



# Development of Russian Venture Entrepreneurship by Activating Project Financing of Innovation Activity

## Desarrollo del emprendimiento empresarial ruso mediante la activación de la financiación de proyectos de actividad de innovación

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#### ABSTRACT:

The goal of this article is to substantiate the reasonability of using the project financing (as a new and the most progressive form of investments) for stimulating the entrepreneurial activity in the Russian venture segment. Based on the materials stated herein, it is possible to formulate the following basic conditions: • Innovation activity and development of venture entrepreneurship are the most principle conditions that provide the macro-economic stability and balanced economic growth, • Venture entrepreneurship in Russia has not yet been sufficiently developed, which is related to including the incomplete process of forming the innovation infrastructure required for implementing progressive innovation ideas, • Insufficiency and in some cases non-availability of investment resources seriously hinders the activation of innovation activity in the entrepreneurial segment, • Project financing is an optimal form to attract investments in the innovation activity, as well as in commercially successful programs

#### RESUMEN:

El objetivo de este artículo es corroborar la razonabilidad de utilizar el financiamiento del proyecto (como una forma nueva y más progresiva de inversiones) para estimular la actividad empresarial en el segmento de riesgo ruso. Con base en los materiales aquí indicados, es posible formular las siguientes condiciones básicas: • La actividad de innovación y el desarrollo del emprendimiento de riesgo son las condiciones principales que proporcionan la estabilidad macroeconómica y el crecimiento económico equilibrado. • Insuficiencia y en algunos casos, la falta de disponibilidad de recursos de inversión dificulta seriamente la activación de la actividad de innovación en el segmento empresarial. • Proyecto El financiamiento es una forma óptima para atraer inversiones en la actividad de innovación, así como en programas y proyectos comercialmente exitosos ofrecidos para la implementación por emprendedores de riesgo, y • El hecho de convertirse en el instituto de

and projects offered for the implementation by venture entrepreneurs, and • Becoming of the institute of project financing requires changing approaches to crediting small and medium-sized entrepreneurship by Russian commercial banks and other financial and investment structures. Besides, project financing requires changes in the state economic and financial and credit policy, which is important to pursue now.

**Key words:** project financing, innovations, venture entrepreneurship, investments, partnership, commercialization of innovations.

financiamiento de proyectos requiere cambiar los enfoques para acreditar a pequeñas y medianas empresas El espíritu empresarial de los bancos comerciales rusos y otras estructuras financieras y de inversión. Además, el financiamiento de proyectos requiere cambios en la política económica y financiera del estado y en la política crediticia, lo cual es importante seguir ahora.

**Palabras clave:** financiamiento de proyectos, innovaciones, emprendimiento emprendedor, inversiones, asociación, comercialización de innovaciones.

## 1. Introduction

Innovation entrepreneurial projects including those implemented by the venture entrepreneurship have incomparably higher risks as compared to other areas of activity that complicate relations of entrepreneurs with external investors (Fiyaksel 2006; Semerkova, Geraschenko and Sherstobitova, 2014). Personal funds of founders and affiliated companies are often insufficient to cover needs of a startup. That is why the indefiniteness of the future revenues on investments, indistinguishable nature of assets of innovation enterprises (lack of security), volatility of their monetary flows, and the lack of credit history as a whole make up the basic obstacles for entrepreneurs in their search for financing. In countries with the forming market, including Russia, the problem of financing at early stages of the project is deepened by the under-development of the financial services market.

One more way of venture financing of the innovation entrepreneurship at early stages of the project is the attraction of capital of external investors or business angels. Business angels are individuals investing in the capital stock of a new company with a high potential of growth. A team organizing the exchange of information within a specific project or business idea is simultaneously formed. Unlike venture funds, business angels invest their own savings and capitals, and finance small and medium-sized (including venture) entrepreneurship at earlier stages of their life cycle than other external investors. Former entrepreneurs who sold their businesses, or founders of large and successful companies whose activity is related to innovations development activity act as business angels (Chemmanur, Loutskina and Tian 2014; Grilli and Murtinu 2014; Vanacker, Heughebaert and Manigart, 2014). To our mind, investments of business angels are more useful and productive than those of venture funds, because their provision is combined not only with the possibility to obtain funds but also to provide practical experience and contacts for business (Dudin, Ivashchenko, Frolova, Abashidze and Smbatyan, 1972; Hamel and Mol 2008).

