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SCIENTIFIC RATIONALE FOR THE INFLUENCE OF BANKING SECTOR ON THE INNOVATIVE DEVELOPMENT OF ECONOMY

Abstract. The theoretical bases of determining the influence of banking sector on the innovative development of economy are systematized and improved. The current theoretical provisions characterizing the processes for organization of relations between banks and enterprises of real sector of economy and arising from financing of innovative development of the country are determined. Different approaches of scientists to assess the relationship between banking sector and economic growth are described. The generalization of the current approaches in the scientific literature for the definition of «interaction of the banking and real sectors» allowed us to say that they are limited to the composition of participants and the priority in the initiation of interaction; the scale of interaction (interaction on micro-, meso- and macroeconomic levels based on the influence of endogenous and exogenous factors) and the forms of interaction (syndicated lending, integration, partnership). It is proved that financial interaction between the subjects of the innovation process is determined by exogenous and endogenous factors. Exogenous factors are a set of factors of macro- and microeconomic environments, which form the position of the external environment of the national banking sector and create the potential for opportunities to finance innovation. The group of endogenous factors consists of transformational and transactional factors that shape the internal environment of banks, determine the availability of their financial potential and the possibility of using it to finance the needs of innovative economic development. The study proved the possibility of obtaining a positive or negative synergistic effect from bank financing of innovative development, depending on the impact of mentioned factors on the results of lending relations and the possibility of forming the required financial resources for banks' lending to innovative projects and programs, taking into account threats and innovation risks. The possibility of the impact of innovative loans of banking sector on the development of economy at the macro- and microeconomic levels is assessed. It is indicated that understanding the results of the processes of interaction between banks and borrowers under the influence of various factors will contribute to the formation of an effective lending risk management system to obtain a positive effect from bank lending to the needs of innovative economic development.

Keywords: innovative development of economy, the bank, the borrower, the financial interaction, factors of influence the potential, synergistic effect, innovative risks.

JEL Classification G21, G24, O16, O31

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НАУКОВЕ ОБҐРУНТУВАННЯ ВПЛИВУ БАНКІВСЬКОГО СЕКТОРУ НА ІННОВАЦІЙНИЙ РОЗВИТОК ЕКОНОМІКИ

Анотація. Систематизовано і вдосконалено теоретичні основи визначення впливу банківського сектору на інноваційний розвиток економіки. Визначено наявні теоретичні положення, що характеризують процеси організації взаємовідносин між банками і підприємствами реального сектору економіки та виникають при фінансуванні інноваційного

розвитку країни. Охарактеризовано різні підходи вчених до оцінки взаємозв'язку між банківським сектором та економічним зростанням. Узагальнення наявних у науковій літературі підходів до визначення поняття «взаємодія банківського та реального секторів» дозволило стверджувати, що вони обмежуються: складом учасників і пріоритетом в ініціації взаємодії; масштабами взаємодії (взаємодія на мікро-, мезо- і макроекономічному рівнях на основі врахування впливу ендогенних та екзогенних чинників) і формами взаємодії (синдиковане кредитування, інтеграція, партнерство). Доведено, що фінансову взаємодію між суб'єктами інноваційного процесу детермінують екзогенні та ендогенні чинники. Екзогенні чинники — це сукупність чинників макро- та мікроекономічного середовища, яка формує позиції зовнішнього середовища національного банківського сектору і утворює потенціал можливостей фінансування інновацій. Групу ендогенних чинників становлять трансформаційні й трансакційні чинники, які формують внутрішнє середовище банків, визначають наявність їхнього фінансового потенціалу і можливості його використання для фінансування потреб інноваційного розвитку економіки. Проведене дослідження довело можливість отримання позитивного або негативного синергетичного ефекту від фінансування банками інноваційного розвитку залежно від впливу визначених чинників на результати кредитних відносин і можливості формування потрібних фінансових ресурсів для кредитування банками інноваційних проектів і програм, з урахуванням загроз виникнення та реалізації інноваційних ризиків. Оцінено можливість впливу інноваційних кредитів банківського сектору на розвиток економіки на макро- і мікроекономічному рівнях. Вказується, що розуміння результатів процесів взаємодії між банками і позичальниками під впливом різних чинників сприятиме формуванню ефективної системи управління кредитними ризиками для отримання позитивного ефекту від кредитування банками потреб інноваційного розвитку економіки.

