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The review provides a detailed analysis of main trends in Russia's economy in 2011. The paper contains 6 big sections that highlight single aspects of Russia's economic development: the socio-political context; the monetary and credit spheres; financial sphere; the real sector; social sphere; institutional challenges. The paper employs a huge mass of statistical data that forms the basis of original computation and numerous charts.

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6.3. Russian Financial Development Institutions: Their Rise and Main Challenges on the Path toward Improvement of Their Performance[1]

It is already for roughly a decade and a half that the RF Government undertook various efforts to build and fine-tune the financial development institutions in the country. This direction of the national economic policy is congruent with the common international practice: there exist a string of tasks and fundamental reasons behind many nations' strive to shape up development institutions and support their operation[2].

In their general form, major drivers for governments to shape up and improve the development institutions' performance are associated with the need to compensate for market failures, lower risks facing private investors, secure substantial positive externalities, assist in overcoming various barriers and cutting down transaction costs, ensure "synchronization" of changes in the economic subjects' behavior. Hence it is not accidental that the most typical development institutions' operational areas include boosting expansion of small- and medium sized businesses, backing import-export operations, infrastructure development, bolstering regional development, support of individual sectors of an economy (agriculture as a model example).

As a marginal note, there is no any strict definition of the phenomenon of development institution. We believe that experts are keen to define it as some kind organization (forms of whose incorporation may vary) which exhibits a combination of at least some of the following signs:

- it was created on the government's initiative and with its participation;
- it centers on compensating for market failures and securing a demonstration effect;
- it is financed through one-time government contribution (in that case, such funding suggests it loss-free operation) or on the basis of regular budget appropriations;
- its operations pursues a long-term prospect, attainment of set for it strategic objectives;
- it operates on the basis of a specific legal base and special regulatory requirements;
- it focuses on employing private-public partnership mechanisms;
- as far as tactical decision making is concerned, it is autonomous from the government.

By various estimates there are a few hundreds of development institutions worldwide, and they fall under different classifications[3] (e.g., basing the nature of services they deliver); however, one singles out, as a rule, the group of financial development institutions, which operate in various forms, including, *inter alia*, development banks, funds and agencies[4].

[1] The present Section was prepared in 2011 using findings of a project "Institutional analysis of problems of functioning of the financial development institutions system for the benefit of the support of innovation activity" completed by the Interdepartmental analytical center at the commission of the Russian Academy of National Economy and Civil Service under the President of Russian Federation.

[2] For more details about the concept and typology of development institutions, objectives, tasks and directions of their operations, see: O.G. Solntsev, M.Yu. Khromov, R.G. Volkov. Development institutions: an analysis and assessment of the international record. Problems of prognostication, 2009, No. 2.

[3] See, for example, a presentation by I.G. Sokolov, Research Fellow of the Gaidar Institute "Development Institutions and the budget: results and prospects" (July 2011 r.).

[4] For a more detailed classification and examples of public development institutions overseas, see presentation by Gref G.O., the RF Minister of Economic Development and Trade: "On creation of a public financial development institution (On the bill "On the Development Bank")" (December 2006).

While citing the need for a government's interference to compensate for market failures with regard to innovation development in particular[1], experts, at the same time, point at certain risks associated with such interference. As to the risks associated with the public development institutions, it is appropriate to single out the following ones:

– reallocation of support in favor of inefficient companies;
– "seizure" by the state of projects its supports;
– generation of sizeable biases into the market environment;
– substitution for private expenses.

In general it is believed that to lower such risks, nations need to employ more sophisticated systems of corporate governance and institutional organization.

6.3.1. Main Stages of the Rise of the Russian System of Financial Development Institutions

From our perspective, it is possible to provisionally identify *five main stages* in the process of the rise and advancement of development institutions in Russia since the late 1990s. (see *Table 15*). Our phasing to a significant degree is determined by changes in the state's resource capacity and a certain evolution, at the government level, of prevailing notions of the urgency and significance of support to innovation development "against the backdrop" of other directions of public policy.

Overall, until 2007 the mode of Russian development institutions' development had been an evolutionary one: the evolution suggested a gradual (and not that costly for the budget) fine-tuning of individual vehicles of support to investment and innovation projects, which were implemented largely in the frame of assistance to the small- and medium-sized entrepreneurship (hereinafter - SME). At the time, implementation of a policy implying the economy diversification and innovation policy went on the back burner as far as the government (as well as allocation of budget resources) was concerned and was reduced to individual experiments and random initiatives.

The switch to an intense shaping up of financial development institutions and fuelling a substantial expansion of their resource base occurred in 2007. Behind that was a political decision[2] to use a fraction of resources under management of the National Welfare Fund (some Rb 300bn) to capitalize several development institutions. In all likelihood there were numerous and heterogenic reasons behind the decision, but we assume a fundamental one was a strive for a certain compromise in the conditions where for one part the government was under a mounting pressure of advocates of a significant increase of public investment in the economy (enemies to a further accumulation of public financial reserves), while on the other hand, the government bent an ear to staunch champions of macroeconomic stability who had managed to organize a systemic resistance to an increase in the level of public spending. Investing a fraction of accumulated public financial resources in development institutions would "link" them to their future investment use, without giving a strong boost to public spending.

Meanwhile, the Russian leadership's view on the main role of the national financial institutions system underwent several changes over the past five years. Back in 2007, extension of the development institutions' mandate was linked primarily to the task of the economy diver-

[1] Igniting innovation: rethinking the role of government in emerging Europe and Central Asia / Itzhak Goldberg [et al.]. The World Bank, 2011.
[2] The Address by the RF President to the Federal Assembly of RF of 26 April 2007.

sification, advancement of its individual sectors, lifting infrastructure barriers. By contrast, in 2009-2010 the emphasis was already made on "fine-tuning" of the development institutions system[1] for the sake of implementation of the innovation policy, technological modernization, attraction of additional investments, with account, *inter alia*, of an insufficiently favorable investment climate.

Table 15

Main Stages of Emergence of the Development Institutions System

Period	External conditions	Key developments	Peculiarities
1999–2000	Tight budget constraints, encouragement of innovations is on the periphery of public policy	The Russian Development Bank * and the Venture Innovation Bank are created**	Emphasis on creation of relatively small self-financing institutions
2004–2006	Budgets constraints softened, a steady economic growth, greater attention to its "quality"	The Russian Development Bank launched the program of support of SME through regional partners; the Fund for Assistance to Development of Small Forms of Enterprises in the Research and Technical Sphere launched the "Start" program; the rise of regional venture funds; establishment of the Russian Venture Company (RVC); decision made to establish the Russian Investment Fund for ICT	Emphasis on the regional support of SME
2007–2008	A huge volume of budget revenues, encouragement of innovation as one of major public policy avenues, an attempt to link substantial resources to individual directions of development	Establishment of public corporations: the Bank of Development and Foreign Economic Acitivity (Vnesheconombank), the Russian Corporation for Nanotechnologies (Rosnanotech) ***	Launch of the biggest institutions
Late 2008 – 2009	The economic crisis, slashing of resources spent on encouragement of innovation along with a greater attention to the effectiveness of measures implemented	Most of resources temporarily withdrawn from Rosnanotech; the Fund for Assistance to Development of Small Forms of Enterprises in the Research and Technical Sphere launches the "Anti-crisis" program instead of a string of earlier implemented ones; the Seed Investment Fund is established under RVC	A vigorous use of the institutions and/or their resources to implement the anti-crisis policy; the beginning of the process of establishment of the "second-tier" institutions
since 2010	Improvement of the economic situation, attempts to learn lessons from the crisis, innovations form one of top priorities declared by the state	RVC and ROSNANO founded a range of new institutions, including those centering on infrastructure, and funds overseas; establishment of the Foundation for Development of the New Technologies Development and Commercialization Centre ("Skolkovo Foundation"); on the government's initiative Vnesheconombank founds the Russian Fund for Direct Investment (RFDI) and the Russian Agency for Export Credit and Investment Insurance (EXIAR); the Russian Development Bank begins implementing a program on support of modernization and innovation	A vigorous process of establishment of new institutions; expansion of international operations; a greater attention paid to improvement of the investment climate

* Currently JSC Russian Bank for Small and Medium Enterprises Support (JSC SME Bank).
** The first public development institution created by the "fund of funds" model in 2000 to support the venture industry. However, it began operating only in 2000 and at a fairly moderate scale, because of a relatively humble capital of Rb 100mn of which, as suggested by data available, only a half was financed, and due to a very strict cap (10%) on participation in venture funds' capital .
*** In March 2011was transformed into joint-stock company – JSC ROSNANO.

The record of the emergence of the Russian development institutions system to date (see *Fig. 1*) allows the following conclusions:

[1] See in particular: Minutes of the meeting of the Commission under the RF President on modernization and technological development of Russia's economy of 25 November 2009.

1) the period between late 1990s and 2008 saw a gradual shift toward shaping up institutions focused on support of projects at their later stages. In this respect a milestone development became the rise of the public corporations Vnsehseconombank and Rosnanotech. But since 2009 some of the then existing development institutions (RVC and ROSNANO) have expanded their operations to encompass earlier stages too. Plus, the newly created institutions ("Skolkovo" Foundation in particular) have become to a significant extent focused on support of projects at their early stages too;

2) there exists a steady trend to expansion of both the institutions and Funds' resources and the size of projects they support: while between late 1990s and early 2000s it was largely "low-cost" instruments (the Fund for Assistance to Development of Small Forms of Enterprises in the Research and Technical Sphere, the Venture Innovation Fund, the Russian Development Bank), a number of institutions (Vnesheconombank, Rosnanotech, RFSI), which were created later, boast a far greater resource capacity and use it to support fairly huge projects (worth a total of some Rb 1bn each);

3) the actual launch of the institutions in question suffered from substantial delays accounting from one to several years. That said, while in the case of RVC and ROSNANO the delay was basically a technical one (dictated by the need to shape up management bodies, craft their mandates, adopt of corporate regulations and statutes, organize of tenders, etc.), in the case of the Venture Investment Fund and the Russian Investment Fund for ICT[1] delays were caused by substantial deficiencies built in the respective rules and standards;

4) in a number of cases, while creating new institutions, the performance record (including the negative one) of earlier created instruments was taken into account: thus, created by the same model as the Venture Investment Fund (that is, a public "fund of funds"), RVC does not exhibit the latter's fundamental normative defects;

5) Roughly since late 2009 there started a large-scale process of "secondary" creation of development institutions. In the frame of the process, the existing structures found new ones, with the government initiating the process just in a handful of instances (RFSI, EXIAR). Meanwhile, in other cases those were the development institutions' initiatives, with RVC and ROSNANO being particular active in this regard;

6) The period between 2010 and 2011 saw the rise of the trend to a rapid expansion of the national development institutions' operations: not only has their circle been growing, but directions of their functional profiles and instruments employed expanded, and the volume of their resources and the number of innovation projects they support was on the rise.

The financial institutions established by today appear fairly versatile (see *Table 16*): they focus on support of both small-and medium-sized firms and large corporations' innovation activity; they orient to different phases of a company's development (from the seed and initial ones to maturity), and their mechanisms of support are associated with awarding grants, investment, disbursement of loans and guarantees. Let us note that different models of encouragement of innovation are realized under individual functional directions: thus, in addition to grant-based mechanism (the Fund of Assistance to Innovation), seed projects are supported through a seed investment vehicle (The Seed Investment Fund under RVC); support to venture investments is carried out via both the "fund-of-funds" model (RVC and, to a lesser ex-

[1] The institution was established back in 2007, but has not yet started investment activity due to a legislatively set strict requirement to reduce the government's participation in its capital to 51%.

tent, ROSNANO) and on the basis of a mechanism of a program-based support of creation of regional venture funds.

