Financial Stability Institute

The implementation of the new capital adequacy framework in Asia

Summary of responses to the Basel II Implementation Assistance Questionnaire

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BANK FOR INTERNATIONAL SETTLEMENTS

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1. General implementation plans

The Questionnaire was sent to 18 non-Basel Committee member jurisdictions[1] in Asia that have actively participated in FSI seminars directly related to Basel II. Responses were received from all jurisdictions and are summarised in this note.

Most respondents recognise the important role that Basel II will play in the strengthening of their financial systems. On this basis, it is not surprising that almost all respondents have taken the decision to implement Basel II.[2] Some, however, are still undecided regarding the date and scope of implementation.

As can be observed from Chart 1, in the period 2007-09 banks controlling around 70% of total banking assets in Asia are expected to move to Basel II. It is also worthwhile to note from Chart 1 the role of foreign banks in the implementation of the framework in the region. Of the total banking assets moving to Basel II during 2007-09, more than 20% belong to banks which are foreign-controlled[3] or foreign-incorporated.

A more in-depth analysis of the responses to the Questionnaire suggests that it is appropriate not only to look at the implementation plans of respondents as a single group, but also to divide them into three, more homogeneous groups, as follows:

- One group plans to offer all options contained in Basel II as from end-2006[4] (Group 1).
- Another group will implement the framework more gradually between 2007 and 2009 (Group 2).
- A third group is still undecided about the date and scope of implementation (Group 3).

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[1] Refer to Annex 1 for a listing of the non-Basel Committee member Asian jurisdictions that responded to the Questionnaire.

[2] Basel II requires the implementation of three mutually reinforcing pillars: Pillar 1 - minimum regulatory capital for credit, market and operational risks; Pillar 2 - a supervisory review process intended to ensure that banks have adequate capital to support their risks as well as sound risk management techniques; and Pillar 3 - a set of disclosures that will promote market discipline by allowing market participants to assess key pieces of information related to Pillar 1 and Pillar 2. Because the 1998 recommendations on regulatory capital for market risks remain unchanged by Basel II, the Questionnaire and this note deal only with the proposals related to credit and operational risks in Pillar 1.

[3] Recognising that there is no common definition for foreign-controlled banks, the Questionnaire allowed each authority to provide information about foreign-controlled assets in its system according to its own rules and definitions. However, when guidance was requested, our advice was to include subsidiaries of foreign banks and, in general, to focus on the decision-making process within banks.

[4] The BCBS believes that the proposals contained in Basel II are suitable for a wide range of banks in different countries. BCBS member countries have agreed to a common implementation date for Basel II of year-end 2006 for the standardised and foundation approaches, and year-end 2007 for the most advanced approaches. In these countries, the implementation of Basel II is intended to encompass internationally active banks, and other significant banks as national supervisors deem appropriate.

Responses also provide information showing to what extent the banking systems in each group will adopt Basel II. Almost all Group 1 and Group 2 respondents expect their most important banks (in terms of assets[5]) to have implemented the framework by December 2009 (Table 1).

Chart 1

Banks adopting Basel II by percentage of total banking assets (weighted average)

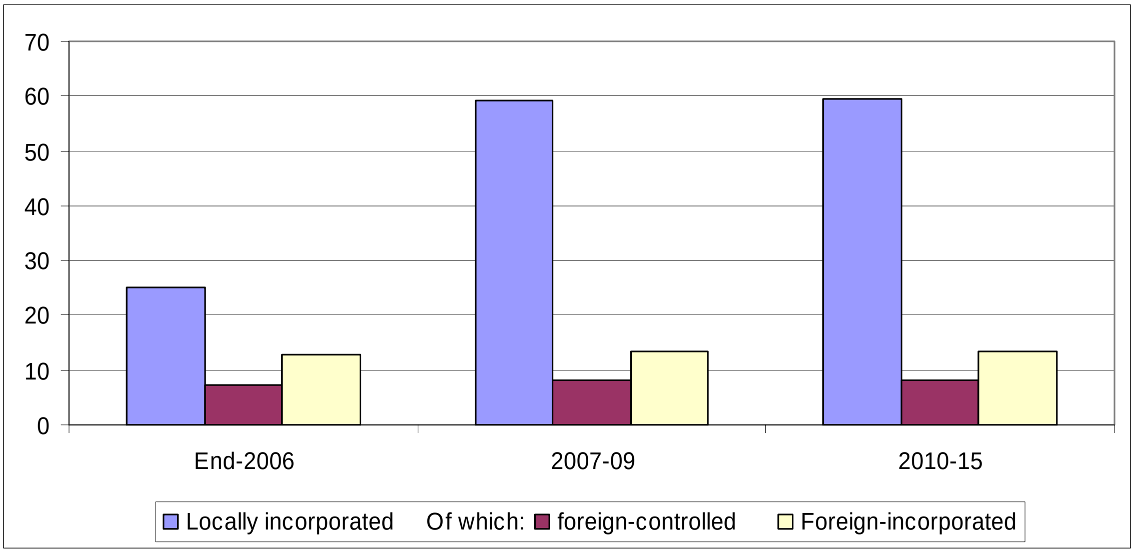


Table 1

Percentage of total banking assets expected to be subject to Basel II in different timeframes