Ключові слова: інноваційний розвиток економіки, банк, позичальник, фінансова взаємодія, чинники впливу, потенціал, синергетичний ефект, інноваційні ризики.

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Introduction. The financial interaction of banking sector with other sectors of economy has a direct impact on the cycle of capital turnover, including the stages of reproduction, circulation and movement. Financing the development of various stages of production contributes to the rational solution of issues related to the introduction of modern innovative technologies, development of science-intensive industries, modernization and renewal of production assets and in general, to fulfilling the tasks of innovative economy.

The need to solve these tasks is relevant for Ukraine, as the multifaceted nature of the national economy, fundamentally different technological level and institutional conditions for the development of different sectors of the national economy exclude the possibility of defining a single, universal model of innovation development. Therefore, the global goal of implementing the tasks of interaction of the Ukrainian banking sector with other sectors of economy to create conditions for the proportional development of its sectors and regions is the banks' financing the needs of proportional and innovative economic development.

Literature review and the problem statement. Problems of participation of banking sector in the process of financing the innovative development of economy, resource provision of the lending process are in the field of scientific interests of both domestic and foreign scientists, such as: B. Andrushkiv, T. Vasylieva, A. Halchynskii, V. Heiets, O. Dziubliuk, M. Zvieriakov, V. Zymovets, O. Kolodiziev, L. Kuznietsova, O. Liuta, I. Movchan, O. Ohloblina, L. Prymostka, R. Lucas, S. King and R. Levine, R. Rajan and L. Zingales, O. Inshakov and others.

While acknowledging the achievements of scientists, it should be noted that the methodological foundations for effective interaction between the banking sector and enterprises of other sectors of economy that implement innovations and use bank lending as a source of funding remain insufficiently studied. In particular, the theoretical provisions of bank innovative lending

(definition of the essence and features); identification of factors for intensifying the participation of banking sector in financing the innovative development of the state and the risks that arise in the process of lending by banks to the innovative needs of customers require in-depth development. Therefore, the purpose of the article is to deepen the theoretical foundations for determining the impact of banking sector on innovative economic development.

Research results. The first stage of our study is to determine the theoretical foundations for the organization of effective interaction between banks and enterprises. In the Great Encyclopedic Dictionary, the concept of «interaction» is interpreted as «a philosophical category that reflects the processes of influence of objects on each other, their mutual conditionality, the most common and universal form of development and change of their state, and the generating one object by another» [1].

The problem of interaction between the banking and real sectors is a field of theoretical research, which under the influence of changes in economic processes, namely — globalization, cyclicity, digitalization — is constantly evolving and deepening. Thus, the study of the interaction of each sector of economy was conducted by leading foreign economists A. Smith, D. Ricardo, K. Marx [2—4], etc., who made a significant theoretical contribution to the formation and development of the concept of interaction of economic entities.

Also the following scientists dealt with issues related to the evolution and development of sectors and the interaction between them: T. Beck, A. Demirguc-Kunt, R. Levine [5], R. King [6], J. Schumpeter [7] and many others.

Ukrainian economists Yu. Bazhal, O. Baranovskyi, O. Dziubliuk, M. Zvieriakov, L. Kuznietsova, L. Prymostka, M. Rudenko [8—13] and others paid special attention to the issue of interaction between banks and enterprises.

The generalization of the existing different opinions of authors in the scientific literature on the peculiarities of the interaction of the banking and real sectors allow us to conclude that their characteristics are limited to the following features:

- the composition of the participants and the priority in the initiation of interaction (enterprises of real (industrial) sector, the state, the Central bank, the banks — and the initiative of interaction belongs to the banks);
- the scale of interaction (interaction at micro-, meso- and macroeconomic levels, taking into account endogenous and exogenous factors);
- the forms of interaction (lending, integration, partnership).

Systematization of different approaches of researchers to determine the nature and features of relationship between banking and other sectors of economy led to the conclusion that the concept of «interaction of the banking and real sectors of the economy» involves defining the processes of mutual influence of the parties on each other, taking into account their conditionality and focus on achieving final results at the microeconomic level (profit maximization, business expansion) and effects at the meso- and macroeconomic levels (innovative development, positive changes in the structure of regions, industries, economy).

