

## THE RESOURCES OF COMMERCIAL BANKS AND THEIR SYSTEMIC RISKS: THEORETICAL-METHODOLOGICAL ASPECTS(FEATURES)

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### ABSTRACT

The article describes the nature of systemic risks, which are of decisive importance in strengthening the resource base of commercial banks, and the forms of manifestation of systemic risks based on a critical analysis of theoretical and methodological approaches to its determination. In addition, the issues of identification and management of systemic risks, as well as the problems existing in this field, were considered.

**Keywords:** systemic risks, banking resources, banks forming the system, short-term liabilities, imbalances, assessment of systemic risks, monitoring of systemic risks.

### АННОТАЦИЯ

В статье рассмотрены сущность системных рисков, имеющих первостепенное значение для укрепления ресурсной базы коммерческих банков, проведен критический анализ теоретико-методологических подходов к определению системных рисков и данной основе определены формы проявления системных рисков. Кроме того в освещены вопросы определения и управления системных рисков и имеющиеся проблемы в данном направлении.

**Ключевые слова:** системный риск, банковские ресурсы, системообразующийся банки, краткосрочные обязательства, дисбалансы, оценка системных рисков, мониторинг системных рисков.

### INTRODUCTION

The formation of the system occurs simultaneously with the process of emergence of systemic risks. These risks create serious risks for the entire system and require an adequate set of measures. The modern banking system, the global economy, all its elements are characterized by interdependence and interdependence. A crisis situation in any one of the elements causes a chain reaction and derails the system. At this point, in our opinion, it is appropriate to pay attention to the future opinion of the former head of the European Central Bank, J-K. Trishe: "The experience of the last 30 years shows that it is necessary for the state bodies of developed countries to improve their ability

to identify systemic risks. Financial control focused on micro-prudential problems at the individual financial intermediary and individual market level is not able to assess the effect created by the “sum” of risks and their interdependence. Supervisory authorities should prioritize the causes of systemic instability and study the ways in which risks become systemic”.

Therefore, the theoretical and practical analysis of the nature, forms and mechanisms of occurrence of systemic risks in the banking sector is of particular importance for the process of formation of bank resources and its implementation. At the moment, there are a number of problems and special features in this direction, which form the methodological source of this analysis and, in our opinion, it is appropriate (necessary) to dwell on them.

Firstly, despite the fact that the economic meaning of the concept of “systemic risk” is clear enough, there is no consensus among scientists, experts, and specialists of regulatory bodies regarding its practical importance (from the point of view of application in banking activities). In this, we mean not only the essence of the term “systemic risk”, but also the identification of systemic risks, their expression through specific indicators, and the development of a general methodology for this activity. Today, there is no sufficient reason to conclude that a generally accepted (recognized) methodology for assessing systemic risks has been developed. We can only think about the advantage or disadvantage of one or another approach to solving this problem.

It should be noted that today uncontrollable local (regional) risks can easily transform into systemic risks that seriously threaten the economy and financial stability of individual countries, as well as the global financial system. Unfortunately, there is no systematic risk management experience because they have not yet been fully identified and accurately measured, as well as mechanisms for identifying and managing these risks at the initial stage of their occurrence have not been developed.

### **METHODOLOGY**

Analyzing the nature of the occurrence and spread of systemic risks, identifying the triggers and channels for the spread of “infection”, as well as increasing the level of strategic “immunity” of the management system to “disease” and systemic dynamics in the transformation of the regulatory and control system in accordance with the changing conditions of the financial markets. and it is necessary to derive from the theory of complex systems. Only in this way is it possible to understand why an insignificant event or event can bring complex systems to a critical state. Only by relying on systemic dynamics and the theory of complex systems can one determine the dynamics and “life” cycles of the development of markets and systems.

The structure of changes in the closely connected global financial systems has created the need to clarify the concept of systemic risks and to study the reasons and laws of its formation and spread throughout the system.

