

Risk management innovation for Philippine banking

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During the first decade of the current century, the risk management practices of financial institutions around the world were subjected to a great deal of criticism (Hull 2015). The global financial crisis (GFC) of 2008 alone has exposed the vulnerabilities of their industry and later resulted in a large decline in the prices of securities in the stock markets of both developed and emerging economies (Alexandridis and Hasan 2016). The aftermath of this crisis has led government regulators to establish more stringent standards to ensure the stability of their financial institutions.

In the Philippines, the *Bangko Sentral ng Pilipinas* (BSP) has also adopted several risk monitoring and reporting measures targeted not only to attain greater resiliency in the local banking system but also to give banks greater flexibility under a deregulated environment. In moments of extreme stress in the markets, such resiliency and flexibility become critical components of sustainable economic growth.

This *Policy Note* revisits the risk management policy of BSP as a guide in strengthening the competitiveness of Philippine banks. It also

recommends measures to further refine the banking system in the country.

The BSP risk management policy

The interconnectedness of the global financial system requires the presence of an international framework, where all countries can benchmark their standards in relation to the measurement, monitoring, and reporting of risk by financial institutions (BIS 2011). In 1974, a group of central bank governors established the Committee on Banking Regulations and Supervisory Practices, which then crafted the capital framework, the 1988 Basel Capital Accord (BIS 2001). According to the Bank for International Settlements (2011), the goal of the said framework is to strengthen the stability of the international banking system and to remove a source of competitive inequality arising from differences in national capital requirements.

In 1995, the BSP started moving toward aligning the Philippine banking system with international standards established by the Basel Committee (Buenaventura 2004) (Table 1). Specifically, it shifted its focus to giving “banks greater flexibility

Table 1: Risk management-focused measures adopted by BSP from 1995 to 2013

| Year | Measures |
|------|--|
| 1995 | Bangko Sentral ng Pilipinas (BSP) issued Circular No. 102, which prescribed the minimum standards for risk management of derivatives. A derivative is a specialized financial instrument companies use to hedge against a sudden change in price of some commodities such as oil. The said circular was the first BSP regulation focused on banks' risk-taking activities and risk management practices. |
| 1997 | The thrust of bank supervision shifted to the measurement and management of banks' exposures to risk, instead of just mainly performing financial audit and compliance review. |
| 2001 | BSP issued Circular No. 280 to adopt the 1998 Basel Capital Accord (Basel 1 Framework), as its initial response to worldwide financial crises, and provide guidelines for the computation of risk-based capital for credit risk. The country had to meet international standards to be recognized as having sound financial institutions. |
| 2002 | BSP issued Circular No. 360 to enhance its risk-based capital framework by incorporating market risk into it. |
| 2006 | BSP revised its risk management framework to conform with the Basel II recommendation, which required higher standards in reporting and managing risk. The said recommendation relied on three pillars, which include the minimum capital requirement, the supervisory review process, and the disclosure of pertinent information necessary to enable market mechanism to complement the supervisory oversight function. |
| 2011 | On January 1, BSP Circular No. 639, containing the guiding principles that address the second pillar of Basel II, took effect. Specifically, it stipulates the guidelines which (1) banks should follow in designing their Internal Capital Adequacy Assessment Process (ICAAP) and (2) BSP supervision and examination personnel should consider in assessing a bank's ICAAP, engaging the bank in an ICAAP dialogue, and proposing prudential measures, if deemed necessary. |
| 2013 | On January 15, BSP issued Circular No. 781, which marked the country's adoption of the Basel III. Covering all universal and commercial banks, the said circular provides the implementing guidelines on the revised risk-based capital adequacy framework particularly on the minimum capital and disclosure requirements. |

Source: Author's compilation based on Buenaventura (2004) and Bangko Sentral ng Pilipinas (2015)

to respond to changing opportunities" and allowing them to "take risks as long as [they] demonstrate the ability to manage the price for those risks" (Buenaventura 2004).