A feature of the current stage of interaction is the mutual influence on the development of innovation: banks lend to the innovative needs of borrowers, and bank customers require innovative banking products and service methods to streamline such interaction. Therefore, effectively organized interaction promotes innovative economic development. Consequently, the analysis of the processes of interaction between the banking and other sectors of economy in solving strategic tasks of financing the innovative development of economy is important and relevant.

The next stage of the study is to determine the features of the banking sector's financing of innovations in other sectors of economy. As you know, loans from the banking sector are one of the important sources of financing the innovative activities of real sector enterprises at all stages of development. In general, the financing of innovations by banks requires the formation of certain lending resources (by terms, volumes, price), the availability of rational lending methods, methods of determining the borrower's creditworthiness, ensuring the movement and distribution of cash flows for timely repayment of loans, profits and development tasks of innovative economy.

The analysis of the scientific economic literature shows that in the scientific sphere there are discussions about the directions and level of the relationship between the banking sector and economic growth. The researchers of these patterns have two opposing scientific views on this issue.

The first group of theorists and practitioners takes a rather pessimistic point of view, emphasizing the uncertainty of innovations nature and the possibilities of their financing by banking sector. For example, Nobel laureate R. Lucas when considering the model of economic growth abstracted from the influence of financial institutions, including banks, referring to the limited impact of this factor on economic development [14, p. 6]. In his research, he justifies the insufficient suitability of the use of banks' lending credit resources as a source of funding for four reasons.

Firstly, the assets used in innovation, especially in the context of digitalization of economy are often intangible; they reflect the specifics of firms and are related to human capital. They are difficult to apply anywhere else, so it is not easy for banks to use them as a guarantee of loan repayment (collateral).

Secondly, innovative firms are characterized by volatility in cash flows, at least at the initial stages of innovation. This does not correspond to the existing inflexible repayment schedules of most bank loans.

Thirdly, banks may simply lack the expertise of managers to evaluate innovative technologies at an early stage to determine the actual timing and volume of loans, and hence the level of innovation risk of borrowers. Finally, banks' lending to innovations is constrained by the fact that funding of new technologies leads to the depreciation of borrowers' collateral for already provided loans (which in most cases are granted on the security of existing old technologies and equipment). The above mentioned reasons reduce the ability of the banking sector to finance the needs of proportional and innovative development of other sectors of economy.

At the same time, there is a different opinion on the financing of innovative development by the banking sector. The second group of researchers in their works is more optimistic about the possibility of participation of the banking sector in lending to innovative growth. For example, a group of authors S. King, R. Levine and R. Rajan, L. Zingales in their studies note a significant positive correlation between the development of financial relations and economic growth, arguing that the level of financial development can be an effective indicator of future economic growth [15, p. 8]. According to them, one of the key functions of banks is to establish long-term relationships with firms, during which lending professionals form a deeper understanding of the behavior and capabilities of borrowers.

Thus, banks can have all the opportunities to finance innovative firms, as such long-term interaction allows staff to conduct a more realistic analysis of business plans and predict the optimal amount and timing of loans in order to preserve the main property of the loan — repayment. In addition, internal firms' innovations require not only purely scientific developments. They involve the introduction of existing products and processes that are new to the borrower, and not to everyone else.

It can be stated that such imitation innovations may have less risk and are more in line with the rational level of «risk appetite», which, unfortunately, was demonstrated during the period of economic growth by most banks. This is especially true for those banks that have previously financed specific technologies in partnership with other borrowers. In this case, banks can act as channels for the distribution of innovative technologies for their entire customer base of borrowers.

Finally, even without directly or indirectly financing innovation projects, the banking sector can still stimulate intra-firm innovation. When banks provide funds directly for working capital replenishment or short-term loans this helps to free up internal resources that can be used by enterprises to finance innovation.

The development of financial interaction of the banking sector with other sectors of the economy is promoted by the transformation processes that take place in the global financial space and determine the basic trend of the global banking market and by the vector of macroeconomic

transformations in the national economy, which necessitates new institutional solutions to the evolutionary problems of innovative development of all states, including Ukraine.