### **Analysis of scientific and practical sources**

The concept of systematic risk is a relatively new term: the analysis of bibliographic sources shows that this term has been used since 1994 in scientific works related to the field of economics and finance. It should be noted that in most cases the essence of the concept of systematic risk remains unexplained. We can explain this to some extent by the fact that the term was introduced by bank managers from political discussions rather than as a conclusion obtained as a result of economic research. At the moment, in order to assess the level of systemic risks, it is necessary to classify this concept and determine its specific aspects. For this, we believe that it is appropriate to critically review the definitions given to systemic risks in modern economic sources and relevant official documents.

The document Consolidation in the Financial Sector[5] published by the Group of Ten in 2001 provides a further working definition of systemic risks: “Systematic financial risk is the risk that some event will lead to a loss of the value of assets or confidence in them, which as a result, the uncertainty in the financial system will reach such a level that it is likely to have a significant negative impact on the real sector of the economy. “Despite the fact that this classification is quite adequate in terms of determining potential risks in the financial sector, defining and evaluating concepts such as “confidence”, “uncertainty” and “probability of negative impact” is a very complicated issue. Moreover, this definition is relevant to the broader issue of systemic risk. In particular, a sentence of an event can include environmental problems or the beginning of military actions, which are risks related to the political and socio-economic system.

In 2003, according to the classification proposed by George G. Kaufman and Kenneth Scott, well-known American experts in the field of banking risks: “Systemic risk is the risk or probability of failure of the entire system due to the failure of individual elements or components of the system; is the result of parallel dynamics (correlation) between the main or all elements of the system” [6]. We can consider this classification much deeper than the working definition given by the 10 group. First, it does not treat the analyzed event (system failure) and cause (loss of trust) as a single case. Secondly, attention is paid to the fact that the assessment of systemic risks is based on the assessment of its elements and the relationship between them. At the moment, the classification has a number of shortcomings. First of all, the derailment of a system’s activity affects all systems related to it (primarily metasystems) and it has a synergistic nature. Alternatively, in our opinion, it is not quite correct to explain

the system malfunction only by the failure of elements or components. A change in the trajectory of activity of elements or components (the appearance of a difference between the goals of the system and the elements), as well as a change in the order of activity (a difference in the principles of the system and the elements' activity) also lead to system failure. In this case, the activity of the elements can even develop. In addition, external systems constantly influence the system's activity, either positively or negatively. This effect often breaks the relationship between elements and causes the system to fail.

American mathematician Darryl Hendricks, in his scientific research published in 2009, defines systemic risks as "the risk of moving from one stability to another more optimal stability state in a phase (cyclical) manner, characterized by many mechanisms of self-reinforcing feedback and complicating the process of their return" [7]. classified in the style. Of course, this definition (from the point of view of economic science) has many methodological flaws, and its application itself creates a number of systematic risks. In our opinion, it is not appropriate to dwell on them. A positive aspect of the definition is the introduction of the concept of feedback to the treatment (a very important aspect of scientific research methodology).

The various vagueness and contradictions of the above-mentioned opinions and considerations regarding the essence of systemic risks (expressed in one case through very narrow, in another case through very abstract concepts) indicate that this problem has not been sufficiently studied.

### **The main part**

First of all, it is necessary to admit that the concept of systematic risks in the documents published by the control and regulatory bodies was not used clearly until the world financial and economic crisis that started in 2007, or during its use it has a very narrow meaning. Initially, systemic risks were understood as significant problems related to the threat to the stability of the entire financial system/market as a result of failure of one organization to fulfill its obligations to another organization within the specified time.

Although there are no significant oppositions to the positions of supervisory and regulatory authorities on the issue of improving approaches to the process of identifying and managing systemic risks, most of the G20 countries have not developed a unified concept for identifying systemic risks. Different countries (even informally) have different views on systemic risks, which are primarily based on the exogenous nature and global nature of risks, which means that risks are considered only through financial characteristics [10,11].

In particular, the Financial Stability Board, the IMF and the Bank of International Accounts consider systemic risk to be "the risk of disruption of financial services as a

result of the disruption of the entire financial system or part of it, which has the potential to have a serious negative impact on the real sector of the economy."In the United States, systemic risk refers to serious adverse consequences for financial stability in the United States. In Great Britain, systemic risks are risks that negatively affect the stability of the entire financial system or its main part, arising from the structure of financial markets or the characteristics of the distribution of risks in the financial system, as well as the level of unsustainable growth of loans or debts [13,14,15,16].