The management of market risk

Aside from highlighting the urgency BSP is giving to risk measurement, monitoring, and management, these policies also emphasize the need to assess market risk, which results from investments in the equities market and foreign exchange currencies. Although the said investments can offer investors a higher return, they come with risks that could lead to major losses. Moreover, while investing in a portfolio of stocks can be more attractive for banks in periods when interest rates are very low, they would still need to manage the additional risk involved in such activity, such as the volatility of stock prices.

The management of market risk is particularly critical in the face of the economic integration within the Association of Southeast Asian Nations. Unless the local banks learn to develop greater familiarity and expertise in this area, they may not be able to compete with foreign banks.

Following the recommendations of the Basel Committee, BSP incorporated the market risk capital requirement in the Manual of Regulations for Banks. The said requirement sets the guidelines on how much capital a bank should retain as a hedge to its various risk exposure activities, market risk being only one of them. Because of the possibility of losses, a bank has to keep a reserve level of high-quality capital, which the BSP closely monitors. Failure to keep the correct reserve results in heavy penalties on the bank.

Through the manual, BSP offered two acceptable methods recognized for the measurement of market risk.

Standardized approach

The standardized approach shall be used by all banks subject to market risk capital requirement, except by those which may be allowed by BSP to use the internal models approach. The method of measuring market risk under the standardized approach is set out in the Instructions for Accomplishing the Report on Computation of the Adjusted Risk-Based Capital Adequacy Ratio Covering Combined Credit Risk and Market Risk.

Internal models approach

The internal models approach is an innovative way of allowing banks with the necessary systems and expertise to use their own internal risk management models to calculate market risk. The use of this approach is subject to prior BSP approval, which shall be based on meeting certain qualitative and quantitative conditions relating to the models themselves and the controls surrounding them.

At the minimum, these conditions include the soundness and integrity of the bank's risk management system; the sufficiency of the staff skilled in the use of sophisticated models not only in the trading area but also in the risk control, audit, and if necessary, back office areas; proven track record of accuracy of the bank's model in measuring risks; and the regular conduct of stress tests.

The BSP may require a period of initial monitoring and live testing of a bank's internal model before it is used for supervisory capital purposes. The reporting under this approach is contained in the Instructions for Accomplishing the Report on Computation of the Adjusted Risk-Based Capital Adequacy Ratio Covering Combined Credit Risk and Market Risk.

On a transitional basis, banks may also be allowed to use a combination of these approaches to measure

their market risk, provided any such partial model shall cover a complete risk category (e.g., interest rate risk or foreign exchange risk).

More flexibility, greater accountability

These prudential measures are meant to guide banks in the adoption of risk measurement procedures, particularly in cases where they choose their own internal risk models. Clearly, making the transition to the internal models approach requires learning new concepts and tools, training in the new methods, and gaining experience in estimating risk and computing its capital coverage requirement. The necessity for incorporating this new mind-set in banks interested in having more flexibility and being more innovative in their ability to internally manage risky investments prompted new policies and guidelines by the BSP.

In line with this, BSP started requiring banks to submit their programs for Internal Capital Adequacy Assessment Process (ICAAP) in January 2011. According to Tetangco (2010), ICAAP is "a tool by which banks assess risks and define a plan to mitigate such risks to help lower capital requirements." Instead of preventing a bank from taking risks, it provides both the bank and the BSP the comfort that the former fully understands the risks and has set sufficient capital against such risks.

The sufficiency of such capital is measured through the capital adequacy ratio (CAR), which refers to the amount banks reserve to protect themselves from losses. While the Basel sets the minimum CAR at 8 percent, BSP is more conservative and prefers to keep the level higher at 10 percent, creating an additional buffer of 2 percent.

As of March 2005, the CAR of the local banks on a consolidated basis was recorded at 18.1 percent



To accomplish its goal in maintaining the fiscal stability of the Philippines, the Bangko Sentral ng Pilipinas has adopted several risk monitoring and reporting measures targeted not only to attain greater resiliency in the local banking system but also to give banks greater flexibility under a deregulated environment. One of these measures is the adoption of the internal models approach, which this study advocates. According to the author, this approach is an innovative way of allowing banks with the necessary system to use their own internal risk management models to calculate market risk. (Photo by Ramon F. Velasquez/Wikipedia)

(Guinigundo 2005). Last June 2017, the BSP reported that the CAR barely moved from 15.4 percent in 2016 to 15.3 percent on solo basis and from 16.1 percent to 16.0 percent on consolidated basis (BSP 2017).