The analysis of current scientific researches allowed us to conclude that the financial interaction between the subjects of the innovation process is determined by exogenous and endogenous factors that cause a number of structural contradictions (*Fig.*).

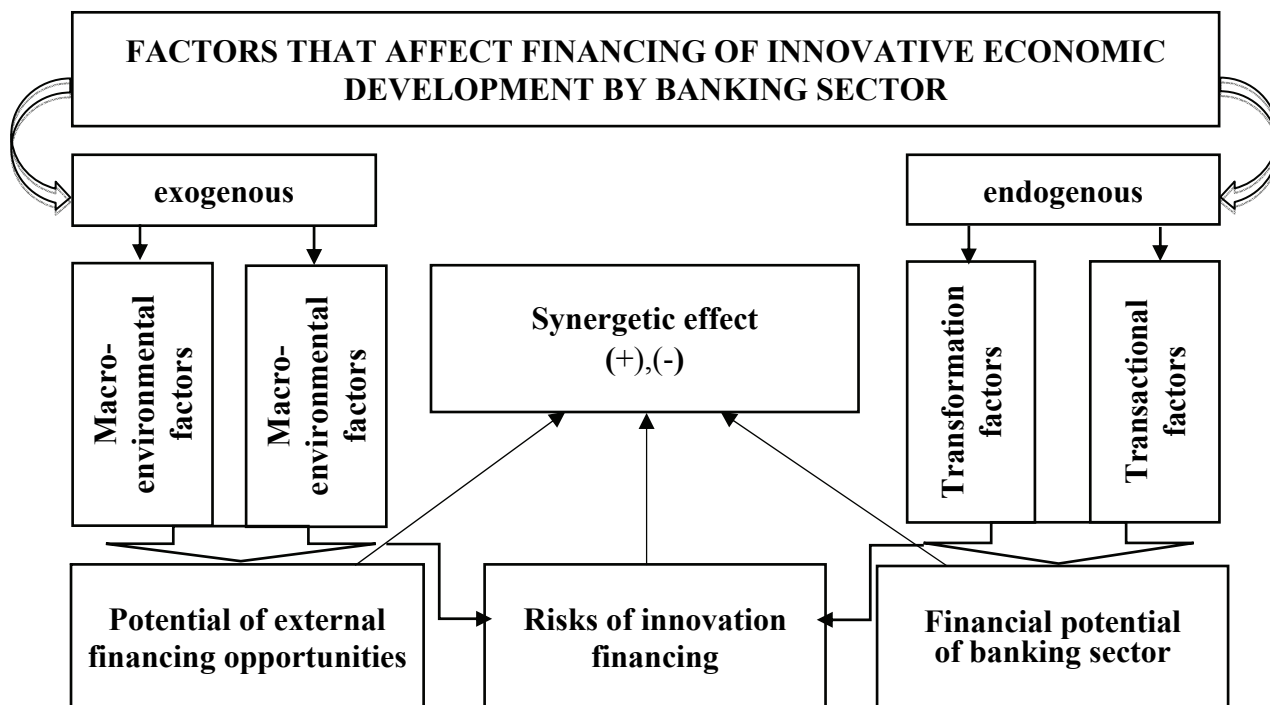


Fig. Factors and results of the influence of banking sector on the development of innovations

Source: own design.

The figure shows that the formation of new approaches to regulating the interaction of the banking sector and real sector enterprises increases the importance of exogenous and endogenous factors, which necessitate a theoretical study of the basic provisions, especially factors of activating the banking sector in financing innovative development of the state.

We will provide a more complete description of the factors influencing the possibility of intensifying the participation of the banking sector in financing the innovative development of the state.

Exogenous factors are those that are determined by the state and characteristics of the macro-environment in which the banking sector operates. Taking into account their number and features, based on the provisions of systems analysis, we recommend studying them as macro-environmental factors and micro-environmental factors.

The main macro-environment factors that affect the selection, formation and implementation by the banking sector tasks of financing innovation include the state and development trends of the world economy and global financial markets; stability of national economies and socio-economic development of society; availability of effective state and normative-legislative regulation of innovative development; stability of the national taxation system and the activities of commercial structures; stability of the financial, first of all, banking sector.

