

Development and Justification of Strategy for Ensuring Financial Security of Commercial Bank

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ABSTRACT

Theoretical and methodological bases of forming the strategy for ensuring bank's financial security according to the value-oriented approach have been developed and substantiated. The essence of bank's financial security strategy according to the value-oriented approach has been determined. Scientific and methodological principles of value-oriented strategy forming for ensuring commercial banks financial security have been substantiated. This strategy is considered as a model of generalization of actions to maximize market value of commercial bank, providing effective use of invested capital, financial stability, preservation and increase of assets with prevention of possible risks and protection from existing internal and external threats to achieve key objectives. The main stages of development, substantiation and implementation of bank's financial security strategy have been identified. It has been established that the choice of bank's value growth strategy depends on the level of financial security. Assessment of key components of bank's financial security integrated indicator has revealed that most of the surveyed banks are characterized by low and critical level of this indicator. Components that have the greatest impact on the level of security and bank's value have been identified. Results of bank's financial security integrated indicator should be used in the development of bank's value-oriented strategy. Scientific and practical approach to evaluation of value-oriented strategic decisions to ensure financial security of commercial banks has been substantiated. It has been established that application of these methods makes it possible to quickly identify the causes of deviations from the safe level of bank and take measures to increase the value of banking business.

Keywords: *financial strategy, security, methodical approach, gap method, game theory.*

1. INTRODUCTION

Ensuring financial security is a defining condition of commercial banks and one of the main objectives of their management. Given the latest challenges and threats to the financial security of banking institutions, development of financial strategy to ensure reliable protection of bank from internal and external threats and increase the value of banking business are of paramount importance. The efficient functioning of banking institution is associated with maintaining a high level of financial security and ensuring the growth of market value of invested capital. Therefore, selection and implementation of banking institution financial strategy, which would simultaneously ensure a high level of financial security and value growth is extremely relevant and timely. Solving the problem of

ensuring financial security of commercial banks in conditions of macroeconomic instability is not complete and requires the use of modern tools for development and implementation of sound strategies for financial security.

2. RESEARCH ANALYSIS

Strategies of organizations have been the subject of research by many scholars, among whom I. Ansoff [1] and M. Porter [2] deserve special attention. I. Ansoff considers strategy as a set of rules for decision-making, by which the organization is guided in its activities [1]. M. Porter, who considers strategy as "- the creation of a unique advantageous position that involves a certain set of activities. If there was only one, ideal position, there would be no need for strategy. The tasks of all companies in this case would be considered quite

obvious - each of them would be the first to seek this position and take it. However, the essence of strategic positioning is to choose activities that are different from the activities of competitors [2]. Modern business conditions require the development of strategies not only in the production and sale of goods, but also in financial sector. Thus, Kotsyuba I.I. understands bank financial strategy as a complex multifactor-oriented model of actions and measures necessary to achieve long-term goals in overall concept of development in the field of formation and use of financial and resource potential [3]. Voloshko I.V. considers bank's financial strategy in practice to be understood as a part of financial activity focused on a period of more than one year, the main task of which is to generate a positive financial gap, i.e. a positive difference between interest-sensitive assets and liabilities [4].

3. AIMS

Development of methodological approach and practical recommendations for treatment and justification of strategy to ensure commercial banks financial security.

4. METHODS

Theoretical and methodological basis of study were the works of leading foreign and domestic scientists, reporting of banking institutions. To achieve this goal, such general scientific methods as generalization and systematization, analysis and synthesis, induction and deduction were used. The GAP method was used to identify the reasons for deviations of financial security level from the optimal level. To establish the feasibility of overcoming strategic gaps, methodology of game theory and linear programming was used.

