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Financial and tax instruments for stimulation of enterprises innovative activity

Abstract

The modernization and transition to the innovative development of all public life spheres are designated as the key priorities for Russian Federation development now. The realization of these country priority goals require the considerable financial resources what causes the interest to the problems credited with the search and choice of the optimal financial instruments for the innovative process financing. This article analyzes financial and tax instruments to promote innovation in enterprises. It is necessary to solve problems connected with the chronic underfinancing innovative activity, the imperfection of the mechanism of additional resources attraction to the innovative sphere, the absence of the substantiation of the priorities for investment in the innovative activity to increase its efficiency. The article offers the approach based on complex representation of the basic sources and forms of the investments realization into the innovatively active enterprises. The model of the enterprises innovative activity financing is presented below providing the consolidation of the various categories financial resources of the potential investors by means of the debt instruments issue in Russian Federation. The developed system of the enterprises innovative activity stimulation with the use of the tax planning instruments as well as the financing forms and the financial instruments. The paper concludes that financial and tax instruments for stimulation of enterprises innovative activity allow to provide the enterprises money resources economy and to influence their innovative activity.

Keywords: enterprise, investment, taxes, innovative activities, financial instruments.
JEL Classification: G31.

Introduction

The problems credited with the successful realization of the innovative projects are very urgent for Russian Federation considering the manufacture increasing technological degradation. Even the most scaled investments in the getting old technological structures are not capable to bring the proportional return and lead to the costs inflation growth only. Thereupon the innovative projects mass character will allow our country to reduce the existing raw materials dependence, to modernize the economy and to create the competitive advantages for Russian Federation at the international level what will stimulate the increase of the citizen's living standards and the life quality finally.

The generally recognized fact is that the economic growth based only on the raw materials export cannot be stable for a long time and thereupon the financing of the enterprises innovative activity gets a special urgency. It is necessary to carry out the transition to an innovative way of a development to provide higher and steady rates of the economy growth and to energize the hi-tech manufactures creation. At the same time it does not mean the automatic stoppage of the extraction of the raw materials which stocks are the leading size ones of the separate kinds not only in our country but in the world. The country future development should cater for the accelerated rates of the innovative technologies adoption for the account of the raw materials disposal means and the following increase of the stuff processing level including.

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1. Literature review

Various aspects of the development of innovation in the works are analyzed by Shumpeter J.A. (Shumpeter, 1982), Yakovets Y. (Yakovets, 1999), Kondratyev N.D. (Kondratyev, 2002), Porter M. (Porter, 2006), Ivanov V.V. (Ivanov, 2006), Marenkov N.L. (Marenkov, 2009), Kokurin D.I. (2011).

The financing of innovation activities of enterprises is considered by Folomev A., Revazov V. (Folomev and Revazov, 2001), Nechaev A.S. (Nechaev, 2009, 2012), Osipov M.A. (Osipov, 2007), Savin T.N. (Savin, 2011), Uvarova S.P. (Uvarova, 2011), Atoyan V. and Eremin E. (Atoyan and Eremin, 2009), Gluschenko I.I. (Gluschenko, 2009), Golichenko O.G. (Golichenko, 2006). But the directions of investment for stimulation of the enterprises innovative activity are poorly studied in the existing works.

2. The sources and forms of financing of the enterprises innovative activity

As a rule the innovative activity is characterized by the uncertainty and risk of a high degree and therefore the important principles of its adoption should be the financing sources multiplicity, the flexibility and adaptability to the innovative processes changing environment what will promote the fast and effective adoption of the innovations with their further commercialization providing the investments financial return growth. It assumes the formation of the innovative activity financial support system on the basis of an optimum combination of the budgetary and off-budget components. And it is necessary to note the importance of the internal sources mobilization for the innovative sphere financing in the country.

Currently the state presented by the various institutes and the private sector representatives (pension funds, insurance companies, credit organizations) possess the most powerful financial possibilities which appear practically uninvolved in the innovative process but being able to affect essentially the strengthening of the innovative accents while an investment policy implementation and to promote the transformation of most important factors of the innovations into one of the economic growth.