These major, in our opinion, five factors of the macro-environment form a super system that regulates the formation, distribution and redistribution of financial resources of economic entities, including banks. Thus, these factors are directly related to each other and affect the processes of bank financing of innovations, their planning and forecasting, and, consequently, create opportunities for intensifying the influence of the banking sector on the innovative development of economy.

The next type of exogenous factors is micro-environmental factors. These factors can be directly influenced by the banking sector, but these factors are difficult to manage. Therefore, the banking sector, influencing these factors, forms its own economic environment, which will contribute to the formation of the required lending resources to finance innovative economic development, as we know, these resources must be long-term. First of all, this economic environment is formed by all banks' stakeholders: owners, investors, powerful clients that affect the volume and structure of financial resources, as well as contact groups (audience) who are directly interested in innovative development and can significantly affect the effectiveness of these processes. This creates the possibility of forming the required flows of lending resources, i.e. forms the potential of external opportunities for financing the needs of innovative economic development by the banking sector.

Therefore, if the macro-environment in the context of financial globalization forms a single global organizational and legal space, which determines the general principles of formation and further redistribution of financial resources in the national socio-economic system, the micro-environment determines the specific economic conditions of lending resources to finance innovations in the state by the banking sector.

Thus, the set of factors of macro- and micro-environments (exogenous factors), forms the position of the external environment of the national banking sector and creates the potential opportunities for funding innovations.

Based on the essence of the term "potential", the potential of external financing the needs for innovative economic development by the banking sector should be understood as the state of exogenous factors at the time of choosing the type of loan and lending method, as well as prospects of their possible changes (forces of influence) at the time of development of the provided lending resources for innovations.

Negative changes can be generated by economic cyclicity, peculiarities of world and national economies development, processes of transition to new technological systems, asymmetry of capital concentration and availability of banking infrastructure in territorial aspect, as well as disparities in both economies and banking sector.

The next group of factors that create conditions for enhancing the participation of the banking sector in financing the innovative development of economy are endogenous, i.e. those factors that are determined by the development and efficiency of structural elements of the investment potential of the banking system (resource, technological, managerial, intellectual, personnel, information potential, etc.).

That is, the factors that belong to this group are formed within the banking sector and depend on the efficiency and balance of its operation. To systematize these factors, we turn to the six-factor model of the production function developed by O. Inshakov. According to this theory, all endogenous factors are divided into two important groups:

- transformational factors (human, natural resource, technical and technological);
- transactional factors (institutional, organizational, informational) [16, p. 68].

Using this model, taking into account the specifics of banking, we identify those factors that affect the efficiency of the processes of formation of lending resources needed to finance innovations by the banking sector.

As noted above, the transformational factors influencing by the banking sector on the innovative development of the economy include:

- human factor (quality of corporate governance, experience of senior management of the bank, strategic and tactical guidelines for lending to innovative needs of bank customers, as well as professional qualifications and work potential of executive banking staff);
- natural resource factor; for banks it is the bank's capital, the ability to generate a flow of incoming financial resources provided they are sufficient for current lending, the availability of long-term lending resources and the ability to replenish them in a timely manner);
- technical and technological factor (various technologies and techniques used in banking: methods of assessing the effectiveness of innovation projects; the mechanism of development and

implementation of a new product designed for lending to innovation; methods of assessing the creditworthiness of potential borrowers engaged in innovations; technology for forming reserves for possible losses, taking into account the specifics of the innovation project, etc.).

The next group of endogenous factors is transactional ones; in the banking sector they include:

- institutional factor (system of corporate relations, which assigns a list of job responsibilities to each employee of the bank and determines its role in the process of innovation lending);

- organizational factor (organizational structure of the bank, which forms the relationships of individual components of the mechanism of innovative lending and determines the relations of employees responsible for these blocks). The organization and management of the bank, which provides the ability to form and use the necessary lending resources for innovation, require quality management for efficiency of management activities;

- information factor (information content of the lending process both at the stage of formation of innovative lending policy and in the process of its implementation). Banks form information systems that accumulate the most valuable information for them, create lending background of borrowers. It should be considered that in the lending market there is information asymmetry and opportunistic behavior of borrowers, which is manifested in violations of payment schedules, requests for mitigation of conditions in the process of execution of the loan agreement and so on.