Corporate venture capital is another noticeable member of financing innovations in the whole world. Using it, investors finance and commercialize innovations to overcome the gap between the product invention and its putting into industrial exploitation. As a rule, the corporate venture investor is a large company (often international) that finances and supports a small innovation business by thorough selection of specific innovation and venture initiatives. Corporate venture companies may have a considerable impact on the activity of a business at an earlier stage than the startup of a life cycle which makes risks more predictable as compared to traditional venture financing.

Project financing remains one of types to finance infrastructure and innovation projects in the whole world (Bottazzi, Da Rin and Hellmann 2004; Wonglimpiyarat 2016). We consider it as a method used to finance infrastructure projects of the entrepreneurship based on the limited regress. One of the peculiarities of the project financing is the need to establish a special purpose vehicle within the project that formally fulfills the role of a loaner and the internal monetary flows generated by the project act as the security base.

Traditionally project financing is used for infrastructure projects of large business. However, in the entrepreneurial practice this stereotype has been successfully defied by creating the

relevant infrastructure to support entrepreneurs (Fiyaksel 2006; Dudin, Ivashchenko, Frolova, Abashidze and Smbatyan, 1972; Wonglimpiyarat 2016). According to some authors, the infrastructure to support subjects of small and medium entrepreneurship is a system of commercial and non-commercial organizations created to perform their activity or involved as suppliers (executives, contractors) to place orders for supplying goods, performing works, providing services for state or municipal needs when implementing federal (regional, municipal) programs aimed to develop subjects of small and medium-sized entrepreneurship that provide the conditions for financial support.

