Basel Committee Newsletter No. 9 (September 2006)

The IRB Use Test: Background and Implementation

Basel II Framework paragraph 444

"Internal ratings and default and loss estimates must play an essential role in the credit approval, risk management, internal capital allocation and corporate governance functions of banks using the IRB approach. Rating systems and estimates designed and implemented exclusively for the purpose of qualifying for the IRB approach and used only to provide IRB inputs are not acceptable. It is recognised that banks will not necessarily be using exactly the same estimates for both IRB and all internal purposes. For example, pricing models are likely to use PDs and LGDs relevant to the life of the asset. Where there are such differences, a bank must document them and demonstrate their reasonableness to their supervisor."

Introduction

This paper is intended to provide background on the evolution of the Basel Committee's thinking on the use test for IRB and clarify expectations for the use of IRB components and risk estimates for internal purposes. It presents a number of principles that are intended to support banks and supervisors in interpreting the key use test provisions of the Basel II Framework. As these principles focus on interpretation rather than expansion of the use test requirements, they are expected to be consistent with guidance on the use test that many jurisdictions have already formalised.

Background of the Use Test

The use test pertains to the internal employment by a bank of the borrower and/or facility ratings, retail segmentation and estimates of PD, EAD and LGD that the Basel II Framework requires banks to use for the calculation of regulatory capital, hereinafter collectively referred to as "IRB components".[1] When the Committee decided to move towards a determination of regulatory capital using internal risk estimates as an important input, it also expressed the desire for reassurance that these risk estimates – the IRB components – were truly employed for internal risk management purposes. However, while the second consultative paper on the new framework contained detailed and prescriptive language on the internal use of IRB components, the final Basel II text, ie paragraph 444, is more principle based, creates more flexibility and reflects the Committee's recognition that some divergence

[1] The Basel II text contains many cases in which a bank is required to first transform or adjust its risk estimates (eg by applying floors) before their use in the IRB approach. Use test compliance generally concerns the internal use of these estimates prior to their transformation or adjustment for regulatory capital purposes.

between IRB components and estimates used for internal purposes is possible. It also requires banks to document differences and demonstrate their reasonableness. Finally, it introduces a clear boundary: IRB components used *only* to provide IRB inputs are not acceptable.

The IRB use test is based on the conception that supervisors can take additional comfort in the IRB components where such components “play an essential role” in how banks measure and manage risk in their businesses. If the IRB components are solely used for regulatory capital purposes, there could be incentives to minimise capital requirements rather than produce accurate measurement of the IRB components and the resultant capital requirement. Moreover, if IRB components were used for regulatory purposes only, banks would have fewer internal incentives to keep them accurate and up-to-date, whereas the employment of IRB components in internal decision-making creates an automatic incentive to ensure sufficient quality and adequate robustness of the systems that produce such data.

That said, supervisors acknowledge that universal usage of the IRB components for all internal purposes is not necessary. In some cases, differences between IRB components and other internal risk estimates can result from mismatches between prudential requirements in the Basel II Framework and reasonable risk management practices business considerations or other regulatory and legal considerations. Examples include different regulatory and accounting requirements for downturn LGD, PD and LGD floors, annualised PDs and provisioning. Other examples of where differences could occur include pricing practices and default definitions. In such cases, supervisors may take a flexible position with respect to the principles below, although the institution should still be able to elaborate on the reasonableness of the differences between the IRB and internal parameter estimates, and demonstrate the relationships between them.

Use of IRB Components

In general, there are three main areas where the use of IRB components for internal risk management purposes should be observable: strategy and planning processes, credit exposure management and reporting. Uses in any of these areas provide evidence of internal use of IRB components; if IRB components are not used in some of these areas, the supervisor may require an explanation for such non-use, or may raise concerns about the quality of the IRB components. In many instances, supervisors will need to exercise considerable judgement in assessing the use of IRB components.

Strategy and planning processes cover all activities related to a bank specifying its objectives; developing its policies and the plans to achieve these objectives; and allocating resources to implement these plans. IRB components may be used in assessment and allocation of economic capital; credit risk strategy; and decisions about acquisitions, new business lines/products, capacity and expansions.

Credit exposure measurement and management covers all activities related to management and control of the credit risk that a bank takes as a consequence of implementing its strategies. IRB components may be used in credit portfolio management; credit approval, review and monitoring; performance assessment/remuneration; pricing; individual/portfolio limit setting; provisioning; and retail segmentation.

Reporting refers to the information flow from credit exposure measurement and management to other functions of the organisation. Reporting is a necessary component of defining a bank’s strategic goals. IRB components may be used in credit portfolio reporting; credit portfolio analysis; and other credit risk information.

Principles

The following principles are designed with the objective of supporting banks and supervisors in interpreting paragraph 444 of the Basel II Framework.

1. Banks are responsible for demonstrating their compliance with the use test.

AIG validation principle 2, as set forth in "Update on work of the Accord Implementation Group related to validation under the Basel II Framework", emphasises that banks have the responsibility for validating their rating system and associated IRB parameter estimates.[2] The use test is no exception to this principle: banks are responsible for complying with the use test requirement and for demonstrating compliance by providing relevant documentation and evidence of use of IRB components.

Banks should demonstrate to their supervisors the processes where IRB components play an essential role and provide the relevant supporting evidence for compliance with the use test. Banks should illustrate how these internal uses confirm management's belief in the validity of the IRB components and contribute towards meeting the use test objectives. Banks should clarify whether the IRB components are used directly in risk management processes, or whether they are used in a derived form or in a partial way. Banks should also demonstrate how risk management processes support the accuracy, robustness and timeliness of the IRB components.