The special role of lending transactions depends on the extent to which this group of relationships involves such a redistribution of bank lending resources that will maximize the innovative development of society. This is achieved by their appropriate use, i.e. by providing loans to those economic agents who can use them effectively and in a timely manner, fully fulfill obligations to the bank.

In modern conditions of banks' activity, in our opinion, the priority in the successful implementation of the tasks of financing innovations by banks is a set of transactional factors, which is explained by the bank's main function (mediation in the exchange of temporarily free monetary resources between economic agents). It should be noted that the set of endogenous factors forms the position of the internal environment of banks, as well as determines the availability of financial potential of the banking sector and the possibility of its use to finance the needs of innovative economic development.

Based on the etymology and semantics of the term «potential», the financial innovation potential of the banking sector should be understood as a comprehensive analytical assessment of the current and projected financial condition of banks to determine lending opportunities for innovative economic development. This assessment determines the capabilities of the external and internal environment: formed, accumulated and attracted financial resources, the availability of insurance reserves for lending operations, as well as the ability in case of special need to quickly attract missing lending resources at the best price) to implement financing innovative development of the country.

The combination of these potentials for financing innovations, formed under the influence of exogenous and endogenous factors, creates a positive synergistic effect if the positive impact of all factors is taken into account in the organization of lending relations. If the factors had a negative impact on the ability to create the necessary financial resources or on the processes of financing the innovations by the banking sector, there are innovation risks and a negative synergy effect from the use of these potentials.

Analysis of the results of the study shows that the proposed approach to identifying opportunities for creating financial potential, on the one hand, proves that these approaches help to increase the use of funding opportunities for the national banking sector, on the other hand, the transformation paradigm inevitably requires significant changes in financing innovation needs of economy.

Important results in the area of micro- and macro environments interaction were received by the followers of post-Keynesian theory, such as A. Arnon [17], H. Minsky [18], that determine how decisions made by corporations and financial intermediaries at the micro level, affect macroeconomic stability, periodically generating systemic risks in an unstable economy permeated by mutual debt obligations of economic agents.

Based on Keynesian and Marxist ideas about economic dynamics, the representatives of this theory introduce the concept of financial fragility as a phenomenon generated at the micro level by firms that carry out risky lending financing of their innovative projects, which contributes to the emergence of systemic risk at the macro level. For example, W. McClam characterizes this phenomenon by the dynamics of the ratio of total private debt to public one, which reaches its maximum just a year before the financial collapse [19, p. 29]. This is the risk realized in the world economy in 2007—2009. This confirms the need to take into account the impact of all factors on the results of interaction among the banking and real sectors of economy in order to minimize possible losses from innovation risks.

The analysis of scientific researches to determine the essence of innovation risk leads to the conclusion that it has a certain dualism. Firstly, it is a deterrent to innovation, because the implementation of such risk can lead to a negative result, and secondly, the company-innovator gets a chance to overtake others and form a competitive advantage in the market, i.e. with effective risk management it becomes stimulating. Both areas of risk exposure results should be taken into consideration. To this end, for each of the innovations we should identify possible positive and negative results, quantify them and choose the best options in terms of risk — a positive result.

We should note that the analysis must take into account the risk of the enterprise-innovator and the impact of innovation for other actors in the innovation process. Their positive or negative attitude to innovation can contribute to significant changes in risk (decrease or increase it) and the success of its introduction to the market.

Using such a methodological approach as system analysis, we will identify the possibilities of the impact of innovative loans in the banking sector at the macro- and microeconomic levels.

Macroeconomic level. In the development of the modern economy, the banking sector plays a dominant role in combining the financial resources of other sectors: as a sector of economy with low energy consumption and high added value, the banking sector not only directly ensures rapid growth of the national economy, but also stimulates by the redistribution of free cash the rapid growth of other sectors of economy. In addition, the stable and efficient operation of the banking sector promotes the formation of opportunities for financing the innovative needs of economic growth, i.e. plays an important role in supporting the efficient functioning of the national economy.

