Asia Focus

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BASEL II IMPLEMENTATION IN ASIA

The current financial market turmoil has sparked debates across the globe about the supervision and regulation of the financial services industry. As the Basel II capital framework is implemented worldwide, many critics have highlighted weaknesses underscored by the crisis. The most prominent criticisms of the framework include its lack of an explicit liquidity risk capital charge, its over-reliance on credit rating agencies, and its pro-cyclical nature. As top financial leaders are calling for more drastic measures to revamp supervisory structures, the Basel II standard should continue to evolve. Nonetheless, it is useful to review how Asian financial sector regulators are implementing the framework because the guiding principles behind Basel II, while imperfect, highlight an important step for Asian economies to develop more robust banking systems. This *Asia Focus* report examines Basel II implementation in Asian economies and discusses key issues and challenges facing Asian banks and regulators.

The Road to Basel II

Adopted by the Basel Committee on Banking Supervision ("Basel Committee") in 1988, the Basel Capital Accord, commonly referred to as "Basel I," represented the first prudential standard of a risk-based capital framework. It also marked the beginning of the process of international capital standards convergence. Initially intended for internationally active banks in the G-10 countries[i], over time the Basel I regime was widely adopted in over 100 jurisdictions across multiple continents and regulatory bodies. Although the framework was successful in its overwhelming acceptance, some have criticized its limited risk sensitivity. For example, Basel I assigns all corporate loans the same capital charge regardless of underlying credit quality, and the framework is focused mainly on credit risk. As a result, the Basel Committee decided in the late 1990s to amend the framework. Following more than five years of deliberations and industry consultation, the Basel Committee in June 2004 published its Revised Framework on International Convergence of Capital Measurement and Capital Standards, commonly referred to as "Basel II."

Basel II is a more risk-sensitive framework than Basel I with respect to the minimum levels of capital required for internationally active banks. In the Basel II framework, Pillar 1 prescribes minimum capital levels to support a bank's credit, market and operational risks. Pillar 2 describes the accompanying supervisory review of a bank's internal capital adequacy assessment, which should include appropriate techniques for monitoring and managing risks, and a process for determining overall capital needs in relation to those risks. Pillar 3 outlines market discipline, which complements the first two Pillars by encouraging public disclosures that offer market participants the ability to assess key information about an institution's risk profile and its associated level of capital. The focus of this report is on Pillar 1, as the current implementation efforts are centered there.

The Basel II framework for Pillar 1 includes different approaches for measuring risk under each risk category (i.e., credit, market, and operational risks), with the more advanced approaches requiring supervisory approval prior to adoption. The table below provides a summary of the approaches under each category.

Implementing Basel II in Asia

Most regulators in Asian economies support the broad objectives of Basel II and believe that the framework will provide further incentives for improvements in risk management, as well as other changes that complement their supervisory objectives.

In general, Asian regulators do not mandate or require banks to adopt specific approaches. Asian banks may choose the approaches that are commensurate with their risk profiles, depending on their size, complexity, and other considerations. For example, the regulatory authorities in both Singapore and Taiwan have made all approaches available and banks are encouraged to adopt the approach that will best match their risk profile in each

Risk Category	Approaches (in order of increasing complexity)		
Credit	Standardized Approach	Foundation Internal Ratings Based (IRB) Approach	Advanced IRB Approach
Market	Standardized Measurement Approach	Internal Models Approach	---------
Operational	Basic Indicator Approach	Standardized Approach	Advanced Measurement Approach (AMA)

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risk category. At the same time, regulatory authorities have encouraged their supervised banks to continually upgrade their risk management capabilities. The table below presents the timeline for Basel II implementation across Asian economies, focusing on the approaches for measuring credit and operational risks.[ii] The implementation schedules, which began as early as January 2007, and the significant number of Asian economies adopting Basel II standards, highlight the widespread acceptance of the Basel II framework.

Initially, most Asian banks adopted the Standardized Approach for credit risk. Only a limited number of the larger banks in Asia chose to adopt the more complex IRB Approach. For operational risk, Asian banks are generally adopting the more basic approaches – the Basic Indicator and Standardized Approaches. At this time, most of the Asian economies have not begun adopting the most sophisticated AMA methodology for operational risk.

In terms of implementation phases, some economies have closely followed the timeline suggested in the Basel II standard: January 1, 2007, for the more basic approaches, and January 1, 2008, for the most advanced approaches. Examples include Hong Kong (except AMA for operational risk), Singapore, and Taiwan. Other countries have decided to take a more gradual approach to adopting the standard. For example, the regulators in the Philippines have adopted only the most basic approaches at this time, but have expressed their intent to move toward adopting the Foundation or Advanced IRB approaches in 2010. India, which has taken a similar position, has adopted the most basic approaches, and regulators there have said that migration to the more advanced approaches will take place after adequate skill sets have been acquired by both the banks and supervisors. In China, the regulatory authority is expecting "large complex banks with [an] overseas presence[iii]" to have risk management infrastructure in place by 2010, while all other banks are permitted to continue with Basel I. Regulators in China have stated that banks should develop a stronger risk management infrastructure before being required to implement the Basel II standard.