High risk level of the innovative activity assumes that the financial support of the innovative sphere should be preceded on the basis of the financing sources multiplicity. Currently in the domestic practice such innovative activity financing sources are used as the budgetary provisions assigned at the different authority levels, the special off-budget funds means of financing the research and development activity which are formed by the ministries and the bodies of power, the enterprises own means, the commercial financial structures means (investment companies, the commercial banks, insurance companies), credit resources of investment banks especially authorized by the government, the foreign investments, the means of the national and foreign scientific funds, the private savings of the individuals. These financing sources can be attributed to the straight ones. Besides practically the enterprise can use the innovative activity indirect financing, for example, by the means of the tax planning instruments which allow saving the means and thus giving the chance to finance the innovations. Among the various innovative activity forms of financing the innovations financing by means of the debt instruments issue deserves attention because they possess a number of the unquestionable advantages revealing in the context of the enterprise innovative activity.

The sources and forms variety of the enterprises innovative activity financing assumes the search of their optimum combination. The scheme of sources and forms formation of the enterprises innovative activity financing is presented in Figure 1.

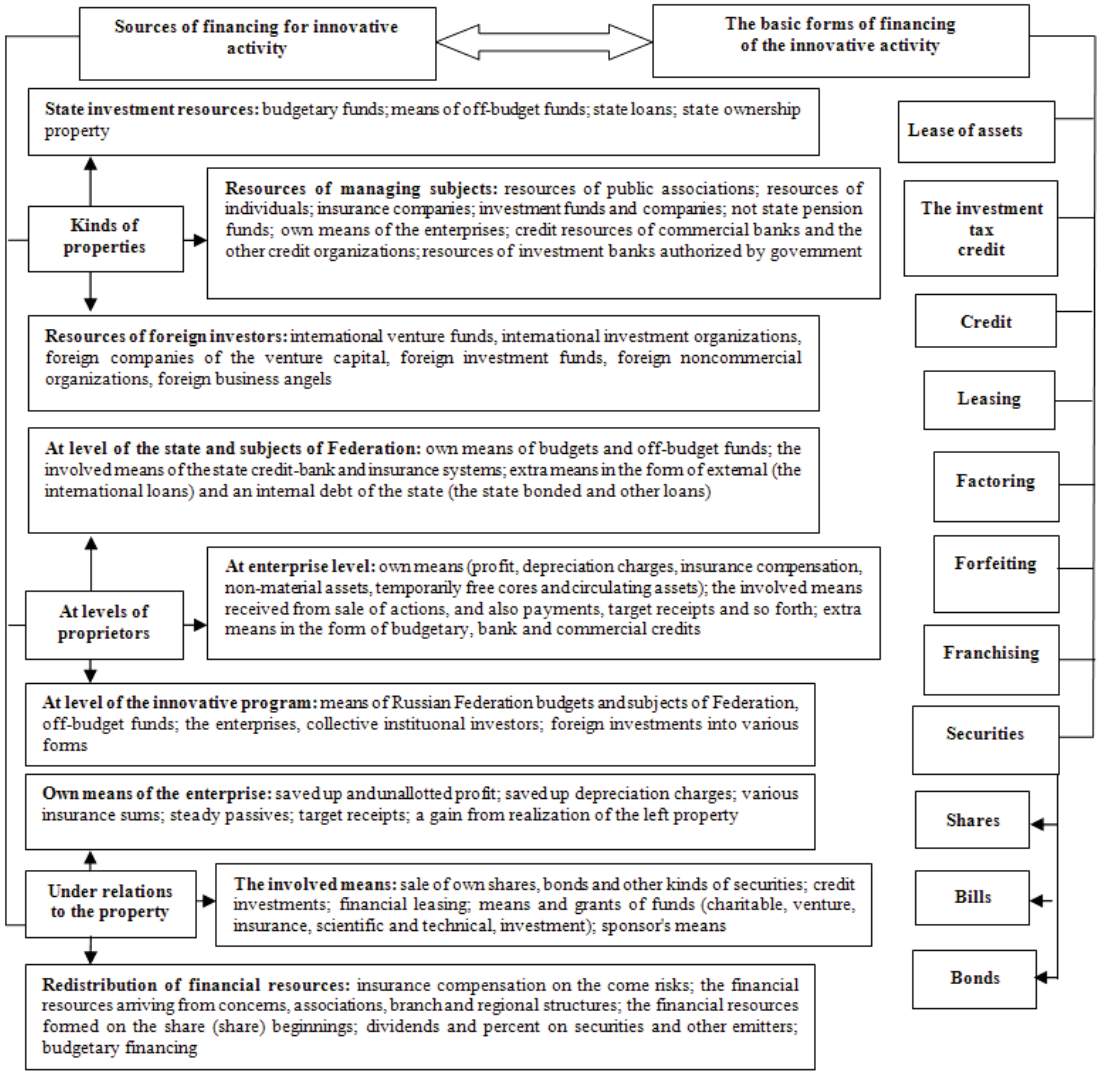

Fig. 1. The sources and forms financing scheme of the enterprises innovative activity

It is necessary to notice that the present stage of Russian Federation economy modernization demands the considerable investments directed not only in the traditional sectors but also into the innovative projects. Meanwhile there is still no effective mechanism allowing to stimulate the expansion of their scales in the country. The scaled investments conjugated to the innovative projects realization will allow to provide the country transformation into the advanced state with the innovative economy. Considering the fact that the enterprises own means are still the basic source for an innovative activity and as a rule the innovative projects demand concentration of the great volume monetary funds it is necessary to form new approaches to the problem decision of the financial resources consolidation of the various economic subjects with their subsequent direction to the innovative sphere for overcoming of the innovative process participants dissociation. The present situation with the innovative activity financial support predetermines highly the low enterprises investment activity in this area.