As a rule, project financing is provided for the whole term of implementing a project, including innovation projects of entrepreneurship. Due to this, the financial intermediaries must have a sufficient security and warranty base to be able to cover risks. However, in practice, project financing is not always provided with the limited regress. Depending on the term and complexity of the project, regress can be fully determined, i.e. with the right to resort all property and capital of the entrepreneur. This is a special form of motivation to guarantee the return of monetary funds.

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## **2. Methodology**

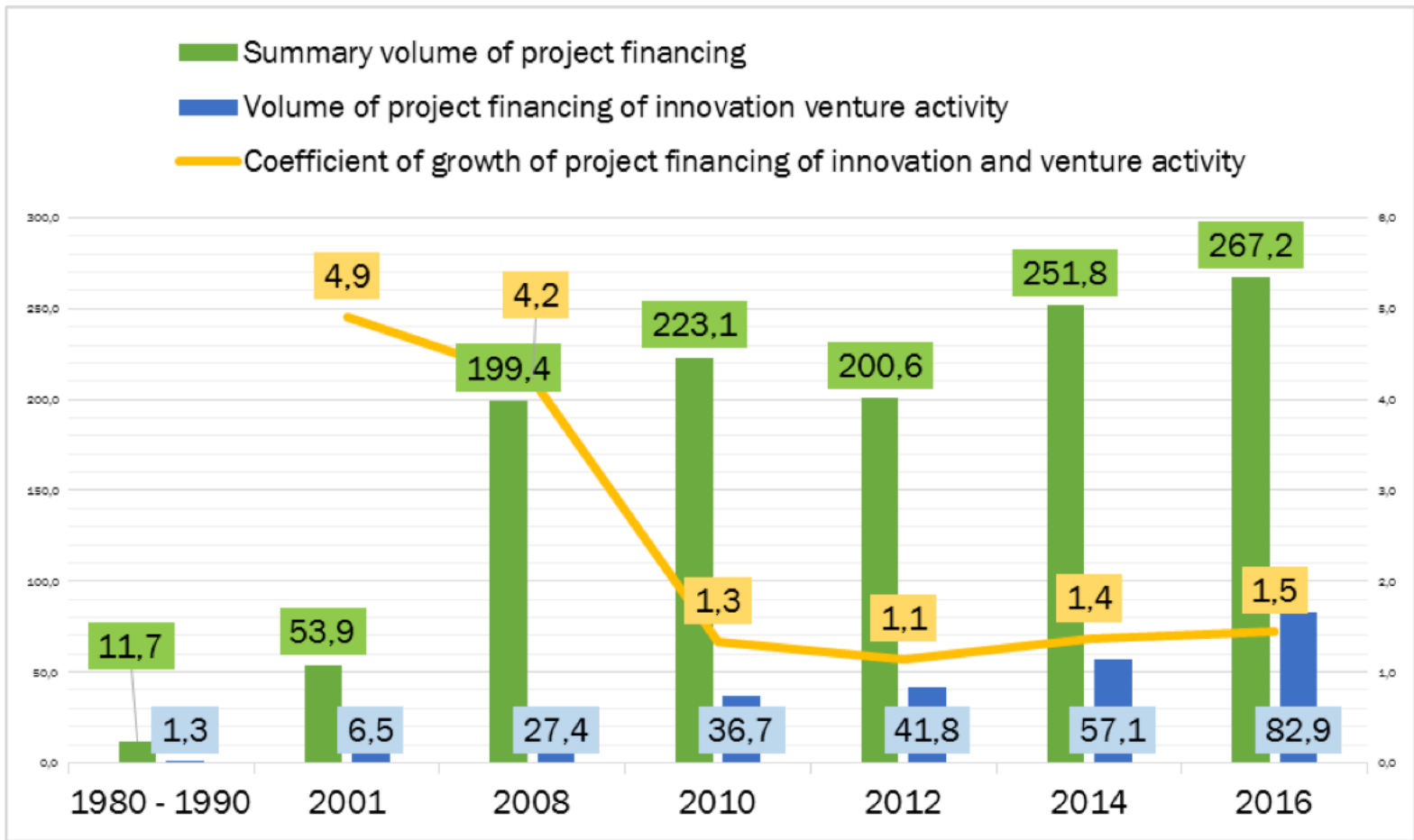
Based on the content analysis, economic analysis of statistical data, and comparative analysis, this article stipulates that methodically project financing is the most developed form of investments in venture projects, as well as in rather risky projects implemented by small and medium-sized entrepreneurship aiming at technological and organizational update of the applied business models. Herewith, based on a wide aggregate of theoretical, methodic and empiric sources (Bottazzi, Da Rin and Hellmann, 2004; Pfirrmann, Wupperfeld and Lerner, 2012; Bigus 2006; Bengtsson and Hsu 2015; Dudin and Ivashchenko, 2016; Riyanto and Schwienbacher, 2006; Block, De Vries, Schumann and Sandner 2014; Cherkasov and Smigel 2016), the article shows and proves that such forms of interrelation as state and private partnership, funds and programs of collective investing, small research and production clusters contribute to increasing the innovation activity of small and medium-sized (including venture) entrepreneurship to a greater degree than traditional financial and organizationally economic mechanisms.