Observations, Issues and Challenges

Implementation of the more basic approaches

At least at the outset, most Asian banks are adopting the Standardized Approach for credit risk. Although this is the most basic approach, it comes with certain implementation chal-

Basel II Implementation Schedule in Asian Economies

<table>
<tr><th rowspan="2">Economy</th><th colspan="3">CREDIT RISK APPROACHES</th><th colspan="3">OPERATIONAL RISK APPROACHES</th></tr>
<tr><th>Standardized Approach</th><th>Foundation-Internal Ratings Based</th><th>Advanced-Internal Ratings Based</th><th>Basic Indicator Approach</th><th>Standardized Approach</th><th>Advanced Measurement Approach</th></tr>
<tr><td>China</td><td>n.a.</td><td>Expected 2010</td><td>n.a.</td><td>n.a.</td><td>Expected 2010</td><td>n.a.</td></tr>
<tr><td>Hong Kong</td><td colspan="2">1/1/2007</td><td>1/1/2008</td><td colspan="2">1/1/2007</td><td>n.a.</td></tr>
<tr><td>India</td><td>3/31/2007</td><td colspan="2">n.a.</td><td>4/1/2007</td><td colspan="2">n.a.</td></tr>
<tr><td>Japan</td><td colspan="2">4/1/2007</td><td>4/1/2008</td><td colspan="2">4/1/2007</td><td>4/1/2008</td></tr>
<tr><td>Korea</td><td colspan="3">1/1/2008</td><td colspan="3">1/1/2008</td></tr>
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<tr><td>Singapore</td><td colspan="3">1/1/2008</td><td colspan="3">1/1/2008</td></tr>
<tr><td>Taiwan</td><td colspan="2">1/1/2007</td><td>1/1/2008</td><td colspan="2">1/1/2007</td><td>1/1/2008</td></tr>
<tr><td>Thailand</td><td>12/31/2008</td><td colspan="2">Expected 12/31/2009</td><td colspan="2">12/31/2008</td><td>Expected 12/31/2009</td></tr>
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Sources: Regulatory agencies' websites; presentations and speeches by regulatory officials; press reports lenges. One of the most significant challenges is the use of a borrower's credit rating to determine the appropriate risk weight for each credit. For instance, a credit rated "AAA" receives a 20 percent risk weight, while a credit rated below investment grade will receive a much higher 150 percent risk weight. This approach is aimed at addressing the "one-size-fits-all" weakness of Basel I where all corporate claims (regardless of underlying credit quality) receive the same risk weight of 100 percent. Arguably, this approach helps to strike a reasonable balance between risk sensitivity and complexity. However, it's difficult to rely on external credit ratings in Asia for two key reasons.

First, Asian regulators historically are skeptical of credit rating agencies; this stems from concern over the accuracy of agency ratings of banks during the 1997-1998 Asian financial crisis and of various assets during the more recent subprime crisis. Therefore, some critics believe that the Standardized Approach, while an improvement over the broad brush approach under Basel I, is not a good solution to assigning accurate risk weights. Second, the percentage of Asian firms that receive ratings from the agencies is significantly lower than that in the G-10 countries. The relatively limited availability of company ratings could undermine the purpose of implementing the Standardized Approach because unrated corporate credits receive a 100 percent risk weight, the same as under Basel I rules. To date, China has expressed its intention not to implement this approach; one likely reason is the incomplete coverage of Chinese companies by domestic credit rating agencies.

While most Asian banks currently use the Standardized Approach for credit risk, some likely will adopt the Foundation or even the Advanced IRB approaches over the longer term due to the challenges associated with the Standardized Approach and the opportunity to enhance their internal risk management infrastructure to the level articulated by the more advanced approaches.

On the operational risk side, almost all Asian economies are implementing the Basic Indicator Approach or the Standardized Approach, which calculate operational risk charges based on a bank's gross income. These approaches are relatively simple and, therefore, do not appear to create significant implementation issues. However, as is the case with banks in other geographic regions, the inclusion of an operational risk charge likely will increase banks' capital requirements.

Implementation of the more advanced approaches

Some Asian economies have started the process of adopting the Foundation or even the Advanced IRB Approaches for credit risk. Following are the most significant implementation challenges that banks in those countries are facing:

- *Enhancing internal management systems*. The adoption of the IRB Approach requires significant enhancements to banks' existing risk management and measurement systems. One simple example is the requirement to have an internal credit rating system that has two distinct dimensions. The first dimension must consider the risk of borrower default and the other must take into account transaction-specific factors such as collateral, guarantees, and seniority or subordination of the obligation. Many banks' internal systems are not currently "two-dimensional" and will have to be upgraded to meet IRB Approach requirements.

