Monitoring Statistics for Financial Stability of a Small and Open Economy

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The financial crises in 1997/98 brought to surface a number of deficiencies in the global financial system. Inadequate transparency, both on a market-wide level as well as on individual firm basis, is one of the most cited weaknesses, along with poor counterparty risk management of banks and aggressive trading behaviour of some hedge funds and proprietary desks of financial institutions. This paper will focus on issues related to transparency of financial markets from the perspective of a small and open economy. First, it reviews the inadequacy of data availability at the time of the financial crisis in 1997/98 and the subsequent improvements made by the international financial community and national authorities. Despite the improvements, there remain concerns about the effectiveness of monitoring financial market stability for small and open economies. The second part of the paper goes through these concerns in more detail. Finally, it looks at the how authorities in Asia to strengthen their domestic and regional efforts to improve their monitoring of statistics for financial stability.

Data availability during the 1997/98 financial turmoil

There are several categories of data that are relevant to financial stability. The most common type is **macroeconomic data** such as GDP, balance of payments account, inflation, fiscal data etc. The second type is **vulnerability indicators**, such as the Macroprudential Indicators (MPIs) currently being developed by the IMF and some measures of exchange market pressure. The third type is **financial data** and they can be further divided into two broad categories: price data and quantity data.

Macroeconomic Data

At the time of the 1997/98 financial turmoil, the availability of macroeconomic data is relatively satisfactory, except for the following two areas:

- Foreign exchange reserves - the provision of some important off-balance sheet information, such as derivative transaction and undrawn credit facilities, was not a common practice. At that time, there was no international consensus to make the disclosure of such information a mandatory requirement.
- External debt – there was a lack of reliable measures of the total outstanding debt incurred by an economy and the maturity breakdown of the debt. Another problem associated with external debt was that most such data were compiled on a resident basis, rather than on ultimate risk basis. For example, the debt of a Hong Kong subsidiary of a US bank was regarded as a debt incurred by Hong Kong, not the US.

In order to address these concerns, the IMF has made several enhancements to its Special Data Dissemination Standards (SDDS) to include external debt as a mandatory disclosure requirement. It also successfully developed a reserves template that requires SDDS subscribing economies to disclose essential off-balance sheet information. Progressing almost in parallel is the improvement in the BIS international banking statistics, where data are now compiled on an ultimate risk basis, with an expansion of geographic coverage and shorter time lag.

Vulnerability Indicator

The development of vulnerability indicators has received renewed interest in the academic circle, especially in the aftermath of the Tequila crisis in 1995. These indicators have their unique attraction because they are forward-looking and have predictive power over the possibility of a financial crisis emerging. However, it was not a common practice for the authorities or the private sector to seriously make use of these indicators during the course of the 19997/98 crises. A major reason for the lackluster response from users was that the reliability of these indicators remains in doubt. These indicators are clearly providing better insight than pure guesswork but they sometimes fail to predict actual crises and often issue false alarms.[1] The problems are manifold. The heterogeneous nature of financial crises and economy-specific factors are making it difficult to develop a comprehensive set of vulnerability indicators for wide application. Nevertheless, it is encouraging to see that the IMF is devoting efforts into the development of the MPIs and I am eagerly waiting for their recommendations.

Financial Data

With regard to financial data, they can be further divided into price data and quantity data. At the time of the crises, price data, such as exchange rates, equity prices and bond yields are available almost real time in most financial markets, even in less sophisticated ones. However, the availability of quantity information was less satisfactory. It was less common for national economies to produce such statistics in a frequent and timely manner. At the international level, the quarterly international banking statistics and the BIS-led triennial central bank survey on foreign exchange market activities were among the more respectable sets of quantity financial data that were made available, but they were subject to the limitations of long time lag and low frequency.

While price data are useful measures of prevailing market trends and investor sentiments, they are not sufficient for monitoring financial stability, at least for the following reasons:

- First, these data often contain noise, making it difficult for market participants and the authorities to make objective and accurate interpretation.
- Secondly, the analysis of price data is sometimes complicated by the lack of information on market liquidity. Even the bid-ask spread alone would not be sufficient to reflect the liquidity condition. The implication for a large price fluctuation under liquid market condition would be very different from that when market liquidity dried up.
- Thirdly, market data do not contain sufficient information for measuring market concentration risk associated with large position taking.

Improvements in the quality and timeliness of quantity financial data, such as transaction and position data, so far have been slow compared with that of other statistics. This is the concern that is especially relevant to small and open economies, which will be covered in greater detail in the following section.

The concerns of small and open economies

The above observations reflected the general plight of many emerging market economies in Asia, and in particular Hong Kong. The experience of the 1997/98 financial turmoil in Asia demonstrated that the lack of reliable and timely quantity data to measure liquidity risk and concentration risk in financial markets was a major limitation for market participants and the authorities to better understand market dynamics and make informed investment decisions and policy responses.

