

IDENTIFYING AND CLOSING DATA GAPS – FINANCIAL DERIVATIVE MEASUREMENT FOR BALANCE OF PAYMENTS PURPOSES

Piet H Swart
South African Reserve Bank

1. Introduction

The South African Reserve Bank (SARB) compiles the country's balance of payments and international investment position in accordance with the 5th Balance of Payments Manual (BPM5) of the International Monetary Fund (IMF). The treatment of financial derivatives in the financial account of the balance of payments and the international investment position has changed since the publication of BPM5 and the IMF has published an amendment to the treatment of financial derivatives. Financial derivatives were added as a separate functional category and as a result the four functional categories for the financial account of the balance of payments are *direct investment, portfolio investment, financial derivatives and other investment*. Due to the aforementioned change in the classification of financial derivatives, the intricate nature of these instruments and the lack of data, the process to compile reliable time series data on financial derivatives took a number of years. This paper will explain the process to obtain this data, endeavour to provide a template for the measurement of data for the first time and highlight the difficulties in identifying and closing data gaps.

2. Consultation with other compilers/organisations

The experience of other agencies involved in the compilation of similar data is valuable in as far as statisticians will be alert to any problems the other countries' compilers encountered in the process. While the market structures and size will be different from country to country, the problems encountered and decisions taken by compilers already through the process could be valuable to statisticians in saving time and resources in their own measurement process.

A meeting with the agency responsible for compiling the standards and guidelines (i.e. IMF, World Bank, BIS, etc.) will further assist the statisticians to understand the requirements and focus on the most important aspects of the data needs. The SA Reserve Bank obtained valuable insight into the measurement of financial derivative data during meetings with the IMF and the Office of National Statistics in the UK. However, while it is useful to study other countries' surveys, due to different market structures and practices across the world, a one-size fits all survey is not the ideal solution to data gathering.

3. Identification of data sources

Ideally a statistician would like to measure the population of any given data set. However, in practice this is mostly not possible due to resource constraints. If a decision is taken to use a survey to obtain the data, it is therefore important to identify the main data sources and optimise the number and size of the survey respondents for the given resources available. In the case of financial derivatives the banking sector was identified as being responsible for the majority of cross-border financial derivatives in South Africa. As a result of the limited number of banks in South Africa, it is possible to survey all of them in the process of measuring financial derivatives.

4. Decision on method of data gathering

Minimising the response burden is one of the main objectives of modern statistical systems. Reducing respondent burden, while at the same time expanding the range of statistics available is a challenge to all agencies responsible for the compilation of statistics. There are two decisions to make during this process which will have an impact on the response burden and the quality of the data.

Firstly, the statistician must decide whether to use a International Transaction Reporting System (ITRS) or to use a survey to obtain the data. If a ITRS is already in place or can be customised to cater for financial derivatives, the statistician must investigate whether quality of data received from the ITRS is of an acceptable standard. However, a ITRS will always result in problems to measure position data and is also not compatible with the accrual system of accounting. It follows from this that a ITRS is not recommended if a survey system is viable. The use of a survey system is regarded as international best practice as it is based on accrual accounting and can be customised to cater for the precise definitions and guidelines. A survey system is also recommended by the IMF as the best system for measuring Balance of Payments statistics.

Secondly, the statistician must decide whether to incorporate the new data requirements into a current survey or to create a new survey. If a survey exists which caters to the frequency and the target respondents, it is preferable to use this survey to minimise response burden and expand it to obtain the required data.

Due to the fact the banking sector emerged as the respondents targeted for financial derivative measurement and a survey existed with the frequency for which the data was required, the SARB decided to incorporate the measurement of financial derivatives in this existing survey.

5. Learn from respondents

Measuring an instrument as complicated as financial derivatives requires statisticians to learn from the parties involved in the trading of these instruments. They can explain the accounting of these instruments and give their input to assist the statistician in constructing survey questions which caters to both the needs of the compiler and the respondent. By interacting with respondents the statistician can also ensure that the reporting burden is balanced with the data needed to adhere to international standards. Eliminating unnecessary and ineffective reporting allow statisticians to focus more resources on ensuring data quality and other higher value work.

In general, contact with respondents is regarded as an integral part of the collection of statistics. The Balance of Payments Division of the Research Department visit survey respondents on a regular basis. These visits add value, amongst other, in that it enhances the statistician's knowledge of the companies on a survey and improves his/her knowledge of the prevailing economic conditions.

6. Education of respondents

To comply with the guidelines and requirements of international standards can lead to complicated questionnaires/surveys. While everything should be done to keep surveys as simple and easy to understand as possible, it can still be confusing to respondents who are not conversant with the terminology associated with economic entity being compiled. Therefore it is important to meet with respondents, either as a group or on an individual basis, to educate them on the requirements of the survey and to ensure that the respondents understand all the definitions on the form. This was very important during the process

followed with financial derivatives as it is a complicated area where confusion can arise between transactions and valuations and the concept of gross and net reporting.

7. Ensuring data quality

While all the previous steps are important to lay the foundation for a successful process to obtain high quality data, evaluating the data submitted by respondents must not be neglected as this will ensure that any incorrect reporting is noticed and dealt with before it is included in the economic accounts. It is important to continue the review of data submitted by respondents for as long as the survey is conducted. Staff turnover at respondent entities can lead to inconsistent reporting and consistent review of data will ensure that any errors are identified early and corrected. This process during the measurement of financial derivatives entail regular monthly meetings where the data is evaluated and requests for clarification of suspect data are sent to respondents. If more significant problems with the data are identified, meetings are arranged with the respondent to discuss the issue in detail.

8. Finding secondary sources

It is very difficult to evaluate data submitted by respondents if you do not have a secondary source to compare the reported data with. Even when exact comparable data is not available from a secondary source, turnover, flow or position data can be used to give an indication whether the data reported is acceptable. ITRS data can for example be useful as a secondary source for survey data, even if it is only used to confirm a trend in the primary data. Secondary data for financial derivatives in South Africa includes other surveys to the banking sector measuring notional values of financial derivatives as well as the BIS Triennial Survey on Foreign Exchange and Derivative Market Activity.

9. Conclusion

Accurate and reliable statistics to include in a country's economic accounts form the cornerstone of monetary and fiscal policy formulation. Early detection and the formulation of a policy response rely on such statistics. While the lack of accurate and reliable statistics in Greece was one of the triggers of the European debt crisis, the financial crisis did not result from a lack of proper macroeconomic statistics. However, the crisis has highlighted the need to address certain data gaps. While international organisations compile international guidelines for the compilation of economic accounts, data collection and data quality is the responsibility of each country. Countries need to merge international standards with the unique nature of their home markets. During the process of identifying and closing data gaps, statisticians must always endeavour to minimise the additional burden placed on respondents.

Data gaps such as the omission of financial derivative data from the balance of payments pose a risk to policy makers as they do not have the complete picture to base decisions on. By following the steps outlined in this paper with the measurement of financial derivatives, accurate and reliable financial derivative data has been obtained for inclusion in the country's balance of payments and a data gap has been closed.