	End-2006	2007-09	2010-15[1]
Group 1 (five jurisdictions)	90	100	100
Group 2 (eight jurisdictions)	4	69	69
Group 3 (five jurisdictions)	0	0	1

[1] In some jurisdictions, not all banking sector assets will be captured by Basel II.

[5] All calculations in this paper, unless otherwise stated, are based on weighted averages of banking sector assets indicated by each jurisdiction. The size of banking assets was obtained from responses to question 3 in the Questionnaire. In all cases and where available, the guidance was to provide information on the size of banking assets as of 31 December 2003 in US dollars. However, we acknowledge that there may be some inconsistencies with regard to banking asset data.

2. Specific implementation plans

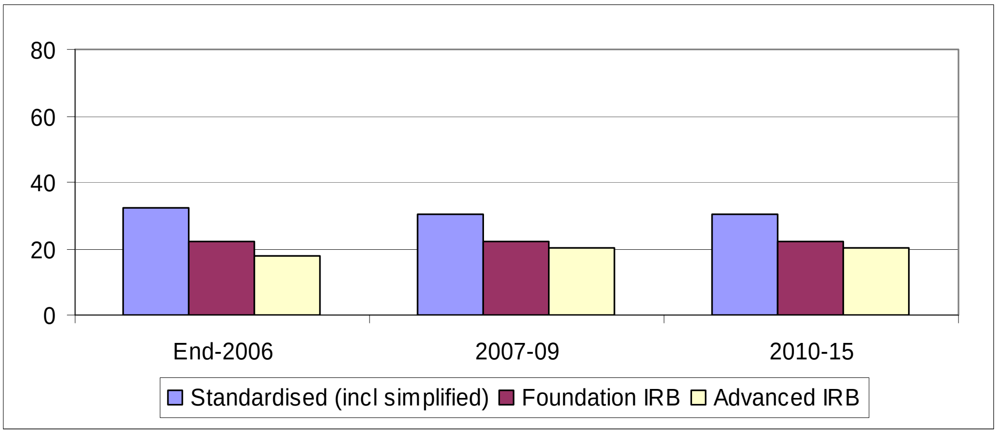
2.1 Pillar 1 - minimum capital requirements[6]

Regarding the minimum capital requirements for credit risk,[7] all three available approaches will be adopted by Group 1 banks (Chart 2). Approximately 20% of banking assets in Group 1 jurisdictions will fall under the foundation internal ratings-based (IRB) approach as from end-2006. Regarding the advanced IRB approaches, approximately 18% of Group 1 banks' assets are also due to be covered as from end-2006. Banks controlling more than 30% of Group 1 banking assets will be applying the standardised approach (SA) in order to allocate capital for credit risk purposes as from end-2006. Throughout the three observation periods, the distribution of the different approaches (SA, foundation IRB and advanced IRB) remains relatively constant. In the period 2007-09, only a slight increase in the use of the advanced IRB approach can be observed.

Chart 2

Credit risk approaches (Group 1)

Percentage of total banking assets in Group 1 jurisdictions
expected to be subject to the different Basel II credit risk approaches



Group 2 participants intend to use the standardised approach as from end-2006, but covering only 5% of their banks' assets (Chart 3). During the period 2007-09 respondents expect their most important banks (almost 50% in terms of banking assets in Group 2) to implement the foundation IRB approach for credit risk. In addition, a significant amount of assets (more than 20%) will fall under the standardised approach in the same period. There is no intention on the part of Group 2 jurisdictions to use the advanced IRB approach. Beyond 2010, there will be no significant change in the distribution of approaches except that approximately 5% of assets will move from the standardised approach to the foundation IRB approach. The advanced IRB approach is not scheduled to be used by banks at any point in the observation period.

