

Merging data streams in operational risk management

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Background

The motivation of this talk is to develop efficient statistical methods aimed at measuring the performance of business controls, through the development of appropriate operational risk indicators.

A number of recent legislations and market practices are motivating such developments. For instance, the New Basel Capital Accord (BCBS, 2001), published by Basel Committee on Banking supervision, requires financial institutions to measure operational risks, defined as “the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events”. In the context of information systems, the recently developed ISO7799 establishes the need of risk controls aimed at preserving the security of information systems. Finally, the publicly available specification PAS56, in setting criteria that should be met to maintain business continuity of IT-intensive companies, also calls for the development of statistical indicators aimed at monitoring the quality of business controls in place.

In this paper we shall focus on the Basel Accord, however keeping in mind that what developed here for the banking sector can be extended to the general enterprise risk management framework (on this matter see e.g. Bonafede and Giudici, 2007).

The Bank of International Settlements (BIS) is the world's oldest financial institution, whose main purpose is to encourage and facilitate cooperation among central banks (for more details see BCBS, 2001). In particular, BIS established a commission, the Basel Committee on Banking Supervision (BCBS, in order to formulate broad supervisory standards, guidelines and recommend statements of best practice. The ultimate purpose of the Committee is the prescription of capital adequacy standards for all internationally active banks. In 1988 the BCBS issued one of the most significant international regulations impacting on the financial decision of banks: the Basel Accord. Subsequently, the BCBS worked on a revision, called the New Accord on Capital Adequacy, or Basel II (BCBS; 2001). This new framework, developed by the Committee in 2002 to ensure the stability and soundness of financial systems, was based on three 'pillars': minimum capital requirements, supervisory review and market discipline.

The crucial novelty of the new agreement was the identification of operational risk as a new category separated from the others. In fact, it was only with the new agreement that the Risk Management Group of the Basel Committee proposed the current definition of Operational Risk:

“Operational Risk is the risk of loss resulting from inadequate or failed internal processes, people and systems or from external events”