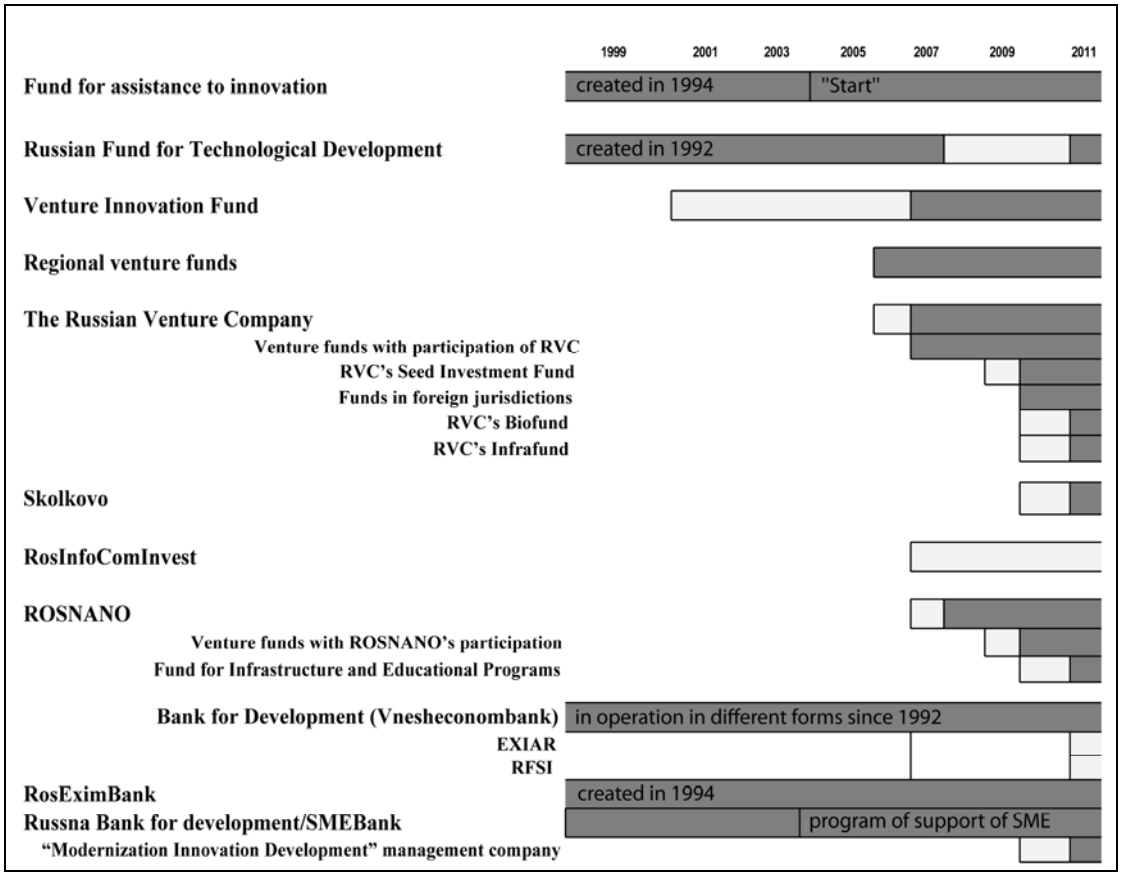


Fig. 1. Process of Creation of Russian Development Institutions

In general, the system of Russian financial development institutions has undergone a dramatic transformation and become far more exuberant vis-à-vis its nascent state in the early 2000s: it indeed became richer in the proper sense of the word, that is, in terms of aggregate volumes of resources under management, and in a figurative sense – in terms of variety of types of the institutions in question. Furthermore, over the past two years the government has been far more active in extending the development institutions system and, particularly, in implementing its earlier designed blueprints.

Table 16

Characteristics of Main Existing Financial Development Institutions

Development institution	Year of incorporation	Legal form	Participants	Modus operandi	Forms of support	Stages supported	Resources
1	2	3	4	5	6	7	8
Fund for assistance to development of small forms of entrepreneurship in the scientific-technical sphere (The Fund for assistance to innovation)	1994	Federal public budget institution	Russian Federation	Funding small innovation firms' R&D at the expense of public funds	Grants	Pre-seed, seed	Budget allocations in 2010 – Rb 3.4bn, 2011. – 4bn, 2012 – 4bn

cont'd

1	2	3	4	5	6	7	8
Russian Venture Company (RVC)	2006	Open-end joint-stock company	Russian Federation	The state fund of funds for seed, venture and direct investment	Investment	Seed Venture Later stages	As of late 2010, net assets worth a total of Rb 34.5bn
The seed Investment Fund under RVC	2009	LLC	RVC – 99%; Fund for assistance to innovation – 1%.	Investment fund for early stages	Investment	Seed	Authorized capital of Rb 2bn
Regional venture funds	2006–2009	Closed-end mutual investment funds for particularly risky (venture) investment	Regional funds for assistance to investment to small-sized enterprises in the research and technical sphere (funded in equal proportion out of the federal and regional budgets) – 50%; outsider investors– 50%	«Classical» venture funds	Investment	Venture	As of early 2012, the aggregate volume was Rb 9.2bn
Foundation for Development of the New Technologies Development and Commercialization Centre ("Skolkovo Foundation"	2010	Non-for-profit organization	Russian Academy of Sciences, Vneshekonombank, Fund for assistance to innovations, Bauman Technical University, ROSNANO, RVC	Funding of innovation projects of companies t participating in the innovation center	Grants	Pre-seed Seed Venture	Budget allocations in 2010 – Rb 10.3bn, 2011. – 15.5bn, 2012 – 27.1bn
The Russian Investment Fund for information and communication technologies (Rosinfocominvest)	2007	Open-end joint-stock company	Russian Federation	Sectoral direct investment fund	Investment	As a rule, late	Authorized capital – Rb 1.45 bn
Russian Fund for Technological Development (RFTD)	1992	Federal state autonomous institution	Russian Federation	Support of R&D on the reverse basis	Loans	As a rule, late	n/a

cont'd

1	2	3	4	5	6	7	8
ROSNANO	2007	Open-end joint-stock company	Russian Federation	Financing of innovation companies, venture and investment funds	Investment	Creation and development of production	Net assets as of June 2011- Rb 61.3bn; long-term borrowings (under state guarantees) – Rb 43bn; Russian Federation's contribution to the authorized capital in 2011 – Rb 47.2bn
Bank for Development and Foreign Economic Activity (Vnesheconombank)	2007*	Public corporation	Russian Federation	State development bank, including exercise of support of investment projects	Loans, investment, guarantees	As a rule, late	As of late 2010, assets were worth a total of Rb 1,782.8bn
The state specialized Russian export-import bank (Roseximbank)	1994	Closed-end joint-stock company	Vneshe-conombank	Specialized bank for support of export	Loans, guarantees	As a rule, late	Assets as of October 2011 – Rb 9.1bn
Russian Bank for Small and Medium Enterprises Support (SME Bank)	1999	Open-end joint-stock company	Vneshe-conombank	Support to SME through target financing of regional partners represented by banks and infrastructure organizations	Loans (incl. microfinancing), leasing, investment	As a rule, late	Operational assets as of early 2012 - Rb 103.9 bn
Russian Fund for Direct Investment (RFDI)	2011	Open-end joint-stock company	Vnesheconombank	Large investment in leading domestic corporations in a proportion equal to foreign institutional investors'	Investment	As a rule, late	Russian Federation's target contribution to Vneshe-conom-bank's in 2011 – Rb 62.6bn.**
Russian Agency for Export Credit and Investment Insurance (EXIAR)	2011	Open-end joint-stock company	Vnesheco-nombank	Insuring Russian exporters and investors' business and ;political risks	Insurance	–	Authorized capital – Rb 30bn

* The year of creation of a public corporation by reorganization of the Bank for Foreign Economic Activity of the USSR, which had been operating in various forms since 1922.
** It is planned that within next 5 years the Government will form the Fund's capital in a volume of USD 10bn.
Sources: the development institutions' official web-pages, official reporting, federal acts on the federal budget.

6.3.2. The Development Institutions' Operational Objectives and Priorities, and Conditions of Projects Support

Whilst considering the totality of objectives developed for public financial development institutions (*Table 17*), it is worthwhile to note that most of them cite assistance to the public policy implementation in the respective area as a principal operational profile, while tasks and targets that complement it are likewise formulated very broadly. Notably, mission of some financial development institution stretches beyond the framework of delivery of solely financial services and outlines a broader sphere of their operations. This, the Fund for Assistant to Innovation is to help attract extrabudgetary investment in the area of small-sized innovation-based entrepreneurship, while RVC is tasked to deliver technological and consulting assistance to the innovation market agents and bolster the infrastructure supporting innovation clusters, as well as professionalism of participants in the innovation ecosystem and encouragement of demand for innovation corporations' produce.

Objectives of the two largest development institutions, Vnesheconombank and ROSNANO, are somewhat nonpareil ones and worth a particular notice. In case of Vnesheconombank, in addition to general objectives, targets and tasks for each of its major operational directions were set (including support of investment projects) in a very concrete form and with measures on their improvement. Meanwhile, ROSNANO's peculiarity lies in a fairly specific (at least, vis-à-vis other institutions) and very ambitious objective, namely, the being first strategy, as far as the global markets for nanotechnological projects are concerned.

Table 17

Operational Objectives, Tasks and Priorities of Development Instutions

Development institution	**Objectives**	**Sectoral and/or subject-wise priorities**
1	2	3
Fund for assistance to innovation	Mission: assistance to implementation of the state scientific-technical policy and bottom-up research projects, efficient employment of the scientific-technical capacity and engagement of scientific and technical achievements in the production sphere to bolster development of small forms of enterprises in the scientific-technical sphere, whose operations imply practical introduction (development) of intellectual deliverables, - small-sized innovation entrepreneurship agents, the innovation infrastructure, generation of job opportunities for an efficient building on the existing national scientific and technical potential . Tasks: – Implementation of the public policy on development and support of small-sized enterprises in the scientific-technical sphere; – Delivery of a direct financial, information and other support to small-sized innovation enterprises which implement projects on development of new kinds of science-intensive products and technologies on the basis of belonging to them intellectual property; – Creation and bolstering of the infrastructure of support of small-sized innovation-based entrepreneurship; – Assistance to generation of new job opportunities for an efficient building on the existing national scientific and technical potential; – Attraction of extrabudgetary investment in the sphere of small sized innovation-based entrepreneurship; – Cadres training (including engagement of the youth in innovation activities)	In the frame of the «Start» program: • 5 thematic directions: – IT; – Medicine of the future; – Modern materials and technologies of their development; – New devices and apps; – biotechnology; • 80 sub-directions. In the frame of the «Development» program: – Sub-program in the energy-saving sphere («Energo»); – Sub-program in the sphere of diagnostics, prevention and treatment of the most socially significant diseases («Frama»); – Sub-program in the IT sphere («Soft»)

cont'd

1	2	3
Russian Venture Company	Mission: ensuring an accelerated unfolding of an efficient and competitive on a global scale national innovation system by creating a self-developing venture industry in interaction with other development institutions with the help of engagement of private venture capital, bolstering innovation-based entrepreneurship and technological business expertise and mobilizing human capital in Russia. Purpose: assistance to implementation of the public policy in the sphere of development of Russian innovation industry and the innovation market's infrastructure, shaping up a system of Russia's own venture investment industry, creation of infrastructure for the innovation-venture ecosystem and encouragement of its expansion, giving a fillip to demand for innovation companies, and generation of profits from business operations. Strategic objectives for the period through2020.: ensuring an unfolding of an independently developing venture industry and innovation-technical entrepreneurship. Tasks: – Integration into global technological chains and support of export of innovation products; – Attraction of international investment resources in a "cash-and-expertise" form to fund Russian innovation industry; – Improvement of innovation Russian companies' investment attractiveness; assistance to increase in the number and enhancement of the quality of technological investors at all stages of the venture investing process; – Communication for the Russian market for innovation, technical and consulting assistance to innovation market agents particularly by organizing workshops, conferences, symposia and roundtables; – Bolstering the back-end infrastructure of innovation clusters, companies at early stages of venture financing and corporations rendering universal services to innovation firms; – Bolstering professionalism of the innovation ecosystem agents, encouragement of demand for innovation corporations' products; promotion of innovation-entrepreneurial, scientific-technical and invention, venture investment activities, in particular, by assisting to creation and advancement of professional contests and awards. Main tasks for the period through 2020: engagement of private venture capital in development of venture entrepreneurship and assistance in creation of the institutional and sectoral venture infrastructure	Venture funds with participation of RVC: • Current priority directions of development of science, technologies and technics of the Russian Federation: – Security and countering terrorism; – The nanosystem industry; – ICT systems; – Life sciences; – Promising kinds of arms, military and special equipment – Rational natural management; – Transportation and space systems; – Energy efficiency, energy saving, nuclear energy; • List of critical technologies of Russian Federation (27 titles therein). The RVC's biofund: biotechnological, pharmaceutical and medical industries
The RVC's seed fund	Tasks: – Boosting advancement of the national sector of seed investment under the venture financing industry; – Boosting a venture partner network for seed investment funds for the sake of a maximum engagement of professional managers, experts and business angels in the process of creation of new technological companies; – Generation of conditions for shaping up an continuous flow of transactions into venture funds, including those established with participation of the JSC RVC's funds; – A significant increase in the number and quality of small-sized technological businesses consequently claiming for receipt of venture investors and early-stage funds' investment	Priority directions of development of science, technologies and technics (see above); The list of critical technologies of Russian Federation
Skolkovo Fund	Shaping up a full cycle of innovation process, including education and research, development efforts and commodization of their deliverables	Priority directions of modernization and technological advancement of Russia's economy ("President's Priorities"): – Energy efficiency and energy saving; – Nuclear technologies; – Space technologies, telecommunications and navigation systems; – Medical technologies; – Strategic computer technologies and software

