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The tradition approach to credit risk and its estimation for selected banks in Slovakia

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Abstract

The development of credit derivatives, the emergence of the global financial crisis and the subsequent development of Basel III is currently pays more attention. For this reason, it is still increasing pressure on the need to estimate the probability of default of the entire portfolio and the expected loss in the event of default. The subject of this article is to present tradition approach to credit risk and its estimation for selected banks in Slovakia for period 2013. This article presents basic approach to economic capital and VAR of the three largest banks in Slovak market. Formation of economic capital is also conditioned by the structure of the client portfolio and loan volumes of individual groups according to the degree of risk.

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1. Introduction

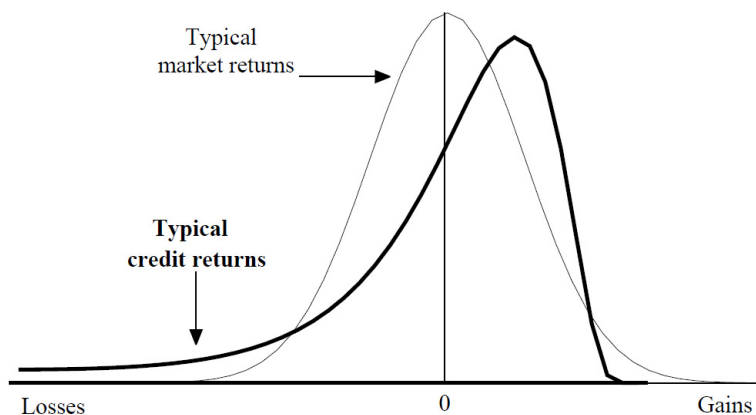
The financial crisis, which was reflected in the European financial sector, revealed weaknesses in the banking sector. It was therefore necessary to adjust the framework of the Basel Accords. Value at Risk and the amount of economic capital are necessary data for calculation of regulatory requirements consequent from the BASEL III.

Credit risk is one of the three fundamental risks a bank or any other regulated financial institution has to face when operating in the markets. Credit risk is the risk of a trading partner not fulfilling their obligations in full on the due date or at any time thereafter. Losses can result both from counterparty default, and from a decline in market value stemming from the credit quality migration of an issuer or counterparty (Duffie, Singleton, 2003). Credit risk is divided into the risk of loss due to changes in credit spread (measured by the change of rating) with a market valuation of products (Credit Spread Risk) and the risk of loss due to failure to comply with financial obligations of counterparty (Credit Default Risk). Further, there is the credit risk of single stand-alone assets (Stand –Alone Credit Risk) or more of the assets in the portfolio, called as Portfolio Credit Risk (Babiaková, 2007).

Specific of credit risk measurement (Duffie, Singleton, 2003):

- symbiosis of market risk and credit risk,
- data limitations – most of the credit market instruments are not market valued, rarity event of default and the length of term credit risk measurement causes a lack of relevant historical observations or relevant time series are short,
- validation of the model – with respect to a one-year (and longer) horizon forecasts cannot use the simple daily backtesting of market risk models,
- problem assumptions – lack of credit data leads to making assumptions, and often is used for ease of normal distribution despite the fact that non- compliance with the empirical data is much more critical than in market data.

Equity returns are relatively symmetric and are approximated by normal or Gaussian distributions. It has an important role in probability theory and mathematical statistics. It is used as a probabilistic model serves of a large number of random events behaviour. It is used where random variable fluctuation is caused by sum of a large number of mutually independent and minor impacts (Buc, Klieštík, 2013). Thus, the two statistical measures – mean and standard deviation of portfolio value are sufficient for understanding market risk. Credit returns are highly skewed and fat-tailed. This long downside tail of the distribution of credit returns is caused by defaults. Credit returns are characterized by a fairly large likelihood of earning a small profit through net interest earnings, coupled with a small change of losing a fairly large amount of investment (Gupton et. al., 2007).



Source: Gupton et. al, 2007, CreditMetrics, Technical document

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