

Risk Weights and Capital Saving/Addition Using the Internal (VaR) Model Based on the Basel Accord

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Abstract

We estimate the VaRs for all marketable financial assets in Taiwan and contrast these VaRs with their corresponding risk weights to examine the propriety of the risk weights set by the Basel Accord. Next, actual portfolios of the securities firms' trading books are used to compare the capital charges between the standardized and the internal model approaches. Our empirical findings suggest that the riskier the asset is, the lower is the "capital charge markup." The prevailing international risk weights are favorable to the riskier assets relative to the riskless assets. As a result, the internal model approach does not necessarily provide capital savings relative to the standardized method that encourages the financial institutions to develop internal models. Whether the internal model approaches can provide capital savings depends on the characteristics of the portfolios of the financial institutions. The capital savings will occur only in the case of low-risk financial institutions. The high-risk financial institutions will choose the standardized method as their calculation tool of capital requirements. To solve the moral hazard problem of "supervisory discrimination", we propose the "VaR-based risk weights" which can ensure capital savings of adoption of the internal model and thereby encourage the financial institutions to develop internal models.

Keywords: VaR, Risk weight, Standardized method, Internal model, Supervisory

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discrimination