cont'd

1	2	3
Rosinfo-cominvest	Purposes: – Facilitation of access to financial resources for the most promising Hi-Tech and rapidly expanding companies of small and medium-sized capitalization in the ICT sphere; – Boosting attractiveness of ICT organizations in the eyes of potential investors through the Fund's participation in their authorized capital and management; – Attraction of domestic and foreign investment to secure production and technological cooperation between domestic and foreign enterprises of the ICT sector, development of mutually complementary and supplier/consumer production; – Assistance to bolstering Russian ICT companies' investment activity with respect to attraction of foreign investment in Hi-Tech sectors of Russia's economy. – Exclusive operational profile: investing assets in objects referenced to in the investment declaration (certain kinds and categories of securities, cash on bank accounts and deposits)	ICT
RFTD	Purpose: assistance to implementation of the public policy in the sphere of scientific, research and technical and innovation activity. Object of activity: securing provision of financial support to Russian organizations implementing scientific, scientific-technical and innovation projects, including those in the frame of international research and technical cooperation.	Technological platforms, including, primarily: – medicine of the future; – bioindustry and bioresources; – bioenergy production; – innovation laser, optical and opto-electronic technologies – photonics; – environmentally friendly high-efficiency thermal power; – cutting-edge renewable energy technologies; – small-sized distributed energy production; – metallurgy materials and technologies; – technological platform for solid minerals; – carbohydrates production and use; – intense processing of carbohydrate resources; – ocean development; – green growth technologies. Priority directions of research, technologies and technics (see above)
ROSNANO	Mission: assistance to implementation of the public policy aiming at having Russia joined the group of leading nations in the nanotechnology area. Purposes: – assistance to implementation of the public policy in the sphere of establishment and development of the nanoindustry and the respective innovation infrastructure; – financing investment nanotechnology production projects; – building technological chains securing the rise of new production units in the nanoindustry area in the territory of Russian Federation; – Generation of profit in the course of implementation of the above purposes. Main objective: Russia winning leading positions on global markets for nanotechnological products. Main purposes: securing commodization of the nanoindustry's R&D and coordination of innovation activities in the sohere of nanoindustry. Main vehicle: investment projects	Nanotechnologies

cont'd

1	2	3
Vnesheconombank	Mission: the national development bank, assisting to implementation of the public socio-economic policy, bolstering the national economy's competitiveness and its innovation-based modernization. Purpose: securing an increase in competitiveness of the Russian Federation's economy, its diversification, encouragement of investment activity by exercising investment, foreign economic, insurance, consulting and other provided for by law activities with regard to implementation of projects both in Russian Federation and overseas, including those with participation of foreign capital, aiming at bolstering infrastructure, innovation, special economic zones, environment protection, support of export of Russian products, works and services, and support of small-and medium-sized entrepreneurship. Strategic objective for the period through 2015: boosting the activity on securing a sustained innovation socio-economic development of Russian Federation on the basis of the national economy's modernization and increasing competitiveness. Implementation of this objective requires a considerable increase in the volume of financing of investment projects, expansion of support of export of Hi-Tech products and implementation of support programs for SME, as well as introduction of best practices with regard to project development and management. The Bank's contribution to solving the government's task of the national economy modernization requires an increase in its credit portfolio of the share of loans associated with the funding of investment projects. Strategic objective in the area of contribution to implementation of investment projects: boosting the volume of financing of investment projects across major avenues and sectoral priorities. To implement this objective the Bank will need to tackle the following tasks: – To ensure a greater efficiency of investment projects to implementation of which the Bank contributes, including improvement of internal documents with respect to project evaluation and selection; – To improve the system of control over implementation of investment projects (including, inter alia, with respect to financial monitoring, monitoring of progress in projects implementation and their efficiency); – To render assistance to organizations in preparation of project documentation in accordance with the Bank's requirements; – To create private equity funds and specialized sectoral investment funds to attract the domestic and foreign capital; – To expand the range of instruments of the Bank's contribution to implementation of investment projects by creating development corporations and funds	Sectoral priorities: – aircraft engineering and aerospace complex; – ship-building; – electronics industry; – nuclear sector, including nuclear energy; – transport, special and power machine building; – metallurgy (production of special kinds of steel); – wood-working industry; – defense-industrial complex; – agroindustrial complex; – strategic computing technologies and software; – ICT; – Medical technics and pharmaceutical sector. Priority directions of modernization and technological advancement of Russia's economy (the "Presidential priorities", see above)
Roseximbank	Purpose: implementation of the public policy of supporting and encouraging the national export, creation of import-substituting production and assistance in attraction of investment into Russia's economy. In its capacity of an agent of the RF Government with regard to extension of the state financial support to Russian exports the Bank is responsible for the following tasks: Pursuance of the state policy in the area of guarantee-based support of Russian exports oriented towards solidification of Russian exporters' standing competition-wise on traditional markets of developing and the CIS countries; Rendering assistance to Russian exporters with regard to marketing their industrial products; Granting Russian exporters access to long-term loans, including pre-export lending at minimal market rates. The Bank's operation as the RF Government's agent with regard to state support of exports should help: – Boost the number of national exporters and countries wherein their supply their products; – Promote Russian companies' competitiveness on the global market; – Create import-substituting production units, including innovation ones; – Attraction of investment in Russia's economy; - Generation job opportunities in the country	The manufacturing sector

cont'd

1	2	3
SME Bank	Strategic objective in the area of support of SME: expansion of the financial support of development of SME agents for the sake of diversification of the economy's structure, increase in employment, bolstering self-employment growth in GDP, boosting tax revenues, emergence of the middle class. Tasks in the area of support of SME: – Ensuring equal opportunities to small- and medium-sized businesses to medium- and long term financial resources throughout the territory of Russian Federation, including resource-scarce regions in the first place; – Organization of financial support to production corporations in the first place, as well as those implementing innovation and Hi-Tech projects, thus promoting changes in the sectoral structure of the lending; – Funding development of the support infrastructure for small-and medium-sized businesses (microlenders, business incubators, leasing companies, regional funds of support of MSE, technoparks, multifunctional business centers for MSEs, etc.)	Primarily production sector
RFDI	Mission, values: – Maximization of return on investment to secure a greater corporations' efficiency, generation of job opportunities and promotion of the economy's competitiveness; – Assistance in modernization of Russian economy; – Ensuring the foreign investment inflow; – Ensuring the inflow of the most advanced technologies and the best cadres into Russia; – Ensuring transparency of the corporate governance procedures	Fundamental sectors of modernization: – Advanced processing of mineral resources; – Technological development of critical deposits; – Agriculture and food retail; – House construction and construction materials; – Transport and logistics. Priority directions of modernization and technological development of Russia's economy («Presidential priorities», see above)
EXIAR	Objective: support of national exports and investment outside of Russia across the following directions: – Insuring of export loans from entrepreneurial (business) and political risks; – Insuring Russian investments to overseas from political risks. Tasks: – Marketing Russian export of equipment and technologies; – Monitoring and insurance support of national exporters on new and risky markets overseas; – Design and introduction of a modern system of financial support of export under the Agency's insurance coverage; – Increase in transparency of Russian export transactions and international investment	–

Sources: statutory and other title documents, including development institutions' internal documents, approved strategies and development programs, the development institutions' official homepages.

The development institutions' current operational priorities appear fairly versatile, having different nature and "origin" and, generally speaking, they raise some questions. More specifically, in accordance with the statute on investment policy of the Russian Venture Company, venture funds in which creation it participates and the Fund for Seed Investment should follow in their operations officially set priority directions of development of research, technologies and technics, and the list of critical technologies of Russian Federation; investments made by Skolkovo Foundation should be consistent the with priority directions of modernization and technological development set by the RF President; the "Start" program operated by the Fund for Assistance to Innovation provides for technological "framework" (a fairly big one, *apropos*) set by the Fund itself. That said, there are serious doubts about appropriateness of employment of any priorities and restrictions at the stage of seed – and even more so – pre-seed financing.

At this point, it is worth noting a fairly peculiar prioritization scheme devised by the Russian Fund for Technological Development. The Fund focuses on support of projects matching

respective approved technological platforms and, primarily, those related to technologies of live systems, future energy engineering and rational environmental management. Vnesheconombank centers on sectoral priorities which encompass practically all major manufacturing industries. Meanwhile, it is only one of them, namely, metallurgy for which a priority was identified, that is, a relatively narrow segment of special steel production, with no meticulously identified priorities for the other sectors. Lastly, a range of development institutions have a clear technological specialization (ROSNANO- nanoindustry, Rosinfocominvest – ICT, RVC's Biofund – bioindustry and pharmaceuticals), but it is not clear why other Hi-Tech sectors have thus far been neglected in this respect.

In all, the current system of development institutions' priorities cannot be viewed as a sufficiently consistent. Quite opposite, it appears even "spontaneous", with no general layout or ideology underpinning it.

While considering the current requirements to quantitative parameters of supported companies and projects (*Table 18*) it should be noted a drawback of the current development institutions system, as follows: it does not appear to a sufficient degree oriented toward supporting mid-size projects worth in the region between several hundred million and one billion Rubles. It is only ROSNANO which can afford to support such projects (provided they are directly associated with the nanotechnology sphere), and so can some of RVC's venture funds. As to other development institutions, they center on either bigger, or smaller projects. The SME Bank's operations nominally focus on small- and medium-sized businesses, but due to the effective caps on volume of funding (Rb 150mn for innovation and modernization projects and Rb 60mn – for all other projects), they largely center on support of small-sized businesses.

Table 18

Main Parameters of and Restrictions on the Development Institutions' Operations on Support of Innovation Companies and Projects[1]

Development institutions	Forms of support	Characteristics of supported companies			Characteristics of supported projects		
		«Age», as years[a]	Number of employees[a]	Volume of revenues (income) as Rb mn[a]	Volume of support, as Rb mn	Term of support, years	Co-financing, as %
1	2	3	4	5	6	7	8
Fund for assistance to innnovation ("Start" program)	Grants	Up to 2	No more than 100	Up to 0.3	Year I – up to 1; Year II – up to 2; Year III – up to 3	1–3	Year I – 0; Year II – no less than 50; Year III – no less than 50
RVC's Fund of Seed Investment	Investment	No more than 3		No more than 10	Up to 25	1–5	No less than 25
Skolkovo Foundation	Grants				1,5–300	Up to 10[b]	0–75
Regional venture funds	Investment		Up to 250	Up to 1000	Up to 36–120[c]	Up to 7[d]	25–75
RVC's Venture funds	Investment			No more than 75	Up to 300–1000	Up to 5–10	
RVC's biofund	Investment				No more than 100[e]		No less than 50

[1] In this case we do not consider support of infrastructure, educational, etc. projects

cont'd

1	2	3	4	5	6	7	8
Russian Fund for Technological Development	Credits				As a rule, no more than 300	Up to 5	
Rosinfocominvest	Investment				No more than 150	2–6	No less than 50
ROSNANO	Investment			No less than 250[f]	300–1300	No more than 10	No less than 25–50
	Loans		Up to 250	Up to 1,000	Up to 60; microfinanc-ing – between 0.1 and 1 per contract (no more than 10 by all the contract with a given SME agent); funding for innovation and moderni-zation – up to 150	From 0,5 Up to 5; Microfinanc-ing – from 0,25 Up to 2; Financing of innovationas and moderni-zation – from 1 Up to 5–7[g]	0 or no less than 15[g]
	Leasing	No less than 1	Up to 250	Up to 1,000	Between 0.15–60 up to 60–150[b]	Up to 5	No less than 15–30[g]
	Investment		Up to 250	Up to 1,000	Up to 60	5–7	No less than 15[h]
Vnesheconom-bank	Loans				No less than 1000 (the volume of the project – no less than 2,000)	As a rule, more than 3 (pay-back time - over 5)	No less than 20
Russian Fund for Direct Investment	Investment				1500–15,000[i]		No less than 50

Note.
[a] – as of the moment of the beginning of support;
[b] – the term of effect of the status of participant in the Innovation Center Skolkovo;
[c] – due to the volume of the Fund;
[d] – the term of trust of the funds;
[e] – during the first round of investment;
[f] – in 5 years after the start of the project;
[g] – due to conditions of a concrete direction of support (product);
[h] – from the total value of the project; investment – no more than 25% of the total value, credit support – no more than 60%;
[i] – 50–500 $ mn.

