statistical processes to be automated, both at the Bank and among respondents, which in turn facilitated the introduction of computerised data validation and enhanced quality control;
- (ii) provided the opportunity for the Bank to develop special computer applications for voluntary no-cost use by respondents – supporting, among other things, preliminary validation (IT tests, coherence and inter-temporal plausibility tests) designed to prevent basic reporting errors, with a view to further facilitating the reporting of statistical data;
- (iii) made it possible to change from a reporting scheme based on physical delivery of data (eg on paper or diskette) to a much more efficient electronic reporting system based on an extranet type of communications infrastructure (BPnet) implemented by the Bank. The exchange of information through the BPnet system includes sending and receiving files, messages and documents, along with mechanisms to implement computer-to-computer solutions through an inter-applications dialogue for the exchange of files and messages.

As one would expect, these developments had a very significant impact on the efficiency of the data submission process, and further eased the reporting burden on respondents.

4. Fostering more active involvement by respondents

The above developments were important in enhancing the Bank's credibility with respondents. Nonetheless, a central bank can never afford a complacent attitude concerning the statistics for which it is accountable. The economy is constantly changing. To remain relevant, economic statistics must keep up with the speed and scope of these ongoing changes. The increasing demands for comprehensive, detailed and high-quality statistical data, stemming from Portugal's Economic and Monetary Union membership, suggested that additional steps would have to be taken to maintain – and, if possible, raise – the high standards already achieved with regard to the Bank's statistics.

To deal with new challenges to the Bank's ability to maintain the quality of its statistics in a shifting and more demanding environment, the Bank decided to expand its relationship with respondents by promoting their involvement in the statistical process beyond areas strictly associated with the compilation of statistics – especially by involving them, at a conceptual level, in the development of new types of statistics.

Intuitively, one could argue that, since statistics are essentially compiled from data originating in the respondents' own information systems, it makes sense to join efforts with reporting agents when developing new types of statistics or dealing with changes that need to be made in existing statistics. This could be expected to facilitate convergence toward a data collection method that would be feasible to implement and methodologically sound and efficient, while addressing the need to keep the reporting burden on respondents at an acceptable level.

Other arguments for involving respondents more deeply in the conceptual stage of the statistical process include the following:

- (i) *Respondents are also data users*, which means that they have a vested interest in the development of new statistics. The Bank's experience suggests that this interest is not merely theoretical. For instance, some years ago, when the Bank was considering whether to stop collecting data on the geographical distribution of MFIs' credits and deposits, the respondents persuaded the Bank against taking that decision, since the aggregated statistics compiled from these data were useful to the industry.
- (ii) *Respondents' participation may help to increase the accuracy of the initial statistical assessment* that usually follows the emergence of a new data requirement. The Bank's assessment traditionally starts with statisticians analysing the extent to which the data already available at the central bank meet users' needs. When, as frequently occurs, the Bank data are deficient, it is sometimes helpful to have a precise idea of the quantitative significance of the new requirements (when the empirical importance of the phenomenon under scrutiny is unclear) to see whether it is reasonable or not to go ahead with the process. Clearly, lack of collaboration with respondents can impede this quantitative evaluation, or even render it unfeasible. Moreover, tentative identification of the most efficient and sound statistical approach to data collection can visibly benefit from respondents' involvement – eg through discussing possible approaches to statistical data collection and assessing whether it is feasible and efficient in terms of meeting the information requirements.

The Bank's long experience provides abundant evidence of the mutual advantages resulting from a well-established relationship between statisticians and respondents. One interesting example is the classical trade-off that statisticians face between achieving greater granularity in statistical requirements and minimising the burden on respondents. Intuitively, one would expect that requesting more comprehensive data would go against the respondents' interests (in that this would presumably increase their reporting burden), and that they therefore would not willingly opt for more aggregate data. Yet, when the Bank discussed this issue with respondents, it

was clear that they favoured the opposite view. From their perspective, it is easier and less costly to report detailed data than aggregated data. A similar situation occurred in terms of the frequency of the data to be reported. Having a reporting scheme with different frequencies – which involves extra work for the Bank's compilation systems – is also undesirable from a respondent's perspective.

- (iii) *Respondents are better positioned to provide an accurate assessment of the costs related to their data reporting obligations.* For those requirements considered technically feasible and relevant, implementation and maintenance costs, both for respondents and for the Bank, need to be assessed and compared with possible benefits. The need to involve respondents in evaluating data reporting costs is obvious and indispensable.

To increase the effectiveness of the relationship between statisticians and respondents throughout the conceptual phase of the statistical process, the Bank opted to create temporary groups of experts wherever possible and necessary. The groups include Bank statisticians and a sample of respondents representative of the potential reporting population, as a means of addressing the technical issues involved in setting up new reporting schemes. The groups are intended to be flexible in the way they operate, and to provide rapid response to any technical problem arising from the development of new statistics, thus facilitating decision-making.

Another crucial factor in involving reporting institutions in the statistical process is the feedback that the Bank provides them, based on the data they have submitted. Individual indicators that make it possible to calculate market share or rankings in specific market segments are recognised by the reporting institutions to be an extremely valuable support to their business decision-making process. The respondents' assistance in shaping the indicators is essential if it is to serve them well. Indeed, in 2000, when the Bank decided to form a monitoring group with representatives of both the Bank and the reporting institutions (and/or their associations) in order to closely monitor the Bank's Central Credit Register and propose possible expansions of its scope, feedback indicators were one of the first issues to be addressed. Creating this monitoring group has proven to be an extremely successful initiative, even in seemingly steady-state situations. Based on the positive outcome of the experiment, the Bank has already approved the creation of similar entities for other statistical domains.

5. Concluding remarks

The combined advantages of cooperative interaction between statisticians and data providers have proven to be a key factor in improving the quality of monetary and financial statistics at the Bank of Portugal.

The Bank's approach to building its data compilation systems deliberately addresses both users' and respondents' concerns, and this has been a vital element in generating high-quality data despite very demanding deadlines. It has also significantly changed the way in which statistical reporting obligations are perceived by respondents, who, instead of perceiving them as an unavoidable and costly burden, view them as a procedure that can be beneficial for their businesses.