- *Changing credit culture and governance*. Improving internal systems and meeting other qualifying IRB criteria would require many banks to change their credit risk management culture because of the enhanced governance and internal control requirements associated with adopting the IRB Approach. For instance, the so-called "use test" stipulates that banks should not use their internal ratings solely to qualify for IRB, but rather should incorporate their internal ratings information into other key processes such as the evaluation of loan pricing, credit approval, and the internal allocation of economic capital. This is not currently a very common practice across Asian banks.

- *Addressing data issues*. Banks are also encountering issues with data collection, integrity and accuracy. Under IRB, banks are required to collect and store historical data on borrower default, rating decisions, rating histories, and rating migration. As some Asian banks did not begin this type of data collection process until recent years, their history of relevant default and loss data is not long enough to meet the requirements of the IRB Approach. Furthermore, data collected is often not sufficient to cover a full economic cycle, thereby exacerbating implementation issues. Some analysts have suggested that this problem is more acute in Asia, as cycles in Asian economies historically have been longer than those in more mature economies.

- *Building expertise, both internally and externally*. As is the case for other geographical regions, banks also have to deal with resource and technical expertise implications in trying to implement the more complex approaches for credit risk. In addition to attracting and retaining employees with the necessary skill sets for Basel II implementation, banks have to identify credible external parties to provide support and expertise to help develop their internal systems. While outsourcing to external vendors provides some clear benefits, there are always risks associated with this approach. Because boards of directors and senior management are ultimately responsible for the robustness of their internal systems, they must remain informed about relationships with external vendors and the related outsourced processes.

On the operational risk side, most Asian economies have not formally adopted the AMA method. Managing operational risk is a relatively new concept for many banks in the Asia region. The AMA approach requires banks to review internal and relevant external loss data, perform scenario analysis, and consider the business environment and internal control factors. Similar to the more advanced credit risk approaches, the major challenges of implementing the advanced approach to operational risk include a lack of operational risk expertise and the collection of historical loss data. In fact, even more mature economies, such as Hong Kong, are not requiring banks to implement the AMA approach at this time. Regulators in Hong Kong have said that they would like their banks to concentrate on IRB implementation in the near term. While some economies, such as Taiwan and Singapore, permit the adoption of AMA, banks from those economies have not yet adopted the methodology.

Regardless of the approaches used, Basel II implementation places significant demands on banks. According to one consulting firm, the costs are not restricted to direct expenditures on system and information technology enhancements, but also include significant indirect costs such as heightened demand on staff time.[iv]

Challenges for Regulators

Regulators also face challenges associated with the stringent qualifying requirements of the Basel II advanced approaches. Like banks, they have to address resource and technical expertise implications, including recruiting staff with strong risk management and quantitative backgrounds, retaining qualified staff, identifying knowledge gaps, and providing necessary training to staff responsible for Basel II monitoring. Even before the monitoring process begins, regulators have the complicated task of reviewing and approving the formal adoption of the advanced credit and operational risk systems by their supervised banks.

Due to the complex nature of the Basel II framework, there also is a strong need for increased cooperation and coordination between "home" and "host" country supervisors. This is especially applicable to internationally active banks, including those with operations in Asia that are implementing the advanced approaches in cross-border locations. Some major cross-border issues include the implementation of different approaches in different jurisdictions, differences in implementation timelines, information sharing between supervisors, and validation and approval of various models. In this vein, the Basel Committee has issued guidance on defining a practical framework for cross-border implementation of Basel II.[v] The challenge facing financial sector regulators is finding an appropriate balance between accomplishing home and host supervisory needs while minimizing regulatory burden on banks.

Conclusion

With financial leaders and market participants advocating for more vigilant oversight of liquidity and capital, the Basel II standard likely will continue to evolve and its rules may experience more changes than originally envisioned. Despite its shortcomings, the Basel II capital framework serves as an important mechanism for advancing financial sector reform and strengthening overall corporate governance. Implementation will support the continuous enhancement of Asian financial institutions' risk monitoring programs and measurement systems, which are key to the comprehensive management of increasingly complex institutions.

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i. The Group of Ten (G-10) includes eleven industrial countries (Belgium, Canada, France, Germany, Italy, Japan, the Netherlands, Sweden, Switzerland, the United Kingdom and the United States) which consult and cooperate on economic, monetary and financial matters. The Ministers of Finance and Central Bank Governors of the G-10 usually meet once a year in connection with the annual meetings of the International Monetary Fund and the World Bank.

ii. The Market Risk Amendment was adopted by the Basel Committee in 1996, before Basel II was introduced. As a result, while there are some proposed revisions to the amendment, this report does not discuss this risk category.

iii. *Basel II Challenges and Implications for Asia*, Huaqing Wang, Assistant Chairman, China Banking Regulatory Commission. Speech presented on May 3, 2006 at the Asian Development Bank Annual Meeting. Available at: http://www.adb.org/annualmeeting/2006/seminars/presentations/huaqing-wang-basel-ii.pdf

iv. Deloitte: *Understanding the framework: adopting the Basel II Accord in Asia Pacific*, 2005.

v. Basel Committee on Banking Supervision: *Home host information sharing for effective Basel II implementation*, June 2006; *High level principles for the cross border implementation of new Accord*, August 2003.

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