In our opinion, the microeconomic level of the possibility of the banking sector's influence on the development of innovations should be divided into positive and negative, which leads to a positive or negative synergetic effect.

The positive role of the banking sector is the ability to make appropriate use of lending resources to finance innovations, optimize them depending on the specifics of lending, determine the most rational method of lending, which will increase the efficiency of bank capital to perform innovative development tasks. The ability of banks to reduce risks in long-term investments on the basis of existing methods of risk management, tools and means is positive. It is known that innovative projects with high profitability require long-term investments, so stock market trading, use of financial instruments, creative approach to financial operations in the field of intermediation, cash saving measures, dynamic equilibrium configuration can reduce and distribute banking risks. This is what contributes to the development of processes for using the deposits of the population to finance innovation, as the banking sector provides maximum guarantees for the individual, which allows to attract significant amounts of free cash of the population to finance long-term innovation projects.

The banking sector can provide many services for society, accelerate the transformation of innovative scientific and technological advances into productive forces and stimulate the development of international economic integration. All this has to some extent a positive impact on the innovative development of the state, which further contributes to a positive economic effect.

The negative role of the banking sector is the ability to generate objective financial risks in conditions of uncertainty in banking, because the banking sector is a sector where there are activities with a high level of debt. The bank has a small share of its own funds, and the source of funds is mainly financial liabilities to customers. However, there are two important conditions. Firstly, the depositor is confident in the bank; secondly, banks perform highly efficient selection and supervision of borrowers. Since it is impossible to determine compliance under these two conditions, financial risks will exist objectively.

Thus, banks, as lending intermediaries between savings and investments, can be a source of losses for many depositors and investors in the wrong performance of their activities, especially in lending to innovations.

Financial and economic globalization, the rapid development of international financial markets and communication technologies, scientific and technological progress can increase the scale and speed of mergers and exchanges of financial resources in different regions. Therefore, financial risks in one country or region can quickly spread to another country or region. When financial risks gradually accumulate to some extent, they turn into a financial crisis, and as a result the economy gets a negative synergistic effect. The negative role of the banking sector is exacerbated by the asymmetry of information in the lending market, which can lead to the fact that the difficulties of one bank can be perceived as a crisis in the banking sector as a whole and cause panic.

These features of the banking sector determine the degree of speed and scale of risk coverage compared to other sectors, which contributes to the rapid evolution of partial financial difficulties, the impact of financial market crises on other sectors of economy and even to the economic crisis. That is, the high fluidity of financial assets, the secrecy and suddenness of financial risks lead to their rapid transformation into serious financial shocks in world markets, which confirm the relationship between micro- and macro-environments.

The above mentioned is confirmed by Carlota Perez's studies. In her scientific works she explores how such a micro-level activity as the creation of bank lending resources, affects macroeconomic processes that lead to the industrial revolution. According to C. Perez, periods of rapid start of the implementation of innovative projects correspond to massive bursts of careless financing. She also justifies that entrepreneurs at the initial stage of an innovative project are in dire need of innovative, even «crazy» bankers [20]. In fact, this means connecting the banking sector with other sectors of economy, which in turn creates a macroeconomic trend. That is, C. Perez demonstrates how decisions about risk financing and the introduction of innovations affect the history of industrial revolutions, which is a macroeconomic phenomenon. In addition, the scientist finds repeated coincidences of clusters of risky financing with clusters of innovative entrepreneurship and interprets such important financial bubbles as massive episodes of lending creation, which coincide with the industrial revolutions.

Conclusion. The study concludes that in solving the problems of innovative economic development in current conditions it is necessary to rationally approach the definition of the positive impact of the banking sector on financing innovation, to take into account the impact of factors on the interaction of banks and real sector enterprises.

To minimize the risks inherent in innovation financing, it is necessary to implement effective macroeconomic regulation to maximize the positive impact of the banking sector with the financial support of innovation development and prevent the possible negative impact of their erroneous activities. This will contribute to the stable, continuous and effective development of the banking sector, which is a key factor in improving the efficiency of its interaction with enterprises of the real sector of economy to address the strategic objectives of innovative economic development as a whole.

Prospects for further research in this area are the development of methodological foundations for the systematic organization of innovative lending in banks.

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