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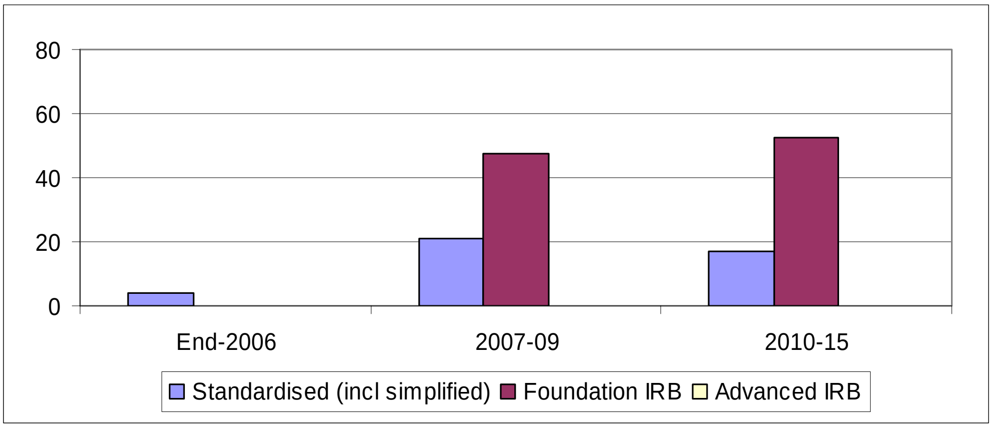
[6] Due to the fact that some respondents know the timeframe for moving to Basel II but were not able to specify the exact approaches to be chosen by the banks, numbers in Charts 2-5 do not fully correspond to those in Table 1. The Questionnaire was completed prior to the Basel Committee's decision to defer implementation of the most advanced approaches of Basel II from end-2006 to end-2007. This may have an impact on responses regarding the implementation of the advanced IRB approach and the advanced measurement approach (AMA).

[7] With regard to calculating regulatory capital requirements for credit risk, Basel II offers a choice between two broad methodologies. One alternative, the standardised approach, proposes to measure credit risk based on external credit assessments provided by rating agencies, export credit agencies, etc. The simplest options for calculating regulatory capital are contained in the simplified standardised approach. The alternative methodology, the internal ratings-based (IRB) approach, would allow banks to use their internal rating systems, subject to supervisory approval, to calculate their capital requirements for credit risk. Within the IRB framework, the BCBS is offering two options: the foundation IRB and advanced IRB approaches. Banks using the foundation IRB approach should calculate the probability of default associated with each of their borrowers' grades and rely on supervisory estimates for other risk components, eg exposure at default (EAD). Banks using the advanced IRB approach should be able to provide all risk components related to their borrowers.

Chart 3

Credit risk approaches (Group 2)

Percentage of total banking assets in Group 2 jurisdictions expected to adopt the different Basel II credit risk approaches

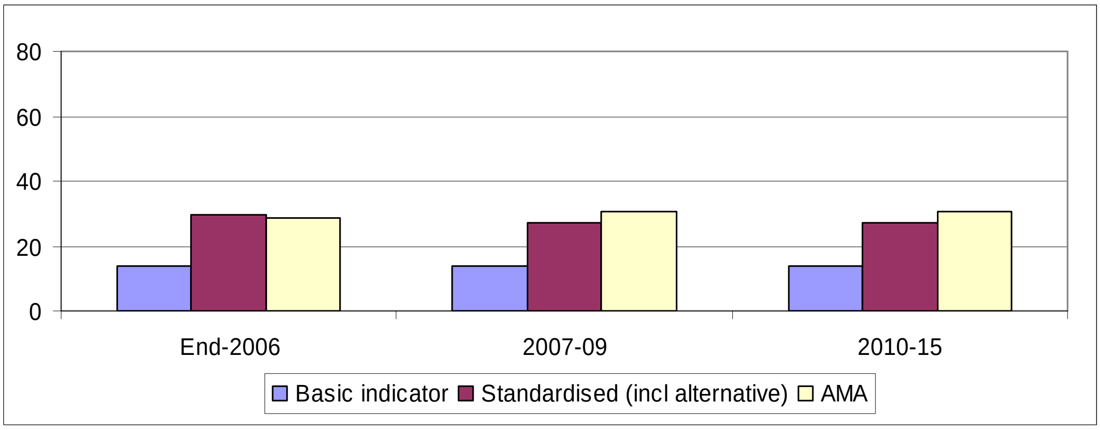


Regarding the minimum capital requirements for operational risk,[8] as with credit risk, all three available approaches will be adopted by Group 1 banks (Chart 4). Approximately 30% of Group 1 banking assets will fall under the standardised and advanced measurement approaches as from end-2006. Regarding the basic indicator approach, approximately 15% of banks' assets are due to be covered as from end-2006. It seems that in the period 2007-09, a small portion of banks' assets will be moving from the standardised approach to the advanced measurement approach. Beyond 2010, no significant change in the distribution of approaches can be observed.