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## **3. Results**

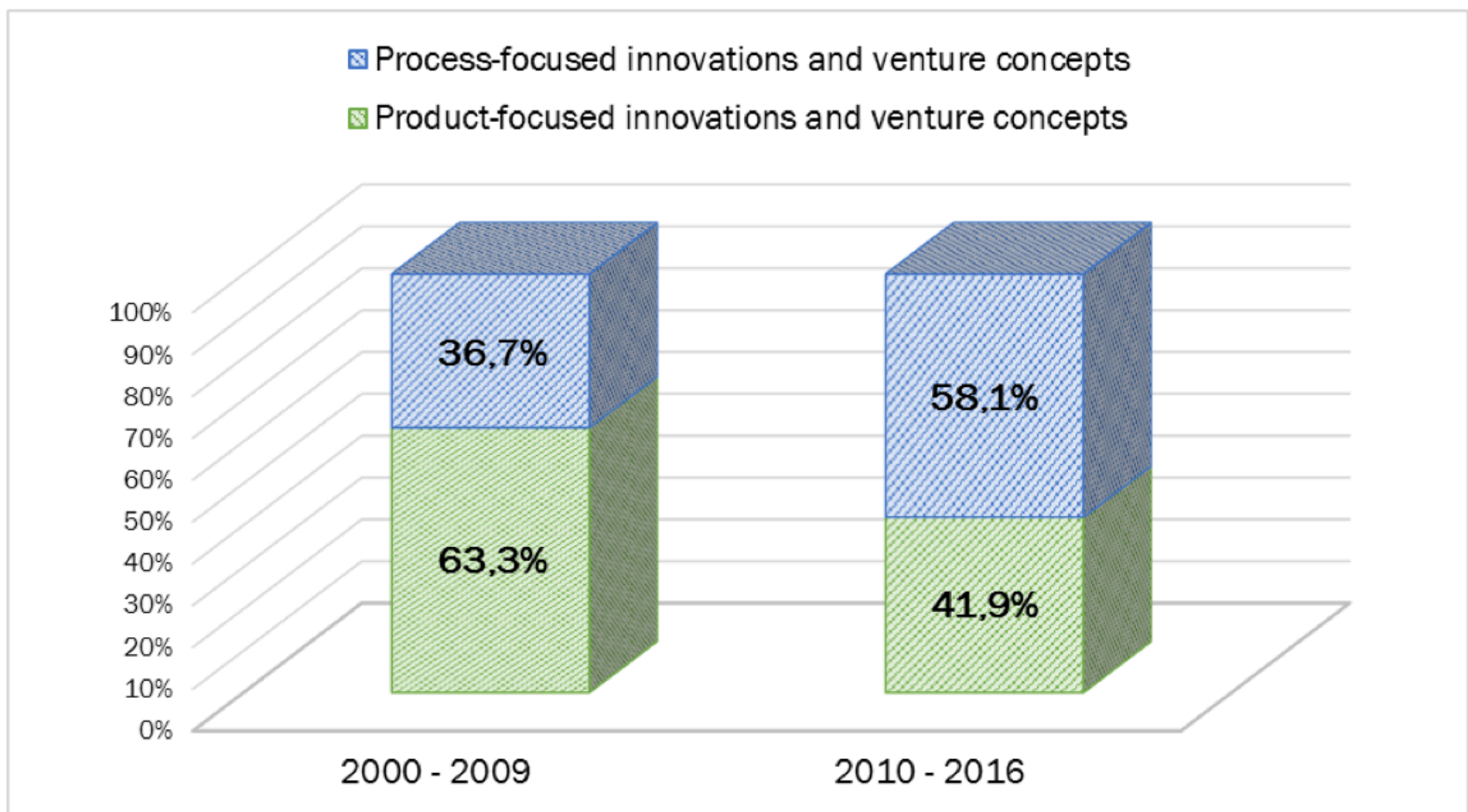
Great Britain can be justly thought as a founder of project financing. Here in 1992 the project of the private financial initiative (PFI) in developing the program of state and private partnership was implemented for the first time. This scheme was peculiar by uniting several stages of designing, constructing and further supporting the object within one contract. The construction and exploitation had been financed at the expense of the investor (fully or partially) who then earned the profit in the form of payments from the relevant budget, also without charging users of the infrastructure. In Great Britain projects of private financial initiative were widely spread in the area of municipal, and public road system, including construction and supporting street illumination, schools, military equipment, roads, hospitals, and other socially important objects (Polyakov, Chertina and Tamaev 2015; Atherton 2009).

According to the global economic statistics, for the period of 2001-2016 the volumes of project financing of transactions in the entrepreneurial area increased more than 5 times (Figure 1). Herewith, we would like to pay attention to the fact that for the same period the volumes of project financing of the innovation and venture activity increased more than 10 times. It allows to say that the entrepreneurship started actively moving to implementing strategies related to the innovation development of its business (types and areas of the economic activity).



**Figure 1.** Dynamics of Volumes of Project Financing of Innovative and Venture Activity in the World, mln. USD (Data and Analysis. Business Consulting. Custom Research, 2016; Reuters 2016).

The balanced and agreed strategy related to the entrepreneurship innovation development allows to synchronize the work of all subdivisions of the organization with its corporate goals. The structure of innovation projects portfolios constantly changes, including the increase in the share of breakthrough and revolutionary innovations. Innovations related to the client servicing, processes (process-focused innovations) in the business model of its development rather than to the product (product-focused innovations) play more and more important role (see Figure 2).



