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Organizational Models of Risk Management in Banks of Developed Countries

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Abstract: This article analyzes the organizational models of risk management in banks of developed countries, their institutional structure and management mechanisms. In particular, the principle of "three lines of defense", the effectiveness of corporate governance, internal control and monitoring systems based on digital technologies are highlighted. Based on advanced foreign experience, practical recommendations are developed for bank stability, financial security and risk reduction.

Key words: commercial banks, financial stability, capitalization, increasing liquidity, USA, Europe.

1. Introduction

Scientific research is continuing in the world to solve problems related to improving the mechanism for effective management of the stability of commercial banks on a scientific basis, including increasing the capitalization and liquidity levels of banks, improving the lending mechanism, and reducing the level of risk in all categories. Measures such as ensuring the financial stability of the banking system, improving the assessment of bank risk taking into account international experience, and introducing modern principles and mechanisms for regulating and controlling the activities of commercial banks make the use of an effective management system in the practice of commercial banks an urgent issue.

During the years of independence, a number of positive results were achieved as a result of the reforms carried out in our country to develop the banking system, strengthen financial stability in it, increase capitalization and liquidity. Especially in the context of the global financial and economic crisis, which has put the economies and financial markets of many developed countries in a dangerous situation, the stable performance of the republic's banking and financial system, including the preservation of the capitalization and liquidity of the commercial banking system, is a practical result of the reforms carried out.

2. Literature review

To date, the issues of bank management and its improvement have been widely studied by domestic and CIS economists. The principles of management in the activities of commercial banks and the directions of their development are reflected in the research of leading foreign scientists such as V.M. Usoskin [1], D.J. Siynki [2], Y.F. Zhukova [3], U. Koch Timoti [4], I.V. Larionova [5], E. Reed [6], Y.A. Malenkov [7].

Among the Uzbek scientists, B.T. Berdiyarov [8], V.A. Kotov, I.L. Butikov, N.Kh. Jumaev, O.B. Sattarov [9], O.Q. Abdurakhmanov, R.T. Tursunov, R.R. Tojiev [10] have covered the theoretical and practical aspects of the activities, tasks and development of commercial banks. Also, the issues of applying bank marketing and financial management to the management process are reflected in the research of such scientists as A.Sh. Bekmurodov, B.Z. Mustafaev [11], B.K. Mirzamaydinov [12], M. Nasritdinova, M.M. Abdurakhmanova [13]. Despite this, the financial stability of commercial banks

in the context of globalization has not been studied in sufficient depth. This scientific research requires the development of theoretical views, methodological approaches and practical recommendations on these issues.

3. Analysis and results

Strategic risk management in financial institutions is defined as a comprehensive approach that aligns risk management practices with the strategic objectives and operational activities of the organization [1]. This approach includes the processes of systematically identifying, assessing, managing and monitoring risks that may adversely affect the ability of a financial institution to achieve its objectives. In the context of the high level of complexity, interconnectedness and volatility of the financial sector, effective strategic risk management is recognized as an important factor in ensuring financial stability, enhancing institutional flexibility and ensuring compliance with regulatory requirements.[2]

The organizational models of risk management in banks in the United States and the European Union are based on international standards such as Basel II/III and ISO 31000 and are characterized by enhanced regulatory oversight, a developed internal control system and a high level of institutionalization of the risk culture. Financial institutions operate in a strict regulatory environment aimed at ensuring the stability, transparency and long-term sustainability of the financial system. The main regulatory documents are the Basel III standards, which set requirements for capital adequacy, stress testing, and liquidity management; the Dodd–Frank Wall Street Reform and Consumer Protection Act, which aims to reduce systemic risks in the US financial system; and the European Banking Authority (EBA) guidelines, which form a comprehensive regulatory framework for banks in the European Union. [3] Meeting these requirements requires the implementation of effective internal control procedures, maintaining adequate capital buffers, managing liquidity risks, and transparent reporting. [4] The modern organizational architecture of banks in developed countries is usually based on the concept of “Three Lines of Defense” (TLOD). The first line consists of the front office and business units that directly accept risks in the course of operational activities. The second line includes the centralized functions of risk management and compliance, and is responsible for developing rules, methodologies, and control mechanisms. The third line is represented by internal audit, and its task is to independently assess the effectiveness of the control system and inform senior management. The TLOD model reinforces the institutional separation of roles and ensures compliance with the recommendations of the Basel Committee on internal control. Despite the controversial historical origins of the model [5], its widespread adoption in the banking sector is explained by the possibility of formalizing and legitimizing regulatory requirements for the separation of front-office and back-office functions. This model was originally recommended by the UK regulator FSA in 2003 and was later developed in consultation documents dedicated to operational risk management and the formation of a sustainable risk culture. [6]

Conceptual models of risk management in US and EU banks describe in detail the management entities - the board of directors, the risk committee, the position of Chief Risk Officer (CRO) and specialized units for individual types of risk - and the objects of management, including credit, market, operational, compliance, reputational and strategic risks. This three-tier architecture aims to prevent conflicts of interest and ensure checks and balances between functions.