5. RESULTS

Due to the need to make sound financial decisions, the problem of choosing an effective strategy to ensure bank financial security is extremely important. The use of bank value as a factor in determining the level of security is not accidental, as value of banking business is closely related to its security. In work [5, p. 98] the authors note that bank value has a twofold effect on its security level - on the one hand, increase in bank value contributes to its security level (due to increased assets and, consequently, ability to withstand external and internal threats), on the other – value growth increases the level of activity of entities wishing to change the ownership of this institution (both legally and illegally). In this case, the actions of business owner should be aimed at finding such an optimal ratio of components "value-development-security", which will ensure the possibility of its effective operation in future. At the same time, it is necessary to take the value of banking business as a basis and adjust the parameters of development and security in relation to it. This is due

to the fact that value is the basis of development and security, in other words with increasing value, the pace of development and level of security increases. It is necessary to develop such a system of protection (counteraction) to internal and external threats, which would not slow down the pace of development and ensure the growth of banking business value [5, p. 99].

Ensuring financial security of banking institution should be based on developed strategy. The presence of numerous threats (both external and internal) to bank's financial security increases the need to develop a comprehensive approach to their detection, analysis and systematic development of measures to prevent them. Under such conditions, the priority is to implement Basel III principles based on the principles of capital and liquidity management in order to increase the stability of banking sector, as well as to provide a stable base and necessary reserves to withstand risks and crises.

Thus, financial strategy of bank financial security is a set of measures aimed at increasing its value, ensuring solvency, liquidity and stability, efficient capital structure and the most profitable areas of its investments. The purpose of the strategy is to increase bank value, its profitability and expand its position in banking market. Strategy of ensuring bank financial security is developed in accordance with the NBU regulations and should be consistent with the overall strategy and developed on the basis of current regulatory framework.

Despite the variety of strategic approaches to ensuring security of different banks (by form of ownership, size, and capital), formation of strategy should take place in a certain sequence (Figure 1).

At the first stage, the level of commercial banks financial security is assessed and decision is made on the need to increase its level. Assessment of commercial banks financial security level at the initial stage is carried out in order to determine the real state of affairs and compare the results obtained from strategy implementation. It is also expedient to define the purpose, to establish general and strategic purposes of commercial banks financial security maintenance in the long-term period.

Analytical stage involves selection of indicators of commercial banks financial security state, the level of which will be constantly monitored. Components of bank's value formation are among the indicators of financial security. At the same stage, the degree of external and internal threats impact on the level of commercial banks financial security is studied and assessed and an integrated assessment of its level is performed.

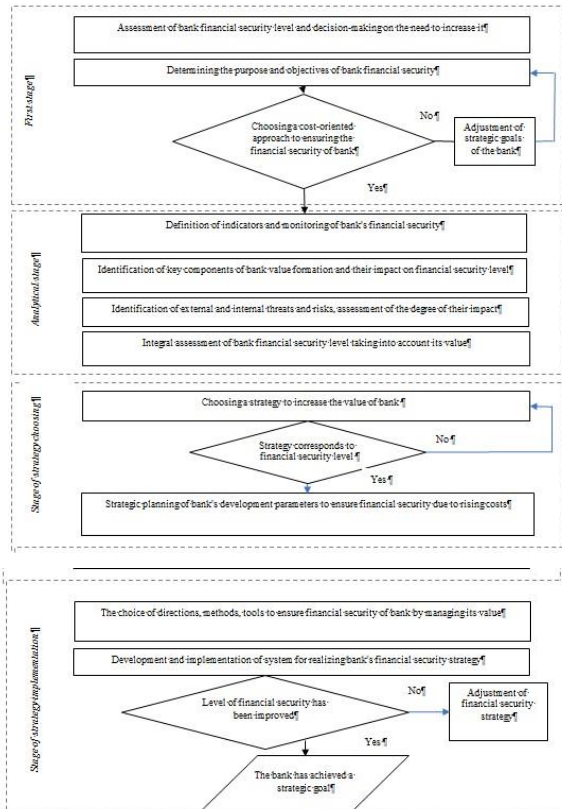


Figure 1 The sequence of strategy formation for ensuring bank financial security according to the value-oriented approach

Source: author's development

An integrated assessment of commercial banks financial security level should be carried out taking into account five groups of indicators - capital and resource (passive operations), credit and investment (active operations), financial and performance security of the bank, currency and monetary security of the bank. Taking into account value-oriented approach to the formation of system and strategy to ensure commercial banks financial security, the group of value and money security of the bank should be singled out.