In our opinion, among the considered approaches, it is necessary to pay special attention to the methodology proposed by the experts of the European Central Bank. At the heart of this methodology is the identification of three main types of systemic risks. This, in turn, provides an opportunity to determine the multifaceted nature of systemic risks and areas of occurrence. The first of them is the risk of "contagion" (the spread of the crisis to the entire system), the second is the risk of macroeconomic shocks (a crisis shaking the entire economic system), and the third is the risk of imbalances (accumulating over a certain period). These risks are not mutually exclusive and occur separately or in a combination.

The risk of "contagion" is manifested in the fact that a specific ("specialized") problem leads various financial institutions or markets to a state of crisis step by step. As an example of such a risk, the illiquidity of one bank leads to the bankruptcy of another bank.

The second form of systemic risks refers to widespread exogenous shocks that simultaneously have a negative impact on financial intermediaries and/or markets. In particular, the decline in economic growth leads to a narrowing of the scope of banking activity.

The third type of systemic risks is related to the endogenous accumulation of large-scale imbalances in the financial system during a certain period (for example, a period of continuous growth of lending). Accumulated imbalances under the influence of endogenous or exogenous factors simultaneously negatively affect the activity of a large group of financial intermediaries and/or markets.

The last two types of systemic risks are particularly important due to the seasonal nature of the financial system. Of course, it should not be overlooked that the risk of "contagion" can play a role in this.

If we conclude on the first direction of the issue which we have mentioned before it is necessary to know clearly absence of the essence definition of the object and subject of study, furthermore the lack of clarification of the causes and spread of risks in the system, lows of occurrence may create serious barriers in the effective reform of the system regulating the activities of financial intermediaries.

So, in turn we should pay attention to the emergency of imbalances which have not been taken into account of the micro and macro levels and spread of all their system and the formation of new systemic crises.

Secondly, financial markets, currencies and to understand the relationship between countries and at the same time a risks of financial markets “address” should clearly determining is extremely important not only for government organizations but also, it is necessary for credit organisations. It’s clear that the availability of complete information on this issue will create effective solutions during the accumulation (gathering) and strengthening of systemic risks, The reason is any decision of regulation or conduct banking activities should be made not on the basis of doubts but it should be made based on right information about risks to financial stability.

The most researches of analytics and scientists is the emergency and accumulation of systemic risks in the banking sector manifests itself, it’s noted by this way

- the strengthening of the position of banks that are dominant in the financial intermediation system and are affected by the criterion of too big to fail

(presumably, too big to fail or the bankruptcy of such an organization will derail the entire financial system) (this situation leads to a weakening of the entire system and a decrease in the level of flexibility);

- the use of short-term obligations in the banking energies

- the preservation and increasing tendency of global and regional imbalances ( systemic debt crisis)

As we mentioned above of regarding the second factor in the banking activities increasing and accumulation of systemic risks are connected with the large-scale use of short-term debt obligations by the bank. If there’s any doubts about the issuer, these obligations can be quickly converted into funds, Such a conclusion cannot be drawn with medium or long-term necessities.

More than 30 years ago economists D. Diamond and F. Dybvigs pointed out that such a strategy of banks, while creating certain possibilities may weaken their position.

According to them the application of the listed banking strategy leads to the emergencies of many structural elements, such as deposit insurance and the lender of last resort which weaken the bank position, it can unquestionably be solved by Central Banks.

At the same time, we should note that the problems during the word financial and economic crisis were not related to banks liquidity but to their lack of Payment. In practice it is very difficult to distinguish between illiquidity and solvency, the difference between the terms can be several days. Although the banking crisis was caused by excessive leverage and risk-taking, the liquidity provided by the central bank

led to an increase in debt relief. The Central Bank can effectively (without creating a chain of defaults) provide liquid funds only to solvent organizations.

At first glance, the stated reasoning does not seem to apply to systemic risks. But such a situation is at the heart of systemic risks. After all, the functions of the financial intermediation system are interconnected, and the problems that arise in any part of it form problems in the provision of services that are considered vital for the economy. In such a situation, state bodies are forced to take measures to stabilize the situation.

