

*Медведева О.А.<sup>1</sup>, Черкасова О.В.<sup>1</sup>, Омеляненко В.А.<sup>2</sup>*

*Medvedeva O.A.<sup>1</sup>, Cherkasova O.V.<sup>1</sup>, Omelyanenko V.A.<sup>2</sup>*

**The analysis of the theoretical foundations of the role of banks in the  
ecosystem of innovation: risks and opportunities**

**Анализ теоретических основ роли банков в экосистеме  
инноваций: риски и возможности**

<sup>1</sup> Филиал Российского государственного социального университета

в г. Серпухов, г. Серпухов, Россия

Serpukhov chapter of Russian State Social University,

Serpukhov, Russia

<sup>2</sup> Сумский государственный университет, г. Сумы, Украина

Sumy State University, Sumy, Ukraine

В статье рассмотрена роль банковской системы в процессе формирования экосистемы инноваций. Проанализировано место банков в экосистеме инноваций «тропического леса». Предложены направления повышения инновационной роли банков и минимизации инновационных рисков путем интеграции с инновационной инфраструктурой. Произведен анализ механизмов поддержки инноваций банками на примере Литвы и Канады.

**Ключевые слова:** инновации, банки, инновационный риск, проект, экосистема инноваций.

In this paper the role of the banking system in the process of innovation ecosystem is considered. Place of banks in the "rainforest" innovation ecosystem is analyzed. Innovative ways of increasing the role of banks and minimize the risks of innovation by integrating with an innovative infrastructure is offered. Analysis of the

mechanisms to support innovation by banks in Lithuania and Canada is produced.

**Keywords:** innovation, banks, innovative risk project, innovation ecosystem.

Innovation is a factor in the growth in business, but their implementation is often accompanied by certain risks and a number of difficulties. One of them is the issue of funding, which must be addressed in the development of innovative projects and in the implementation phase.

According to Gregg Horovitt [1], social and economic model of Silicon Valley allows people to experiment and to spread the risk across the innovation community. And there are three important points. First, in the Silicon Valley, everyone understands that innovation is not just the creation of successful companies. Innovation is primarily related to the resolution of the existing business and society problems. Second, people realize that the process of innovation can be supported only in no-bureaucratic structures, that is, in small innovative companies, so established venture capital industry to support the creation of start-ups, through which the economy and society penetrate new products and technologies to solve existing problems. And the third point: the large companies have access to the markets, but it is difficult to build its hierarchical structure of the innovation process, so in the innovation economy, large and small companies are working closely and easily.

The role of government is to create and implement smart economic policies that allow people to live in the risk logic and implement innovative behavior. Need policies governing the work with high-risk situations. In the U.S., each state agency is required to put 3-5% of its annual budget in innovation. As for the venture investor is an ideal situation – the state is implementing a program of co-financing of innovation 50% to 50 %, and then returns the money to the investor with a small percentage.

For investing venture capital fund should be based on economic sectors that will become drivers of economic growth in the next period. Today this role claimed by biotech, telecommunications, healthcare and energy.

Of the 1,000 applications that come to us, we meet with 200, with 50 applicants meet to select 2-3 teams and invest in them. Of the 10 companies in which

it has invested venture capital fund, one company gives a tenfold return on investment, then 2-3 of the company – a three-fold return, two of work, but the money invested in them, never to return again. The other 4-5 start-ups tend to die [1].

There are three key reasons for the statistics. The first is the wrong vision of market, customer and wrong activities in a general decline in the economic situation. Second, team members cannot work together. Third, do not have enough money invested to create the product due to an incorrect calculation of the required initial investment.

Promising start-ups today are those that offer a fusion of mobile technology devices and medical equipment, water purification technology to drinking water standards, technology in the field of public health, food technology and food security, energy storage and energy storage, agro-technology and biotechnology.

Venture fund financed from three to five years in and out of the company's fifth – seventh year of its operation. The fund invests only when the product startup has already passed the first test of the market, and helps quickly gather feedback from customers to accelerate the development of the products.

We are actively involved in the management of start-ups, helping to build a negotiation process with universities about licensing agreements, business plan.

With regard to the innovation economy cluster system of financing and lending innovation is the most adequate. Cluster system provides funding for a group of related companies that complement each other and reinforce their competitive advantages in the market innovation. Key actors in the innovation process within the framework of this model are varied independent of each other market agents: small innovative companies, large companies, research institutes, universities, united around specific sectoral and regional clusters. The existence of a strong and professional training and technical education, focused on the specific needs of corporations is necessary [2].

We believe that the main innovative risk is the risk of financial inadequacy, which is based on the difficulty of assessing the necessary funds before the project (means of labor , methods and techniques are constantly being improved during the

process) and on the difference in goals for the relationship "developer – investor". This aspect is particularly relevant for international multi- innovation projects, when it comes to the proportional income of the developed technology. This risks, related to the risk of financial inadequacy, are the risk of lack of control and risk of unmanageable business: the scientific basis of all phases of the development, improve the production process proposed product may not be sufficient, as science or science, which are formed on the base of technologies themselves may be at formation stage.

Increasing demand the active participation of the banking sector in addressing the multi-functional and complex problem is dictated by both external and internal factors influencing the course of economic reforms in our country. The external factors include the expanding globalization of financial markets, the increased integration of financial and industrial capital, and the growing needs of domestic producers in attracting foreign investment to innovation.

The whole set of internal factors that influence this process can be divided into two groups [3]. The first is connected with the activity of the enterprises themselves.