Banks and supervisors may rely on existing internal documentation for the purpose of demonstrating use test compliance. To a large extent, the obligations implied by this principle will be met through normal documentation of the banks' overall validation and governance frameworks and internal operating processes.

2. Internal use of IRB components should be sufficiently material to result in continuous pressure on the quality of IRB components.

To make the use of the IRB approach credible, IRB components should be entrenched in the bank's internal risk management processes. While IRB components should play an essential role in risk management and decision-making, this does not necessarily mean an exclusive or primary role in all relevant processes. In addition, as elaborated upon in principle 3, there may be differences between the internal risk measures used for risk management and the IRB components.

One of the aims of the use test is to promote adequate and appropriate incentives internal to banks so that the banks have a strong belief and interest in the accuracy of their IRB components and the quality of the processes that generate those components. The following are examples of situations where a lack of quality in the IRB components or their underlying processes may give rise to supervisory concern:

[2] January 2005 Basel Committee Newsletter No. 4, "Update on work of the Accord Implementation Group related to validation under the Basel II Framework".

- the IRB components are calculated solely for regulatory purposes with little or no internal incentives for ensuring the quality of those components;
- a deterioration in the accuracy, robustness, and timeliness of the IRB components is unlikely to be picked up by the bank's internal processes;
- the IRB components are based on insufficient or lower quality data relative to what is used to estimate internal parameters;
- the bank lacks a process for continuous improvement of the IRB components; and
- the bank has used the Framework's flexibility for designing an IRB rating system in a way that produces artificially low capital requirements inconsistent with their internal approach to measuring credit risk.

In a bank that meets the use test, supervisors would expect to see evidence of the occurrence of internal challenges to the accuracy, robustness, and timeliness of IRB components resulting from any direct or indirect employment of IRB components along the lines mentioned in the introductory section, ie strategy and planning processes, credit exposure management, and reporting.

Thus as a quality check of IRB components and underlying processes, the use test is a necessary supplement to the overall validation process. It represents a very important supervisory tool and a fundamental component of the case that banks must put to their supervisors to demonstrate that they initially meet the IRB minimum requirements and will continue to do so, on an ongoing basis.

As such, the use test plays a key role in ensuring and encouraging the accuracy, robustness, and timeliness of a bank's IRB components, confirms the bank's trust in those components and allows supervisors to place more reliance on their robustness and thus on the adequacy of regulatory capital. The evaluation of the use test in banks' risk management processes and the focus on continuous quality assurance for risk estimates may also encourage improved risk management, which is an overarching objective of the Basel II Framework.

3. Demonstrating consistency and explaining differences between IRB components and internal measures can establish sufficient comfort that the first two principles are met.

Measures used for internal processes may reasonably differ from IRB components in some instances. As mentioned in the Background section, such differences may arise from legitimate mismatches between the prudential requirements of the IRB framework and a bank's own risk management practices. Where such differences exist, banks should demonstrate good reasons for use of parameters that do not match IRB components. The supervisory objectives of the use test could be met if banks demonstrate that the degree of consistency between the IRB components and the internal estimates is sufficiently high as to contribute to continuous quality pressure on the IRB components. In this context, consistency might be demonstrated by establishing clear linkages between the internal inputs and the IRB components, showing that any differences reflect legitimate risk management needs.

A combination of multiple features could provide comfort to supervisors that sufficient linkage exists. Such features could include use of the same underlying data for computations, reliance on the same IT systems, application of similar quality checks and similar validation techniques, or use of common methodologies or similar models.

4. The importance of an internal process to the bank's decision making influences the extent to which that process contributes to an assessment of use test compliance. Banks should take a holistic approach when assessing overall compliance of their institution with the use test requirements.

Any processes in which significant use is made of IRB components or where incentives to ensure the quality of IRB components are sufficiently strong can contribute to a bank's overall self-assessment of use test compliance. Certain uses in certain processes could potentially provide higher comfort than others. Generally speaking, the more important, pervasive and granular the use of the IRB components in a bank's decision making processes, the greater is the likelihood of meaningful internal challenge and the stronger are the incentives to ensure the accuracy and robustness of IRB components, giving greater confidence that management is committed to the validity of the IRB components. Supervisors should adopt a similar approach when assessing factors supporting a bank's compliance with the use test.

If, on the other hand, ratings, retail segmentation and estimates used in internal processes differ from respective IRB components without convincing explanation as to the reasons for the lack of consistency, bank management's commitment to the importance of the IRB components and thus compliance with the use test may be in doubt. However, shortfalls in use test compliance in individual processes do not in and of themselves imply a negative overall evaluation of an institution's compliance with the use test.

It should be recognised that a group with subsidiaries in more than one country may conduct much of its risk management and business management activities on a group basis using processes, procedures and IRB and internal components defined at the group level.[3] In such cases both home and host supervisors may need to be flexible in determining whether the purposes of the use test are met on a holistic basis, generally with reference to such group policies, procedures and components.[4]

[3] It should be noted, however, that it is a fundamental element of corporate governance that local management should understand and manage a banking subsidiary's risk profile and ensure that the subsidiary is adequately capitalised in light of that profile.

[4] For a more thorough treatment of cross-border implementation of Basel II, see Basel Committee on Banking Supervision, *High-level principles for the cross-border implementation of the New Accord*, August 2003.