There exist some barriers to the "innovation lift" at early stages, particularly to the "capture" by the RVC's Seed Investment Fund of successful projects earlier supported by the Fund for Assistance to Innovation. This can be explained by the fact that the Seed Investment Fund grants support on a far greater (up to Rb 25mn) level, and the recipient company should be no more than 3-year old. By contrast, the Fund for Assistance to Innovation extends support to companies aged under 2 years and with the volume of proceeds at the onset of no more than Rb 0.3mn. So, objectively, companies' chances for managing to "grow up" to a level at which they can qualify for the Seed Investment Fund's support are limited.

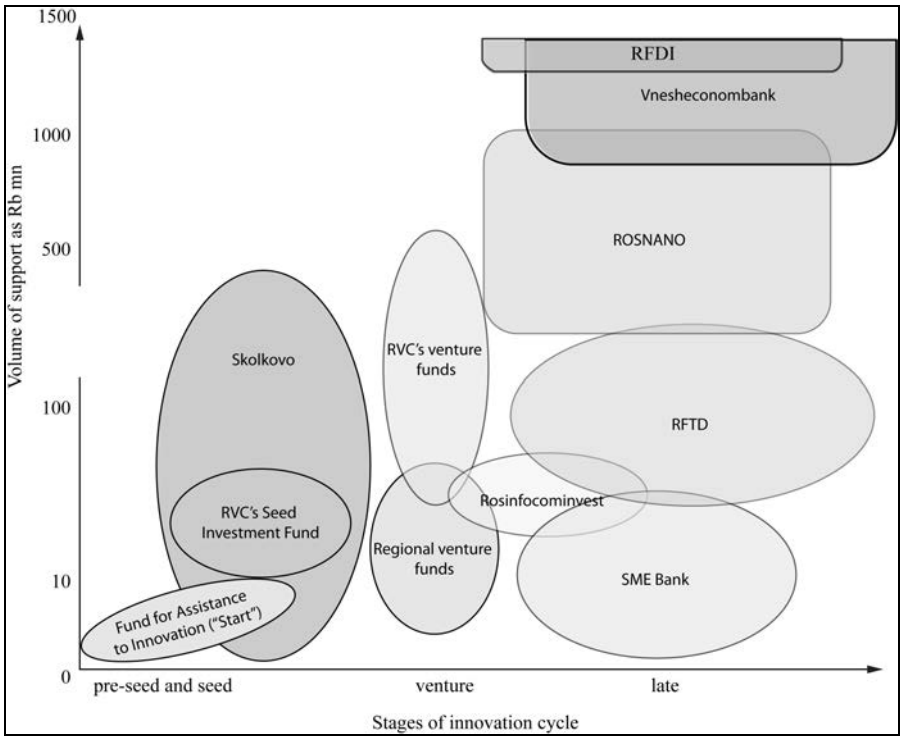


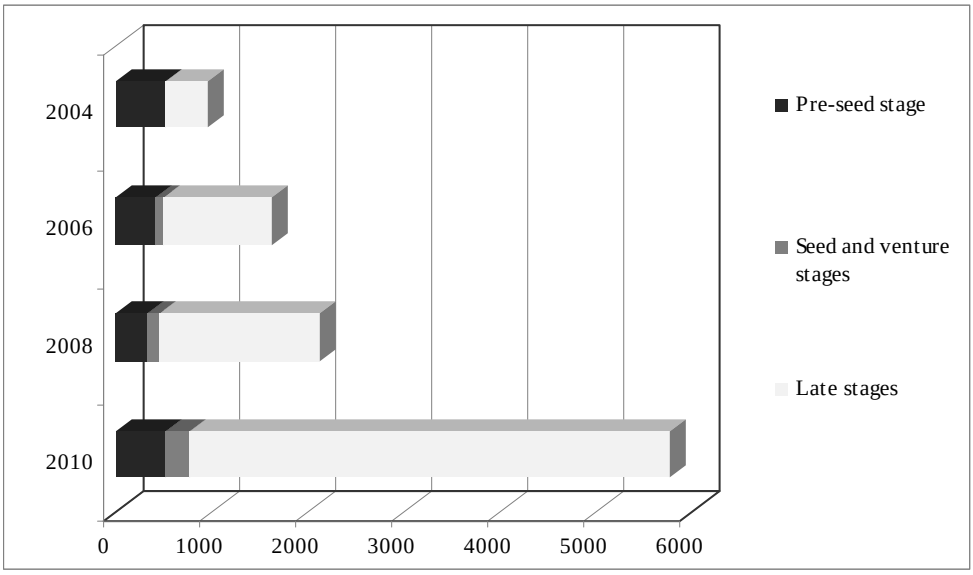
Fig. 2. "Positioning" of Financial Development Institutions by Stages of Projects and Volumes of Their Support

It should be noted that there has recently emerged a tendency to extension of the upper margin of support: thus, the Fund for Assistance to Innovation raised it by 1/3, SME Bank now is in a position to disburse loans of up to Rb 150mn to innovation and modernization projects (with another 60mn to be potentially invested in SME implementing such projects), while earlier the cap for the said categories of project was Rb 60mn. Plus, some of recently established institutions and funds allow far greater projects financing volumes than the existing institutions centering on the same stages of the innovation cycle (the most shining examples in this respect are Skolkovo and RFDI).

6.3.3. Assessment of the Scale and Outputs of the Development Institutions' Performance, Main Tendencies and Recent Critical Changes

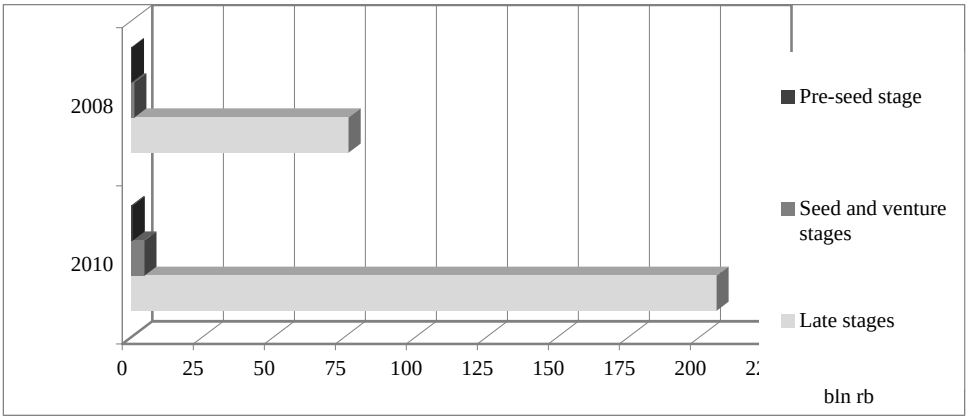
The number of supported projects recently has steadily been on the upsurge (*Fig. 3*), and in 2009 – 2010 it nearly tripled, which can be ascribed largely to a substantial expansion of SME Bank's operations. The rise was practically exclusively fueled by projects at late stages of the innovation cycle, which resulted in a very considerable "bias" towards those: while in 2004 the number of supported projects at early stages roughly equaled the one of late-stage projects, in 2010 the latter accounted for nearly 90%.

The prevalence of late-stage projects is yet more visible in the structure of financing (*Fig. 4*), which, however, is quite natural, as the size of support granted at early stages is more humble. As well, let us note that in the overwhelming majority of cases the size of support of projects implemented in 2010 was fairly small and accounted for up to Rb 50mn per project.



* Hereinafter without regard of the projects supported by SME Bank via the infrastructure organizations.
Source: estimates by the interdepartmental Analytical Center on the basis of materials of Russian development institutions and RVCI.

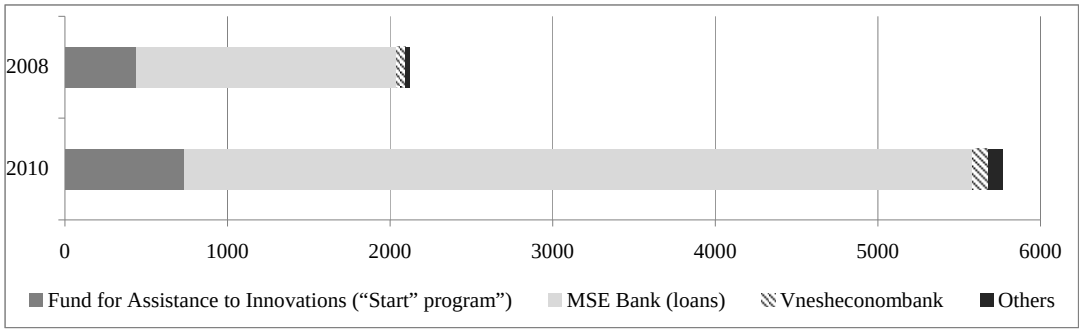
Fig. 3. Dynamic of the Number of Supported by Development Institutions Projects by Main Stages of Innovation Cycle*



Source: estimates by the interdepartmental Analytical Center on the basis of materials of Russian development institutions and RVCI.

Fig. 4. Volume of Financing of Supported during the Year Projects by Development Institutions by Main Stages of Innovation Cycle

It was the Fund for Assistance to Investment and SME Bank's performance which proved the most "mass-scale" one (*Fig. 5*): in the case of the former institution, there were hundreds of objects of support over the year, while in the latter case they were counted in thousands. Common for the institutions in question is their focus on support of relatively small projects: in the former case the grant typically does not exceed Rb 1mn, while loans disbursed in the latter case account for some Rb 4mn each. That said, the institutions' operations center on the "polar" stages of the innovation cycle: that is to say, the Fund supports projects at their early (mostly pre-seed) stages, while the Bank does the same for projects on late stages.



Source: estimates by the interdepartmental Analytical Center on the basis of materials of Russian development institutions and RVCI.

Fig. 5. The Number of Projects Supported by Development Institutions over the Year

When it comes to the performance of two particular development institutions, SME Bank and Vnesheconombank, which carry out fairly large-scale support programs (in the former case – in terms of the number of supported objects, while in the latter case – volume-wise), their common peculiarity lies in a relatively low proportion of the "investment component": thus, the institutions themselves estimate the specific weight of innovation projects in the overall amount of support at the level of ¼ for SME Bank (as of 2009) and a meager 3% for Vnesheconombank (as of 2010). Meanwhile, SME Bank has recently launched a program "Financing of innovation and modernization" which should intensify its activity in the area of innovation; as to Vnesheconombank, we feel the above estimate appears lower than in reality, as some projects which the Bank did not label as innovation ones are directly associated with innovation, nevertheless. As well, it is worth noting that the Bank's recently adopted strategy through 2015 provides for an increase of the proportion of investment projects in its credit portfolio up to 20%.

While comparing the magnitude of the development institutions' operations in 2008 with the 2010–2011 one (*Table 19*), it is worthwhile to note their substantial expansion for most of the institutions and, sometimes, in tandem with diversification of their activities. In a number of cases that was determined by the fact that back in 2008 some institutions (like RVC or ROSNANO) basically kicked off into existence and were way below their "projected capacity". However, in certain instances, it can be ascertained that already mature institutions (such as SME Bank) expanded their operations considerably. Against the general backdrop RFTD appears a notable looser, as not only did the Fund fail to expand its R&D financing operations, but de facto put them on halt. That said, as noted above, it was announced in 2011 that the Fund was going to renew its operations in the capacity of development institution.