The state undertakes the certain steps for the innovations financial support in the country but these measures do not promote the situation basic change now. For example the existing state funds financing innovations in Russian Federation concentrate the activity basically at the enterprises of the small and average business. The activity of such funds is conjugated to the number of restrictions and the volume of their means is insufficient in the country scales. Besides there are some legislative and regulatory restrictions complicating the investment of the funds means on the risk stages of the innovative projects development as well as the complicating procedures of the return of the means allocated as the interest-free or soft loans.

At the same time the state being the key participant of the innovative investment process as well as some representatives of a private sector possess the powerful financial potential which can be involved in the innovative process today.

Thereupon the essential value gets the search of the new ways of the enterprises innovative activity financial support which would allow involving the additional investments from the other fields of the activity. At the same time it is necessary to notice that there is no effective mechanism of the portfolio investments transformation into the real investments which can promote the productive innovations occurrence in the domestic practice yet.

The offered author's model based on the issue of the debt instruments can become a possible variant of the financial support problem decision in the enterprises innovative activity and it is presented in Figure 2 (see Appendix).

3. Stimulation system of the enterprises innovative activity

In the innovative activity stimulation the tax system plays one of the key roles and it is urged to create the conditions for the innovative production demand and the economy modernizations. But the tax system should not create barriers to the innovations offer what practically means the unobstructed activity of tax the bearers directed to the introduction in the manufacturing process the results of the scientific researches and the experimental design works which increase a labor productivity. Striving for this aim it is necessary to correct the taxation mechanism taking into account the modern requirements for the enterprises innovative activity. The organizations receive the additional possibilities for the maximum increase in the financial and economic activity profitableness and for the further effective manufacture development at the expense of the tax burden simplification with help of the most rational ways research of the tax obligations decrease. Realizing the tax planning the organization creates the certain scheme according to which it plans to exercise the financial and economic activity.