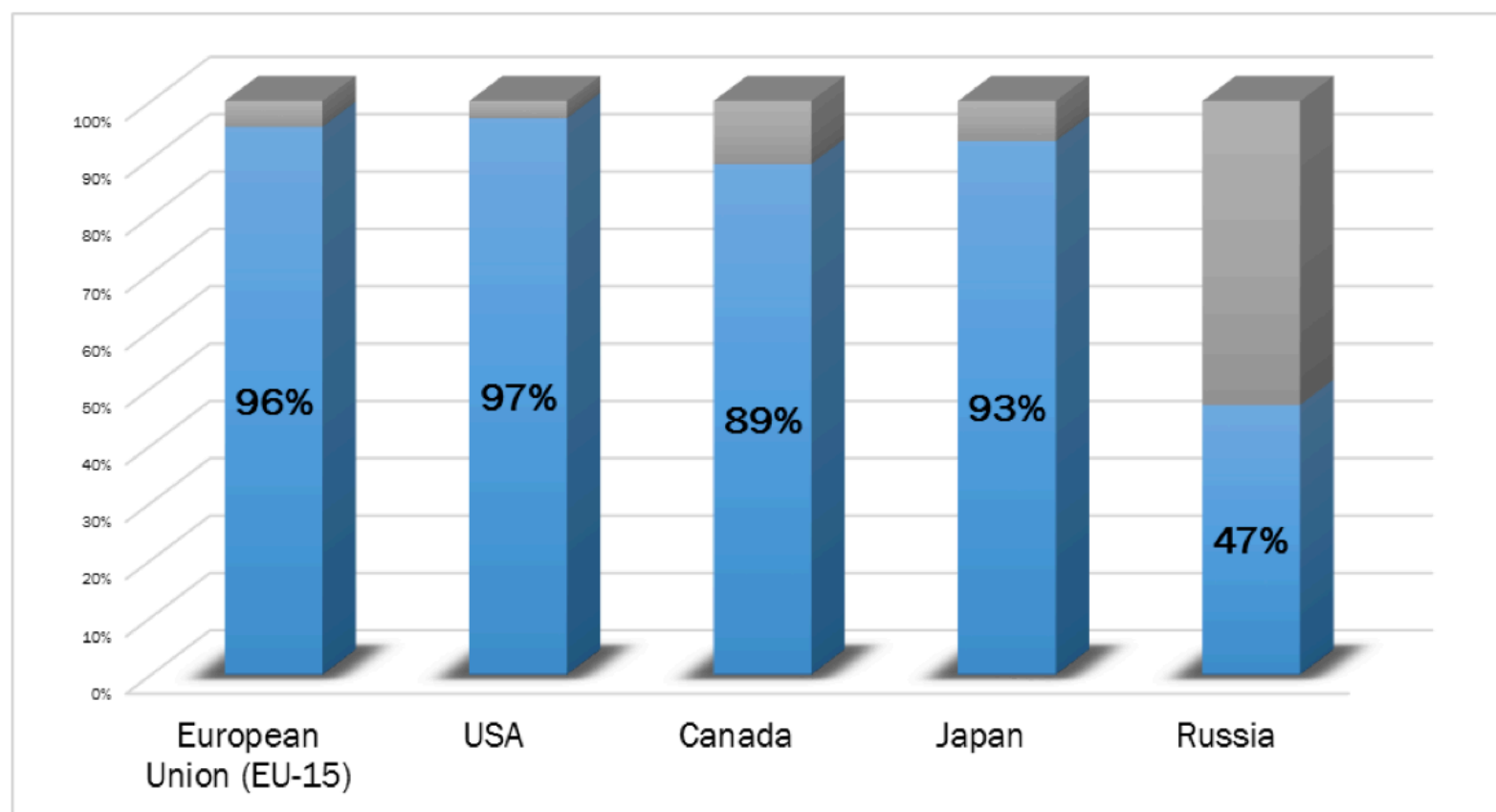
**Figure 2.** Correlation of Product and Process-Focused Innovations, as Well as Venture Concepts Implemented in the Segment of Small and Medium-Sized Entrepreneurship (Data and Analysis. Business Consulting. Custom Research, 2016; Reuters 2016)

Entrepreneurs focused on the near future never critically analyze the existing theories and ideas. At the same time entrepreneurs who are too focused in the long-term perspective can lose sight of the return of funds invested in innovations in the short-term perspective. It is necessary to use the balanced approach to selecting time marks. Top managers who are entirely satisfied with the current position are among the most serious barriers on the way of innovative development. These are commercialization and transformation of innovations into the factor of considerable growth of revenues that often cause the greatest difficulties.

The lack of stable financing for companies at the pre-seed stage is a key restraining factor of development, especially for highly technological enterprises that are not startups in the information and communication area. It is necessary to create regional funds and programs of private collective investing at incubators and technological parks, including by using state funds. Such funds and programs may target financing innovation and venture concepts at early stages of their emergence (since the idea formation).

This is especially important for Russia because here forms of private collective investing have not been practically developed unlike in European countries, Canada, and Japan.

The second important task is related to the development of the innovation infrastructure. According to independent expert opinions, the level of development of the innovation infrastructure in Russia, countries of the European Union (EU-15), the USA, Canada and Japan is estimated differently. However, it is obvious that in the Russian Federation it is impossible to acknowledge the level of the innovation infrastructure development as optimal or sufficient (Figure 3).