Table 19

Magnitude and Performance of Development Institutions with Regard to Support of Innovation Projects

Development institutions	Magnitude and performance	
	2008	2010–2011
1	2	3
Fund for Assistance to Innovation	Between 2004 and 2008 in the frame of the "Start" program 8,700 applications were considered, over 2,000 projects were supported, including some 270 ones – at the second stage and around 50 – at the third stage	By late 2010 in the frame of the "Start" program over 12,000 applications had been received and some 3,000 projects were supported. As many as 82 small-sized innovation companies had completed a three-stage cycle of the program

cont'd

1	2	3
Russian Venture Company	As many as 7 venture funds with a total volume of a. Rb 19bn were formed. Three funds invested some Rb. 1.8bn in 15 companies	By late 2011 venture funds had selected 45 projects to be financed. The Seed Investment Fund was created (see below). Two Funds were created under foreign jurisdictions and USD 20mn was invested. The RVC's InfraFund was established , 9 projects were selected. The RVC's BioFund was established
RVC's Seed Investment Fund	–	By the end of 2011 41 projects were selected for financing
Regional venture funds	As many as 14 funds created in 12 Russian regions with a total capitalization of some Rb 5.5bn. A. 30 porjects were funded, and the aggregate amount of investment hit Rb 1.3bn	There are 22 funds in 20 regions with the aggregate capitalization of over Rb 9bn. By late 2010 they had approved a. 50 projects for financing, and the aggregate amount of investment was Rb. 3.3bn
Skolkovo Foundation	–	By late 2011 as many as 85 grants worth a total of Rb 5.8bn were approved and the volume of co-financing hit Rb 4bn. The grant recipients de facto received Rb 1.9bn
Russian Fund for Technological Development	Over 800 projects worth a total of Rb 7.4bn were financed*	
ROSNANO	By late 2008 a. 400 applications and proposals for financing were received for a total of Rb. 464bn, including 310bn out of the corporation's funds. ROSNANO approved 7 projects (6 investment and 1 educational one) worth a total of Rb. 10.3bn, including 5.5bn – out for the Corporation's funds. Another 2 projects were launched with the funding amounting to Rb 0.2bn	By late 2011 as many as 1,884 applications for project financing worth a total of Rb 4,064bn, including 1,764bn out of the Corporation's funds (in 2010 – 439 applications, Rb 1,867bn and 556bn, respectively). Of the said number 104 projects worth a total of Rb 347bn, including ROSNANO's co-funding in the amount of Rb 140bn, were approved (in 2010 – 44 projects, Rb 146bn and 47bn, respectively). The Corporation allocated Rb 64bn for 49 projects, including32bn – in 2010. ROSNANO fulfilled its investment obligations by 11 projects. ROSNANO's participation with Rb 30bn in creation of 8 venture funds worth a total of Rb 62bnwas approved. Of the said number 4 funds were financed (Skolkovo-Nanotech, Advanced Nanotechnologies, Nanomet, Rosnano Capital), of which 3 are up and running
Vnesheconombank	By late 2008 as a creditor contributed to financing of 54 investment projects, of which contributed to 5 projects as an investor, too, while to another two projects – as a guarantor. The volume of loans on implementation of investment projects accounted for Rb 129.9bn. In 2008, the Bank started financing 21 new investment projects in Russia	By late 2010 Vnesheconombank contributed to funding of 97 investment projects, of which to 94 – as a creditor. As well, the Bank provided guarantees to 2 investment projects. The volume of disbursed loans accounted for Rb 306bn, the balance-sheet value of stock the Bank acquired in the process of allocation of support to the project was Rb 27bn, and the volume of guarantees provided was a. Rb 11bn. In 2010 the Bank began financing 27 new investment projects and disbursed Rb 126bn in loans on projects implementation, including Rb 61bn- on new projects, and invested in corporate stock over Rb 20bn
Roseximbank	By late 2008, the Bank's credit portfolio accounted for Rb 4bn, including some 2.5bn extended in the form of pre-export funding. The volume of loans disbursed in 2008 was Rb. 29bn	By late 2010, the Bank's credit portfolio accounted for Rb. 5.1bn, including some 3bn extended in the form of pre-export and investment lending (aiming, as a rule, at modernization of equipment of manufacturing corporations seeking to reduce production costs of their exports). In the course of the year, Rb 3.7bn was disbursed (prolonged) in loans
SME Bank	In 2008, as many as 1,600 loans worth a a total of Rb. 7.8bn were disbursed to SMEs. In all, since 2004, the Bank extended nearly 6,500 loans to SMEs for a total of over Rb 23bn	In 2010, MSEs were granted some 5,000 loans for a total of over Rb 27bn. By the end of the year, the aggregate volume of the support to SMEs accounted for, on an accrual basis, some Rb 80bn. In the frame of the "Financing for innovation and modernization" program in 2010 alone the Bank disbursed 12 loans for a total of Rb. 0.8bn

* By 2008 RFTD had de facto terminated its project financing operations.
Sources: the official corporate reports, the development institutions' official homepages.

Importantly, a number of Russian development institutions *have lately substantially modified* operations (or, at least, modifications began to emerge therein), *and, as a rule, for the better:*

- As the most visible recent tendency it is worth noticing the aforementioned activation of efforts to complete building the system of development institutions, primarily in respect to creation of new ones both by the state (Skolkovo Foundation) and by the already existing institutions (RVC and ROSNANO's venture and infrastructure funds, among others – see *Fig. 6*);
- The processes of Russian development institutions' integration into the global innovation system have gained a notable momentum: at this point, it would be appropriate to cite a string of programs with Vnesheconombank's participation (co-funding of projects in the area of infrastructure, industrial production, energy efficiency and resource management with the World Bank; a joint program with EBRD on funding investment projects in the frame of the Russia-EU "Partnership for Modernization" initiative, and incorporation by RVC and ROSNANO of subsidiaries and foundations under foreign jurisdictions;
- An important operational direction for the institutions and funds in question has recently been support of development of various elements of the innovation operational (information, educational one, etc.) infrastructure. At this point, it should be noted that while creation by ROSNANO of the Fund for Infrastructure and Educational Programs allows to speak about incorporation of the respective operational direction in the individual legal entity format, creation, for instance, of the InfraFund and BioFund under RVC (in the focus of the latter are both innovation and service companies that deliver laboratory, information-analytical and consulting services) constitutes the every initiation of the respective operational directions under the aegis of Russian Venture Company;
- Meanwhile, the development institutions have substantially bolstered their cooperation with respect to support of innovation activities. The most visible manifestations of the process in question are the "Agreement of the Nine" aiming at securing a perpetual funding of innovation projects[1]; bilateral agreements between individual funds and institutions, such as creation of the RVC's Seed Investment Fund with participation of the Fund for Assistance to Innovation, the RVC running evaluation of projects that seek funding out of regional venture funds. Besides, it is worthwhile to note the recently started "mutual penetration" of managing structures of different development institutions, which is most visible at the level of their Boards (Advisory Councils);
- The search for optimal forms of organization of development institutions' operations, shaping up new directions and instruments of support, including in pursuit of strategic prospects, is under way. To cite particular moves or core initiatives in this area suffice it to refer to the incorporation of ROSNANO and the planned for a foreseeable future privatization of a fraction (up to 10%) of the newly established joint-stock company's stock; the transformation of RFTD from public institution into an autonomous one and renewal of its operations on supporting R&D with the emphasis on projects implemented in the frame of tech-

[1] In 2010, a number of public development institutions, including Vnesheconombank, ROSNANO, the RF Ministry of Education, Fund for Assistance to Innovation and RVC, as well as 2 non-profits (OPORA Rossii and the Russian Association fof Direct and Venture Investment), and MICEX, and the Federal Agency for Youth concluded a cooperation agreement which provides for organization of a prompt information exchange about projects in progress to arrange for their "transfer" from one institution to another.

nological platforms; the already repetitiously cited creation of RVC and ROSNANO's funds; initiation by the Russian Bank for Development of the "Financing for Innovation and Modernization" program. It is also worth noting a practically completed process of development of strategic guidelines (plans, programs, etc.) for core institutions for years to come[1];

- Development institutions have to some degree succeeded in solidifying trust in them through their leadership's professional reputation. In this regard the most shining example is the composition of the RVC's Board, with 3 out of its 7 members being independent directors and renowned business community representatives.

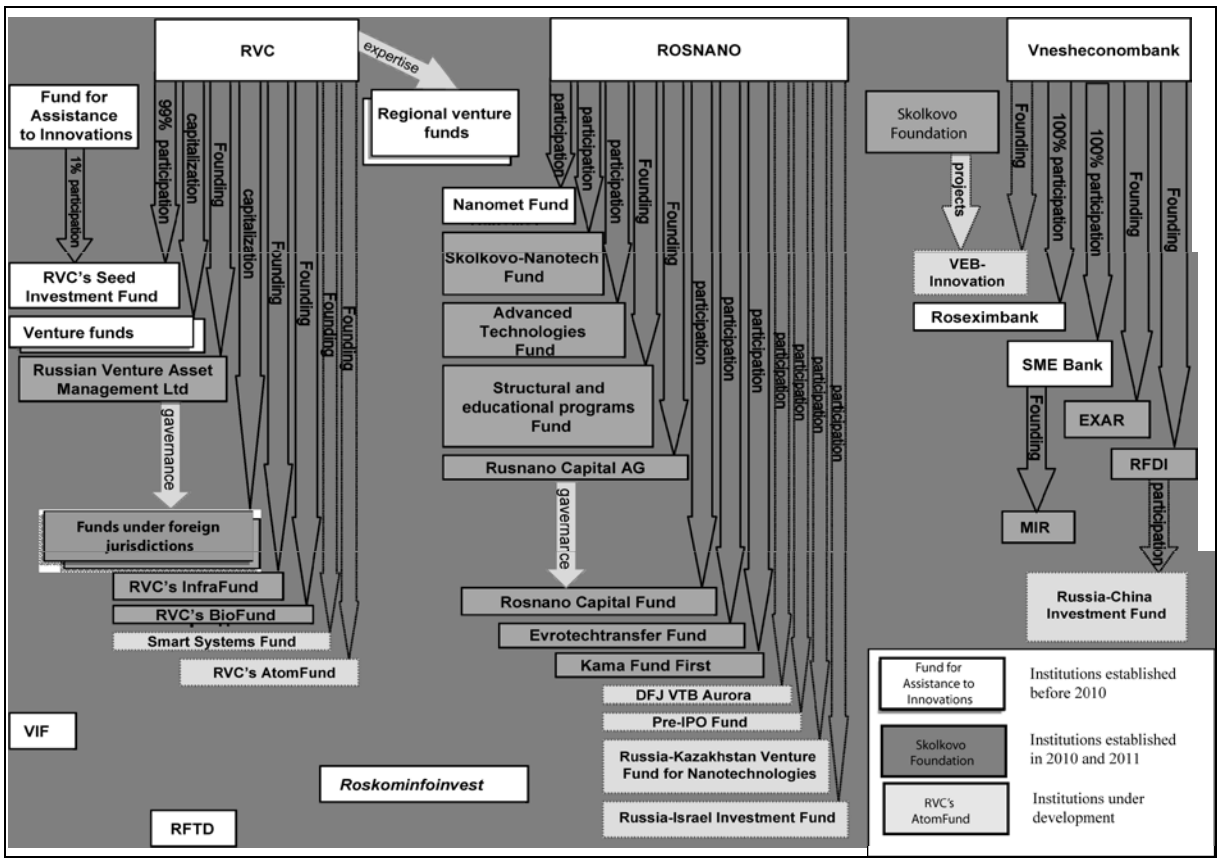


Fig. 6. The System of Existing Financial Development Institutions and the Ones under Development

While considering the balance of the development institutions' strengths and weaknesses (*Table 20*) it can be noticed that each of them is in possession of a substantial spare capacity to bolster operations on support of innovation: for example, the Fund for Assistance to Innovation could raise its caps on both the volume of support and the size of supported companies, as well as enhance its operational transparency and improve the overall performance; Vnesheconombank could bolster the innovation component; Rosinfocominvest could tackle nor-

[1] The only clear "lacuna" today is the absence of such a public document for the Fund of Assistance to Innovation; however, it has already crafted a draft medium-term action plan.

mative hurdles to the start of its investment operation; and practically all the institutions could expand the array of forms of support and intensify their efforts to attract private resources.

