

VAR AS THE MAIN METHOD OF CALCULATING THE INTEGRATED FINANCIAL RISK OF THE BANK

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In recent years, banking institutions have made significant efforts to develop internal models for assessing financial risks and determine an adequate level of capital to cover these risks. These studies were carried out under the supervision and with the support of Bank regulators. As a result of joint efforts of commercial banks and Bank regulators, there have achieved significant successes in this area. Nowadays, the main attention is paid to the modelling and assessment of the integrated financial risk. The Basel Committee on banking supervision proposed a new system of banks financial risk management, under which banks are allowed to calculate capital adequacy standards on the basis of their own (internal) assessment techniques of integral risk.

An indicator of Value-at-Risk (VaR) is taken in this article as the main measure of risk; let us dwell on the methods of its calculation since the choice of method to estimate VaR of the risk factors can significantly affect the calculation of the integral financial risk and its components.

VaR is a statistical technique used to measure and quantify the level of financial risk within a firm or investment portfolio over a specific time frame. This metric is most commonly used by investment and commercial banks to determine the extent and

occurrence ratio of potential losses in their institutional portfolios. VaR calculations can be applied to specific positions or portfolios as a whole or to measure firm-wide risk exposure.

Investment banks commonly apply VaR modelling to firm-wide risk due to the potential for independent trading desks to expose the firm to highly correlated assets unintentionally. Employing a firm-wide VaR assessment allows for the determination of the cumulative risks from aggregated positions held by different trading desks and departments within the institution. Using the data provided by VaR modelling, financial institutions can determine whether they have sufficient capital reserves in place to cover losses or whether higher-than-acceptable risks require concentrated holdings to be reduced.

There are three basic approaches that are used to compute Value at Risk, though there are numerous variations within each approach. The measure can be computed analytically by making assumptions about return distributions for market risks, and by using the variances in and covariances across these risks. It can also be estimated by running hypothetical portfolios through historical data or from Monte Carlo simulations. In this research, we describe and compare the approaches.