Thus the organization primary goal is to apply and to group correctly the exercising tax planning tools for the purpose of construction the system allowing to realize problems of the tax planning in the best way. The standard sources analysis allowed to generalize the available tax planning tools directed to the innovations stimulation and to present them in the system form in Figure 3.

From the economic point of view the tax stimulation tools appeal is the fact that the public authorities and the local government refuse from the part of means which must enter from the scientific and innovative organizations as the taxes in the state and local budgets. These means remain in control of the specified organizations for carrying out the researches and the development, the innovations plantation, the expansion or modernization of a manufacture and etc. Thereby the effect of their indirect financial support is created.

Thus, within the limits of tax legal relationships there is "an accent displacement" from fiscal function of taxes to stimulating function by means of the corresponding tax tools application. Also the application of the financial and investment tools allows influencing the indicators of the enterprises innovative activity. For example, the use of a franchising in the innovatively active enterprises functioning allows reducing the expenses and terms for the creation of the innovative productions, works and services. A factoring allows increasing the realization volumes of

the innovative production at the expense of the short-term crediting use. The offered system novelty consists of the fact that it reflects the complex influence of the tax stimulation application in the innovative activity as well as the financial and investment tools on the indicators of the enterprises innovative activity.

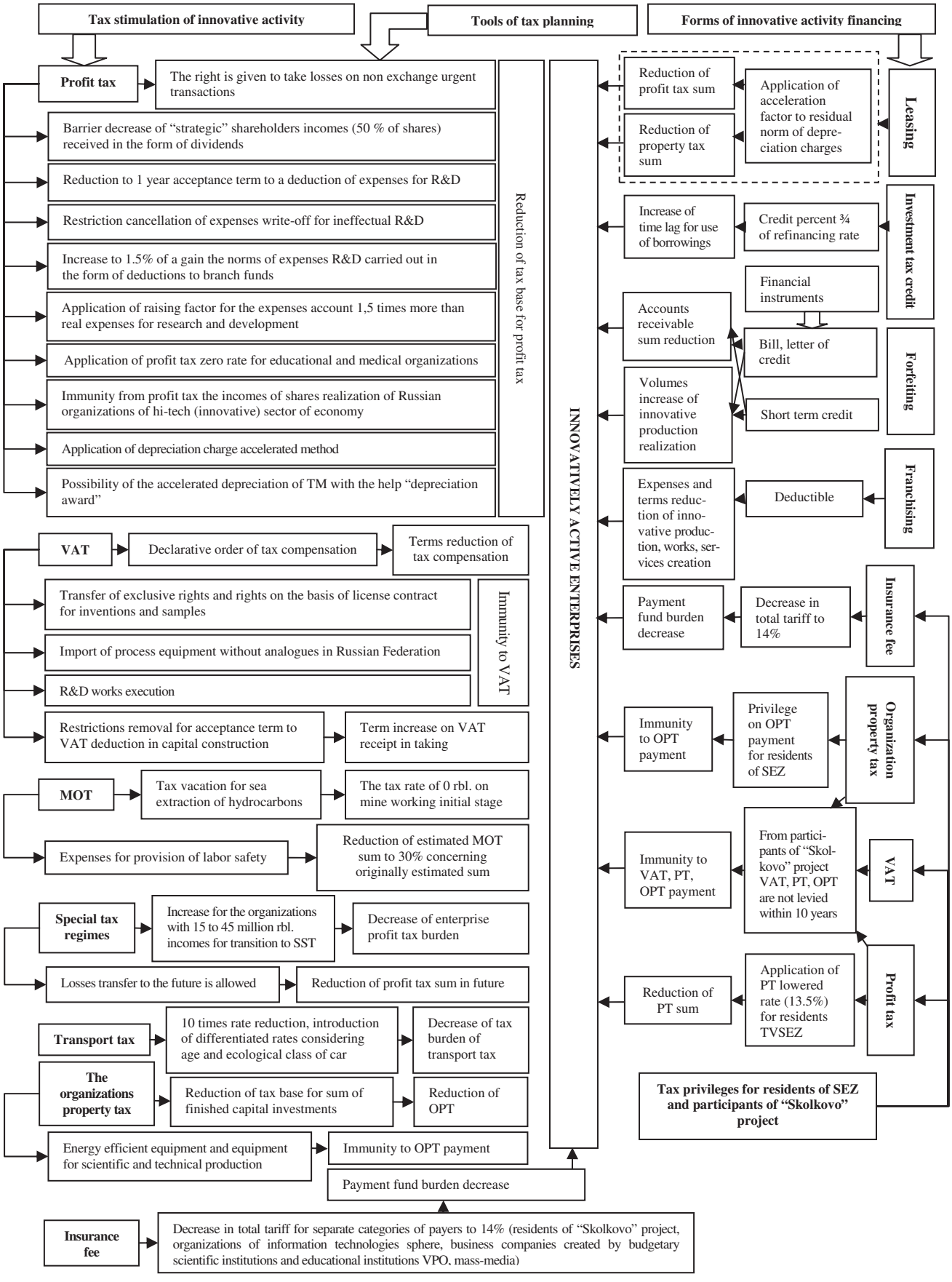