Table 20

Main Strengths and Weaknesses of Development Institutions with Respect to Support of Innovation

1	Strengths 2	Weaknesses 3
Fund for Assistance to Innovation	Implements a grant-based scheme of support, no problems with "walking out" from the supported projects. A developed territorial structure in place, a broad "encompassing" of Russian regions, a well-developed evaluation system. Credibility, the possibility for a substantial scaling of "Start" and "SMART" programs without lowering the selection quality bar. Flexibility and creativity in shaping up new programs. Possibility for building a program of new directions of support, particularly with regard to small business – exporters	Financial resources are limited. A significant fraction of programs suspended during the crisis. The Fund's support may go only into funding R&D and works directly related to R&D implementation. A fairly low cap on support of a single project. Restrictions on subjects of supported projects (albeit not so stringent) appear excessive on the seed stage and on the pre-seed one in particular. Possibilities for purchasing special equipment are considerably restricted by the effective standards[1], ergo, problems with supporting start-ups where costly equipment is needed. No approved development strategy and public performance reports available
RVC	Possibilities for flexible participation in creation of various funds together with private businesses. RVC's lessen principle with regard to decisions on projects selection generate general framework for private initiative and risk allocation. In addition to "typical" venture funds, shaping up specialized ones (seed, infrastructure, sectoral (BioFund). High activity, regular putting forward new practical initiatives on creation of new funds, development of the innovation-venture ecosystem, etc.	Shift of the focus on creation of funds without co-sponsors. Due to the established prioritization (priority directions of development of research, technologies and technics, and the list of critical technologies of RF) there may exist a lack of attention to interdisciplinary projects, new, rapidly growing sectors that have failed to make it into the list of officially set priorities
RVC's Seed Investment Fund	With account of a substantially higher (compared with the 'Start" program) cap on support of a individual project –s the possibility for implementation of investment-intensive projects at the seed stage across a broad spectrum of thematic directions. No caps on kinds of financial costs associated with projects implementation, flexible conditions with regard to projects implementation timelines. Focus on capitalization of innovation firms. Possibility for creation in the future of a steady flow of transactions on "walkaway" from projects with the help of the system of venture partners	Overly strict capping on marginal earnings of a company potentially applying for support – in reality it is micro-companies, not even small-sized businesses which are subject to support. Due to the innovation pattern of the "seeding", the problem of "walkaway" from projects. Requirement to supported companies' operations to be in line with priority directions of development of research, technologies and technics, and the list of critical technologies of RF appears excessive
Regional venture funds	Attraction of RF Subjects' funds to develop the venture industry. A due account of the regional specificity of venture investment, possibility for flexible "walkaway" timelines. Decreasing small-sized innovation companies' costs of access to support Requirement for RVC to run evaluation of projects seeking the funds' investment can positively influence the quality of supported projects	Low level of investment activity: as of late 2010 the average transactions-to-fund ratio was just around 2 to 1. The need for an "intermediary link" – The need for «regional funds for assistance to venture investment in small-sized enterprises in the technical sphere most of which are used to create a sole venture fund. A broad representation of RVC on the funds' Boards in tuned, with evaluation of projects can result in an excessive concentration of real control powers in the hands of RVC. Negative record of interaction with private management companies (in Tyumen oblast, Stavropol krai). An insufficient level of the overall transparency of the system of created funds and their deliverables
Skolkovo Foundation	Considerable amount of support, grant-based operational pattern. Possibility to combine financial support with other mechanisms provided for residents of the Skolkovo Innovation Center: large-scale tax, customs and tariff benefits, a simplified procedure of employment of foreign workforce, softening administrative barriers to doing business with the use of an independent institutional regulation system	The priorities embrace just a fraction of promising directions of technological development. The current concept of the Foundation and the Innovation Center is better suited to accommodate large, well-established companies, rather than innovation startups

[1] Proportion of funds used to purchase special equipment may not exceed 15% of the value of the contract .

cont'd

1	2	3
Rosinfocominvest	Focus on a partial privatization, possibility to refine the scheme of attraction of private investment at the Fund's level which can prove effective in the ICT sector, along with implementation of a broad totality in respect of short-term projects	Ban on the Fund investing until the moment the government reduces participation in its capital to 51%, the absence of any progress in attraction of private shareholders and, as a consequence, the absence of the Fund's profile operations. The cap on investment in a given single project may prove insufficient, as the Fund has not right to invest in LLCs of which such a volume of investment is more typical than of JSCs
RFTD	A significant record of selection and support of applied research projects. A mature system of communication with research organizations and corporations. As the focus is on support of projects in the frame of technological platforms, the high demand for the projects' outputs is highly likely	Just a sole mechanism of support is permitted, that is, target loans, which is not always the best mechanism for innovation projects by companies and new and small-sized ones in particular. The selection of a fraction of technological platforms as top priority ones is not clear
ROSNANO	Holistic approach to operations (support of innovation projects, innovation infrastructure development, education, improvement of regulation. Sizeable financial resources at hands. Upon incorporation there emerges a possibility (and plans have been shaped up already) for attraction of private investors. Highly active, primarily in regard to investment projects rollout across a broad range of directions. A considerable number of initiatives associated with the innovation infrastructure development. A fairly high degree of transparency, including that of operational pillars and regulations; a well-developed public awareness and communications system.	Gradual drift to support of increasingly larger programs and projects. With no strictly established corporate development framework in place, the risk of an unjustified expansion of the scale and functions. The de-facto refusal to finance R&D (beyond the frame of innovation projects), while support of R&D was set as one of the company's major functions
Vnesheconombank	A sizeable resources volume, possibility to support huge long-term investment projects. Pre-crisis, a high efficacy with regard to organization of selection and support of implementation of huge investment projects. The resource and organizational capacity on hand to support projects that secure significant multiplying effects for advancement of the national economy and the rise of progressive technological shifts. Rainbow of forms of support: loans, investment, guarantees – and the possibility to combine them. Possibility to expand projects on support of regional innovation infrastructure	No strictly determined methodology of assessment and principles of support of investment projects on development of innovation as yet. A gradual expansion of the Bank's functions in its capacity of the RF Government's agent (which became particularly significant during the crisis) which reduces the Bank's capacity with regard to a consistent and systemic implementation of functions of development institution. There are signs of a certain trend to reallocation of resources in favor of infrastructure projects with resources on support of innovation projects being limited. No strictly determined requirements to the extrabudgetary project co-financing. The risk of using the Bank's resources as a "surrogate" of extrabudgetary funding in side-projects (including those implemented by other development institutions)
Roseximbank	Employment of various schemes, provision of support at different stages, including the pre-export one. Support of export as a major profile, a substantial record in this sphere	Relatively moderate magnitude of operations and humble resource capacity on hand. A certain inclination to supporting traditional industries. The support was not customized to meet small-sized companies' needs
SME Bank	Well-developed and fairly effective operational pattern of a mass provision of support to SMEs on the basis of agent agreements with banks and infrastructure organizations. Sizeable volume of resources to support SMEs. A very broad "encompassing" (in terms of the number of supported projects). Rainbow of forms of support: loans, including microfinancing), leasing, investment. Expansion of the scope and employment of new forms of support, in particular, in the innovation sphere	Because of the effective caps on loans, the Bank focuses largely on support of small-sized and micro-firms, rather than medium-sized businesses. A special program of support of innovation activity was launched just in 2010 and, funds-wise, has thus far been fairly modest
RFDI	Possibility to implement very large, backbone for an industry, region or the economy as a whole, projects Focus on attraction of foreign investors, including institutional ones. Intention to invest in rapidly expanding sectors and industry leaders	Taking into account prospective projects – relatively small capital of the fund. No publicly available documents to specify the procedure and conditions of investment activity. The risk of "megalomania" in the course of selection of projects to

6.3.4. Critical Challenges and Possible Ways of Improvement of the System of Public Financial Development Institutions with Regard to Support of Innovation Activity

So, there has recently emerged a tendency to a notable expansion of Russian financial development institutions' scope of operations: the volume of their investment is on the rise, as the number of investment projects they back is. Our estimates suggest that the aggregate volume of support of investment and innovation projects by development institutions increased from Rb 78bn in 2008 to 211bn in 2010, while the number of supported projects grew over the same period from 2,100 to 5,800. As noted above, it was expansion of the Russian Bank for Development's operations on support of MSEs that accounted for a critical contribution to the rise in the number of supported projects. Meanwhile, the growth in the overall volume of support was secured by expansion of the Vnesheconombank's operations on lending to investment projects and ROSNANO's funding production projects.

In its most general form, as far as the innovation sphere is concerned, the development institutions system should ensure addressing the following tasks:

1) Support of creation of new innovation companies, R&D commodization processes, and technology transfers;
2) Ensuring conditions of a rapid expansion of successful innovation firms, including by compensating for market failures and granting access to financing at different stages of the innovation cycle;
3) Ensuring a demonstration effect for the economy, boosting private resources in the innovation sphere.

The businesses' assessment[1] *of the development institutions' impact* allows the following conclusions: on the one hand, their influence on the corporate sector's innovation performance may appear fairly limited: only 4% of enterprises in the sample noted the presence of such an effect from VEB and ROSNANO's operations, while another 2% of respondents noted the same with regard to venture funds' operations. On the other hand, however, those are not small figures, given the narrow focus of the development institutions' operations and comparing them with the respective figure of the impact of financing of innovation projects in the frame of the FTP (8% of respondents).

More important is what category of enterprises noted a positive effect from development institutions' operations. Having run a regression analysis, we found out that it is corporations with government participation and those with a solid financial standing which more often cite a positive effect from Vnesheconombank and ROSNANO's operations. Meanwhile, it is medium-sized companies (with up to 250 employees), corporations with government participation and those with a solid financial standing which more often ascertained the same with regard to venture funds. As a positive fact, let us note that the positive effect in question was more often cited (given other conditions being equal) by companies with a higher level of spending on technological innovation, a positive dynamic of such costs and boasting cutting-edge innovation produce.

[1] On the basis of a survey on executives of 600 medium-sized and large industrial corporations run in October-November 2011 and individual interim findings of the project of the Interdepartmental analytical center on assessment of various instruments of encouragement of innovation implemented for the benefit of the RF Ministry of Education and Science.

It appears quite logical that the development institutions' operations generally prove more significant to robust companies, while venture funds' operations in particular – to smaller-sized companies. That said, interpretation of some shift of the "group of beneficiaries" towards companies with government participation is a tricky question. We assume there might be at least two explanatory hypotheses: (1) being controlled by the state, public development institutions' focus of operations is shifted toward support of companies with government participation; (2) where private corporations receive funding from public development institutions, they face the need to give up a fraction of corporate control in the course of implementation of an investment project, while companies with government participation are not particularly concerned about such anti-motivations.

An accelerated and multidirectional expansion of Russian development institutions, particularly coupled with an insufficiently developed independent audit of their performance, inevitably increases risks associated with the rise (intensification) of certain systemic imbalances in their operations. It is possible to identify the following tentative groups of such imbalances:

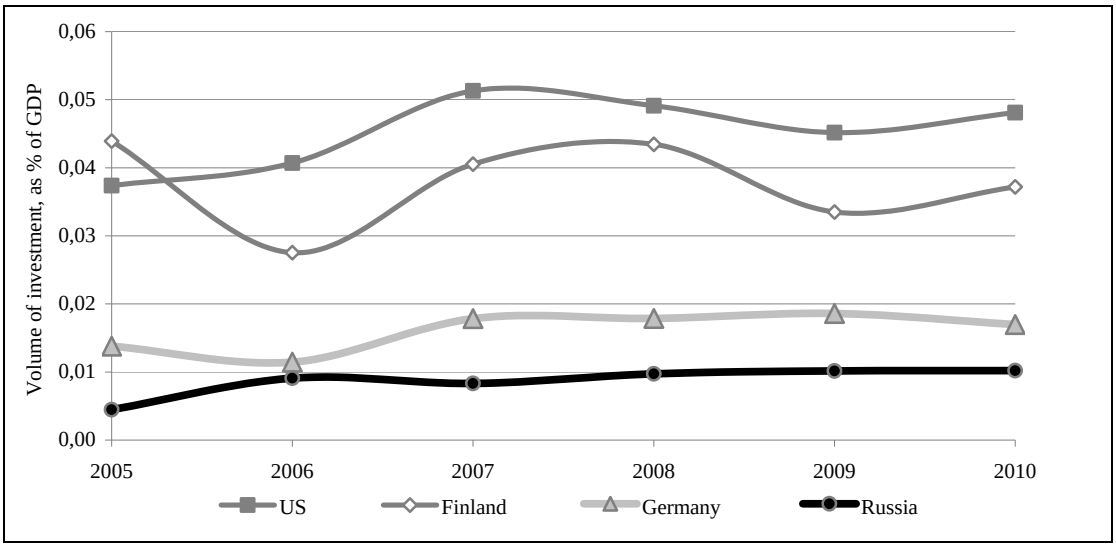
- «vertical» ones, which appear to be determined by an insufficient balance of support at different stages of innovation ;
- «horizontal», which are associated with thematic directions of development institutions' operations and peculiarities of their prioritization; and
- Institutional ones, determined by the normative framework of conditions of provision of support and a loose combination of instruments applied.