Chart 4

Operational risk approaches (Group 1)

Percentage of total banking assets in Group 1 jurisdictions expected to be subject to the different Basel II operational risk approaches



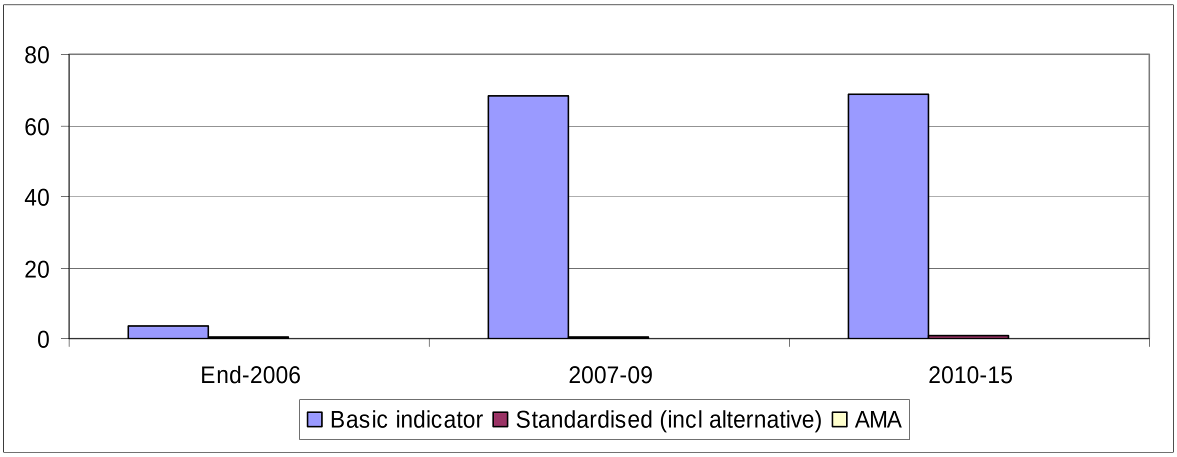
[8] With regard to calculating regulatory capital requirements for operational risk, the BCBS proposes a choice between three broad methodologies. The first, the basic indicator approach, proposes that a single indicator, ie gross income, be used for calculating the bank's regulatory capital for operational risk. The second, the standardised approach, would allow banks to calculate their capital requirements for each business line, again using gross income, although on a business line basis. An alternative standardised approach would allow banks applying the standardised approach to use a different indicator, ie loans and advances for two specific business lines: commercial and retail banking, respectively. Finally, the advanced measurement approaches (AMAs) would allow banks to use their internal measurement systems, subject to supervisory approval, to calculate their regulatory capital requirements for operational risk.

Regarding Group 2 banks' adoption of operational risk approaches (Chart 5), the majority of assets of Group 2 jurisdictions will be subject to the basic indicator approach after January 2007. A very small amount of assets will then move to the AMAs.

Chart 5

Operational risk approaches (Group 2)

Percentage of total banking assets in Group 2 jurisdictions expected to be subject to the different Basel II operational risk approaches



2.2 Pillar 2 - supervisory review process

All Group 1 and Group 2 respondents acknowledge the importance of proper implementation of Pillar 2. At the same time, they recognise the challenges that exist with respect to Pillar 2 and its full and complete implementation. The main challenge for most respondents will be the development of an objective methodology that enables supervisors to require individual banks to maintain capital at a level above that stipulated under Pillar 1. In addition, several respondents in Group 2 consider the lack of appropriate supervisory technical "expertise" and "resources" to be the main challenge to implementing Pillar 2. A related difficulty in complying with Pillar 2 mentioned by Group 2 respondents concerns the application of concentration risk and stress tests, as well as the implementation of a comprehensive assessment of "other" banking risks such as interest rate risk in the banking book, liquidity risk, etc.

2.3 Pillar 3 - market discipline

Respondents in Groups 1 and 2 share very similar challenges when it comes to the implementation of Pillar 3 proposals. One will be aligning supervisory requirements with international and national accounting standards. A second relates to achieving a proper balance between the market's need for information and issues related to confidentiality, competition and costs. The third challenge concerns the potential impact of the enhanced disclosure requirements of Pillar 3, particularly in jurisdictions unfamiliar with such levels of transparency.

3. Capacity building

Most respondents recognise that upgrading their expertise and sharing information are crucial in order to achieve their Basel II implementation objectives. With this in mind, the majority of respondents have already developed internal plans to prepare their staff to implement the framework.