Fig. 3. Stimulation system of the enterprises innovative activity

4. The estimation technique of personnel, scientific, economic and financial potentials of the enterprise

As the result of the analysis made by us it was revealed that the personnel, scientific, economic and financial potentials have the greatest influence on the innovative activity. The analysis made by us is supported by the practical experience of many enterprises conducting the innovative activity. For example, the personnel component of the actions being done will have the crucial importance for any enterprise engaged in the innovations. The personnel possessing higher knowledge and qualification are more productive than the other categories of the employees and are capable to generate the effective ways of realization of these or those production processes. The other potentials revealed by us possess not smaller importance too. Generally it is possible to present the technique as follows (Figure 4).

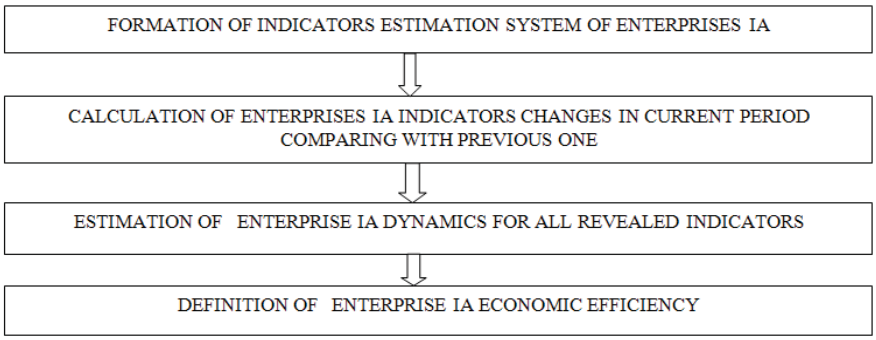

Fig. 4. The estimation technique of personnel, scientific, economic and financial potentials of the enterprise

We will define every indicator and their change on the basis of the made correlation and regression analysis in the current period comparing with the previous one the following equation:

$$K_y = \frac{L_1}{L_0}, \quad (1)$$

where K_y is the dynamics factor of the enterprise innovative activity corresponding indicator; L_1 is a quantity indicator of the current period of enterprise innovative activity in the corresponding measure units; L_0 is a quantity indicator of the previous period of the enterprise innovative activity in the corresponding measure units.

Equation (1) allows defining the change of the innovative activity indicator in the current period comparing with the previous one and exposing the general tendency of its change.

