

# Credit risk catches up

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When Basel II was first proposed in 1999, credit risk models lagged way behind market risk models. But that's changed, which means we need less prescriptive rules for determining credit risk capital. By David Rowe

To calculate minimum regulatory capital for credit risk, many banks have long argued that they should be allowed to use their own internal models, as they already do for market risk and prospectively will be able to do for operational risk. The market risk extension of Basel I has been very successful and allows regulators to insist on continuous improvement in banks' market risk measurement and monitoring techniques. Furthermore, under the Advanced Measurement Approach (AMA), banks will be allowed to define internal assessment techniques for op risk. It is widely agreed that op risk analysis is in its infancy, whereas credit risk analysis has been the core focus of banks since antiquity. So why should internal models not be allowed for credit risk when they are allowed for the other two categories of risk?

From a regulatory standpoint, the rejoinder concerning market risk models tends to be two-fold. First, national supervisors realised in the mid-1990s that market risk systems were surprisingly sophisticated. At least equally important, they recognised that there was a simple means of back-testing internal market risk models. Value-at-risk estimates are produced every day and can be compared with the following day's P&L. A pattern of actual losses that exceed the associated VAR estimates too frequently is a clear signal of problems with the risk calculation. Indeed, since VAR estimates generally assume a static portfolio, actual losses should exceed the estimates even less often than the formal confidence level would imply because of defensive day trading. Regulators therefore felt they had a reliable means of keeping banks honest regarding their market risk estimates.

Regarding op risk, the arguments are quite different. Relative to credit risk, op risk capital is estimated to be fairly small. This has allowed the Basel Committee to be more forthcoming on the issue of internal models. Op risk modelling has less leverage over the total capital requirement than credit risk modelling. Moreover, early in the Basel II debate, the Committee realised that the op risk capital charge could be a powerful means of focusing banks' senior management on the need for more formal and more con-



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sistent process controls.

The Basel Committee took to heart the criticism that a purely volume-based capital assessment for op risk offered no incentives for actually improving operational discipline and reducing the potential for operational losses. This, combined with some work under way in more progressive institutions, convinced the Committee to allow a range of AMAs. The content of these approaches was left open, to be determined by future dialogue with the industry – a very different approach than has been taken towards credit risk capital calculations. Presumably the regulatory view is that promoting op risk management as a serious internal focus for banks is socially desirable and that the potential reduction in regulatory capital is modest.

When Basel II was first proposed in 1999, the Basel Committee argued strongly that credit risk models were not as advanced as market risk models were in the mid-1990s. It also believed the less frequent occurrence of credit losses made back-testing of credit risk model results much less robust and transparent than was true for market VAR models. For these reasons, it refused to sanction use of internal credit risk models as the basis for calculating regulatory capital requirements.<sup>1</sup> At the time I believed the Committee's arguments were fundamentally correct.

As deliberation on the structure of the fairly prescriptive capital calculation rules in Basel II dragged on, something interesting happened. Credit risk modelling continued to advance, driven partly by growth in the credit derivatives markets. Ironically, Basel II itself accelerated the pace of this advance. Even though Pillar I of the Basel II proposal does not explicitly recognise most portfolio effects, the implicit supervisory sanction given to formal analytical methods promoted this approach as a supplement to long-standing, largely judgemental, techniques.<sup>2</sup>

## Which way now?

It can be argued that credit risk models are rapidly approaching the level of sophistication exhibited by market risk models 10 years ago. This raises the question of how best to achieve a more flexible and less prescriptive approach to calculating minimum regulatory capital for credit risk. I believe expediting implementation of Basel II on or near the current deadline is the best alternative. For all its flaws, Basel II is a huge improvement over the simplistic structure of Basel I. If we were to shift gears and demand an immediate jump to the use of internal models, I fear we would prolong the process and extend the Basel I regime indefinitely.

That said, both the Basel Committee and major banks should begin a dialogue on appropriate ground rules for the use of internal credit models at some point in the future. It would also be helpful for banks to supply the Committee, confidentially, with quarterly estimates of their regulatory capital under such rules. This would become a continuing quantitative impact study, helping the Committee calibrate such a regime to assure that aggregate capital requirements in the system remain at acceptable levels. ■

<sup>1</sup> The Basel Committee openly stated that it intended to monitor developments in the credit risk modeling area and believed such models would eventually advance to a point where they could be the basis for regulatory capital calculations.

<sup>2</sup> These approaches are not mutually exclusive. Indeed, sound analysis of the details of each individual exposure is essential for successful credit risk management. But without rigorous analysis of portfolio effects, a bank's ability to control credit risk will fall well short of best practice.