Table 1. Key elements of organizational models of risk management in US and EU banks

Organizational model element	Content and description
Regulatory framework	Basel III, Dodd–Frank, EBA/ECB
Three lines of defense	Business – risk/compliance – internal audit
Risk culture	Motivation, structure, behavior
Technologies	Artificial intelligence, big data, real-time monitoring

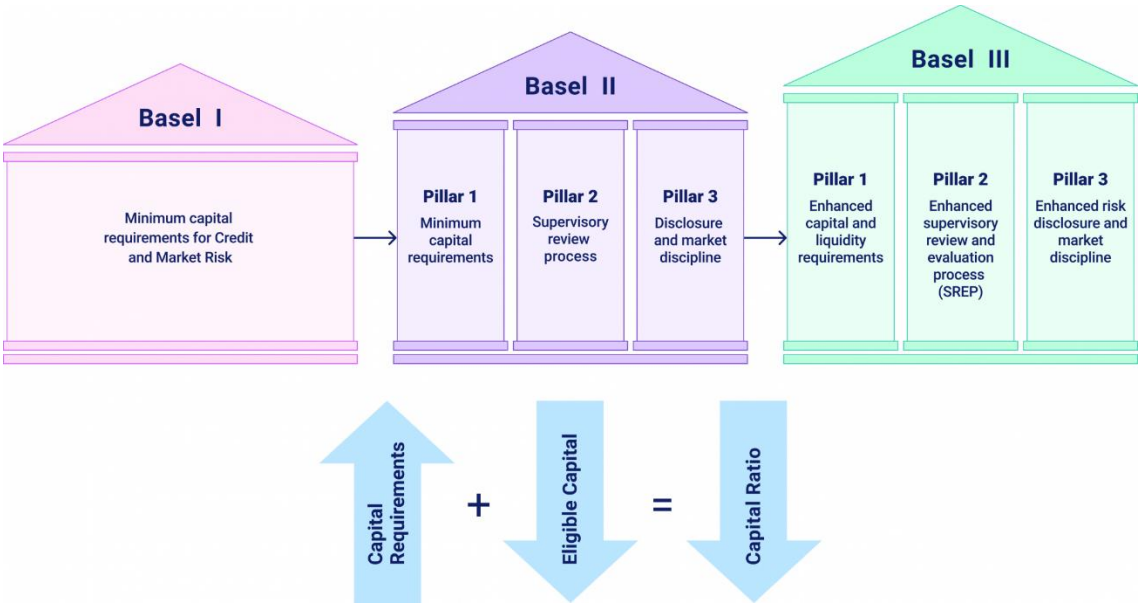
Research shows that the formal independence of risk departments is often challenged by business lines in practice. In some banks, a “power imbalance” in favor of the front office persists, which reduces the real effectiveness of risk management organizational models. Regulators also emphasize the need for a deeper understanding of the interactions between the risk function and business units. In particular, the Senior Supervisors Group report [7] noted that sustainable results can only be achieved when risk management is integrated into the corporate culture. A similar position was previously expressed by the Institute of International Finance, which noted that developing a risk culture is a fundamental tool for effective risk management. [8] In recent years, there has been increasing attention in the US and EU to operational risks, including risks associated with cyber risks, fraud, artificial intelligence and the use of complex stochastic models, as well as to managing model risk. Digital banking technologies increase operational efficiency and allow for the prediction of risks associated with customer behavior and financial trends. Banks are moving to integrated Enterprise Risk Management (ERM) systems based on big data, artificial intelligence, and real-time monitoring. Machine learning algorithms allow for the detection of hidden patterns and anomalies that signal potential threats, including fraudulent transactions, which significantly reduces response time and the amount of losses.[9]

However, digital transformation also increases banks’ vulnerability to cyber threats, such as ransomware attacks, phishing, and data breaches. [10] In this regard, financial institutions are investing in cybersecurity systems that include data encryption, multi-factor authentication, and continuous vulnerability monitoring [10]. Modern practice shows a shift from traditional analytical methods to automated monitoring systems that provide continuous risk identification and rapid management decision-making.