During a financial crisis, the foreign exchange market is always the pressure point and monitoring activities in this market gives useful insights on financial stability of the economy. This is especially helpful to small and open economies. These economies are very much inclined toward having their financial markets integrated with the global system, but they are also worried about the

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[1] **See Hawkins and Klau (2000) for a comprehensive overview of the development of these indicators and Berg (1999) for a critical review of the usefulness of these indicators.**

potentially huge volatility that might come along with market liberalization. One particular concern for these economies is the possibility of large individual financial institutions taking a dominating position in particular currencies or markets and either intentionally or inadvertently causing large price movements.

Improving the monitoring of liquidity and concentration risks in the foreign exchange market would enable market participants as well as the authorities to better assess: (i) the risks associated with high concentration; (ii) the likelihood of a loss of liquidity under extreme market conditions; and (iii) the potential contagion effect of extreme exchange rate movements.

The disclosure of quantity information by market participants should work in two ways. First, it should contain the essential elements that would allow the financial position of significant market participants to be assessed objectively, such as their degree of leverage and their exposures to specific markets or currencies. This could help counterparties, for example the banks extending credit to them and the customers using their services, to make decisions based on rational analysis. Secondly, the information should also include data that will enable aggregate market positions and their concentration to be assessed. This could help regulators to ensure systemic stability by taking the appropriate response to manage any potential systemic risk that might arise. The two types of quantity information should be made available at least on a quarterly basis, and preferable monthly basis.

With regard to the disclosure by key market participants, a number of efforts are underway to improve transparency of risk-taking by individual financial institutions. The most notable one is the Multidisciplinary Working Group on Enhanced Disclosure, which has just completed a study on the feasibility of disclosing more information by financial intermediaries. The information include, inter alias, intra-period and end-period VAR of certain broad risk/asset classes, such as equity, currency and fixed income instrument etc., undertaken by a financial institution. However, these information will not be detailed enough to enable any meaningful assessment of the risk taken in specific instrument or currency.

The development in the collection and compilation of aggregate position data in foreign exchange markets has been less than satisfactory. There was a fierce debate over the feasibility of producing such data. The arguments against the provision of such data can be broadly summarized as below:

- long time lag if data are compiled on a global basis;
- doubtful data quality because of window dressing by data suppliers; and
- potential loss of proprietary information;

The first two arguments highlight the generic limitations of position data and they are equally applicable to any statistical data of similar nature, including statistics on external debt and international bank credits. Users have to be cautious in the analysis and interpretation of the statistics. However, in my opinion, these arguments do not possess sufficiently strong ground to reject the usefulness of such data. With regard to the concern over the potential loss of proprietary information, it has become apparent that the private sector, or at least some of the key market participants, are unwilling to voluntarily share the information, even at the aggregate level. They believe that position data are the sort of proprietary information upon which financial institutions generate profits and the leakage of such information would seriously undermine their competitive advantage in the market. The possibility of a mandatory disclosure requirement for such data is rather remote because some major financial centers do not have sufficient political support to enact the required legislation. A statistical gap has thus been left open in the production of aggregate position data in the foreign exchange market.

Strengthening domestic and regional monitoring framework

While international efforts may not have fully addressed the concerns of small and open economies, there remains keen interest from national authorities in the region to search for a more robust monitoring framework for financial stability. The requirement to report foreign exchange activities is quite common amongst emerging market economies in Asia. These reporting regimes are subject to the same limitation, that is, they cannot be applied to extra-territorial entities. As a result, these economies have to rely on domestic financial institutions to report their counterparty positions in domestic currencies as a means to monitor potential risks arising from financial markets in general and foreign exchange market in particular.

The lack of an effective framework to monitor concentration and liquidity risks in a global and/or regional context has prompted many small economies in Asia, including Singapore, Malaysia, Thailand and Indonesia, to impose restrictions on the access to their domestic currencies by non-residents. These restrictive measures are unlikely to be removed until an effective monitoring framework is developed. Strengthening the provision and monitoring of statistics for financial stability is certainly an unfinished task and it will continue to carry a high priority in the policy agenda for central banks and other authorities in the region.

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RESUME

Cet article a étudié les lacunes de données disponibles pour surveiller la stabilité du système financier. Bien que des progrès encourageants aient été faits pour fournir des données macroéconomiques de meilleure qualité et plus à propos, le développement des indicateurs de vulnérabilité et de la tension du marché des changes est moins satisfaisant. Les manques d'informations sont particulièrement pertinents pour les petites économies et les économies ouvertes dont les monnaies sont plus vulnérables aux attaques spéculatives. Manquant d'outils de surveillance efficaces sur les marchés des devises étrangères dans un contexte mondial, de nombreuses économies en Asie, surtout à Singapour, en Malaisie, Thaïlande et plus récemment en Indonésie adoptent des mesures intérieures pour limiter l'accès à leur monnaie nationale par les non résidents. Il est peu probable que ces mesures seront levées avant que le manque d'informations ne soit résolu.