The general factor should be applied for the dynamics estimation of the enterprise innovative activity for all indicators of innovative activity and it is defined using the equation:

$$\overline{K_o} = \sqrt[z]{K_1 * ... * K_y}, \quad (2)$$

where K_0 is the economic efficiency general factor of the enterprise innovative activity; z is the quantity of factors; $K_1,\ldots,K_y$ are the dynamics factors of the enterprise innovative activity indicators (K_1 is the dynamics factor of the enterprise employees mid-annual number; K_2 is the dynamics factor of the employees number with the various scientific degrees; K_3 is the dynamics factor of the employees number with the higher education; K_4 is the dynamics factor of the acquired new technologies volume; K_5 is the dynamics factor of the quantity of the submitted demands for patents; K_6 is the dynamics factor of quantity of the enterprise joint projects for the researches and development execution; K_7 is the dynamics factor of the enterprise investments volume in a fixed capital; K_8 is the dynamics factor of the dispatched innovative production volume; K_9 is the dynamics factor of the enterprise profit from the innovative production realization; K_{10} is the dynamics factor of the enterprise internal expenses for the researches and developments). The abovementioned factors cannot accept zero values because the most significant indicators were selected for the efficiency estimation of the enterprise innovative activity with the help of the correlation and regression analysis.

Equation (2) allows to reveal the general dynamics of the enterprise innovative activity and to take the corresponding measures for the improvement of the indicators values.

Conclusion

The calculation of the abovementioned dynamics factors is rather effective tool of the company innovative development management as it allows to react to the occurring changes promptly and to make the correcting decisions. The possible negative tendencies of the enterprise innovative development which come to light by means of the instruments offered could be eliminated by means of the financial resources which should be directed to those problem zones which were found out while calculating.

Thus, the achievement of the strategic target connected with Russian economy transition to the innovative way of development is impossible without construction of the debugged system of the innovative activity financial support. Accordingly the complex application of the abovementioned financial and tax instruments can lead to the considerable economy of the enterprise means what will give the chance to use more widely the available forms of the innovative projects financing in its turn.

