

# The Issue of Risk in Lending and Ways to Minimize it

# Sharbat Abdullaeva Tashkent Financial Institute, Department of Banking, Prof

## **Nozima Abdullaeva** *Tashkent Financial Institute, Doctoral Researcher*

**Abstract:** The article is devoted to the issues of improving the mechanism for assessing and managing banking risks using the foreign VaR (Value at risk) methodology in the activities of commercial banks.

**Keywords:** bank, credit, risk, bank risks, cost, losses, default, percentage, methodology, management, risk assessment, risk management.

**Introduction**. Currently, the presence of specialized, network and universal banks diversifies the scale of banking risk of banks. Adaptation of specialized banks to lending to one industry, one sector can lead to increased risks in their activities. The study of the topic of this article examines the cost assessment of risks in the practice of foreign banks and management by the method of diversification, using methods of comparative and analytical analysis, correct risk assessment, historical materials related to risk, analysis - synthesis method, statistical analysis, risk assessment in practice with using expert assessment methods and forming opinions and conclusions on the use of VaR and diversification methods in management.

**Literary analysis.** It is desirable that the process of banking risk management be carried out by commercial banks in all its activities and operations in general. This approach helps banks not only to timely identify, correctly assess, manage and control banking risks, but also to stabilize the balance between the bank's profit and risk. Therefore, it is important for banks to analyze and study risk management methods, evaluate them quantitatively and qualitatively in the risk management process. In this article, we would like to think about VAR - the cost of risk estimation method and diversification methods, which are considered important methods for quantitative and qualitative assessment and management of banking risk.

One of the most effective ways to reduce credit risks is to diversify the bank's set of credit resources and their use. As a result, diversification of the bank's loan portfolio makes it possible to compensate for the bank's losses from some clients with income from other clients. Diversification based on portfolio, geography, maturity, quality and volume of loans is effective. An undiversified loan portfolio is always associated with high risk. Diversification comes from the Latin word *diversificatio*, which means *diversus* "different" + *facere* "to do", that is, "to change or diversify." Some scholars say that diversification is a destruction of integrity, but according to Russian economist I. V. Kozlov, diversification is an important investment activity of banks, which means reducing the risks associated with an investment portfolio without reducing their income<sup>1</sup>. According to the Russian scientist G. B. Bakanov, "Mastering the production of new products, expanding the range and types of products and other similar

<sup>&</sup>lt;sup>1</sup> Kozlov I.V. Investing to improve the efficiency of economic benefits. M.: INFRA 2018. 67 p.

processes at manufacturing enterprises are called diversification of production and are used for effective participation in market competition<sup>2</sup>. Sh.Z.Abdullayeva, one of our local scientists, believes that diversification is one of the principles of banking and its role in risk management is important, and diversification means diversification, diversification<sup>3</sup>. In her opinion, bank diversification means reducing the risks associated with loans and services, distributing the bank's assets among as many clients as possible in order to coordinate the loan portfolio, and also having the bank have more than one asset<sup>4</sup>. According to Professor Sh.Z. Abdullayeva, the standards of risk accepted by a bank are determined depending on what strategy commercial banks adopt - aggressive or conservative<sup>5</sup>. This approach helps banks not only to correctly assess, plan and control banking risks, but also to ensure a balance between the bank's profit and risk. The VAR risk assessment method is a probabilistic-statistical approach that shows the probability of occurrence of risks leading to losses and represents the maximum amount of possible losses over a certain period of time or interval. According to Russian economists O.I. Lavrushin, N.I. Valentseva, L.N. Krasavina, risk analysis, limitation and control of this stage includes the development of techniques and methods<sup>6</sup>.

**Analysis and results.** VaR (Value at Risk) is taken from English and means "value at risk" or "value at risk", and this indicator shows how much of the value is at risk in the volume of value aimed at profit. This is why VaR is considered a cost-based measure of risk. VaR (Value at Risk) - as a risk assessment method, it is usually calculated as a percentage and shows the limit of deviation or loss in the value of assets or their value in a certain period of time, with a given probability, and expresses the amount of loss in monetary units.

The results of VAR analysis depend on:

- determine the time and volume of the process, action;
- specified probabilities in the considered period interval;
- depends on the analysis of the market situation and its volatility.