**Figure 3.** Estimating the Level of Innovation Infrastructure Development in Certain Countries (Data and Analysis. Business Consulting. Custom Research, 2016; Tverev 2015)

It is obvious that in order to solve infrastructure problems in Russia, it is also possible to use mechanisms of project financing. The cumulative result of infrastructure investments is an increase in the productivity which is one of the main goals for many companies operating in Russia. Since over the recent years Russian regions have reduced investments in infrastructure projects, some market members speak out to support the increase in financing of regional infrastructure projects from federal sources. However, this is not correct because this is now when the load on the federal budget can be acknowledged as excessive.

We will generalize problems that restrain the development of the Russian innovation and venture entrepreneurship by using the mechanism of project financing (Tverev 2015).

- Firstly, this is the lack of laboratories, production facilities and warehouses, or insufficient technological equipment for the development of innovation and venture entrepreneurship by using various business models. Systematic under-loading of the already purchased equipment and existing specialized premises is also an important problem.
- Secondly, the lack of financing for companies at the pre-seed stage is a key restraining factor of the development, especially for highly technological enterprises that operate beyond the area of information and communication technologies. Another key factor is the lack of “smart money” at the early stage, which stipulates the need to actively use project financing.

What is the advantage of project financing over traditional forms of crediting entrepreneurship and classical mechanisms of financing innovation and venture concepts? In Russia the entrepreneurship (above all, small and medium-sized) has a limited access to traditional forms of crediting and classical mechanism of financing either because of the lack of the credit history or because of the already existing excessive debt overburden activity. That is why the selection in favor of project financing is obvious. The project (innovation or venture) generates the monetary flow and thereby independently covers the entrepreneurial debt without attracting other capital that has already been invested in the business model. Besides, the use of project financing is a good means for the entrepreneurship for hedging risks of its basic business.

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## **4. Discussion**

It is possible to obtain considerable advantages for the entrepreneurship and venture concepts within the project financing that can be also used in the area of state and private partnership while establishing small research and production clusters and other forms of inter-company (inter-organization) interrelation.

There are several undisputable advantages of project financing (financial optimization, efficiency of the process related to providing innovation and venture activity, minimization of production risks (Abor 2016; Chen, Yuan and Li, 2017), which we will consider hereafter.

Thus, the first advantage is the provision of financial optimization. The traditional approaches to crediting and financing entrepreneurial initiatives require to impose the responsibility for the raised funds not on the specific initiative (innovation or venture) but on the whole business of the entrepreneur. Consequently, the use of project financing allows to allocate risks by transferring a part of financial responsibility to a specific project (innovation or venture). Herewith, the use of project financing does not worsen the financial independence of the entrepreneurial activity in other areas, and does not worsen the estimation of the level of payment capacity and business credibility.

The second advantage of project financing is the increase in the efficiency of supplying innovation of venture activity. Since the innovation or venture idea is financed as a separate project, resources are supplied in this project without taking into account the formation of the existing business process related to the supply established in the entrepreneurial structure, but on the basis of the rationally estimated needs correlated with the terms and other limitations of the project.

The third important advantage is that project financing allows to optimize production risks within implementing the innovation and venture concept. Project financing considers the level of risks of a specific concept but not the entrepreneurial activity as a whole. In its turn, the operational entrepreneurial activity does not assume risks related to implementing a separately taken innovation or venture concept. It is obvious that project financing both optimizes and hedges risks of the entrepreneurial activity, as a whole, and separate entrepreneurial projects, in particular.

Unlike other forms of financing (including the use of funds of venture funds), project financing allows to not only develop small and medium-sized entrepreneurship in the innovation area and

the area of high technologies (including in the form of small research and production clusters) but also to implement social projects together with the state within the state and private partnership.

However, along with this, it is necessary to note that to a great degree the level, quality, and efficiency of project financing depend on the state of national social and economic development and tempos of economic growth. That is why in order to develop project financing in the Russian economy, it is necessary to provide the following conditions:

- Stable situation in economy: since the profit from the project is earned in the form of forecasted monetary flows, in the context of increased macro-economic risks it is necessary to use various stress tests for forecasting unfavorable scenarios of its completion and development of possible ways of their minimization,
- Availability of markets to sell products and services obtained as a result of the project: this condition is obligatory for the purpose of rationalizing monetary flows and possible cover of losses in case of decreasing the demand,
- Risks identification: taking into account a high degree of correlation of risks from the project implementation, it is necessary to understand their importance for the borrower within favorable completion of the project. In this context, it is important to develop methods to mitigate their consequences of the strategy related to the project financing,
- Accessibility to financing: as applied to the project specificity, it is important to understand perspectives of obtaining funds and compliance with the terms planned by the project. That is why achieving the goal of financing requires the agreed work of the sponsor and financial intermediary - creditor, especially if it goes about the innovation project,
- Political stability: even if to take into account that the state bears the risk of political instability which is a subject of force-majeure within any state contract, it is necessary to set additional conditions for providing terms to fulfill its conditions for creditors and investors in order to decrease the probability of the borrower's default, and
- Risks insurance: some types of risks cannot be mitigated even by obtaining additional guarantees from the state, export agencies, etc. Due to this, it is reasonable to use tools of additional insurance of risks related to non-fulfillment of the project conditions and insurance of the security in the form of forecasted monetary flows.