On one hand, such decline in the CAR from 2005 to 2017 could mean that banks are taking a less conservative position and are willing to take greater risks by investing more of their capital reserve. This is good because it makes capital more productive for as long as the risks in these investments are

well managed. The more that banks are able to make their capital productive, the more competitive they become and the more profitable. The more capital is made available, the better also are the benefits to the economy given that business and government can use that extra capital to create more productive initiatives that lead to more jobs and economic activity.

On the other hand, however, these figures mean the local banks are being more conservative in their capital reserve than what the international standard

requires. They likewise demonstrate that Philippine banks are well capitalized because their average CAR is well above the minimum requirements. Clearly, they have much room to free up capital and make it more productive through additional investments. By gaining expertise in market risk management, banks would be able to explore additional possibilities for increasing their revenues. Such increase can be done through, for instance, investment in equities, thereby getting higher returns but at the same time mitigating the risks involved through their internal models.

Recommendations

In line with the above thrusts of the BSP toward making Philippine banks more competitive as financial instruments, this paper recommends the following.

Provide training and development programs to banks

The BSP, in collaboration with Philippine universal and commercial banks, should provide training and development programs on the right methodologies and use of internal market risk models to its trustees, directors, officers, and personnel as well as to all banks under its supervision. These programs will improve their understanding and appreciation of the relatively new tools and methods that measure risk and are adapted to serve the regulatory and risk management requirements of the banks.

The development of innovative methods and tools for measuring market risk is due to the speed of technology innovation, particularly in terms of the computational power of computers, high-speed communications, and the rise of cloud-computing technologies. The GFC crisis has also brought to the attention of many researchers and policymakers the need to improve risk computations. The statistical theory and assumptions underlying the risk models have been reviewed, corrected, and updated as a

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result of the lessons learned from the failure of many risk models during the crisis.

Previously, risk methods required heavy investment in computational power and software development. The latter in particular could be very costly due to commercial and proprietary packages. However, the development of open source software has recently skyrocketed through the collaborative efforts of experts in computer science, statistics, and finance, who have made their algorithms available for public use. For this reason, even small banks can now avail of more sophisticated computational methods for measuring risk with a modest capital expenditure.

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The fact that the knowledge to compute market risk is becoming straightforward and does not require special patents or proprietary rights can also allow the risk measurement process to be partially outsourced to third-party groups or consultants. For instance, several small banks could request a company specializing in risk measurement to run their internal risk models, which would be unique to each bank. As long as proper safeguards are put in place within that company to protect client confidentiality, the system

could work. Obviously, this option does not mean that the banks would outsource their risk management; rather they outsource the processing of the data while knowing very well the characteristics, strengths, and weakness of the internal models being applied by the company to which the banks have agreed.

Innovate, update, and improve risk measurement

More than 10 years have passed since the BSP provided Philippine banks the option of using the internal risk model approach. As such, historical data in bank records are already sufficient to review the past and current methods used by these institutions and compare them with more recent methods in measuring risk. Surely, the insights that can be gained from this review can help the BSP advance improvements in the current systems. Moreover, they can help the BSP and local banks to innovate, update, and improve their risk measurement and management processes.

By bringing new and innovative methods in computing market risk into their tool kits, banks can realize a greater room for flexibility in choosing their portfolios and planning their strategies for increasing or reducing their investment in the financial markets. In the process, they can develop a competitive advantage and define their market position and risk profile within the industry with greater clarity and prudence. 📄

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PIDS Policy Notes are analyses written by PIDS researchers on certain policy issues. The treatise is holistic in approach and aims to provide useful inputs for decisionmaking.

The author is a grantee under the Thesis and Dissertation Assistance Program of the Philippine APEC Study Center Network. The views expressed are those of the author and do not necessarily reflect those of the PIDS or any of the study's sponsors.