Let us first examine *general trends of development of the Russian market for investment at venture stages* vis-à-vis mature innovation economies. Between 2005 and 2010, Russia first posted some advanced growth of the level (vs. GDP) of investment at venture stages followed by its stabilization at the level of 0.1% of GGDP since 2008 (*Fig. 7*), with the indicator in question nationwide during the whole period being substantially lower than in countries with a mature venture industry, such as US and Finland and thus far having exhibited no trend to its *post-crisis growth.*

While analyzing *operations on the Russian market for venture and direct investment sector-wise*, it should be noted that thus far it has not undergone any substantial, sustained shifts in terms of "diversification" of thematic directions. According to RAVI[1], in 2007–2010, investment in three sectors – telecommunications, financial services and consumer market – accounted for 70-80% in the structure of private equity and venture funds' investments. Throughout the period in question, investments in the medicine and health care sector were being steadily on the rise. After the crisis 2009 tendencies to growth in investment renewed in such sectors and energy, industrial equipment, agriculture, while investment activity in such sectors as chemicals, biotechnology, light industry, and environmental management remained low.

The public institutions' operations at venture stages also gravitate more toward "traditional" thematic direction, though with some attention being paid to certain other sectors, such as medicine and energy engineering.

[1] Russian Association for Direct and Venture Investment. Direct and venture investment in Russia 2010. A preliminary market review. 2011

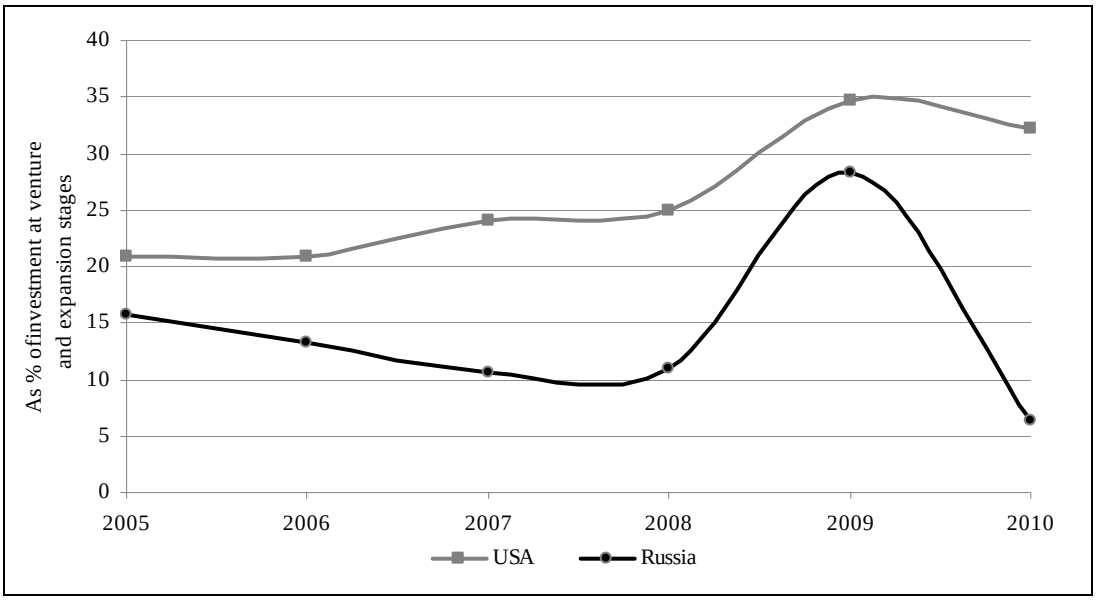


* Venture stages include the seed, initial and early stages (by the RAVI methodology) and analogous stages as classified overseas.
Source: assessments of the Interdepartmental analytical center on the basis of data of RAVI (Russia), NVCA (UD), EVCA (Germany).

Fig. 7. Dynamic of the level of Investment at Venture Stages * in Individual Countries, as % to GDP

As to the direct investment market, ROSNANO is particularly active there, but, of course, only in the frame of its core mission of development of nanoindustry. Meanwhile, as far as such a promising direction as bioindustry is concerned, the existing development institutions do not exert any significant influence on its advancement. In our view, due to the industry's huge capital intensiveness and dependence of its development prospects on improvement of regulation, it is imperative to establish a specialized PPP-based biotechnological direct investment fund. There might as well be a certain niche to form other funds (both venture and direct investment ones) to focus on such directions as fine chemistry, alternative energy, robotics.

Despite a certain progress, the Russian industry of venture capital and direct investment has still *remained unbalanced phase-wise:* between 2005-10 investment at the stage of expansion proved nearly 10-fold greater than investment at venture phases, while developed economies exhibit a greater level of investment at the latter stages. If in our consideration we cross out a "formal" increase in the share of investment at venture stages during the crisis period (determined by contraction of private businesses' investment activity at expansion stages), it can be noted that US demonstrated a tendency to increase in the share of investment at venture stages, while in Russia this share was down: in 2005, the proportion of investment at venture stages in the aggregate volume of investment at venture stages plus those at expansion stages was over 15.7%, in 2010 it dwindled to 6.3% (*Fig. 8*). We believe this effect was engendered by the strive for practical results from development institutions' operations in the short run and by the shift of operation of the whole system of development institutions toward later-, "commercial" stages with more visible direct deliverables.



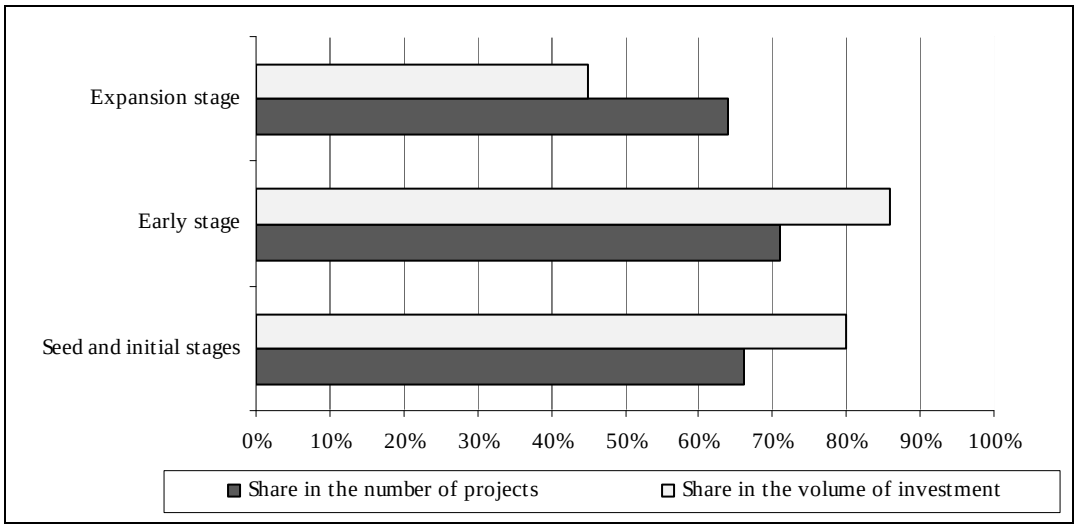
* The category of venture stages comprises seed, initial and early stages (by the RAVI methodology), and their analogues in foreign classifications.
Source: estimates by the Interdepartmental analytical center on the basis of RAVI (Russia) and NVCA (US) data.

Fig. 8. Dynamics of the Proportion of Investment at Venture * Stages in the Volume of Investment at Venture and Expansion Stages

It is common knowledge that it is early stages when the role of the state (and development institutions) with regard to support of innovation is critical, as at these stages private initiative is missing at most. But the Russian system of public development institutions appears insufficiently mature as far as the said stages are concerned.

On the one hand, Russia's development institutions do play the greatest role at venture stages. Thus, we estimated that in 2010 alone, their and their daughter funds' direct contribution to the aggregate volume of investment in companies at venture stages accounted for 85% (RAVI estimates it at a level of 75%), and another 45% - in the total volume of investment in companies at expansion stage (*Fig. 9*). Let us note the critical role played by the Fund for Assistance to Development at the pre-seed stage.

On the other hand, the main "increase" in Russian development institutions' activity in 2010, both investment-wise and in terms of the number of supported projects, was associated with later-stage investment. While comparing the magnitude of public development institutions' operations in terms of different stages of the innovation cycle, an insufficient "broadness" of support (in terms of the number of projects) at venture stages in general (*Fig. 10*) and with regard to seed investment in particular (despite expansion of the RVC's Seed Investment Fund' operations) is particularly noticeable. This substantially constraints possibilities for private investment to embrace later-stage projects and blocs the rise of a steady "flow" of innovation projects.

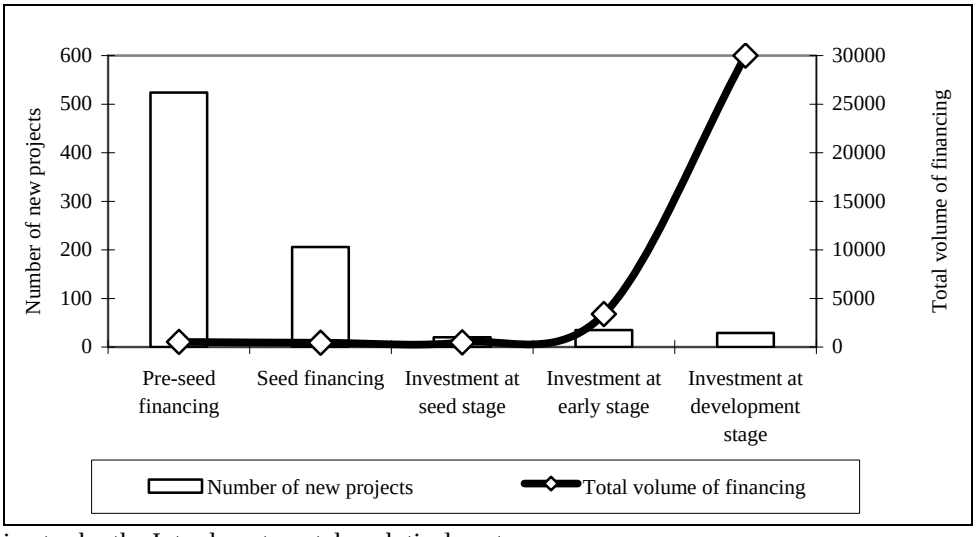


* Assessments by RAVI are used as basic values with regard to aggregate volumes of direct and venture investment in Russia.

** The Seed Investment fund, venture funds founded with RVC's participation, regional venture funds, ROSNANO.

Source: estimates by the Interdepartmental analytical center with the use of RAVI's estimates of aggregate volumes of direct and venture investment in Russia.

Fig. 9. Assessment of Contribution* of Public Financial Development Institutions (and Funds Created with their Participation)** in Russian Market of Venture and Direct Investment in 2010



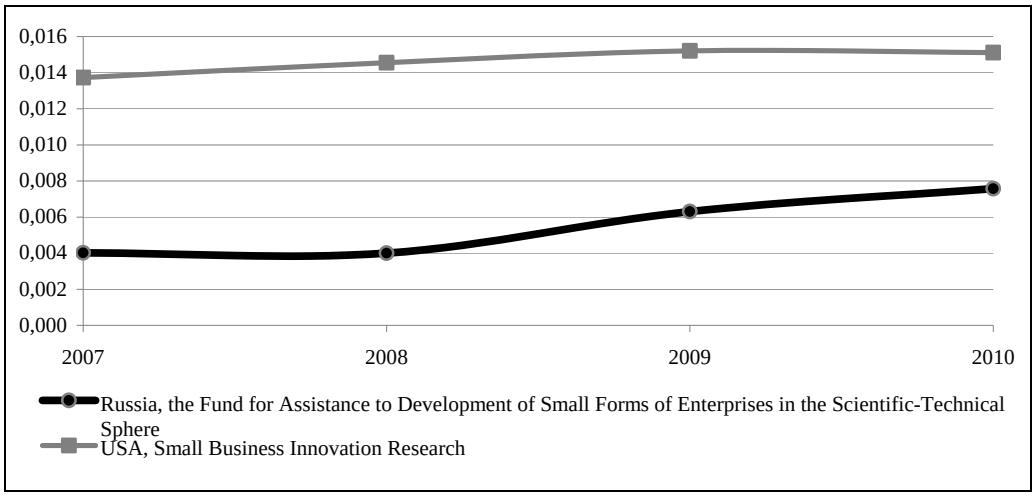
Source: estimates by the Interdepartmental analytical center

Fig. 10. Estimated Correlation between the Scale of Public Development Institutions' Operations on Support of Innovation Projects at Different Stages

An insufficient project "flow" at the pre-seed and seed stages appears a critical challenge to the task of ensuring a broad general economic effect from the development institutions' operation. Let us note the limited nature of grant-based support arrangements in the first

place (this modus operandi is noted only for the Fund for Assistance to Innovation and Sklokovo Foundation).