Enterprises improve competitiveness through effective cooperation with commercial banks. The need for such mutual assistance is determined by the need to update their fixed assets, conducting market research on potential markets for products, development of innovative strategies for balanced development.

The second group of internal factors that influence the effectiveness of economic reforms, due to the interest of the banking sector in the further integration of the industrial and financial capital. The main of these factors include increasing every year universalization of banking business due to increased competition between commercial banks and non-banking institutions, the need to expand the range of new banking products.

The efforts of commercial banks during the aftermath of the global financial and economic crisis should focus primarily on high-quality reconstruction of existing facilities or modernization of production facilities. As a result, there will be opportunities for the development of qualitatively new, competitive products that are in demand in the world market, the restructuring of certain areas of the business areas

of finance, property, logistics, social workers and others. The ultimate goal of effective banks participation in the innovation process is improving the business capitalization and restructuring of key areas of activity of enterprises and on that basis, their sustainable financial development, guaranteeing high level of dividends to investors.

To implement these strategic objectives will require banks to rapid development of advanced methods for innovative bank management and financial engineering – including such as project finance and syndicated loans, issue and placement of shares or corporate bonds, leasing, factoring, franchising. In addition, quality monitoring of the implementation of innovative programs is very important. The weighted forecasting and strategic monitoring the progress of renovation of enterprises should be supported by the development and introduction of the practice of the flexible mechanisms of motivation of all stakeholders.

In the practice of modern bank sufficient tools exist that allow finance including venture capital business.

According to new approaches to behavior-based business innovation is not a theory of rational choice, but it is human and nice things for us – friendship, team, challenge, adventure, excitement. Thus, understandable motive innovation appears.

Also, two views of the weeds there. Weed on the innovation plantation – it's a weed, and the weed in the Rainforest is a useful idea, which leads us to new product.

Third – the bank is a party to the innovation ecosystem. Bank as a deposit broker, solves the problem of attracting resources – gaining the confidence of those who have surplus funds to attract them, preserve and, where possible, multiply and return. Accordingly, the task of the bank is to find objects for investments that generate cash flow. And no matter what it is – material or tangible assets.

The bank is the same company that has the innovative to find new customer needs and new opportunities. This is a service industry, which must have new products and offers. Today, there are many proposals – a system of cash management corporation cash pooling, project financing for some period.

Banks are constantly in need of projects that generate cash flow to ensure the

implementation of its primary function – to preserve and restore the trusted agent. And today we are looking for an answer to the question – how to bring projects to a level where they can be financed through bank lending.

It is an example of Silicon Valley Bank to mention that is valuable to the customer is not banking services, and communications. Silicon Valley Bank is constantly invites its customers to a business breakfast, business meetings, etc. The task of the bank as an intermediary is to connect people to consult, examination, comprehensive tools to search for business financing and bringing it to the level of bank lending. Trust is the most important thing for the bank since it trust funds. And, recently, the institutional tools and conditions are necessary to review the basis of the model Rainforest innovation. For example, the bankruptcy of the banks in the understanding of this tool against the creditor and bankruptcy in the sense of the Rainforest innovation – is a tool of protection and hedging innovator.

Implementation of the agreement between the bank and the element of innovation infrastructure will create a mechanism for the exchange of information, providing a constant interaction with the participants and accompanied by the implementation of innovative projects, and to ensure consistent communication of designs to support the development of specialized institutions.

Participants can carry out cooperation in the following areas:

- financial support for innovative projects of small and medium-sized enterprises at different stages of their implementation;
- advanced search for innovative projects and present them to the other participants in the agreement;
- attract private investment in projects supported by development financial institutions;
- developing common approaches to the selection, examination, structuring and implementation of innovative projects.

It should be mentioned a few of these initiatives.

Among the projects in which Swedbank participate, support, or arrange them – Competition Open Mind, competition Ideju kauss, organized LIAA, conference

InnoLatvija. Innovation Competence Center in Swedbank use successfully in their work «Blue Ocean» strategy. «Blue ocean» is a new concept of business thinking, which helps to create innovative ideas and find a unique product or service and stay out of the competition. This is a sphere where no one had time to visit competitors, moreover, they did not even think to go there. The Bank has also established its own competence and innovation center with the help of a creative potential of their employees in the business. Contact is maintained with the Innovation Centre, University of Latvia.

Another bank – SEB banka supports businesses and projects that focus on innovation. It is worth noting that the bank's important – even before the start of the project to understand how it is viable and will be able to pay off their own. That is why we advise entrepreneurs attract Latvian Guarantee Agency to obtain surety, as well as encourage cooperation with venture funds (eg, Zalas gaismas investicijas, Balt Cap Management, Askembla Asset Management). It was working all together, the most realistic to implement innovative projects.

Department of Venture Capital (BDC Venture Capital) in the Business Development Bank of Canada is functioning since 1975. Through him, the investments in the amount of 500 thousand to \$ 5 million in private and in public unlisted companies at all stages of development [4]. Department is funded by the boards of directors of companies and providing them with support for management. To date, through the offices of venture more than 400 companies were supported. There are also several regional funds for venture capital - backed governments of the provinces , the main objectives of these funds are to promote development engineering and technology, improving the competitiveness of companies, creating new jobs and economic growth. They support the start of the company, many of whom belong to the sector of high technology and investments in which the first stage is estimated between 250 000 and 2.5 million U.S. dollars. In addition to providing advice and monitoring of these funds help to attract large sums of money from banks and other lending institutions.

Innovative strategies objectively become part of the enterprise, because

opportunities both organic growth of the banking business from traditional sources, and growth through mergers and acquisitions is substantially limited.

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