With regard to upgrading expertise, internal plans of Group 1 respondents include training around 700 supervisors on Basel II implementation issues (Table 2). This number represents around 60% of the total number of supervisory staff in this group. Internal plans of Group 2 respondents include training around 2,500 supervisory staff, representing more than 10% of the total supervisory staff in this group.

The results of the Questionnaire show strong demand for opportunities to share information, practices and experiences.

Table 2

Supervisory staff requiring training on Basel II implementation issues in Asia

	Number of supervisory staff	Number of supervisory staff to be trained on Basel II
Group 1	1,200	700
Group 2	23,100	2,500
Group 3	1,500	300
Total	**25,800**	**3,500**

The majority of respondents consider that training is most needed for Pillars 1 and 2. With respect to Pillar 1, most respondents see training related to the IRB approaches for credit risk and the advanced measurement approaches for operational risk as very important. Almost all respondents assign little priority to training related to Pillar 3. Specific training needs expressed by respondents are provided in Annex 2.

Annex 1:
Basel II Implementation Assistance Questionnaire

Participating jurisdictions in Asia

Australia

Bangladesh

China

Hong Kong SAR

India

Indonesia

Korea

Malaysia

Mongolia

Nepal

New Zealand

Pakistan

Philippines

Singapore

Sri Lanka

Taiwan, China

Thailand

Vietnam

Annex 2:
Specific training requirements identified by national supervisors responding to the Questionnaire

Pillar 1	
Credit risk	
Standardised approach/ simplified standardised approach	– General • Application of the simplified standardised approach • Definition of higher risk categories and their risk weights • Treatment of SME exposures – Credit risk mitigation • Technical calculations • Operational requirements – External ratings • Methodologies of external rating agencies • Methodology of OECD ratings • Development of eligibility criteria for external credit assessment institutions (ECAIs) and how supervisors should assess compliance with these requirements • Mapping of external ratings to risk weights – Areas of national discretion • Definition of retail exposures • Determination of an appropriate LTV ratio for residential mortgages – Securitisation framework
IRB approach	– Rating systems (model development, implementation and validation) • Core criteria of rating system • Classification (segregation) of borrowers • Credit risk modelling (available methodologies, their strengths and weaknesses) • Data requirements – The IRB approach • PD, LGD and EAD estimation and validation techniques • Derivation of supervisory IRB inputs (LGD, EAD) • Derivation of IRB formulas • Specialised lending – Supervisory assessment of internal models • Initial IRB model approval process • Review process of internal rating systems and compliance with IRB minimum requirements • Assessment of PD/LGD/EAD accuracy • Validation of correlation • Qualitative aspects and calibration of IRB models – Securitisation framework under the IRB approach – Stress testing techniques
Operational risk	
Basic indicator approach/ standardised approach	– Operational risk management requirements for banks intending to adopt these two approaches • Detailed criteria for using the alternative standardised approach – Gross income • Definition and calculation of gross income • Allocation/mapping of gross income into eight business lines • Treatment for negative gross income – Formulas to derive alpha and beta

Pillar 1 (cont)	
Operational risk	
Advanced measurement approach	– Operational risk loss database development • Identification of risk events • Segregation according to business lines • Collection and mapping of operational risk loss data • Mathematical techniques to overcome lack of data – Development of appropriate methodology and approach for measurement of operational risk • Core criteria (qualitative and quantitative aspects of the AMA) • Approaches for model development (top-down vs bottom-up) • Optimal risk scorecard approach/scenario approach and loss distribution approach – Supervision of qualifying criteria • Requirements for supervisory validation • Model and data validation – Use of risk mitigation • Types and application
Other areas	
	– Cross-border implementation and issues – Formulation of supervisory legal documents, establishment of supervisory information systems and development of methodologies for supervision, analysis and categorisation of financial institutions

Pillar 2	
	– Implementation of Pillar 2 – Risks captured under Pillar 2 and the assessment of these risks: • Concentration risk • E-banking risk • Liquidity risk • Interest rate risk in the banking book – Methodology for providing non-Pillar 1 capital charges – Review of banks' capital adequacy assessment process • Supervisory review techniques and validation of internal ratings and risk management systems • Methods for deciding individual capital ratio requirements – Determination of appropriate prompt corrective actions – Stress testing

Pillar 3	
	– Guiding principles on implementation of Pillar 3 • Best practices on disclosure requirements • Development of skills/expertise of regulators to facilitate effective analysis and review of Pillar 3 requirements – Guidance on interaction between Basel II requirements and IAS 39 – Approaches adopted by countries for quarterly reporting requirements under Pillar 3