In principle, the state-sponsored grant-based support of projects at the pre-seed stage is unfolding in Russia, but its magnitude has thus far been far smaller than in the US: the grant-based support to GDP ratio displayed by the Fund for Assistance to Development of Small Forms of Enterprises in the Scientific-Technical Sphere is nearly twice as little as the respective figure of its US vis-à-vis, the Small Business Innovative Research (*Fig. 11*).



Source: estimates by the Interdepartmental analytical center on the basis of public information about operation of the Fund for Assistance to Development of Small Forms of Enterprises in the Scientific-Technical Sphere (Russia) and about implementation of SBIR (USA)

Fig. 11. Level of State Support of projects at the Pre-seed Stage

But the challenge does not lie solely in the above: it is imperative to pay attention to a fairly low size of individual grants the Fund in question is authorized to award (even after the cap was raised up to Rb 1mn) vis-à-vis other nations' practice. Plus, while using such grants, there are stringent restrictions with regard to the volume of spending on equipment (which objectively is explained by the fact that the Fund's operation is financed out of the state budget in the frame of the R&D expenditure). This constraints possibilities for effective implementation of the pre-seed stage across a string of cash-intensive technological directions.

We believe that a limited demonstration effect in the innovation sphere from Russian development institutions' operations appears to a significant degree associated with external institutional constraints, as well as peculiarities of the authorities' "expectation overhang". So far there have been substantial institutional barriers in place to implementation of the "venture" model of innovation development basing on a high activity on creation of new innovation businesses and a rapid expansion of successful companies.

First, the inflow of new entrepreneurs is limited, due to an insufficiently conducive entrepreneurial environment and negative, rather than positive, public perception of entrepreneurship: more specifically, a recent monitoring of entrepreneurship[1] evidences that in 2010 only 4.3% of Russian residents were going to start their own business in 3 years to come, but,

[1] Verkhovskaya.O., Doronina M. National report "Global monitoring of entrepreneurship. Russia. 2010". High School of Management of the St. Petersburg State University, 2011

given that entrepreneurs accounted for a. one-third of them, the prospective inflow of entrepreneurs makes up a meager 2.6% (one of the lowest figures vis-à-vis other countries). The same research exposed such fundamental challenges to expansion of entrepreneurship in Russia (vs. other nations) as a weak cultural background, nascent competition, and a low level of availability of venture capital.

Second, the national policy on support of small-sized business has thus far been to a greater degree oriented towards its social mission, that is, a mechanism to generate new job opportunities and mitigate social problems, rather than a major driver of economic development and emergence of new sectors. There emerged a significant "tax lacuna" for small businesses, due to which (as well as because of risks of increase of the administrative burden and a limited array of instruments of support tailored for small businesses) their motivations to transition to (over time) the category of medium-sized ones prove substantially arrested.

Third, the pace of the process of formation of a civilized market for mergers and takeovers has been very slow, which can be ascribed primarily to problems with protection of property rights, including intellectual ones, and risks associated with raiders' operations. Because of this, on the one hand, owners' motivations to capitalize their companies are limited, while venture investors have problems with an efficient "walkaway" from corporate capital, on the other.

Fourth, there exist external constraints to a cardinal increase of the number of projects supported at the pre-seed and seed stages. There of course exists a potential positive short-range effect from measures on development of organizational infrastructure for formation of new innovation projects (e.g. a model with venture partners for search of projects and assistance in preparing high-quality business offers, which is implemented by the Seed Investment Fund). But we believe that the future will see an increasing exhaustion of scientific-technological capacity across a number of demanded by business thematic directions and an adverse impact of the insufficient effectiveness of instruments of assistance to commercialization of R&D outputs.

The government's underestimation of external constraints and its excessive expectations, in our view, lead to *a certain deformation of motivations behind, and assessment of, the development institutions' performance.*

The *first peculiarity* in this regard is the strive to demonstrate to a broad array of stakeholders notable successes in the innovation sphere already in the short run, at the expense of the development institutions' operation.

At the development institutions level, this results in stronger motivations to demonstration of their outputs, implementation of milestone, "worth-bragging-about" projects. That the development institutions have received sizeable resources is an additional factor fuelling the anticipation of significant and understandable to a broad audience deliverables. Conceptual opponents to the development institutions accentuate an insufficient efficiency of their contribution to economic development, while individual groups of champions of the government's proactive role in encouragement of innovation criticize them for a slow pace of spending.

An inseparable and fundamental component of development institutions' operation is *securing a demonstration effect for private businesses*, diffusion of best practices, improvement of regulation, the environment for innovation and, ultimately, a gradual overcoming of "market failures". That said, *principles of assessment of the development institutions' performance*

appear to a far greater degree oriented toward their direct performance metrics, with the emphasis on employing formal indicators which characterize the use of resources.

Due to their profile, development institutions respond to expectations of the public administration system and various interest groups by boosting the scale of their projects, their uniqueness, spending, and by launching new initiatives.

Second, strive for ensuring dynamic structural shifts, scientific and technological breakthroughs through the development institutions.

We believe this sometimes results in *development institutions' operation in certain cases beginning to drift away from general market trends and investors' preferences*. This problem is further exacerbated by the view that capitalization of the development institution and expansion of their operational scale can help promptly compensate for drawbacks of the investment climate. *Having been oriented toward support of huge projects, development institutions become prone to a strong political pressure*, which gives rise to preconditions of their following the "agent – of - the government" model, rather than the "development institution" one.

Even with locally efficient operations and successful direct project outputs, such an approach arrests possibilities to attract private investment in development institutions' operation, fuels their hunger for additional public resources and encourages their shift from the PPP model to a public-quasipublic partnership one, concentration of the state banks and development institutions' resources on implementation of individual projects.

Third, the desire to increase direct return from their operation, no readiness for risk-taking (costs- wise), strive for localization of all the effects in the frame of the national economy.

The problem of bolstering the development institutions' efficiency is often viewed from the perspective of the need for their concentration solely on provision of financial support to projects implementation, without pursuing any organizational, educational and methodological goals. With very stringent criteria of assessment of success of projects they support and direct effectiveness of the development institutions' costs there arise *extra motivations to shifting main risks with regard to failures in innovation projects implementation onto recipients of the support.*

Focusing on early stages, development institutions appear objectively limited in delivering immediate results, as main positive effects from their operation become visible at later stages. In this regard more motives emerge to extend the development institutions' resources at the later stages which are capable to demonstrate the said results.

Despite the above problems with improvement of the development institutions system (which to a significant extent can be ascribed to costs of its rapid growth), basically, it can be ascertained that there has been made a substantial progress in the area concerned. More specifically, development institutions secured the following positive qualitative effects:

- demonstration to business of possible prospects with regard to obtaining support at different stages of development;
- cementing trust in development institutions on the part of the business community and the new, medium-sized business in the first place;
- working out various new, complex patterns of support of innovation and investment activity; laying ground for diffusion of respective qualifications and skills;
- design and promotion of proposals on improvement of market regulation and investment climate;

– identification of policy bottlenecks and critical challenges in the area of innovation development; a substantial public administration system's progress in appreciation of tasks and instruments of innovation policy.

In conclusion, let us single out the following possible *avenues of improvement of the Russian system of development institutions*:

1. It is imperative to expand the scope of their support of early-stage innovation, primarily at the pre-seed and seed stages. For a steady flow of projects to rise it is necessary to substantially broaden the "array" of the supported projects: up to several thousand – at the level of the Fund for Assistance to Development, and up to several hundred – at the level of the Seed Investment Fund.
2. It seems appropriate to expand the scale of grant-based support at early stages (where risks are maximum), namely, at the pre-seed one, as well as to spread this mechanism onto the seed stage of innovation. It is desirable, in the frame of measures on development of the university R&D, to consider a possibility for support of creation by research universities of special seed funds (capitalization of the existing ones).
3. With regard to development of grant-based innovation support patterns in Russia, it should be noted that a string of nations apply the "matching grants" mechanism to encourage innovation development. Good practices evidence that provision of such public grants to private businesses appears more effective than tax incentives for innovation[1]. When compared with "regular" grants, the mechanism in question is less exposed to the risk of "substitution" of private resources with public ones in the course of exercise of investment activity, and it to a greater extent helps attract businesses' extra resources into the innovation sphere.

In principle, in Russia, there is a similar mechanism associated with provision of subsidies on financing of innovation projects corporations implement together with universities[2]. However, an additional flexibility of this mechanism and prospects of its expansion could be ensured either by positioning it as a basic operational vehicle of one of public funds engaged in support of innovation activity, or by creating a special fund.

1. An important source of new innovation projects may become small innovation companies created under universities. This appears important from the perspective of expansion of the community of innovation-oriented entrepreneurs at the expense of university graduates: in the frame of the aforementioned monitoring, experts referenced to a substantial potential of the university environment in this regard: some 8.5% of students are ready to become entrepreneurs[3].

While noting a substantial progress in terms of reduction of normative barriers to creation of small-sized innovation firms under universities, it can be ascertained, nonetheless, there should be additional measures (mechanisms) in place to support integration of such companies into global value creation chains. The current emphasis on the number of newly founded companies and their focus mostly on local niches arrest potential to their dynamic growth.

[1] See, for example: Maloney, William. 2005. "Global Patterns of Innovation". World Bank

[2] Resolution of the RF Government of 9 April 2010 No. 218 "On measures of state support to development of cooperation between Russian institutions of high education and organizations implementing complex projects on creation of highly technological production".

[3] Verkhovskaya.O., Doronina M. National report "Global monitoring of entrepreneurship. Russia. 2010". High School of Management of the St. Petersburg State University, 2011.

1. The task to broaden the circle of projects supported at the pre-seed and seed stages cannot be solved momentarily, as it requires improvement of conditions of formation of new innovation projects and companies. So, it is imperative to increase funding of applied R&D at the pre-commercial stage to ensure an accelerated rise of the scientific and technological capacity to get university students engaged in conduct of research and commercialization of research outputs.
2. Solution to the problem of bolstering the development institutions' operational efficacy appears in many ways associated with implementation of measures on attraction of foreign investors to participate in their capital. This allows counting on a fair assessment of the quality of governance and "value" of the respective structures, improvement of selection of projects to support, and mitigation of the risk of a "timeserving" influence of the state. So far it has been only ROSNANO which has developed plans to attract private investors; however, such medium-term tasks seem rational for the Russian Venture Company and – in a more remote future – for Vnesheconombank (upon separation from it the Bank for Development per se and its transformation into an adequate organizational and legal form), too.
3. It is imperative to promote efforts with regard to dissemination of development institutions' best operational practices, public demonstration of success stories associated with specific projects, and special educational programs. It is critical to ensure a substantial progress in monitoring and assessment of qualitative, indirect effects from development institutions' operations[1]; meanwhile, assessment of such external effects requires organization of regular independent audit.

6.4. Bankruptcies in 2009–2011: Post-crisis Dynamics; New Trends; Regulation

6.4.1. Dynamics of Bankruptcies (2009–2011)

The overall situation in the field of bankruptcy over the period under consideration was shaped by the following four key trends.

1. First of all, it is necessary to *note the beginning, in first half-year 2011, of a decline in the number of bankruptcies and the number of petitions in bankruptcy submitted to court that followed the period of growth of these indices in 2009–2010*. Thus, over the period of 2009–2010, the number of court decisions concerning the recognition of a debtor to be bankrupt and the initiation of a proceeding in bankruptcy rose by more than 15% (in 2008 – 13.9 thousand; in 2009 – 15.5 thousand; in 2010 – 16 thousand cases[2]). In the first half-year 2011, there occurred a significant drop (by nearly 20%) in the number of petitions in bankruptcy filed with courts of justice (first half-year 2010 – 21,037; first half-year 2011 – 16,853); and a drop by 13.5%, on the same period of 2010, in the number of decisions issued to the effect that a relevant debtor should be deemed to be bankrupt (first half-year 2010 – 8,047; first half-year

[1] See, also: Simachev Yu., Kuzyk M. Institutions in Development.- Direct investment, 2010, No. 4.

[2] Out of 16,009 decisions on deeming a debtor to be bankrupt and initiating a proceeding in bankruptcy in 2010:
– 3.2% (or 508 cases) have to do with state and municipal unitary enterprises;
– 13.1% (or 4,882 cases) have to do with individual entrepreneurs;
– 5% (or 800 cases) have to do with agricultural producers;
– 1.4% (or 224 cases) have to do with financial institutions.