The analysis shows that the organizational models of risk management in US and EU banks are based on standardized regulatory requirements, a three-line system of defense, a developed risk culture and the active use of digital technologies. At the same time, the main conclusion is that the effectiveness of these models is ensured only under the conditions of a real redistribution of management influence in favor of an independent risk function, its active participation in strategic management and deep integration of risk management into the corporate culture and daily activities of the bank.

In the UK, the main tool for assessing control is the RATE system, which has been used by the Bank of England since 1997 for a comprehensive assessment of the financial stability of banks. This system includes three main interrelated blocks: (1) risk assessment (Risk Assessment), (2) control tools (Tools) and (3) assessment of the effectiveness of the use of control tools (Evaluation). At the first stage, key indicators reflecting the main categories of bank risks and the adequacy of internal control systems are analyzed. The second stage involves the development of individual control tools, programs and approaches tailored to the specific characteristics of a particular credit institution. The final stage is aimed at assessing the overall effectiveness of the control effect over the entire period of observation, including identifying structural changes in the bank's activities and the dynamics of its risk profile.

In Germany, this task is performed by the BAKIS information and analytical system, introduced in 1997 by the Federal Office for Financial Services Supervision and the Bundesbank. BAKIS is a standardized system for assessing banks, aimed at promptly monitoring the financial condition of credit institutions, identifying trends in the level of credit, market and liquidity risks, as well as analyzing the development of banking groups and the banking system as a whole. Within the framework of this system, a total of 47 risk indicators are calculated and analyzed on a monthly, quarterly, semi-annual and annual basis, including 19 credit risk indicators, 16 market risk indicators, 2 liquidity indicators and 10 profitability indicators. At the same time, the results of the calculated indicators and intergroup comparisons are not directly communicated to the banks; in communication with the bank management, only generalized trends and ratios formed within the banking system or its individual segments are discussed.



In France, the ORAP (Organisation et Renforcement de l'Action Préventive) rating system was introduced by the Banking Commission in 1997, which is a multi-factor software package designed to assess the financial condition of a particular bank. The main goal of the system is to identify potential problems through a comprehensive assessment of all risk components using quantitative and qualitative indicators.

It is advisable to summarize the methodologies for assessing the financial stability of banks in the UK, Germany and France, which are presented in the form of a comparative table (Table 2) reflecting the differences in control approaches, types of methodologies and periods of implementation.

In foreign practice, financial risk management in commercial banks is increasingly associated with the use of stress testing. In this case, stress testing, as a rule, does not involve calculating the probability of a stress event, but its results allow banks to forecast their need for additional capital and liquidity sources. Supervisory authorities recommend using stress tests to assess the adequacy of capital needed to cover potential losses and to develop measures to address liquidity crises.

Table 2. Methods for assessing financial stability [11]

Country	Supervisory Authority	Methods	Began	Methodology type
Great Britain	Central Authority for the Supervision of the Financial Services Market	RATE	1998	Comprehensive Bank Risk Assessment System
Germany	German Central Bank	BAKIS	1997	Financial Ratios and Peer Group Analysis System
France	Banking Commission	ORAP	1997	External Control over the Bank Assessment System
		SAABA	1997	Expected Loss Model

Stress testing allows you to identify crisis situations at the early stages of their development and mitigate their negative consequences by assessing the impact of potential shocks on the financial stability of individual banks and the banking system as a whole. In addition, the results of stress tests are used in the formulation of financial recovery plans and in the preliminary development of measures to restore stability. It is worth noting that stress testing is not a forecast of real losses, but an assessment of the potential impact of specified, exceptional, but theoretically possible events.

Studies conducted by rating agencies confirm the need to introduce comprehensive risk management methods in banking and strengthen regulatory influence by supervisory authorities.

In particular, in the UK, the Financial Supervisory Authority has developed and published special recommendations in the field of stress testing.

4. Conclusions

In conclusion, the effectiveness of risk committees and CROs is largely determined by the quality of corporate governance, the independence of committee members, their level of expertise, the frequency of meetings, and the nature of interaction with the CRO. Within the three-line defense model, the risk committee and CRO serve as an important interface between the second line of defense and the board of directors, ensuring the translation of risk appetite into clear limits and control procedures. The final conclusion is that the formal existence of the risk committee and CRO is a necessary but not sufficient condition; what is crucial is the real authority, accountability, and deep integration of these mechanisms into the strategic management of the bank. Methods based solely on historical data have limitations associated with the volatility of market conditions. The main disadvantage of probabilistic methods is the complexity of modeling previously unobserved events. Therefore, large Western and European banks are using multi-factor aggregated risk management systems based on internal macroeconomic models that combine historical data and scenario approaches.

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