At the stage of strategy selection, strategy of bank value growth is selected taking into account the level of its financial security. The development of strategy for ensuring financial security by value-oriented approach takes into account the level of bank financial security. Developed methodical approach to determining the level of bank financial security provides the possibility of obtaining one of the five types of its assessment - critical, low, satisfactory, sufficient and optimal. Based on these types of valuation, we propose five types of strategies to increase the value of banking institutions depending on the level of financial security.

Identifying the main factors influencing the value and security of bank allows developing and implementing adequate measures to influence internal

factors and take into account external actions. Understanding the dependence of financial security on the factors that determine bank value, we consider it appropriate to develop measures to increase bank value. Table 2 describes the strategies for ensuring financial security by means of managing bank value, depending on the level of bank security, and their main measures.

In order to determine the type of strategy for increasing the value of banking institutions based on the level of their financial security, calculations of gaps of individual security components have been made (Table 1). As it can be seen from Table 1, the level of security of surveyed banks is low. To develop an effective strategy for ensuring bank security by achieving an increase in its value, it is advisable to use the methods of strategic analysis. One of the methods of developing an effective strategy is GAP-analysis.

Table 1. Assessment of financial security level of state banks of Ukraine on 01.01.2020

Components of financial security	Normative value	PJSC "State Savings Bank of Ukraine"		PJSC "State Export-Import Bank of Ukraine"	
		value	deviation from the normative value	value	deviation from the normative value
Capital and resource security of banks	0,25	0,0373	$e_1 = -0,2127$	0,0505	$e_1 = -0,25$
Credit and investment security	0,2	0,0621	$e_2 = 0,1379$	0,0876	$e_2 = 0,1124$
Financial and performance security	0,15	0,0448	$e_3 = 0,1052$	0,0470	$e_3 = 0,103$
Currency security	0,1	0,0526	$e_4 = 0,0474$	0,0213	$e_4 = 0,0787$
Monetary security of banks	0,3	0,0301	$e_5 = 0,2699$	0,0189	$e_5 = 0,2811$
An integrated indicator of bank's financial security	1,0	0,2271	0,7729	0,2254	0,7746
The level of the integrated indicator of financial security		low		low	

Source: calculated by the author

The analysis of gaps for each component of financial security has showed that all surveyed banks are characterized by maximum gaps in two key components of financial security - capital-resource and value-money. Taking into account the level of financial security and its components, it is advisable to determine a strategy to ensure value growth. The results of determining the strategy to increase the level of financial security by ensuring the growth of bank market value are shown in Table 3.

In order to determine the feasibility of overcoming the identified gaps by applying proposed strategies, it is advisable to use methodology of game theory and linear programming.

Table 2 Strategies for ensuring financial security by managing bank value, depending on the level of bank security

Level of bank financial security	Bank value growth strategy	Characteristics of the strategy
Optimal (value of the integrated safety indicator from 80 to 100 points)	Strategy to maintain the rate of increase in value	A strategy aimed at maintaining the achieved level of security by maintaining the rate of increase in value
Sufficient (value of the integrated safety indicator from 60 to 79 points)	Strategy to increase the rate of increase in value	A strategy aimed at increasing the growth rate of value of banking institution
Satisfactory (value of the integrated safety indicator from 40 to 59 points)	Strategy to achieve the target amount of value	A strategy aimed at determining and achieving the desired value of banking institution
Low (value of the integrated safety indicator from 20 to 39 points)	Limited value growth strategy	A strategy aimed at ensuring the growth of value of banking institution, carried out in conditions of limited resources
Critical less than 20 points (value of the integrated safety indicator from 0 to 19 points)	Strategy to achieve a positive increase in value	Strategy that involves determining the value potential of bank and introduction of measures aimed at increasing the value of bank

Source: author's development

Table 3 The results of determining the strategy for increasing bank value for the surveyed banks on 01.01.2020

Bank	Score of key security components					Recommended value growth strategy
	F1	F2	F3	F4	F5	
PJSC "State Savings Bank of Ukraine"	0	1	2	1	0	Strategy to achieve the target amount of value
PJSC "State Export-Import Bank of Ukraine"	0	1	2	1	0	Limited cost growth strategy

Source: author's development

To obtain reliable results, it is necessary to choose the factors that affect the final indicator (safety) and components for which we observe the largest gaps. Since it was found that the largest gaps are observed in the capital-resource and value-money component, it is appropriate to identify the factors that determine them - regulatory capital adequacy, return on capital, capital adequacy ratio, interest margin, liquidity, financial leverage, the level of problem loans and the ratio of the bank's value to cash flow from operating activities.