Thus, state support encourages the bank to take more risks: if things go well, they get additional income for the risk, but if they fail, the state compensates for the loss. The higher the level of risk, the greater its importance for the state, the greater the importance, the greater the amount of funds allocated by the state, and the greater the desire to take on more risks. This connection was called “financial doomsday machine” by M. Wolf [23]

### **Conclusions**

Many measures are proposed to reduce the level of systemic risks in the banking sector, ranging from tightening regulatory capital requirements to restructuring financial institutions according to their functional activities. In our opinion, it is appropriate to express the following principle, which is at the heart of systemic risk in the banking sector;

The costs of transformations in the structure of bank liabilities, that is, the costs of periodic financial crises, must be borne by the beneficiaries of this transformation" (or in other words, "the polluter must pay compensation for this"). Of course, the application of this principle creates the problem of determining the cost of financial system derailment. But this is a separate research topic.

If it is not possible to determine the cost of derailment of the financial system, or if it is considered that it does not solve the problem of systemic risks, there are other methods in the practice of banking supervision: limiting leverage, increasing capital requirements, etc. However, there are certain problems in their application. In particular, the application of the norms of the Basel III agreement is very important in the regulation of banking activities.

At the same time, there are a number of factors that the possibility that the introduction of agreement criteria into banking activity will ensure the elimination of systemic risks is not maximal due to the following reasons:

- firstly, the maximum level of capital cannot save from the crisis. It should be recognized that when investors' “mood” and future forecasts change (especially in developed countries), highly capitalized banks may appear to them as undercapitalized and insolvent banks.

This situation was observed during 2007-2008. According to the documents of the IMF regarding the crisis, the indicator of the level of capital supply did not gain much importance during the crisis. Only long-term storage of a large amount of capital in the bank's balance sheet can prevent a crisis;

- secondly, the risk-weighted asset index is used to assess the level of capital adequacy. The appropriate level of risks is determined retrospectively. The level of asset risk defined by the Basel Accord did not play a role during the crisis the main reason for this is not the mistakes of investors or regulatory authorities, but the lack of an opportunity to accurately assess the risks that are likely to occur. Because in a rapidly changing economic environment with a high degree of interdependence and dependence, risks constantly change their nature and form of occurrence.

-thirdly obtaining this information alone creates enough problems for a number of reasons listed below limitation of information necessary for regulation and analysis by legal norms; restrictions on disclosure of information on certain markets/financial products (in particular, services of a complex nature); on collection of information on the activities of non-bank credit organizations (investment banks, insurance organizations and hedge funds) difficulties; non-observance (or delay) of publication deadlines of performance reports.

- fourthly, the above-mentioned problems do not stop work in the direction of the development of the methodology of systematic risk assessment and monitoring. It weakens them to some extent. Since this problem is large enough, it will take a long time to solve it. At the moment, it is necessary to protect against unnecessary actions in this direction.

-fifthly, despite the fact that the responsibility for ensuring financial stability and identifying potential risks is primarily borne by national regulatory bodies, the financial system is international in its essence. Therefore, international cooperation and coordination of actions in the field of financial monitoring, regulation and control is required.

### **In conclusion**

the theoretical and practical aspects of systemic risks require systematic research. As one of the current directions of such activity, it is possible to mention the necessity of clearly differentiating different types of risks (primarily based on empirical analysis). In any case, it can be considered that global macroeconomic models do not reflect all aspects of financial stability. Second, theoretical research should cover the mechanisms and sources of accumulation of widespread (traditional) imbalances. In this regard, we believe that special attention should be paid to the development of adequate methods for assessing the positive aspects of financial innovation and the costs associated with it. Thirdly, it is necessary to become the object of systematic



research on the activities of financial intermediaries, which are taken separately and acquire systemic importance. Fourthly, in order to increase the effectiveness of regulation at the macro-prudential level, it is necessary to expand the scope of theoretical and practical research of problems such as the comparative risks of exchange and over-the-counter trading, the role and circulation of derivatives.

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