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Appendix

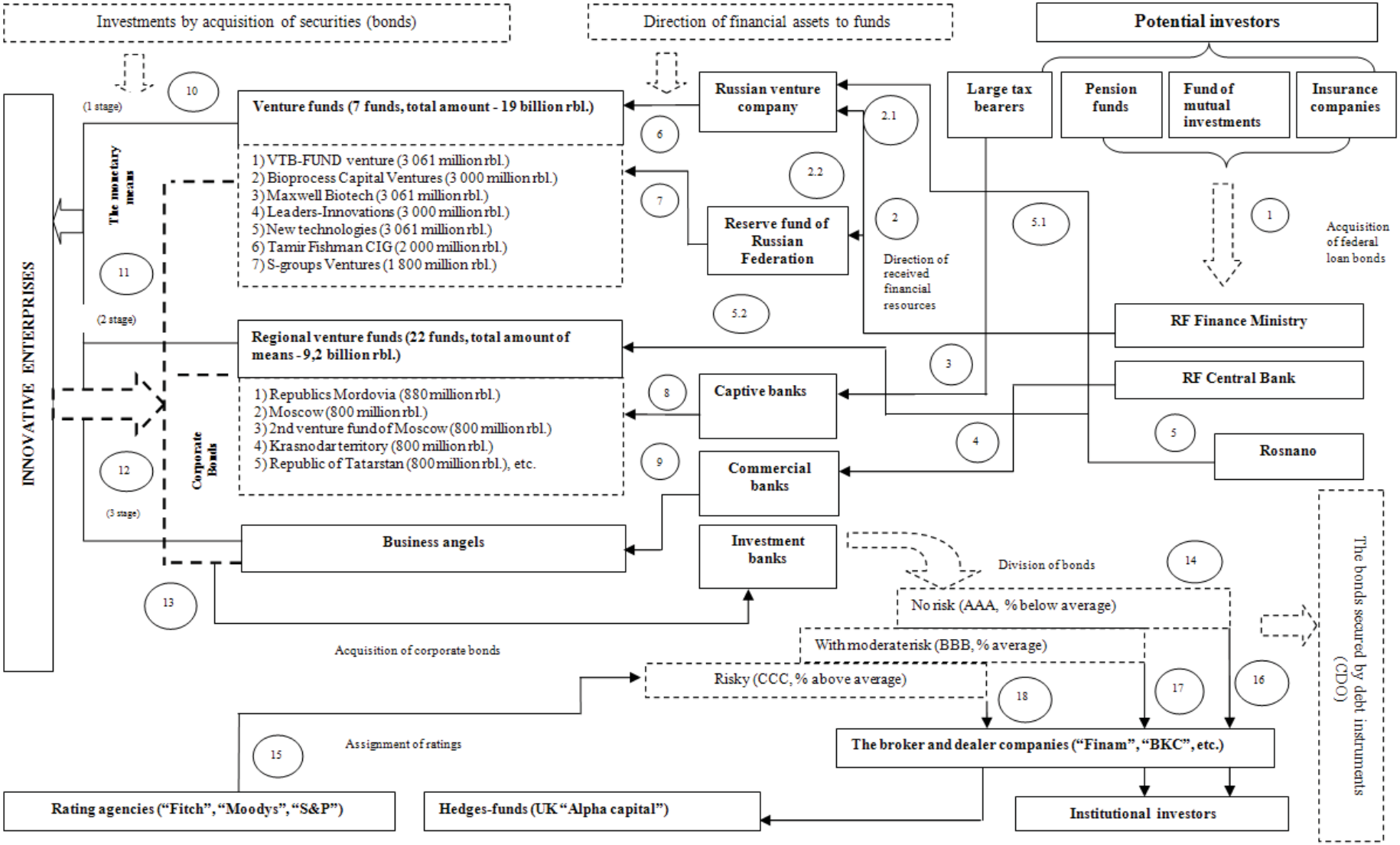

Fig. 2. The model of the innovative companies financing by means of the consecutive involving in the investment process the various categories of the potential investor

Notes: 1 – potential investors get the bonds of the federal loan issued by Russian Federation Ministry of Finance for the purpose of the means accumulation of the pension funds, insurance companies, fund of the mutual investments for the further innovative activity financing; 2 – received financial resources go to Russian Federation Ministry of Finance for the replenishment of the Russian venture company capital base (2.1) and the Reserve fund of Russian Federation (2.2) for the purpose of the further escalating of the federal value venture funds volume and activization of their investment activity; 3 – means of large tax bearers go to captive banks which give the financial support to the regional venture funds; 4 – Central Bank of Russian Federation as the creditor of the ultimate authority for the commercial banks finances the activity of the credit organizations which direct the got resources to the business angels support; 5 – "Rosnano" gives the financial support to the Russian venture company (5.1) and to the regional venture funds (5.2) through their cofinancing; 6 – Russian venture company increases the financing of the federal value venture funds at the expense of Russian Federations resources received from the Ministry of Finance and Rosnano; 7 – means available in Reserve Fund and the means entered there from the Russian Federation Ministry of Finance directed to support of the federal level venture funds; 8 – captive banks using the parent companies means fill up the resource base of the regional venture funds for the subsequent investments into the innovative projects; 9 – commercial banks actualize the financing of the business angels activity which expand the possibilities of the innovative companies investment in their turn; 10 – federal venture funds direct the innovative companies support means receiving from them the corporate bonds; 11 – regional venture funds direct the innovative companies support means receiving from them the corporate bonds; 12 – business angels direct the innovative companies support means receiving from them the corporate bonds; 13 – corporate bonds are purchased by the investment banks with the subsequent release of the derivative financial tools (derivatives) for the realization to the broker and dealer companies; 14 – realization of the bonds division on the assumption of the risk and profitableness criteria for the definition of the further placing optimum variants; 15 – attraction of the authoritative world and Russian rating agencies for the ratings assignment to the securities; 16 – unrisky securities are directed to the broker and dealer companies with the subsequent realization to the intuitional investors; 17 – securities with the moderate risk are directed to the broker and dealer companies with the subsequent realization to the intuitional investors; 18 – risky securities are directed to the broker and dealer companies with their subsequent transfer to hedge funds.