This indicator can also be calculated as follows:

VAR = $Z \times (+/-GAPi) \times T_i \times P / 365$ ; here:

Z – quantile of the confidence interval;

GAPi - the difference between assets and liabilities in the i-th interval;

Ti - half of the periodic period in the i-th interval;

P - forecast indicator of the market rate. We can also see this in the following chart. That is, our confidence interval is below 95%, the quantile of the confidence interval corresponding to this interval gives 1.98 under the parameters of the standard normal distribution, and we can observe precisely the lowest values on the left side of the distribution.

<sup>&</sup>lt;sup>2</sup> Bakanov G.B. Strategic management. M.: OMEGA, 2019. 84 p.

<sup>&</sup>lt;sup>3</sup> Abdullaeva Sh.Z. Banking risks and lending. T: "Finance" 2002..., 72 p.

<sup>&</sup>lt;sup>4</sup> Abdullaeva Sh.Z. Credit and lending practice. T: "ECONOMICS-FINANCE". 2017, pp. 50-56.



Figure 1. Graphical representation of VaR as a distribution.

Looking at the same situation with a 99% confidence interval, we see that our confidence interval captures more of the observed data in the distribution and also captures observed losses that are relatively less likely. Therefore, we can say with complete confidence that as the confidence interval increases, our expected losses will increase in direct proportion (in absolute numbers).



Figure 2. The 99% confidence interval of VaR is shown.

VaR is usually characterized by three main indicators (criteria). This:

**Time.** This indicator depends on the operation or process chosen by the bank. According to documents of the Basel Committee on Banking Supervision, this period for banks is 10 days, according to the "RiskMetrics methodology" - 1 day.

**Confidence level -** shows the level of risk that can be tolerated. According to the Basel Committee documents, 99% is used as a confidence level, while RiskMetrics uses 95%.

The base currency is the currency in which the indicator is measured.



Figure 3. Key Value at Risk (VaR) criteria.

With VaR - for example, with 99% confidence, the amount of possible losses will not exceed the calculated VaR. Therefore, the case where the amount of loss exceeds VaR may be 1%. In other words, your confidence in VaR is X% (that is, some fraction of X of 100%, X/100), and the amount of losses will not exceed Y for N days in the future. In this hypothesis, Y is the unknown VaR. Simply put, VaR analysis is carried out according to the following idea: "We are confident that our loss will not exceed the value Y by X% (with probability X%) in the next N days." In this case, the value of Y is equal to VaR<sup>7</sup>. In the practice of banks, VaR allows one to estimate the probability of losses that a bank may incur and answers the question of what is the probability of losing \$100 or more during the day is 1%. And our probability of not losing \$100 or more during the day is 1%. And our probability of not losing \$100 or more during the day is 1%.

### **Conclusions and offers:**

1. When calculating VaR, it is important to choose the period and time. The business entity or the banks themselves can determine in which period to calculate the risk and apply VaR for the desired risk period. For example, banks in foreign countries usually calculate VaR in days, while pension funds calculate VaR in months. In the practice of our country, it would be advisable for banks and financial organizations to introduce such a method into their practice;

2. The VaR method is a universal method for calculating various risks. In particular, price risk from the VaR method is the risk of changes in the price of a financial asset on the market, currency risk is a change in the market of the currency of one country compared to the currency of another country, credit risk is the risk that the borrower will not be able to partially or fully repay a loan, liquidity risk - the impossibility of selling an asset, can be used to calculate and assess the risk or risk of selling a financial asset with a large amount of losses;

3. When applying VaR in our local banks, it is necessary to collect data on income for the analyzed period (month, quarter, year), group the data by dynamics and determine the period and time of risk forecasting;

4. It is necessary to coordinate the bank's short- and long-term plans with an analysis of risk management activities. In this case, the bank's management must determine whether the level of risk factor management meets the set goals;

5. It is necessary to analyze the actions and decisions taken in the field of risk management (during and following the results of each reporting period), to ensure that the bank's management has fully identified risk factors and is working to eliminate them. can ensure the achievement of the goals provided for by the bank's short-term and long-term plans.

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<sup>&</sup>lt;sup>7</sup> Systematized on the basis of foreign sources.