Besides, we would like to specifically single out organizational and educational programs that are crucially important for high quality development of the Russian entrepreneurship and that may use project financing.

- Firstly, these are the programs focused on supporting in terms of skills and knowledge of the innovation entrepreneurship. This program can be formed to support beginning entrepreneurs-inventors, individual entrepreneurs and small companies that are sure that their intellectual property has potentially high commercial success on the market but do not know how to make the first steps in this area.
- Secondly, these are the programs focused on the cooperation related to searching for highly qualified managers. Within this program entrepreneurs can submit a request for co-financing of the expenses related to paying for the labor of the most qualified specialists who can ensure the innovation or venture concept to quicker and more efficiently overcome the early stage and move to the phase of the product launch in the mass production or occupy a specific share of the market.
- Thirdly, these are the programs focused on creating a concept of the test pattern of the innovation product/service. This program of financing aims at defining the reasonability of introducing a new product, service or technology to the market.
- Fourthly, these are the programs focused on cooperation in financing the early stage of commercialization. Within this program, financing must be provided to the entrepreneurs who have a working prototype of idea for the purpose of introducing the innovation product to the mass market. The areas of expenses that can be paid by financing as a whole comply with the areas according to the program "checking the concept (creating the test pattern)". However, it includes the full amount of expenses for constructing the pilot plant (if it is necessary to demonstrate the possibility to commercialize the product) or innovation production capacities.
- Fifthly, these are the programs focused on contributing to obtaining financing for beginning

innovators. Financing must be meant for the entrepreneurs who want to start implementing their first research or design and experimental project. After financing such entrepreneurship must continue its activity in the area of researches and developments, and finally, according to the results of the project, either launch the product or technology on the market or in production, or make the conclusion about the economic inexpediency of such actions.

- Sixthly, these are the programs focused on financing ideas of the global expert community.

It is necessary to note that the latter programs must aim at project financing of the innovation (venture) entrepreneurship and research organizations that will be associated with

- Estimating a new idea, technology, or environment of the market,
  - Solving technological or market tasks,
  - Accelerating the development, improvement or introducing the product to the market, and
  - Contributing to searching for suppliers and partners.
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## 5. Conclusions

Thus, summarizing this article, we can note that it is reasonable to consider project financing as a modern tool to attract monetary and investment resources in innovation and venture concepts that have a high potential of successful commercialization on consumer markets (both b-2-c, and b-2-b). Russian entrepreneurship that has a limited access to traditional credit resources and not always can get the financial and investment help from venture funds must consider project financing as a stimulus for development and intensification of economic growth. As a whole, it will have a positive impact on the state of national macro-economic system.

It is also worth mentioning that quick and high quality development of forms, ways and mechanisms of project financing in Russia is impossible unilaterally only due to the initiative of commercial banks and other financial and investment structures. For the project financing to become a reliable mechanism, including the one that stimulates the development of small and medium-sized entrepreneurship in the area of innovations and venture initiatives, it is necessary to transform the Russian economy. It assumes the formation of both innovation infrastructure, and innovation ecosystem that at the present time cannot be acknowledged as sufficiently developed.

That is why the next works and articles will consider the basic ways that will allow to create the required conditions for high quality becoming of the project financing institute in Russia, as well as for forming optimal national innovation environment that contributes to the growth of venture entrepreneurial activity.