The strategy of increasing the value to ensure bank security is determined by 8 selected variables (components). The combination of these variables identified possible game situations. Output payment matrices are formed for each player. We believe that strategy S1 is the strategy currently in use, which means that it remains unchanged; strategy S2 - a strategy that involves changing the components in order to overcome strategic gaps and implement recommended strategy of increasing the bank value.

To make optimal decision to bridge the gaps for banks selected for the study calculations have been made. The main task of solving the matrix game is to determine the type of strategic changes, which will provide the company with the optimal level of efficiency, taking into account the situational features of strategic development [6, p. 14]. Calculation of distances between positions of banks in n-dimensional space allowed constructing a matrix of winnings (Table 4).

Checking the matrix for the presence of saddles point showed that the minimum win (upper price of the game) for PJSC "State Savings Bank of Ukraine" is 7.3672, which indicates the purest strategy S1 of PJSC "State Savings Bank of Ukraine. The top price of the game is 7.3749. Since the upper and lower price of the game does not match, this indicates the absence of a saddle point and the feasibility of using mixed strategies.

Table 4 Winnings matrix to determine the optimal decision on the feasibility of bridging strategic gaps

The results of the implementation of clean strategies		PJSC "State Export-Import Bank of Ukraine"		
		S1	S2	Minimum win
PJSC "State Savings Bank of Ukraine"	S1	7,3701	7,3749	7,3701
	S2	7,3868	7,3672	7,3672
	maximum loss	7,3868	7,3749	

Source: calculated by the author [7-8]

It is advisable to solve linear inequalities to determine the optimal mixed strategies. The results of solving the inequalities are presented in Table 5.

The solution of the linear equations made it possible to determine the optimal strategy for overcoming strategic gaps for each bank. Thus, the current strategy, S1 strategy, is optimal for PJSC State Savings Bank of Ukraine. For PJSC "State Export-Import Bank of Ukraine" the optimal strategy is S2 that is a strategy which provides an increase in return on capital, interest margin and capital adequacy ratio and reduces the share of problem loans.

Table 5 Determining the feasibility of using mixed strategies to bridge gaps

Bank	Strategy	Probability of choosing a strategy	Price, UAH	Optimal strategy
PJSC "State Savings Bank of Ukraine"	S1	0,8	7,373	S1
	S2	0,2		
PJSC "State Export-Import Bank of Ukraine"	S1	0,32	7,373	S2
	S2	0,68		

Source: calculated by the author [9-10].

The stage of strategy implementation involves the choice of areas, methods, tools to ensure financial security of commercial banks, by managing its value, as well as determining the necessary amount and sources of resources for their implementation.

After selection is made, a system of measures to ensure the financial security of commercial banks is developed and implemented under the condition of strategic management of its value.

At the stage of strategy implementation, based on the results of commercial banks' value and financial security level assessment, a decision is made on the expediency of adjusting the strategies.

The desired result of strategies implementation is to increase the level of financial security to planned point. If the results obtained do not correspond to a safe level, it is advisable to develop possible security scenarios.

6. CONCLUSION

The development of strategy for ensuring financial security of commercial banks is a comprehensive management process that involves formulation of goals, methods and means to achieve them, definition of indicators for measuring its results, takes into account risks and has countermeasures. Development and selection of a strategy to ensure banking institutions financial security by managing their value should be carried out using GAP-analysis and game theory. The application of GAP-analysis made it possible to identify strategic gaps, which means to identify those components that need to be adjusted to obtain the required level of security among the main components. The application of game theory methods made it possible to determine the optimal strategy for overcoming identified gaps.

The application of these methodologies will enable managers of banking institutions to minimize time and

resource losses to identify and overcome the problems of financial security in a cost-oriented approach.

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