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## References

- Abor, J.Y., 2016. New Venture Development and Sources of Financing. *Entrepreneurial Finance for MSMEs*, November: 21-50.
- Atherton, A., 2009. Rational Actors, Knowledgeable Agents. Extending Pecking Order Considerations of New Venture Financing to Incorporate Founder Experience, Knowledge and Networks. *International Small Business Journal*, 27 (4): 470-495.
- Bengtsson, O. and D.H. Hsu, 2015. Ethnic Matching in the U.S. Venture Capital Market. *Journal of Business Venturing*, 30 (2): 338-354.
- Bigus, J., 2006. Staging of Venture Financing, Investor Opportunism and Patent Law. *Journal of Business and Financing Accounting*, 33 (7-8): 939-960.
- Block, J.H., G.De Vries, J.H. Schumann and Ph. Sandner, 2014. Trademarks and Venture Capital Valuation. *Journal of Business Venturing*, 29 (4): 525-542.
- Bottazzi, L., M. Da Rin and T. Hellmann, 2004. The Changing Face of the European Venture Capital Industry. Facts and Analysis. *The Journal of Private Equity*, 7 (2): 26-53.
- Chemmanur, T.J., E. Loutskina and X. Tian, 2014. Corporate Venture Capital, Value Creation,



and Innovation. *The Review of Financial Studies*, 27 (8): 2434-2473.

Chen, Zh., J. Yuan and Q. Li, 2017. *Financing Risk Analysis and Case Study of Public-Private Partnerships Infrastructure Project*. In the Proceedings of the 20th International Symposium on Advancement of Construction Management and Real Estate. Singapore: Springer, pp. 405-416.

Cherkasov, A.A. and M.Smigel, 2016. Public Education in the Russian Empire during the Last Third of the XIX Century: Parish Schools. *European Journal of Contemporary Education*, 18 (4): 418-429.

*Data and Analysis. Business Consulting. Custom Research*, 2016. Strategy Analytics. Date Views 26.02.2017 [www.strategyanalytics.com/strategy-analytics/strategy-analytics-analysts-free](http://www.strategyanalytics.com/strategy-analytics/strategy-analytics-analysts-free).

Dudin, M.N. and N.P. Ivashchenko, 2016. Development Institutions "CULTIVATION" of Innovation Projects in the Context of the Formation of Venture Capital Ecosystem. *MIR [World] (Modernization Innovation Research)*, 7 3(27): 70-75.

Dudin, M.N., N.P. Ivashchenko, E.E. Frolova, A.H. Abashidze and A.S. Smbatyan, 1972. Innovative Approach to the Development of the Logistics System of Supply of the Arctic Region Space. *International Journal of Economics and Financial Issues*, 6(4): 1965-1972.

Fiyaksel, E.A., 2006. *Teoriya, metody I praktika venchurnogo biznesa* [Theory, Methods and Practice of Venture Business]. Saint Petersburg: Publishing House of the Saint-Petersburg University of Economy and Finances, pp. 220.

Grilli, L. and S. Murtinu, 2014. Government, Venture Capital and the Growth of European High-tech Entrepreneurial Firms. *Research Policy*, 43 (9): 1523-1543.

Hamel, G. and M.J. Mol, 2008. Management Innovation. *Academy of Management Review*, 4 (33): 825-845.

Pfirmsmann, O., U. Wupperfeld and J. Lerner, 2012. *Venture Capital and New Technology Based Firms: An US-German Comparison*. Springer: Springer Science & Business Media, pp. 154.

Polyakov, A.A., E.V. Chertina and M.A.Tamaev, 2015. The Venture Industry and Venture Investments: The Russian and Foreign Practice. *Advanced Studies in Science: Theory and Practice*, 4: 41-50.

Reuters, T., 2016. *Private Equity. Deals Intelligence*. Date Views 26.02.2017 [dmi.thomsonreuters.com/PrivateEquityfree](http://dmi.thomsonreuters.com/PrivateEquityfree).

Riyanto, Y.E. and A.Schwienbacher, 2006. The Strategic Use of Corporate venture Financing for Securing Demand. *Journal of Banking & Finance*, 30 (10): 2809-2833.

Semerikova, L.N., M.M. Geraschenko and T.I. Sherstobitova, 2014. Innovatsionnye modeli rossiyskogo predprinimatelstva (na primere malogo innovatsionnogo biznesa) [Innovational Models of Russian Entrepreneurship (Through the Example of Small Innovational Business)]. *Creative Economics*, 3 (87): 50-57.

Tverev, D.Y., 2015. The Problems and Prospects of Developing a System of Financing Innovation in Russia. *Review of European Studies*, 7.9: 140-150.

Vanacker, T., A. Heughebaert and S.Manigart, 2014. Institutional Frameworks, Venture Capital and the Financing of European New Technology-based Firms. *Corporate Governance and International Review*, 22 (3): 199-215.

Wonglimpiyarat, J., 2016. The Role of Equity Financing to Support Entrepreneurship in Asia. The Experience of Singapore and Thailand. *Technovation*, 33 (4-5): 163-171.

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